

# The Influence and Possibilities of Migrant Children Educational Achievement—A Case Study in a Chinese NGO Institute

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## Abstract

The academic achievement of migrant children has been widely concerned in the field of education and psychology. Both the external (school education) and internal environment (family education) has a great impact on their academic performance. Most of the pre-existing studies are qualitative, focusing on the impact of school education on migrant children's academic performance and psychological development, leaving a void in the exploration on their family education. Based on the family pressure model and investment model, this study investigated the impact of family socioeconomic status on the academic performance of migrant children. The data sets mainly come from a questionnaire survey of 91 students from two NGOs (Non-Governmental organizations). Through a series of regression methods, it is obtained related research results. The results show that: 1) the family socioeconomic status of migrant children has a positive relationship with their math scores; 2) the family socioeconomic status of migrant children has a positive relationship with their Chinese scores; 3) the family socioeconomic status of migrant children has a positive relationship with their comprehensive performance. Finally, the paper analyzes the results of this research, summarizes the contributions and shortcomings of this research, and the enlightenment of the research conclusions to the education of migrant and urban children.

**Keywords:** family socioeconomic status, math grades, Chinese grades, comprehensive grades

## 1. Introduction

### 1.1 Introduce the Problem

The pace of the development of the times is accelerating. China's economy is in a period of rapid development. In order to improve the family's economic situation and quality of life, a large number of rural laborers choose to work in cities. According to the data of China's seventh national population census in 2020, China's floating population has reached 376 million. Most children also follow their parents away from home and become migrant children. Until 2020, the total number of migrant children has been climbing to 130 million, accounting for 34.57% of the total migrant population (National Bureau of Statistics, 2020). Rural migrant children, a special group, have attracted more and more attention from researchers. Although these migrant children still live with their parents, their education is affected to some extent due to changes in their parents' working environment, family living environment, and other factors (Luo, 2021). In this study, migrant children refer to children and adolescents under the age of 18 who have lived in the city for more than half a year after their parents left the registered residence and have no registered residence in the city (Shuang & et al., 2022). Since the 1990s, the migration pattern has gradually changed from individual adult migration to family migration (Duan, 2004; Zhou, 2003), resulting in an increase in the number of immigrant children.

The family is the most basic unit of society, and the process place to realize individual socialization. For migrant

children, the family is the most important initial environment for their socialization. The population mobility and migration of migrant children's families have produced a lot of instability in their family environment, which has a profound impact on family education ideas and behaviors and the development of migrant children in all aspects. (Sun, 2020) First of all, family socioeconomic status covers comprehensive indicators of different aspects of social status, including prestige, power, and economic ability. It is the ability of individuals or groups (such as families) to obtain social resources such as economy, education, and occupation. This ability is different and provides individuals or groups with advantages in obtaining commodities or resources with social value compared with other people or groups, some studies have also confirmed the positive impact of high socioeconomic status on academic achievement (Wolfe, 2015). Secondly, the family rearing style refers to the relatively stable behavior style commonly used by parents in the process of raising and educating children, and its style is relatively stable, which is a summary of the characteristics of various parental rearing behaviors (Chen, 2002). The existing research shows that the family upbringing style is also significantly positively related to children's academic achievements, and the family socioeconomic status of migrant children is lower than that of ordinary children, and the education level of parents is generally low, most of them are engaged in heavy manual labor, have less daily communication with children, and may lack scientific family education knowledge. The lack of family education or improper upbringing will also have a negative impact on the academic development of migrant children (Bradley & Corwyn, 2002). One is the objective family environment, the other is the subjective behavior of parents towards their children. It is of practical significance to combine subjective and objective factors to explore their impact on academic achievement.

Driven by the theory of family stress model and family investment model, this study selected two influencing factors, family socioeconomic status and family upbringing style, to explore their impact on the development of children's academic achievements. The overall aim of this study was to understand the general situation of migrant children's education from several aspects of family education and puts forward relevant suggestions and countermeasures accordingly. Hope the findings can enrich researchers' understanding of the relationship and impact model between family socioeconomic status, family upbringing methods, and academic achievements. At the same time, the results will provide theoretical guidance for parents of migrant children and urban children to form more appropriate and effective parent-child interaction and family interaction, models.

