



# Parental Education Anxiety and Investment in Summer Enrichment Programs: Factors and Strategies for Balance

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**Abstract.** Study aims to explore the factors influencing parental education anxiety when choosing summer enrichment programs and analyze its relationship with the amount of parental educational investment, in order to reduce parental education anxiety. Against the backdrop of parents being eager to enroll their children in summer programs and investing heavily, the study employs Fromm's theory of sense of belonging to delve into the factors affecting parental anxiety. To achieve this research objective, data was collected through a questionnaire survey to quantitatively understand the level of parental education anxiety and its relationship with the amount of educational investment. The study links parental education anxiety with the investment in summer enrichment programs and examines their mutual impact. The experimental results demonstrate that parental education anxiety is influenced by multiple factors, including academic achievement anxiety, social comparison pressure, education investment anxiety, and family status and identity. Furthermore, it was found that there is a positive correlation between the amount of parental educational investment and their level of education anxiety, indicating that the greater the investment, the higher the anxiety. Additionally, based on the mediation model, academic achievement pressure and social comparison pressure play a mediating role in their relationship. To address the issues behind this phenomenon, several coping strategies are proposed, such as providing appropriate educational resources, improving the school learning environment, offering counseling and support, etc., to assist parents in developing reasonable expectations for their children's education and alleviating education anxiety.

**Keywords:** Education anxiety; Summer enrichment programs; Fromm's theory of sense of belonging.

# 1 Introduction

## 1.1 Question Raising

### **Selecting Summer Enrichment Programs, a Parental Education Dilemma.**

According to a report by Xinhua News Agency titled "Seven to Eight Hours a Day! What's Taught in the Booming Summer Training Classes," in recent years, the enrollment for summer enrichment programs in China has been soaring. Some training institutions start their classes on the very day school exams end, and the most renowned programs even face a shortage of available slots, leaving parents frustrated with their struggle to secure a spot for their children in their desired classes. This reflects the pressure from both schools and society for academically outstanding students to participate in summer enrichment programs. Parents hope that by enrolling their children in these programs, they can get a head start and maintain a competitive edge in school.

According to data from the China Institute for Educational Finance Research Household Survey (Wei Yi, 2019<sup>[1]</sup>), with the improvement of family financial capabilities and parental educational backgrounds, the participation rate in extracurricular education has also increased. This indicates that some families possess sufficient financial resources and educational support to enable their children to attend summer enrichment programs, with the expectation of enhancing their academic performance.

At the same time, selecting the appropriate summer enrichment program has become a predicament for parents. Firstly, they worry about whether their child's academic achievements can meet their expectations and hope that attending summer programs will enhance their learning abilities. Secondly, the current phenomenon of training institutions "peddling anxiety," promoting educational competition, and preying on parents' wallets appears to have become a winning strategy for some educational institutions in attracting students (Li Qing, 2022<sup>[2]</sup>). Moreover, the high cost of summer enrichment programs puts financial pressure on parents. They need to weigh the relationship between investment and returns, concerned that spending a considerable amount of money might not guarantee satisfactory results.

### **Education Anxiety Among Middle Class Families.**

Currently, the issue of educational anxiety has become increasingly prominent, and middle-class families typically aspire to provide the best educational resources for their children. Some British parents strongly perceive themselves as "educational consumers." They invest a significant amount of time and effort into choosing private secondary schools for their children. They believe that educational success determines their children's future prospects, is the primary means to maintain or achieve social status, and enter the privileged social strata - a form of educational consumption. (Salhi Baor et al. 2003<sup>[3]</sup>)

However, in the pursuit of their children's success, some parents may become overly reliant on summer classes, sacrificing their children's rest time. They expect these classes to significantly boost their children's academic performance within a short period. Unfortunately, the outcomes are often less than satisfactory, leading parents to experience a sense of disappointment and getting trapped in a cycle of anxiety.

