

# A Study on the Relationship between Parents' High Educational Expectations and Children's Academic Performance ——An Empirical Analysis Based on the CFPS2020

Sang Mingwei<sup>1\*\*†</sup> & Liu Haozheng<sup>2\*\*†</sup>

<sup>1</sup> School of Economics and Management, Shihezi University, Shihezi, Xinjiang

<sup>2</sup> School of Economics and Management, Shihezi University, Shihezi, Xinjiang

Correspondence: Sang Mingwei, School of Economics and Management, Shihezi University, Shihezi, Xinjiang.

\*These authors contributed equally to this work.

†These authors are co-first authors.

Received: September 11, 2024 Accepted: September 28, 2024 Online Published: October 18, 2024

doi:10.5539/jedp.v14n2p132

URL: <http://doi.org/10.5539/jedp.v14n2p132>

## Abstract

This paper studies the relationship between parents' higher educational expectations and the academic performance of young children in middle school and primary school on the basis of data from the CFPS2020. Multiple regression analysis and intermediary utility analysis revealed that parents' educational expectations and educational savings positively affect children's academic performance and that age negatively affects children's academic performance. There is some intermediary effect between family education savings and parents' education expectations and children's academic performance, but the proportion of indirect utility in the total utility is lower. Therefore, countermeasures should appropriately increase investment in children's future education savings to avoid the negative impact of parents' excessive expectations and less material support of children's academic performance and pay attention to avoiding the extreme tendency toward excessive investment in education savings.

**Keywords:** high expectations, academic performance, intermediary utility, CFPS, education savings

## 1. Introduction

Chinese parents are famous for their importance to their children's education. The hope for their children's outstanding academic performance and better academic qualifications has become the common expectation of parents from all walks of Chinese society. Most Chinese parents have high educational expectations for their children. Expectation refers to an individual's subjective expectation of whether something happens. Parental educational expectations refer to the expectations of parents that their children obtain higher education levels. High parental educational expectations further affect individuals' academic performance by affecting their children's learning attitudes and learning expectations. However, if there is a lack of corresponding family resource support, parents' high education expectations will cause their children to face greater psychological pressure and become prone to anxiety and depression, which will have a negative impact on their academic performance. In recent years, many studies have focused on the impact of family education savings on children's academic performance. After collation and analysis, relatively few studies have focused on the intermediary role of parental expectations and the academic performance of primary and middle school students. This paper aims to explore the internal links between higher education expectations, academic performance and educational savings via multiple regression analysis and intermediary utility analysis, with the goal of obtaining practical research results to provide useful reference and guidance for parents in children's training. In addition, in view of the relatively old research data on parents' expectations and children's academic performance, this paper uses CFPS2020 data for analysis, which includes some innovations and references.

## 2. Related Literature Review

According to the research direction of this paper, we organize and study the literature in two main aspects. The first aspect is the impact of parents' high education expectations on their children's academic performance, and the second aspect is the factors that affect their academic performance.

In the first aspect, there are three main levels of parents' high educational expectations, including the factors affecting parents' expectations, the influence of parents' expectations on their children's studies, the influence mechanism, and the principles of parents' expectations.

With respect to the factors influencing parents' expectations, Zhang (2021) suggested that individuals, families and schools affect parents' educational expectations of their children, among which the situation within the family has the greatest impact on parents' expectations. In addition, an empirical analysis revealed that both parents' economic status and social status can influence parents' educational expectations for their children (Benner et al., 2016).

There are multiple levels of research on the impact of parental expectations on children's schooling. The difference between parents' expectations and their children's self-expectations is that older individuals are bad for their children's mental health (Kiwoong, 2020; Li & Hu, 2021; Zhang, 2021). As children's age and cognition improve, the difference between parents' expectations of their children and their children's self-expectations gradually decreases (Rimkute, 2012). Differences in parental expectations can have different effects on children's development (Gallagher, 2016).