## 2. Literature Review

Different scholars have different understandings of family socioeconomic status. According to Mueller and Parcel (1981), household socioeconomic status is based on access to or control over a combination of valuable goods such as wealth, power, and social status, and it describes the ranking of an individual or family in a hierarchy. Oakes and Rossi (2003) defined socioeconomic status as the different ways and approaches for individuals to obtain needed resources. These differences could be the subjective consciousness of individuals or the ability of individuals to explore their potential. Other scholars believe that socioeconomic status is a kind of social position, which is defined according to the various social resources that an individual or a group has in society. Coleman (1966) has put forward the concept of capital more reflects the definition of family socioeconomic status in a preferred way, which includes financial capital (material resources), human capital (intangible resources such as education), and social capital (through social relations and access to resources) (Bradley & Corwyn, 2002; Coleman, 1998), they are easy to direct impact on happiness. The scholars although the focus is different, the meaning of social and economic status agree that social and economic status is the individual or group, such as family access to social resources, such as economy, education, and professional ability, the ability difference, and provides individual or group or group compared with others, it has the social value of the goods or the advantage of resources (Wolfe, 2015). From this point of view, family socioeconomic status is a comprehensive index that covers different aspects of social status, including prestige, power, and economic ability. Socioeconomic status is also commonly referred to as a social class.

As for the measurement of family socioeconomic status, scholars usually take family economic income, parents' education level, and parents' occupation as the main indicators to objectively measure socioeconomic status. Family income is one of the commonly used indicators to measure the socioeconomic status of families. In the past, the most used method of family income survey was to invite students or parents to directly fill in the income amount (Bae & Wickrama, 2015; Shi & et al., 2013). Although family income can represent family economic status to a large extent, it is private, and it may be difficult to collect real data in the process of measurement. At the same time, the research tools of education surveys are mostly filled by students, who often do not know the actual family income, so they give incorrect answers or refuse to answer them. In addition, due to the differences in the development levels of countries and regions, the standard for classifying income levels is not the same. The basic method is to classify income levels by themselves based on the statistical data of local government departments (Chung & et al., 2017; Zhou & Guo, 2013), all these factors will have adverse effects on the research results. In view of the above shortcomings, some scholars proposed that students should be allowed to report family possessions, such as computers and books, and the reliability of family possessions as

indicators of family socioeconomic status has been confirmed in previous studies (Caro, McDonald & Willms, 2009; Chen, Guo & Hu, 2015). However, the choice of items to use as proxies for measuring household income also depends on the target population in different political, economic, and cultural contexts.

### *2.1 Indicators of Family Socioeconomic Status*

Parental education is also an indicator of a family's socioeconomic status. The educational level of parents reflects the cultural level of a family and its cultural capital to a certain extent, which affects the intergenerational flow of education within the family. Parents can pass on the cultural resources of the family to their children through intentional or unintentional emotional communication and educational investment. Parental education is also an indicator of a family's socioeconomic status. To some extent, parents' educational level reflects the cultural level of a family and its cultural capital, which affects the intergenerational flow of education within the family. Parents can pass on the family's cultural resources to their children through intentional or unintentional emotional communication and educational investment. (Shahaeian & et al., 2018). The level of education of parents also affects the establishment of parent-child relationship between parents and children, and the affinity relationship can provide a good learning atmosphere for children. As for the measurement method of parents' educational level, researchers classified their parents' educational level into five categories: "primary school and below", "junior high school", "high school or technical secondary school", "University (junior college or bachelor's degree)", and "graduate students and above", which were answered by subjects according to their own situation (Pang & et al., 2013; Shi & Shen, 2007). The advantage of collecting information based on parents' educational background is that it is easy to operate, but there may be applicability problems for groups with high dropout rates, repeated grades, and groups with different schooling systems. Therefore, some scholars believe that the education level can consider the years of education at the same time or distinguish between graduation and dropout (Ren, 2010). In addition, it is noteworthy that some scholars believe that educational level is a representative element of socioeconomic status and can be one of the most widely used indicators of socioeconomic status because of its effect on subsequent earnings and occupations (Krieger, Williams & Moss, 1997; Mueller & Parcel, 1981). In some cases, an individual's early education can even be used to predict future earnings and job success. Thus, education can be a joint measure of socioeconomic status along with income and occupational status, and it can be used as a separate indicator to assess its unique contribution to family processes and individual development.