## 1.2 Concept definition

### **Summer enrichment programs.**

Summer school is an educational training program conducted during students' summer vacations, with the aim of providing supplementary learning opportunities and subject-specific tutoring. The definition and characteristics of supplementary classes primarily pertain to extracurricular, privately undertaken instructional and remedial activities in cultural subjects by primary and secondary school students, distinct from their formal education. This is predominantly manifested through participation in holiday or weekend schools and enrollment in daily supplementary classes (Wang Yousheng, 1997<sup>[4]</sup>). Summer supplementary classes, a subtype of supplementary classes, specifically refer to educational activities organized for students during their summer break, offering a distinct curriculum and instructional approach compared to formal school education. As an extracurricular educational endeavor, students often participate involuntarily. The process of children attending supplementary classes can be depicted as a "disciplinary" process achieved under the joint authority of parents and the supplementary classes (He Ting, 2020<sup>[5]</sup>). This aspect contributes to the suboptimal effectiveness of many supplementary classes and may even lead to family disputes during the course, further intensifying parental educational anxiety. These factors underscore the necessity for a more profound examination and discussion of summer schools.

### **Concept definition education anxiety.**

In domestic educational research, educational anxiety primarily refers to parental educational anxiety. Educational anxiety stems from an excessive concern regarding children's academic performance, manifested as apprehension that their children may not gain admission to prestigious schools, receive equitable treatment, or ultimately secure a place in a reputable university, thereby hindering their prospects of finding gainful employment in society (Wang Hongcai, 2012<sup>[6]</sup>). Simultaneously, other studies define educational anxiety as a negative emotional state that students develop within the educational environment, characterized primarily by concerns and uneasiness regarding academic achievements and academic progress. This definition accentuates the psychological aspect of educational anxiety and underscores its connection with factors such as academic pressure and competition stress.

## 1.3 Theoretical basis

### **Fromm's Theory of Sense of Belonging.**

This theory focuses on the relationship between individuals and society, and parental anxiety may stem from concerns about their child's academic achievement and social status, as well as their own identification with the role and status of the family in education. This theory helps to understand the relationship between parental anxiety and family well-being. By applying Fromm's theory of sense of belonging, we can delve into the reasons for parental anxiety. Here are some factors that may contribute to parental anxiety:

Firstly, academic achievement anxiety: Parents may feel anxious because they believe their child's academic performance is closely tied to their social status and future success. They may worry that their child won't achieve the expected grades in the highly competitive educational environment, affecting their future development. Research indicates that parents often expect their children to gain admission to prestigious universities. However, the reality is that the enrollment rate at such universities is only around 5%, and children may even face academic streaming as early as the middle school entrance examination. The stark disparity between parental expectations and the harsh reality engenders profound anxiety in parents regarding their children's education (Yin Xia, Liu Yongcun, Zhang Heping, & Tu Wenting. 2022<sup>[7]</sup>).

Secondly, social comparison pressure: Parents may be influenced by pressure from other families and society, hoping their child can outperform others academically. They may worry that their child will miss opportunities to improve academic competitiveness during summer vacation, leading to feelings of anxiety and unease. In research examining the influence of peer pressure and parental expectations on students' participation in supplementary education, it was found that the more frequent the communication among parents, the more likely they were to invest in extracurricular training to enhance their children's academic performance. This reflects the tendency of parents to conform and exhibit irrational behavior due to peer pressure (Chen Binli and Bai Xiaoxi. 2015<sup>[8]</sup>).

Fourthly, education investment anxiety: Parents may experience anxiety regarding their investments in their children's education, especially when they dedicate substantial amounts of time, money, and effort to summer school tutoring. They believe that increasing investments in human capital within the family will correspondingly increase the returns on educational investments. (Becker. 1964<sup>[9]</sup>). Thus, they hope these investments will yield the anticipated returns; otherwise, they may feel concerned and anxious.

Fifthly, family status and identity: Parents may associate their child's academic achievement with the family's social status and sense of identity. They believe that a higher level of education for their child will increase the likelihood of securing an ideal job and attaining a higher social status in the future. Moreover, they see education as a means to change individuals' attitudes and habits, thereby enhancing their lives and increasing their sense of well-being. (Lennox and Wolfe. 1984<sup>[10]</sup>). It is only when their child achieves outstanding results that they can gain recognition and respect in society; otherwise, they may experience anxiety and disappointment. Parents may link their child's academic achievement to the family's status and identity. They may believe that only exceptional academic performance will earn recognition and respect in society, otherwise leading to feelings of anxiety and disappointment.