About the influencing mechanisms and principles of parental expectations. On the theoretical side, identity control theory holds that differences in educational expectations between parents and children are related to the mental health of adolescent children. The deviation between individual self-role identity and the reactive evaluation of important others is an important source of depression and anxiety. In terms of empirical analysis, Kiwoong (2020) suggested that the relative status of schools has intermediary utility in influencing educational achievement. Some scholars believe that the intermediary utility of family background affects the acquisition of education (Wang et al., 2018; Xue, 2018; Yang, 2018).

The second aspect concerns the factors that influence academic performance. Coleman (1966) report leading up to research on the impact of school studies. He believes that family background factors play a large role. In the present world, students from good families have a natural advantage in their academic performance (Liu, 2006; Wu, 2013). From other perspectives, competition has different effects on academic performance and is characterized by polarization (Qin, 2017; Zhou et al., 2024). In addition, the level of school and family informatization affects students' academic performance (Ma et al., 2020).

At the present stage, the literature is quite in depth. The relationship between higher education expectations and academic performance at the theoretical and empirical levels reveals many influencing factors and their complex mechanisms, which provides a valuable reference for the research of this paper. Therefore, on the basis of the research of other scholars, this paper further demonstrates the internal connection between high educational expectations and academic performance through empirical analysis. Moreover, this paper innovatively introduces educational savings as an intermediary variable to study the influence mechanism between high education expectations and academic performance, hoping to provide a new perspective for research in related fields.

### **3. Research Technique**

#### *3.1 Data Sources*

The data used in this paper are from the China Family Tracking Survey Database (CFPS), which uses the 2020 data in the database to analyze the relationship between parental educational expectations and the academic performance of primary and secondary school students. The information source of the database is a questionnaire summarized by the 2020 Chinese Family Tracking Survey of the Center for Social Science Survey of Peking University. There are four types of questionnaires in the CFPS project, four types of which are designed around communities, families, adults and children. To improve the rigor of the data and avoid interference from other factors, this paper mainly extracts variables from the questions of children's parents. On the basis of the analysis method of the whole sample data, the preliminary treatment of the data mainly included excluding the unanswered questionnaires, excluding the unknown and unclear questionnaires, eliminating the non-Chinese mainland data questionnaire, and controlling the age of the children aged 7--15 years according to the actual situation. After layers were screened, a total of 3,047 samples met the criteria.

#### *3.2 Variables and Data Processing*

##### *3.2.1 Dependent Variable*

The dependent variable analyzed in this paper was student academic performance. The two responses in the questionnaire, "How do parents think their child's Chinese/math scores?", were combined. We assign "difference" to 1, "middle" to 2, "good" to 3, and "excellent" to 4 and add up both scores. Finally, those with total scores lower

than or equal to 4 were classified as poor, and those with total scores greater than 4 were classified as good and assigned 0 s and 1 s, respectively.

### 3.2.2 Argument

The independent variable is parents' expectations for their children. The question "the final stage that you want your child to study" in the questionnaire was organized, and the final degree of their child's bachelor's degree or above was assigned a value of 1, and the final degree below 0 was assigned. Those assigned values of 1 are high expectations, and those assigned values of 0 are low expectations.

### 3.2.3 Control Variables

The main control variables were the number of households and total population, the gender of the interviewed children, and the age of the interviewed children. According to the variables of household registration, the data were divided into "agricultural registered permanent residence" and "nonfarm registered permanent residence", and the values were assigned to 0 and 1, respectively. For the gender variable of the interviewed children, "female" and "male" were assigned values of 0 and 1, respectively.

### 3.2.4 Metavariabale

In the following analysis, significant associations between academic performance, parental expectations, and savings were found. For better further analysis, "whether to save education for children" was defined as the intermediary variable. This paper assigns the answer to "no" and a value of 1.

### 3.2.5 Statistical Methods

This paper analyzes the relationship between academic performance and parental expectations via multiple linear regression. The regression model is as follows:

$$Score = \beta_0 + \beta_1 \times exp + Z_i \times X_i + \varepsilon$$

The score is the dependent variable, that is, student academic performance. Exp is the parent expectation. X is the control variable, and  $\varepsilon$  is a random interference term.