The final key indicator of family socioeconomic status is the occupational prestige of the parents. American sociologist Duncan (1961) proposed the socioeconomic Status index (SEI). The concept of a socioeconomic index holds that income and education determine the prestige of a job. This index represents the occupational identity or occupational prestige represents the social prestige, and the socioeconomic status index represents the individual's social status (Ganzeboom, Graaf & Treiman, 1992). Domestic some scholars also hold similar views, think parents' occupational prestige is a family's social class and power status symbol, the higher the occupational prestige of the parents, the children can obtain the advantage of educational resources, so the family with higher socioeconomic status can take advantage of social status into their children's education condition. However, the calculation standards of occupational prestige scores for each occupational category in China need to be unified, and few studies have been conducted to calculate SEI using this method (Li, 2005). At present, parents' occupations are still collected by self-report, and then the reported occupations are coded according to relevant occupational classification standards and converted into corresponding grades. The five-level classification of occupations by Shi and Shen (2007) is widely used in China.

In the recent 20 to 30 years, Chinese society shows obvious social stratification, so the study on the social and economic status of the family started relatively late. In the research on the relationship between family and academic achievement development, problems such as inaccurate use of research tools, single description, and measurement methods all affect the results of research and even lead to contradictions in research conclusions. This situation is not conducive to the scientific evaluation of educational fairness and may also mislead decision-making. Therefore, it is necessary to improve the classification and comprehensive calculation of family socioeconomic status measurement indicators. In addition, although the objective description of family socioeconomic status is common, in recent years, some scholars point out that considering the subjective social and economic status is also very necessary, only from the objective level measuring family socioeconomic status, if the individual subjective experience the social classes and status of the class is not consistent with objective reality, in order to position and stratum as the description may lose their meaning (Chen & et al., 2015). Internationally, the MacArthur Subjective socioeconomic Status Scale is widely used to measure an individual's social class (Adler & et al., 2000). The scale is a 10-step ladder chart, with numbers 1 to 10 from the bottom up. Participants chose their position on the ladder by combining their parents' education, occupational status and prestige, and family income, with higher scores indicating higher subjective social class. Generally speaking, individuals with a score above 6 belong to the high class, while individuals with a score below 3 belong to the low class (Adler & et al., 2000). To sum up, in the research on family socioeconomic status, the subjective and

objective socioeconomic status of the family can be selected for investigation according to the needs of the researcher (Shen, 2014). Objective measures of family socioeconomic status were used in this study.

## *2.2 Family Socioeconomic Status and Academic Achievement*

As for the connection between family socioeconomic status and academic achievement, early studies have suggested that there is a strong correlation between academic failure and low family socioeconomic status. This view has been supported by many scholars and has almost become an accepted conclusion (Conger & Donnellan, 2006; Duleep, 1998). However, since the 1980s, two meta-analyses of the relationship between SES and academic achievement of students in different eras in the United States, and a recent meta-analysis examining the association between SES and academic achievement of Chinese students, have provided us with new insights into the relationship between SES and academic achievement. Compared with before accepted their strong correlation, this meta-analysis is careful to distinguish the source of social and economic status, evaluation method, the student's grade, race, school location, factors such as academic subjects and academic performance measurement methods, objective family socioeconomic status and student academic achievement is moderate, however, no matter in the United States or a Chinese student, this correlation seems to have diminished with the times.