## 2 Data variables and methods

### 2.1 Research Design

#### Research methods.

The article adopted a questionnaire survey method, distributing the questionnaires through random sampling via the online platform "Questionstar." A total of 221 questionnaires were distributed, and 221 were successfully collected, resulting in a response rate of 100%. Data analysis was conducted using the website <https://spssau.com> in conjunction with SPSS software.

#### Research Approach.

The research hypothesis for this study is that parental anxiety in choosing summer enrichment programs (independent variable, X) may have a certain relationship with the investment in summer programs (dependent variable, Y). The study also investigates the presence of mediator and moderator variables. The main research content of this article consists of the following four parts:

Part One: Frequency analysis was performed to examine whether the majority of the sample belongs to the middle-class, ensuring that the sample is more representative.

Part Two: Data processing was conducted for the fifth part of the questionnaire, which covered four dimensions, and the parental education anxiety in choosing summer enrichment programs. The average scores of academic achievement anxiety, social comparison pressure, education investment anxiety, and family status and identity pressure were calculated for further analysis.

Part Three: the research explores the relationships among different factors and parental education anxiety when choosing summer classes, focusing mainly on academic achievement anxiety, social comparison pressure, education investment anxiety, and family status and identity pressure, and their correlation with parents' choice of summer classes. Pearson model analysis was employed in this section, using the following formula:

$$r = \frac{\sum(X_i - \bar{X})^2 (Y_i - \bar{Y})}{\sqrt{\sum(X_i - \bar{X})^2 \sum_{i=1}^n (Y_i - \bar{Y})^2}}$$

The objective is to calculate which factors among the aforementioned ones have the closest relationship with education anxiety and have the most significant impact on the degree of education anxiety. This serves as the basis for regression analysis.

Part Four: In this section, a hierarchical regression analysis model is used to validate the regression coefficients of various factors. In this section, academic achievement pressure ( $Y_1$ ) and social comparison pressure ( $Y_2$ ) are used as dependent variables, and parental education anxiety (X) as the independent variable for the hierarchical regression model analysis. The samples are divided into two different levels (a and b) for analysis. The formula for this model is as follows:

$$\begin{aligned} Y_1 &= \beta_{0a} + \beta_a X_a + \beta_a X_a + \epsilon_a \\ Y_2 &= \beta_{0b} + \beta_b X_b + \beta_b X_b + \epsilon_b \end{aligned}$$

Next, a similar method is used to verify the analysis when Y1 and Y2 are independent variables, and the educational investment cost for summer classes is the dependent variable. After confirming the relationships, a stepwise regression analysis is conducted by observing the changes in  $R^2$  and F-values when moving from stratum a to stratum b ( $b = a + 1$ ), making it easier to observe the changes in  $R^2$  values when new X variables are introduced. The formula used in this analysis is:

$$R_{\text{change}}^2 = R_b^2 - R_a^2$$

This type of analysis is typically used to determine which independent variables have the greatest explanatory power for the dependent variable, which is used for subsequent mediation model analysis.

Part Five: It mainly involves mediation effect analysis, combined with the factors with the highest correlation. In this section, for each Bootstrap sample, the mediation effect ab is calculated. Then, based on these mediation effect values, a Bootstrap sampling distribution is constructed. Finally, the Bootstrap confidence interval for the indirect effect is calculated. The significance of the mediation effect is tested by examining whether the Bootstrap confidence interval contains zero. If the Bootstrap confidence interval does not contain zero, it can be concluded that there is a mediation effect.

Part Six: In the final section, the experimental results were analyzed and interpreted.