## 4. Empirical Analysis

The empirical analysis includes three main aspects. The first step is to analyze the changes in key variables. The second is correlation analysis, which shows the correlation between the variables. The second is regressive analysis, through which the regression changes among the variables to reflect the influence of each variable on the variable of academic performance. Finally, the mediation utility analysis indicates the influence path of the "academic performance" variable.

### 4.1 Descriptive Analysis

Table 1 presents a descriptive analysis of the relevant variables, from which several conclusions are intuitively drawn.

1) Most parents believe that their children's future degree should reach a bachelor's degree or above, among which 69.84% believe that their children can reach a bachelor's degree, 12.27% believe that their children's future degree or above, and only 17.89% believe that a bachelor's degree is enough. This finding shows that with improvements in the overall education level of society, most parents pay more attention to their children's learning, and their expectations are also increasing. Moreover, the social environment reflects the depreciation of academic qualifications.

2) Although most families have high expectations for their children's studies, they do not set enough education savings for their children. Only 12.77% of the families answered "yes", and 87.23% of the families answered "no". This shows that most families, faced with the educational pressure of educational background depreciation in the overall environment, have high expectations for their children but do not pay attention to the family's capital investment in education and future education savings. Most parents have high expectations for their children's learning but have fewer plans for the future.

3) For the number of households and total population of the interviewed families, "agricultural registered permanent residence" accounts for 70.86%, and "nonfarm registered permanent residence" accounts for 29.14%.

4) On the whole, parents' evaluation of their children's academic performance shows a continuous distribution from low to high, and the academic performance of each part is relatively balanced.

Table 1. Descriptive statistics of the related variables

| Name                                      | Option                                      | Frequency | Percentage (%) | Cumulative percentage of (%) |
|---|---|-----------|----------------|------------------------------|
| Parents expect                            | Under undergraduate course                  | 545       | 17.89          | 17.89                        |
|   | Undergraduate course                        | 2128      | 69.84          | 87.73                        |
|   | Bachelor or above degree                    | 374       | 12.27          | 100                          |
| Education savings                         | No  | 2658      | 87.23          | 87.23                        |
|   | Yes   | 389       | 12.77          | 100                          |
| Number of households and total population | Agricultural registered permanent residence | 2159      | 70.86          | 70.86                        |
|   | Nonfarm registered permanent residence      | 888       | 29.14          | 100                          |
| Academic performance                      | 2   | 147       | 4.82           | 4.82                         |
|   | 3   | 196       | 6.43           | 11.26                        |
|   | 4   | 688       | 22.58          | 33.84                        |
|   | 5   | 290       | 9.52           | 43.35                        |
|   | 6   | 669       | 21.96          | 65.31                        |
|   | 7   | 352       | 11.55          | 76.86                        |
|   | 8   | 705       | 23.14          | 100                          |
|   | Amount to                                   |           | 3047           | 100                          |

#### 4.2 Correlation Analysis

Table 2 presents a correlation analysis of each variable, which reveals that there is a significant positive correlation between parental expectations and educational savings and academic performance, but parental expectations are significantly negatively correlated with age. In addition, the number of households and total population were significantly positively correlated with gender. The educational savings, were significantly positively correlated with academic performance. Notably, gender showed a significant negative correlation with education savings, which means that women tend to save more significantly in terms of education.

Table 2. Correlation analysis of the individual variables

|   | Parents expect | Number of households and total population | Education savings | Academic performance | Age   | Sex |
|---|----------------|---|-------------------|----------------------|-------|-----|
| Parents expect                            | 1              |   |                   |                      |       |     |
| Number of households and total population | -0.015         | 1   |                   |                      |       |     |
| Education savings                         | 0.081**        | 0.004                                     | 1                 |                      |       |     |
| Academic performance                      | 0.213**        | -0.021                                    | 0.076**           | 1                    |       |     |
| Age                                       | -0.050**       | 0   | 0.017             | -0.209**             | 1     |     |
| Sex                                       | -0.023         | 0.046*                                    | -0.037*           | -0.017               | 0.033 | 1   |

\*  $p < 0.05$  \*\*  $p < 0.01$ .