Social capital theory (Coleman, 1988) suggests that there is a link between parental social capital and child developmental outcomes. Social capital includes social networks, social relationships, and other social resources that facilitate an individual's access to information and skills (Coleman, 1988). Among these social networks, relationships and resources, family and family relations are particularly important as the first important proxy for children's socialization. Coleman (1988) believes that family values, parents' expectations and beliefs, as well as parenting styles and behaviors play an important role in individual success. Parenting styles may directly affect children's academic achievement. Many studies have confirmed the correlation between family rearing style and children and adolescents' academic achievement. Most of them are based on Baumrind's (1966) division of family rearing style, and the research results are consistent. In general, the children of authoritative parenting had higher academic achievement than children and adolescents raised in authoritarian and discretionary parenting (Chen, 2015; Kim & et al., 2018; Pinquart & Kauser, 2017; Weiss & Schwarz, 1996). Specifically, children who are warm, supportive and accepting, and accompanied by appropriately strict parents are more likely to have strong academic performance; children of authoritarian parents, who tended to have high levels of control and low levels of acceptance, were more likely to show lower academic achievement (Masud, Thurasamy & Ahmad, 2015; Shumow, Vandell & Posner, 1998).

For example, a study of about 6,400 high school students found that parents who were warm and accepting toward their children were more likely to be actively involved in their children's education, resulting in higher academic achievement (Steinberg & et al., 1992). The researchers further examined the relationship between high support and high severity of authoritative parenting, high support and low severity of lax parenting, low support and high severity of authoritarian parenting, and low support and low severity of neglect parenting and academic achievement. According to the research results, among the four parenting styles, authoritative parenting style with high warm support and high supervision was significantly positively correlated with high academic achievement, authoritarian parenting style and neglectful parenting style were significantly negatively correlated with academic achievement, and liberal parenting style was not significantly correlated with academic achievement (Park & Bauer, 2002).

## **3. Research Aim and Question**

The above theoretical models, as well as the very limited empirical research, suggest that family socioeconomic status does affect individual academic achievement through family upbringing. However, we only give the basis from the perspective of theoretical analysis and lack enough empirical research to prove the mediating effect of family rearing style. Firstly, both the family stress model and the family investment model called for the emphasis on the process variables of the relationship between socioeconomic status and academic performance, and call for support from empirical studies. Secondly, existing studies still pay little attention to the development and impact of migrant children's academic achievement, especially from the perspective of the relationship or mechanism between family socioeconomic status and parenting style. Based on this, this study mainly investigated the influence of family socioeconomic status and parenting style on the academic achievement of migrant children through empirical analysis. And put forward the following hypotheses:

H1: Family socioeconomic status has a positive impact on the academic achievement of migrant children.

H1a: Family socioeconomic status has a positive impact on the math performance of migrant children.

H1b: Family socioeconomic status has a positive impact on the Chinese performance of migrant children.

## **4. Methodology**

#### 4.1 Data

This study used data on migrant children and their academic performance from two Shanghai NGOs interviewed offline in 2021. It covers presentation charts, family background, school experience, educational expectations, parental involvement in a wide range of information, and other factors. One is Shanghai Sunflower Community Children's Service Center, the other is Shanghai Jiujuan Volunteer Service Association. Among them, the children in Sunflower community children's service center are generally young, mainly in primary schools; Long lead volunteer service society's children are generally older, mainly in middle school. A random sample of students and their parents were then surveyed from the sampled classes, 50% from each institution.

The research team surveyed children and parents at the two institutions. The children's survey was conducted in the classroom and supervised by a research group research assistant teacher. Each research assistant teacher is responsible for a sample class. Students completed the survey during a regular 45-minute class period, and questionnaires were collected after class. At the same time, the team distributed a parallel parental survey to the children. The children were asked to take the parental survey home and asked their parents to participate. Students are required to return the questionnaire the next day. The response rates of children surveyed by parents were 98% and 90%, respectively.