## Data analysis.

**Table 1.** Basic household statistics table

Results of frequency analysis				
Name	Options	Frequency	Percentage (%)	Cumulative percentage (%)
Identity of parent	Father	91	41	41
	Mother	130	59	100
Number of children	1	102	46	46
	2	91	41	87
	3 and up	29	13	100
Sex of the child	Male	126	57	57
	Women	95	43	100
The highest level of literacy of the child's father	Junior high school and below	9	4	4
	High school/technical secondary school/vocational high school	80	36	40
	Junior college	53	24	64
	Undergrad	49	22	86
	Masters	24	11	97
	Dr.	7	3	100
	Junior high school and below	11	5	5

The highest level of literacy of the child's mother	High school/technical secondary school/vocational high school	75	34	39
	Junior college	42	19	58
	Undergrad	38	17	75
	Master's	27	12	87
	Dr.	29	13	100
Total annual income of the household	100,000-200K (excluding 200K)	66	30	30
	200,000-400,000 (excluding 400,000)	44	20	50
	400,000-600,000 (excluding 600,000)	38	17	67
	600,000-800,000 (excluding 800,000)	38	17	84
	800,000-960,000 (excluding 960,000)	29	13	97
	2 million - 4 million (excluding 4 million)	7	3	100
The job of the child's father	Managerial staff	46	21	21
	Private business owners	33	15	36
	Professional and technical personnel in government departments, state-owned enterprises and public institutions	51	23	59
	Professional and technical personnel from large and medium-sized private enterprises and foreign-funded enterprises	33	15	74
	Clerical staff (including general civil servants, clerks; Grassroots managers of state-owned enterprises and public institutions)	13	6	80
	Military	2	1	81

	Individual industrial and commercial businesses	35	16	97
	Business and service personnel	2	1	98
	Farmers, herders, fishermen	2	1	99
	Unemployed, unemployed, laid off	2	1	100
The work of the child's mother	Managerial personnel	20	9	9
	Private business owners	40	18	27
	Professional and technical personnel in government departments, state-owned enterprises and public institutions	27	12	39
	Professional and technical personnel from large and medium-sized private enterprises and foreign-funded enterprises	4	2	41
	Clerical staff (including general civil servants and clerks; Grassroots managers of state-owned enterprises and public institutions)	33	15	56
	Stay home full time with the kids	20	9	65
	Military	2	1	66
	Business and service personnel	31	14	80
	Farmers, herdsmen, fishermen	2	1	81
	Freelancer	33	15	96
	Retirement	2	1	97
	Jobless, unemployed, laid off	7	3	100
	total	221	100	100

As can be seen from the above Table 1, more than 50% of the sample choose "mother" as the identity of parent. In addition, the proportion of father sample is



41.00%. From the distribution of the number of children, the majority of samples are "1", the proportion is 46.00%. And the proportion of 2 samples is 41.00%. For the sex of the child, "male" accounted for the highest proportion of 57.00%. And for the female sample it was 43.00%. In terms of the distribution of the highest education level of the child's father, most of the samples are "high school/secondary school/vocational high school", the proportion is 36.00%. The proportion of "high school/technical secondary school/vocational high school" was 34.00%. The proportion of "100,000 to 200,000 yuan (excluding 200,000 yuan)" was 30.00%. Among the sample, 23.00% chose "professional and technical personnel from government departments, state-owned enterprises and public institutions". From the perspective of the work of the child's mother, more than 10% of the samples are "private business owners". This indicates that most of the families in this sample are middle class families.

**Table 2.** Reliability and validity analysis

Cronbach reliability analysis				
Name	Correction Items Total Correlation (CITC)	$\alpha$ coefficient of deleted terms	Cronbach $\alpha$ coefficient	
Social status and sense of identity stress	0.582	0.804		
Pressure to invest in education	0.656	0.792		
Social comparison stress	0.598	0.804		
Academic achievement stress	0.618	0.799		
Child's dissatisfaction with summer classes	0.577	0.804	0.826	
Parents' dissatisfaction with summer classes	0.618	0.799		
Parents' anxiety about choosing summer classes	0.481	0.818		
The cost of education invested in summer classes	0.525	0.832		

Standardized Cronbach  $\alpha$  coefficient: 0.851

As can be seen from the above Table 2, the value of the reliability coefficient is 0.826, greater than 0.8, which indicates that the reliability quality of the research data is high. For " $\alpha$  coefficient of deleted items", after any item is deleted, the reliability coefficient will not increase significantly, so the item should not be deleted.