#### 4.3 Regression Analysis

Table 3 presents a regression analysis of academic performance versus parental expectations, and Model 1 presents a full-sample regression analysis. Model 2 was a regression that controlled for the parental expectation variables. Model 3 is a regression analysis that controls for the educational savings variables and removes the variables.

Data on parental expectations, educational savings, and age are significant from Model 1. The coefficient of parental expectations was 0.244, indicating that the higher the parent's expectations were, the better the child's grade. The coefficient of educational savings is 0.090, indicating that the more prepared a family is for a child's savings, the better his or her grades will be. In addition, the coefficient of age is negative, indicating a negative correlation with children's age. Senior exams are relatively difficult in lower grades, and parents believe that their children's grades are relatively lower.

Notably, Model 2 controls for the parental expectation variable, and the coefficient of educational savings willingness is greater at 0.113. This means that regardless of the factors of parents' expectations, the more the family is to save, the more it will promote children's and academic performance. At this time, we can also see that the coefficient of age is negative at -0.040, which means that with increasing age, the child's performance shows a relatively fast downward trend. Furthermore, the R values of Model 2 versus Model 32 are all lower than the R values of Model 12, which means that the fit of the overall regression analysis was better when parental expectations and educational savings were analyzed together.

Table 3. Regression analysis of academic performance and parental expectations among primary and middle school students

|   | Academic performance  |                       |                       |
|---|-----------------------|-----------------------|-----------------------|
|   | Model 1               | Model 2               | Model 3               |
| Constant                                  | 0.878**<br>(20.420)   | 1.099**<br>(28.081)   | 0.882**<br>(20.483)   |
| Parents expect                            | 0.244**<br>(11.341)   | 0                     | 0.250**<br>(11.654)   |
| Education savings                         | 0.090**<br>(3.659)    | 0.113**<br>(4.503)    | 0                     |
| Number of households and total population | -0.018<br>(-1.024)    | -0.022<br>(-1.169)    | -0.018<br>(-0.998)    |
| Sex                                       | -0.002<br>(-0.118)    | -0.005<br>(-0.317)    | -0.004<br>(-0.251)    |
| Age                                       | -0.038**<br>(-11.554) | -0.040**<br>(-11.906) | -0.038**<br>(-11.451) |
| Sample capacity                           | 3047                  |                       |                       |
| R <sup>2</sup>                            | 0.089                 | 0.051                 | 0.085                 |

#### 4.4 Mediator Utility Analysis

The mediating effect is an important theoretical mechanism in social science research to explain how independent variables influence the dependent variable through mediating variables. The core idea of mediation utility analysis is to reveal the complex action path and internal mechanism principle among the variables. This paper uses percentile bootstrap analysis to introduce educational savings as a mediating variable to study the effect of educational expectations on academic performance. According to the data in Table 2, there is a significant correlation between academic performance, parental expectations and educational savings, which complies with the premise of mediation utility analysis. Figure 1 is a model diagram of the mediation utility analysis, which can better show the influence of two paths, parental expectations and educational savings, on academic performance. Route C is the total utility, and paths A and B are the indirect utility. Table 4 presents the results of the mediation utility analysis. The total utility is 0.263, with a P value of 0, passing the 95% significance test. P values for A and B passed the 95% significance test. The mediation utility is  $A * B$  with a value of 0.006, representing 2.257% of the total utility of 0.263, so a partial mediation utility exists. Statistically, the path of academic performance through parental expectations and education savings has influenced utility, but this indirect utility accounts for a small proportion of total utility.

Table 4. Intermediary action analysis

| Mediator utility path | B       | Standard error | t     | p     | $\beta$ |
|-----------------------|---------|----------------|-------|-------|---------|
| C                     | 0.263** | 0.022          | 12.02 | 0     | 0.213   |
| A                     | 0.071** | 0.016          | 4.486 | 0     | 0.081   |
| B                     | 0.084** | 0.025          | 3.342 | 0.001 | 0.059   |

\*  $P < 0.05$  \*\*  $p < 0.01$  bootstrap type = percentile bootstrap method.