The NGO was responsible for aggregating the child survey data assigned to each child and the parent survey data to form the complete dataset for this study. The sample included 100 children and 100 parents, and the final valid sample was 91. This study used descriptive statistics to explore the family financial, human, and social capital of the sample children and then uses a series of regression models to examine the contribution of these factors to children's academic achievement in mathematics and Chinese.

#### 4.2 Measures

##### 4.2.1 Dependent Variable

The dependent variables are children's math grades, Chinese grades, and comprehensive grades respectively, which are represented by Y1, Y2, and Y3. In China's K12 education scenario, mathematics and Chinese are two main courses, and the main curriculum performance is usually considered to be a core indicator for academic assessment. The comprehensive grades are represented by the weighted average of math and Chinese grades, that is, children's academic performance is measured by children's school grades. The grade numbers are 1 = D, 2 = C, 3 = B, and 4 = A.

##### 4.2.2 Independent Variables

- Family socioeconomic status was measured by the following parental self-reported variables, denoted by X1 below. Low-income was coded 1 if the parent's reported annual household income was 50000 RMB or less, and 0 otherwise. (Criteria for identifying the financial status of low-income poor families applying for special assistance in Shanghai)
- Parental educational attainments were measured by the father's education and mother's education separately, denoted by X2 below. Father high school and mother high school were coded 1 if the parent had a high-school education or higher; otherwise, it was coded 0.
- Parent-aspiration / expectation: two variables were used to measure parental beliefs concerning their child's future performance, denoted by X3 and X4 below. Aspiration referred to desired levels of future educational attainment, while expectation referred to realistic beliefs about their child's future educational attainment. Parents were asked "What is the highest level of education you would like your child to achieve?" and "Realistically speaking, what is the highest level of education that you think your child will achieve?" Parent-aspiration and parent-expectation were coded as 1 = elementary school, 2 = middle school, 3 = high school, 4 = college & university and 5 = graduate school.
- Parental involvement: Three questions in the parent survey focused on parental involvement in their child's education. Parents were asked how often they contacted their child's teachers, helped their child with homework at home, and talked with their child about school. Three variables—contact, tutor, and communication – were used to measure parental involvement. These variables were coded as 1 = never, 2 = a few times, 3 = sometimes and 4 = often. In parallel to the parent survey questions, children were asked two questions about their parents and homework: "How often does your father tutor your homework at home?" and "How often does your mother tutor your homework at home?" Two variables, father tutor and mother-tutor, based on the children's responses, were included in the study. These variables were coded as 1 = never, 2 = a few times, 3 = sometimes and 4 = often.

In addition, parents were asked whether they knew where their child was after school and the names of their child's best friends. Accordingly, two dichotomous variables were created, know-where and know-friend, based upon parents' responses (1 = yes, I know; and 0 = no, I don't know) to measure parental monitoring. The

variables above are denoted by X4, X5, X6, X7, X8, and X9, respectively.

• Control variables: Gender was coded 0 if the child was a male and 1 if the child was a female. School- mobility was coded 1 if the child had attended more than one school since entering primary school and 0 if the child had attended only the current school. One-child was coded 0 if there was only one child in the family and 1 if there was more than one child in the family. The variables above are denoted by X10, X11, and X12, respectively.

Table1. Variable definitions

variable		label	operation definition
Dependent variable	math grades	Y1	The grade numbers are 1 = D, 2 = C, 3 = B, and 4 = A.
	Chinese grades	Y2	
	comprehensive grades	Y3	
Independent variables	Low-income	X1	Low-income was coded 1 if the parent's reported annual household income was 50000 RMB or less, and 0 otherwise.
	Parental educational attainments	X2	If the parent has a high school education or higher, the number is 1; Otherwise, it is encoded as 0.
	Parent-aspiration	X3	Parent-aspiration and parent-expectation were coded as 1 = elementary school, 2 = middle school, 3 = high school, 4 = college & university and 5 = graduate school.
	Parent-expectation	X4	
	contact	X5	These variables were coded as 1 = never, 2 = a few times, 3 = sometimes and 4 = often.
	Father-tutor	X6	
	Mother-tutor	X7	
	Know-where	X8	1 = yes, I know; and 0 = no, I don't know
	Know-friend	X9	
Control variables	Gender	X10	Gender was coded 0 if the child was a male and 1 if the child was a female.
	School- mobility	X11	School- mobility was coded 1 if the child had attended more than one school since entering primary school and 0 if the child had attended only the current school.
	One-child	X12	One-child was coded 0 if there was only one child in the family and 1 if there was more than one child in the family.