For "CITC value", the CITC value of the analysis items is greater than 0.4, indicating that there is a good correlation between the analysis items, but also indicates that the reliability level is good. In summary, the reliability coefficient value of the research data is higher than 0.8, which indicates that the data reliability quality is high and can be used for further analysis.

**Table 3.** Shows the correlation between parents' educational anxiety in choosing summer classes and the input cost of summer classes

Pearson correlation - Standard format

	Aver- ages	Standard Deviation	Educational anxiety in choosing summer classes	The cost of education invested in summer classes
The educational anxiety of choosing summer classes	2.532	1.058	1	
The cost of education invested in summer classes	2.493	1.238	0.620**	1

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

As can be seen from the above Table 3, correlation analysis was used to study the correlation between educational anxiety in choosing summer vacation classes and educational expenses invested in summer vacation classes, and Pearson correlation coefficient was used to express the strength of the correlation. As can be seen from the concrete analysis, the correlation between the educational anxiety of choosing summer classes and the educational expenses invested in summer classes is 0.620, with a significance of 0.01, indicating that there is a significant positive correlation between the educational anxiety of choosing summer classes and the educational expenses invested in summer classes.

**Table 4.** The relationship between parents' educational anxiety in choosing summer classes and various stress factors

Pearson Correlation - Standard format

	Aver- ages	Standard Devia- tion	Educa- tional anxiety in choosing summer classes	Social status and identity pressure	Education invest- ment pressure	Social compari- son pres- sure	Academic achieve- ment pressure
Choose summer classes for educational anxiety	2.532	1.058	1				
Social status and identity pressure	2.470	0.924	0.767**	1			
Education investment pressure	2.463	0.972	0.771**	0.847**	1		

Pearson Correlation - Standard format

	Averages	Standard Deviation	Educational anxiety in choosing summer classes	Social status and identity pressure	Education investment pressure	Social comparison pressure	Academic achievement pressure
Choose summer classes for educational anxiety	2.532	1.058	1				
Social comparison pressure	2.478	0.934	0.774**	0.869**	0.855**	1	
Academic achievement pressure	2.500	0.945	0.774**	0.840**	0.847**	0.873**	1

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

As can be seen from the above Table 4, correlation analysis was used to study the correlation between educational anxiety, social status and identity pressure, educational investment pressure, social comparison pressure and academic achievement pressure in choosing summer vacation classes, and Pearson correlation coefficient was used to express the strength of the correlation. Specific analysis shows that: The four factors of educational anxiety and social status and identity pressure, educational investment pressure, social comparison pressure and academic achievement pressure in choosing summer vacation class are all significant, and the correlation values are 0.767, 0.771, 0.774 and 0.774 respectively, and the correlation values are all greater than 0. It means that there is a positive correlation between educational anxiety and social status and sense of identity pressure, educational investment pressure, social comparison pressure and academic achievement pressure.

**Table 5.** 1 predictive model of the influence of academic achievement pressure on parents' educational anxiety in choosing summer classes

Results of hierarchical regression analysis ( $n=221$ )

	Stratification 1					Stratification 2				
	B	Standard Error	t	p	$\beta$	B	Standard Error	t	p	$\beta$
Constant	2.430**	0.278	8.7390.000	-	1.173**	0.220	5.338	0.000	-	
The sex of the child	0.052	0.129	0.4050.6860.027	0.064		0.093	0.684	0.4950.034		

Results of hierarchical regression analysis ( $n=221$ )

	Stratification 1					Stratification 2				
	<i>B</i>	Standard Error	<i>t</i>	<i>p</i>	$\beta$	<i>B</i>	Standard Error	<i>t</i>	<i>p</i>	$\beta$
Parent's gender	0.090	0.132	0.681	0.497	0.046	0.012	0.095	0.129	0.897	0.006
Choose summer classes for educational anxiety						0.560 **	0.040	14.152	0.000	0.693
$R^2$			0.003					0.481		
Adjust $R^2$			0.006					0.474		
<i>F</i>			$F(2,218)=0.294, p=0.746$					$F(3,217)=67.132, p=0.000$		
$\Delta R^2$			0.003					0.479		
$\Delta F$			$F(2,218)=0.294, p=0.746$					$F(1,217)=200.273, p=0.000$		