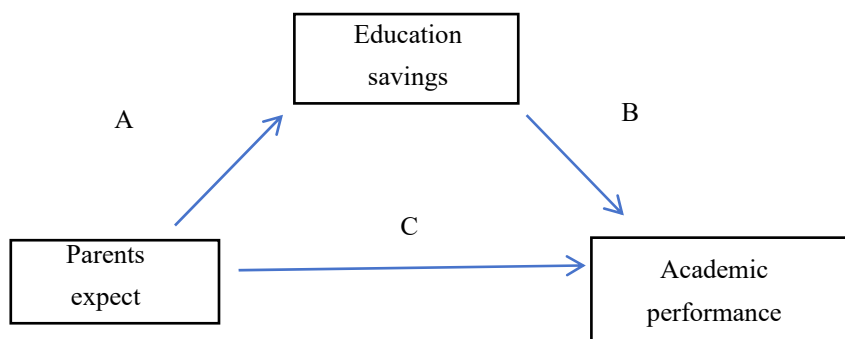


Figure 1. Mediation utility model

## 5. Conclusion and Suggestions

On the basis of relevant data from the CFPS in 2020, after learning from previous research, this paper chooses the relationship between children's academic performance and parents' high expectations as the main research direction, supplemented by educational savings as the intermediary variable. SPSS software was used to analyze the results via multiple regression as well as the mediation utility approach. The study revealed that most parents want their children to have a final degree of at least an undergraduate degree and have high expectations for their children's academic performance. Children's academic performance is affected by parents' expectations, family education savings and their own age, among which parents' expectations are positively associated with educational savings in terms of children's education, and age is negatively correlated with children's academic performance. In addition, in terms of the influence path, family education savings have some intermediary effect on parents' educational expectations and children's academic performance, but the proportion of such indirect utility in total utility is small, and the main influence path is that parents' high expectations directly affect children's academic performance.

For the above studies, the following suggestions are proposed:

1) Parents should pay attention to investment in their children's education and increase their education savings appropriately. The negative impact of parents' excessive expectations and less material support for their children's academic performance should be avoided. While parents have high expectations for their children's academic performance, they should support their children behind them, make appropriate education savings in the key learning stage of adolescent children, enhance the planning awareness of their children's future education savings, try to prepare in advance, and provide better educational resources for their children. However, at the same time, parents need to avoid investing too much in saving education, creating another extreme tendency. According to the mediation analysis, parents' high expectations for their children's academic performance lead to educational savings, which can promote the progress of their children's performance only to a certain extent. Therefore, the improvement in education savings is not linearly positively correlated with academic performance but rather tends to first increase but then decrease. Making too much education savings may go to another extreme.

2) Parents should adjust in time according to the actual situation to form reasonable academic expectations suitable for their children at the current stage. With increasing age and grade, the capacity and complexity of what students learn in school increase, as does the difficulty of taking exams. At this time, parents should adjust their expectations of their children's grades in time because unrealistic expectations make it easy for their children to experience great psychological pressure, which will have a negative impact on their academic performance. Parents should form academic expectations that are suitable for their children's current situation according to the

learning difficulty of each age group and their children's learning situation to reduce the negative impact of unreasonable expectations on their children. For example, it can help your child set an attainable stretch zone goal and never praise your child's progress.

3) This can enhance children's sense of self-efficacy and improve their self-expectations. According to Bandura's theory of self-efficacy, a child's academic level is strongly influenced by expectations of self-behavioral competence and behavioral outcomes. Children with high self-efficacy will form moderate self-expectations, be more active in regulating and controlling behaviors, be more persistent and proactive in study, and have a more positive attitude and thinking mode in facing difficulties. Parents expect it to be an external drive to encourage their children to learn for the admiration of their parents and teachers, but the most effective drive is the child's internal drive. It is suggested that schoolteachers set appropriate difficult learning tasks for students, avoid public rankings, and praise students' progress so that students can have a more successful experience and be more confident in their learning ability. It is also suggested that parents encourage their children more, pay attention to their emotional support and emotional guidance, cultivate their children's self-confidence, enhance their sense of self-efficacy, and help their children form appropriate self-expectations.