## 5. Analysis and Results

### 5.1 Descriptive Statistics

Table 2 shows descriptive statistics of migrant children and their family characteristics. The study sample of 91 children was nearly evenly split between males and females. Thirty-nine percent of migrant children are the only children in their families, nearly half of them come from families with an annual household income of less than RMB 50,000, and half of the migrant children attend more than one school. In terms of parental education, 39% of migrant children's parents have received higher education. In terms of academic performance, math scores were better than Chinese scores, but there was no significant difference between them, with mean values of 2.67 (SD=0.93) and 2.59 (SD=0.94), respectively.

Overall, parents have high expectations and aspirations for their children's future educational achievements, as shown in Table 2, with an average of 4.32 (SD = 0.49). The results also showed that immigrant parents were only moderately involved. Among the two parental control variables, 78% of migrant parents knew where their children were after school and 59% knew the names of their children's best friends.

Table 2. Descriptive statistics

	Number	%
Female	91	48

Only child	91	39
Low-income family	91	47
Father or mother has a high-school degree	91	39
Attended more than one school	91	51
Know where the child is after school	91	78
Know child's friend	91	59
	Mean	SD
Parent-aspiration	4.32	0.49
Parent-expectation	4.13	0.60
Contact teacher	2.56	0.82
Father-tutor	2.38	1.02
Mother-tutor	2.46	1.04
Math-grade	2.67	0.93
Chinese-grades	2.59	0.94
Comprehensive-grades	2.63	0.84

### 5.2 Regression Results

Table 3 shows the regression results of the relationship between the academic performance of migrant children and the socioeconomic relationship of their families. In this study, the academic performance of migrant children is specifically divided into mathematical performance, Chinese performance, and comprehensive performance, namely, the weighted average score of mathematical performance and Chinese performance, and then the family socioeconomic relationship between them and migrant children is respectively regressed, and the influence of various variables on the academic performance of migrant children is analyzed.

This study first regressed the family socioeconomic relationship of migrant children with their math scores, and the results are shown in the first column of Table 3. The results show that low-income families have a strong negative correlation with the math scores of migrant children ( $P < 0.001$ ), and the math scores of migrant children in low-income families with an annual per capita income of less than 50,000 yuan are lower, which is the same as our hypothesis. The educational level of parents also has a strong positive correlation with the mathematics achievement of migrant children ( $P < 0.001$ ), that is, the higher the educational experience of the father or mother or parents, the higher the possibility of their children obtaining high mathematics achievement. In addition, parents' expectations, the degree of contact with children's teachers, the frequency of the father's homework help, and the frequency of the mother's homework help also positively promote children's math performance. Parents' knowledge of their children's whereabouts after school and their best friends also had a strong positive relationship with children's math scores, which was also in line with the impact of parenting style determined by family socioeconomic relations on scores mentioned in the review.