Dependent variable: academic achievement stress

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

As we can see from the Table 5, the independent variables in Model 1 are the gender of the child, the gender of the parent, and Model 2 is added on the basis of Model 1. Choose summer classes for educational anxiety, the dependent variable of model 1 is: academic achievement pressure. It can be seen from the above table that the linear regression analysis is carried out with the gender of the child and the gender of the parent as the independent variable, and the pressure of academic achievement as the dependent variable. From the above table, it can be seen that the R-square value of the model is 0.003, which means that the gender of the child and the gender of the parent can explain 0.3% of the change of academic achievement pressure and does not pass the F-test ( $F=0.294, p>0.05$ ), that is, the gender of the child and the gender of the parent do not have an impact on the academic achievement pressure. For model 2: After adding whether students feel educational anxiety when choosing and arranging summer classes on the basis of model 1, the change of F value shows significant ( $p < 0.05$ ), which means whether students feel educational anxiety when choosing and arranging summer classes? The addition has explanatory significance for model 2. In addition, the R-square value increased from 0.003 to 0.481, which means whether you feel educational anxiety when choosing and arranging summer vacation classes? It could explain 47.9% of the stress of academic achievement. Specifically, do you feel educational anxiety when choosing and arranging summer classes? The regression coefficient was 0.560 and showed significance ( $t=14.152, p=0.000 < 0.01$ ), which means that whether you feel educational anxiety when choosing and arranging summer classes will have a significant positive impact on academic achievement pressure.

**Table 6.** 2predictive model of the influence of social comparative stress on parents' educational anxiety in choosing summer classes

Results of hierarchical regression analysis (n=221)										
	Stratification 1					Stratification 2				
	B	Standard Error	t	p	$\beta$	B	Standard Error	t	p	$\beta$
Constant	2.215**	0.274	8.0830.000	-	1.013**	0.222	4.556	0.000	-	
Sex of the child	0.007	0.127	0.0540.957	0.004	0.004	0.094	0.044	0.965	0.002	
Parent's gender	0.156	0.130	1.2070.229	0.082	0.083	0.096	0.857	0.392	0.043	
Choose summer classes for educational anxiety					0.535**	0.040	13.365	0.000	0.671	
$R^2$			0.007				0.455			
Adjust $R^2$			0.002				0.448			
F	F (2,218)=0.740,p=0.478					F (3,217)=60.436,p=0.000				
$\Delta R^2$			0.007				0.448			
$\Delta F$	F (2,218)=0.740,p=0.478					F (1,217)=178.623,p=0.000				
Dependent variable: social comparative stress										
* $p < 0.05$ ** $p < 0.01$										

A total of 2 models were involved in this hierarchical regression analysis. The independent variables in Model 1 are the gender of the child, the gender of the parent, and Model 2 is added on the basis of Model 1. Choose summer classes for educational anxiety The dependent variables of the model are as follows: social comparative pressure.

From the Table 6 above, the gender of the child, the gender of the parent as the independent variable, and the social comparative pressure as the dependent variable for linear regression analysis, from the table above, it can be seen that the R-square value of the model is 0.007, which means that the gender of the child, the gender of the parent can explain 0.7% of the change of social comparative pressure. When F test was conducted on the model, it was found that the model did not pass the F test ( $F=0.740$ ,  $p > 0.05$ ), that is, the gender of the child and the gender of the parent did not affect the social comparative pressure. As for model 2, after adding whether one feels educational anxiety when choosing and arranging summer classes on the basis of model 1, the change of F value shows a significant ( $p < 0.05$ ), which means that whether one feels educational anxiety when choosing and arranging summer classes has explanatory significance for the model. In addition, the R-square value increased from 0.007 to 0.455, which means that whether people feel educational anxiety when choosing and arranging summer classes can produce 44.8% of the explanatory power for social comparative stress. Specifically, does it mean that you feel educational anxiety when choosing and arranging summer classes? Will have a significant positive impact on social comparative stress.