Parental expectations and children's self-expectations are best maintained at a moderate level, and expectations are appropriately adjusted according to the difficulty of the academic task. According to the Yeck–Morsen law, there is an inverted U-shaped curve relationship between motivation and behavior efficiency. Expectations that are too high or too low are not conducive to improving children's academic level; that is, when motivation intensity is at the middle level, behavior efficiency is the highest. Various behaviors have an optimal level of motivation that varies depending on the nature of the task. In simpler tasks, behavioral efficiency increases with motivation level, and the optimal level of motivation tends to decrease gradually as task difficulty increases. Therefore, parents and children should maintain moderate-intensity motivation for periodic and ordinary difficult academic tasks and maintain relatively low expectations for difficult learning tasks because, with high internal and external expectations for difficult tasks, children are likely to develop anxiety and tension.

#### **Funding**

None.

#### **Informed Consent**

Obtained.

#### **Provenance and Peer Review**

Not commissioned; externally double-blind peer reviewed.

#### **Data Availability Statement**

The data that support the findings of this study are available on request.

#### **Competing Interests Statement**

The authors declare that there are no competing or potential conflicts of interest.

#### **References**

- Benner, A. D., Boyle, A. E., & Sadler, S. (2016). Parental involvement and adolescents' educational success: The roles of prior achievement and socioeconomic status. *Journal of Youth and Adolescence*, 45(6), 1053-1064. <https://doi.org/10.1007/s10964-016-0431-4>
- Coleman, J. S. (1966). *Equality of educational opportunity*. US Government Printing Office.
- Gallagher, M. (2016). Adolescent-parent college aspiration discrepancies and changes in depressive symptoms. *Sociological Perspectives*, 59(2), 296-316. <https://doi.org/10.1177/0731121415589137>
- Kiwoong, P. (2020). Adolescents' relative position in school and educational attainment: The mediating role of educational expectations. *Social Science Research*, 94, Article 102520. <https://doi.org/10.1016/j.ssresearch.2020.102520>
- Li, J., & Hu, Y. (2021). How can we be achieved?: Based on the similarities and differences between the educational expectations of parents and their children. *Sociological Research*, 36(3), 204-224.
- Liu, S. (2006). Differences between higher education expansion and admission opportunities: 1978~2003. *Society*, (3), 158-179.
- Ma, H., Chen, Y., & Xiao, Y. (2020). The “digital divide” of school informatization and its impact on student

- performance. *Research on Modern Distance Education*, 32(5), 86-94.
- Qin, W. (2017). The dilemma and transcendence of over-education competition. *Research on Modern Basic Education*, 25(1), 42-47.
- Rimkute, L. (2012). Parents' role in adolescents' educational expectations. *Scandinavian Journal of Educational Research*, 56(6), 571-590. <https://doi.org/10.1080/00313831.2011.621133>
- Wang, Y., Zhang, Y., & Xin, T. (2018). Impact of parental educational expectations on math achievement in fourth-year students: An analysis of multiple mediating effects. *Psychological and Behavioral Research*, 16(1), 96-102.
- Wu, Y. (2013). Educational stratification system and China (1978-2008). *Sociological Research*, 28(4), 179-202.
- Xue, H. (2018). Family capital and education access: An intermediary effect analysis based on shadow education. *Education and Economics*, (4), 69-78.
- Yang, S. (2018). Family background and student development: The mediating role of parental engagement and self-education expectations. *Educational Economic Review*, 3(3), 61-82. <https://doi.org/10.19512/j.cnki.issn2096-2088.2018.03.004>
- Zhang, N. (2021). Analysis of the relative importance of factors influencing educational expectation gap between parents and children: Empirical study based on CEPS survey data. *Basic Education*, 18(2), 28-41.
- Zhou, L., Wang, Y., & Hou, S. (2024). The impact of physical competition on adolescent academic performance and well-being: The regulation of the competitive atmosphere. *Education Academic Monthly*, (2), 55-64. <https://doi.org/10.16477/j.cnki.issn1674-2311.2024.02.004>

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).