Secondly, this study regressed the family socioeconomic relationship of migrant children with their Chinese language scores, as shown in the second column of Table 3. The results show that low-income families have a negative correlation with the Chinese scores of migrant children, but it is not as significant as that for mathematics. In low-income families, the Chinese scores of migrant children with an annual per capita income of less than 50,000 yuan are lower, which is the same as our hypothesis. The educational level of parents also has a positive correlation with the Chinese scores of migrant children, that is, the higher the educational experience of the father or mother or parents, the higher the possibility of their children obtaining high Chinese scores. In addition, parents' expectations, the degree of contact with children's teachers, the frequency of the father's homework help, and the frequency of the mother's homework help also positively promote children's Chinese performance. Parents' knowledge of their children's whereabouts after school and their best friends were also positively correlated with children's language scores, which was also in line with the influence of parenting style determined by family socioeconomic relations on scores mentioned in the review. However, the frequency of parents' homework tutoring for children has a strong correlation with children's Chinese scores, which are different from math scores, and may also be caused by subject characteristics. Compared with mathematics, the improvement of Chinese performance needs to be realized through the substantive participation of parents in education, such as parent-child reading, the cultivation of children's reading ability, and the emphasis on the improvement of Chinese ability. On the contrary, because of the difficulty and scientific nature of math, parents may need to invest more extracurricular education resources to improve math scores.

Finally, this study regressed the family socioeconomic relations of migrant children and their comprehensive performance, as shown in the last column of Table 3. The results show that low-income families have a strong negative correlation with the comprehensive performance of migrant children ( $P < 0.001$ ). In low-income families, that is, migrant children with an annual per capita income of less than 50,000 yuan have lower comprehensive performance, which is in line with our hypothesis H1. Parents' education level and parents' expectations also had a strong positive correlation with the comprehensive scores of migrant children ( $P < 0.001$ ), that is, the higher the educational experience of the father or mother or parents, the higher the possibility of their children to obtain high comprehensive scores. The higher parents' expectations for their children, the better their children's academic performance tends to be. This may be because the higher parents' expectations, the more attention they pay to their children's education and the more frequent supervision they give, which promotes the improvement of their children's performance. In addition, parents' expectations, the degree of contact with children's teachers, the frequency of the father's homework help, and the frequency of the mother's homework help also positively promote children's comprehensive performance. Parents' knowledge of children's whereabouts after school and their best friends also have strong positive relationships with children's academic performance, which is also in line with the influence of family parenting style determined by family socioeconomic relations on performance mentioned in the review.

Table 3. Regression of children's academic performance (standardized B coefficient)

	Y1	Y2	Y3
X1	-1.192***	-0.018	-0.428***
X2	0.761***	0.137	0.083
X3	0.154	0.127	0.121
X4	0.186	0.244	0.290***
X5	0.310	-0.102	0.331***
X6	0.276	0.464***	0.110
X7	0.336	0.289	0.067
X8	0.682***	0.151	0.143
X9	0.036	0.121	0.046
X11	-	-	-
X12	-	-	-
X13	-	-	-
$R^2$	0.832	0.807	0.827
$R^2$ change	0.816	0.789	0.812

$P < 0.05$ ; \*\*  $P < 0.01$ ; \*\*\*  $P < 0.001$  ( $n = 91$ ).

## 6. Discussion

This study hypothesized that higher family socioeconomic status has a positive relationship with the Chinese and math scores of migrant children, that is, a positive promoting effect. The research results support the above hypothesis. The results are consistent with the hypothesis that family socioeconomic status and family rearing style can have an important impact on the academic performance of migrant children. For mathematics achievement, family socioeconomic status can significantly predict the impact on the mathematics achievement of migrant children. The higher the level of family socioeconomic status, the less likely the migrant children are to have low mathematics achievement. For Chinese scores, the higher the family socioeconomic status, the lower the likelihood of Chinese scores; For comprehensive scores, family socioeconomic status can significantly predict the impact on the academic performance of migrant children. The higher the level of family socioeconomic status, the lower the possibility of low academic performance of migrant children. However, relatively speaking, the impact of family socioeconomic status on the mathematical performance of migrant children is more significant than its impact on Chinese performance.

First of all, the association between family socioeconomic status and mathematical achievement of migrant children is consistent with previous studies (Liu & et al., 2019; Sirin, 2005; White, 1982). As mentioned in the review, three meta-analyses on the relationship between family socioeconomic status and academic performance of American and Chinese students consistently reveal the correlation between socioeconomic status and academic performance of students. The results of this study echo the findings of Sirin (2005) that family socioeconomic status is more strongly associated with students' math performance than with their verbal performance.