**Table 7.** A predictive model of the effects of social comparative stress and academic achievement pressure on educational anxiety of summer school engagement

Results of hierarchical regression analysis (*n*=221)

	Stratification 1					Stratification 2				
	<i>B</i>	Standard Error	<i>t</i>	<i>p</i>	$\beta$	<i>B</i>	Standard Error	<i>t</i>	<i>p</i>	$\beta$
Constant	2.260 *	0.364	6.2050.000	-	0.065	0.305	0.2130.831	-		
The sex of the child	0.109	0.169	0.6480.518	0.044	0.127	0.122	1.0440.298	0.051		
Parent's gender	0.047	0.172	0.2720.786	0.018	0.074	0.125	0.5960.552	0.029		
Social comparison stress					0.538 *	0.133	4.0380.000	0.406		
Academic achievement stress					0.413 *	0.131	3.1400.002	0.315		
<i>R</i> <sup>2</sup>			0.002				0.487			
Adjust <i>R</i> <sup>2</sup>			0.007				0.478			
<i>F</i>			<i>F</i> (2,218)=0.263, <i>p</i> =0.769				<i>F</i> (4,216)=51.362, <i>p</i> =0.000			
$\Delta R^2$			0.002				0.485			
$\Delta F$			<i>F</i> (2,218)=0.263, <i>p</i> =0.769				<i>F</i> (2,216)=102.217, <i>p</i> =0.000			

Dependent variable: Education cost invested in summer class

\* *p*<0.05 \*\* *p*<0.01

From the above Table 7, we can see that the gender of the child and the gender of the parents are taken as independent variables, and the education cost invested in the summer vacation class is taken as the dependent variable for linear regression analysis. From the above table, we can see that the R-square value of the model is 0.002, which means that the gender of the child and the gender of the parents can explain 0.2% of the change of the education cost invested in the summer vacation class. When F-test was conducted on the model, it was found that the model did not pass the F-test (*F*=0.263, *p*>0.05), indicating that the gender of the child and the gender of the parent did not have an impact on the education cost invested in the summer class. Therefore, the impact of the independent variable on the dependent variable could not be analyzed in detail. The analysis was over. For model 2, when social comparative pressure is added to model 1, the change of F value is significant (*p*<0.05) after academic achievement pressure is added, which means that social comparative pressure and academic achievement pressure have explanatory significance to the model. In addition, the R-square value increased from 0.002 to 0.487, which means that social comparison pressure and academic achievement pressure can produce 48.5% explanatory power for the education expenditure invested in summer class. Specifically, the regression coefficient

value of social comparative pressure is 0.538, and shows a significant ( $t=4.038$ ,  $p=0.000<0.01$ ), which means that social comparative pressure will have a significant positive impact on the educational expenses invested in summer classes. The regression coefficient value of academic achievement pressure is 0.413, and presents a significant ( $t=3.140$ ,  $p=0.002<0.01$ ), which means that academic achievement pressure will have a significant positive impact on the educational cost invested in summer class.

**Table 8.** Mediating model analysis of anxiety in choosing summer classes on summer class input

Mediating model analysis (n=221)				
	summer class input	Social comparison stress	Academic achievement stress	summer class input
Constant	0.653*(2.051)	0.705**(3.645)	0.894**(4.573)	0.055(0.180)
The sex of the child	0.065(0.490)	-0.035(-0.428)	-0.094(-1.157)	0.111(0.914)
Parent's gender	-0.056(-0.414)	0.060(0.722)	-0.009(-0.107)	-0.080(-0.646)
Choose summer classes for educational anxiety	0.726**(11.617)	0.682**(17.962)	0.694**(18.085)	0.201*(2.129)
Social comparison stress				0.446**(3.204)
Academic achievement stress				0.318*(2.308)
$R^2$	0.385	0.601	0.602	0.498
Adjust $R^2$	0.376	0.595	0.597	0.486
$F$	F (3,217)=45.266,p=0.000	F (3,217)=108.771,p=0.000	F (3,217)=109.505,p=0.000	F (5,215)=42.669,p=0.000