Second, why does it turn out that family socioeconomic relationships have a stronger impact on children's math scores than on their language scores? On the one hand, according to the family investment theory (Duleep, 1998), the improvement of math performance may require parents to invest more material support and invest more extracurricular education resources, for example, hiring home tutors for children, enrolling children in after-school enrichment classes or cram schools, etc., because of the difficulty and subject nature of math. Making it difficult for parents to tutor their children in math. On the other hand, migrant children live in cities with their parents, which has more advantages than rural Chinese education, and they need more emotional and time companionship from parents with material support. This also confirms that the impact of family socioeconomic status on the language performance of migrant children is not as strong as that of mathematics.

Therefore, the improvement of Chinese performance may require parents' substantial educational participation and input, such as parent-child reading, and joint parent-child educational activities that broaden their horizons, such as visiting museums, children's palaces, tourism, sports, and so on. Moreover, in the current education environment, elementary student's parents and teachers by traditional ideas, such as "learn math, science, everywhere" and "take several scholars to the world", generally pay more attention to the development of mathematical thinking ability, provide much Olympic math tutoring for children, not enough attention to the language ability (such as verbal expression, reading ability, writing ability, etc.) of the ascension, in addition, compared with Chinese, mathematics is more rigorous and standardized. In most cases, input and output can be directly proportional. But the Chinese subject is different, its flexibility and development are stronger, the input is not necessarily output, or the effect is slow. Therefore, although the level of family socioeconomic status has an impact on the Chinese scores of migrant children, it is not as big as its impact on the mathematical scores of migrant children.

## **7. Revelation and Limitation**

### *7.1 Revelation*

Our research findings provide the enlightenment in light of certain aspects: first, family socioeconomic status can affect the parenting style of parents, and then affect the development of children's academic achievement. Both migrant children and urban children, for the low social and economic status of family, family socioeconomic status is stable to a certain extent, in a short period of time may not be a big change, but the parents if a way to adopt a more active and more emotional atmosphere of warmth, may make up for the lower family socioeconomic status to the flaws of the children's academic development. Migrant children, in particular, may face lower family socioeconomic status and unstable living environments than urban children. If their parents give them more emotional support, it may be of great benefit to their academic development and even physical and mental health.

Second, for the improvement of Chinese scores, parents need to participate and invest substantively in education, such as parent-child reading, cultivate children's reading hobbies and abilities, jointly engage in parent-child education activities that broaden their horizons, and pay attention to the improvement of Chinese ability (such as speech expression, reading ability, writing ability, etc.). Whether migrant or urban children, if parents can effectively participate in their children's learning and growth, it will benefit the children's personal development.

Third, floating children in family education on the material resources and manpower into maybe very limited, and carry out cooperative education, namely, to establish a family education and school education, community education effective link mechanism is very important for a long time, education should not be all on one side main body responsibility, nor will the family education and school education, social education completely separated, should actively carry out cooperative education. It is necessary to establish the home-school cooperation mechanism and the family and community education connection mechanism to form a good system of full cooperation and connection between family, school and society.

### *7.2 Limitation*

Of course, there are still shortcomings in this study. First, in terms of research tools, the parenting style questionnaire is answered by one parent, which may have social praise effect. Follow-up research can adopt the multi-subject reporting method of children's self-reports and parents' reports to enhance the reliability of the research results. Second, regarding the socioeconomic status of the family, this study only used the objective socioeconomic status as the measurement index, and the subsequent research can also include the subjective socioeconomic status, so as to reflect the individual's socioeconomic status more comprehensively and truly. Third, one of the theoretical bases of this study is the family stress model, in which there are still other intermediate variables related to parental interaction between family socioeconomic status and parenting style, and subsequent studies can continue to include such variables to explore the applicability of this model.

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