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

It can be seen from the above Table 8 that the analysis of intermediary effect involves a total of 4 models, which are as follows: Education cost invested in summer classes =0.653+0.065\* child's gender -0.056\* parent's gender +0.726\* Educational anxiety social comparative pressure of choosing summer classes =0.705-0.035\* Child's gender +0.060\* parent's gender +0.682\* Educational anxiety and academic achievement pressure of choosing summer classes =0.894-0.094\* Child's gender -0.009\* parent's gender +0.694\* Choice of summer class's educational anxiety in summer class Input education cost =0.055+0.111\* child's gender -0.080\* parent's gender +0.201\* Choice of summer class's educational anxiety +0.446\* social comparative pressure +0.318\* Academic achievement stress

It is known that social comparative pressure and academic achievement pressure have mediating effects.

### **3 Conclusion**

#### **3.1 Research Conclusions**

The results of this study show that there is a significant positive relationship between parents' educational input and their anxiety about summer class selection. At the same time, academic achievement anxiety and social comparative pressure play a mediating role between parents' educational engagement and choice anxiety, while parents' dissatisfaction with summer classes plays a moderating role.

First, parents' educational investment in summer school is positively correlated with their choice anxiety, that is, parents are willing to invest more time, money and energy in summer school in the hope of improving their children's academic performance and competitiveness. This indicates that parents' expectation and anxiety about their children's education play an important role in the choice of summer classes.

Second, academic achievement anxiety and social comparative pressure play a mediating role between parents' educational engagement and choice anxiety. Parents' academic achievement anxiety and social comparative pressure make them more inclined to take summer classes to relieve their anxiety and improve their children's academic performance. Therefore, these psychological factors indirectly affect parents' choice anxiety by influencing their educational input.

Third, parents' dissatisfaction with summer classes plays a moderating role. If parents are not satisfied with the effect and quality of summer classes, they may reduce their input in summer classes, thus reducing their choice anxiety. Therefore, educational institutions and providers of summer classes should strive to provide high-quality educational services that meet parents' expectations in order to alleviate their choice anxiety.

#### **3.2 Solution Strategies**

First, provide appropriate educational resources: the government and schools should be committed to providing high-quality educational resources, including improving school facilities, upgrading teachers' quality, and updating educational curricula. By providing adequate educational resources, the quality and effect of school education can be improved, parents' reliance on summer classes can be reduced, and parents' confidence in school education can be enhanced.

Second, provide counseling and support: Schools and communities can set up special educational counseling centers or provide educational counseling services to provide parents with guidance and support on educational planning, learning methods, mental health and other aspects. By providing counseling and support, parents can better understand their children's learning needs and learn about the latest developments in education, so as to make education plans more reasonably and reduce educational anxiety.



Third, advocate reasonable education concepts: All sectors of society should strengthen the education publicity of parents, and advocate reasonable education concepts and family education concepts. The purpose of education through publicity is to cultivate all-round development of talents, emphasizing children's interests, personality and healthy growth, can reduce parents excessive pursuit of academic performance anxiety, to achieve reasonable expectations of children's education.

To sum up, by providing appropriate educational resources, improving the school education environment, providing consultation and support and advocating reasonable educational concepts, parents can help to achieve reasonable expectations of children's education and reduce educational anxiety. This will promote the cooperation between parents and schools to jointly focus on the comprehensive development and happy growth of their children.

### 3.3 Outlook

There are still shortcomings in this study. Firstly, the selection of survey tools and measurement problems are a limitation of this study. Future studies may consider using a variety of methods and tools, such as in-depth interviews, observations, and journaling, to fully understand parents' educational anxiety when choosing summer classes.

Secondly, this study only considers the relationship between educational input and parents' educational anxiety, failing to fully consider other potential influencing factors. Future studies can explore the influence of family background, socio-cultural factors, and education policies on parents' educational anxiety to provide a more comprehensive analysis.

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