

ORIGINAL

Parental Educational Anxiety and Its Effects on Academic Self-Efficacy among Primary School Students in Zhejiang Province

Ansiedad educativa de los padres y sus efectos en la autoeficacia académica entre estudiantes de primaria en la provincia de Zhejiang

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ABSTRACT

Parental educational anxiety refers to the emotional distress that parents experience related to their children's academic performance and future success. In recent years, this phenomenon has gained significant attention, where educational pressures are high in China. The objective of the research is to investigate parental educational anxiety affects the academic self-efficacy of primary school students. It surveyed 487 students along with their parents in elementary schools. Participants were collected among various schools across the Province of Zhejiang. The structured questionnaire assessing parental anxiety, psychological control, and self-efficacy was used as an instrument to collect the data. The survey measures parental educational anxiety, which was analyzed through surveys of anxiety and stress about the child's academic success. Parental psychological control is measured by over-involvement and restrictive behaviors. Parental educational anxiety (PEA), parental supportive involvement (PSI), parental confidence (PC), positive parent-child communication (PCC), academic self-efficacy (ASE), parental mental health support (PHMS), and educational workshops for parents (EWP) were all measured by the questionnaire. Structural Equation Modeling (SEM) is utilized to evaluate the mediating effects of variables. Additionally, ANOVA was employed to assess differences in the outcomes. The analysis revealed that higher levels of parental educational anxiety negatively affected students' academic self-efficacy, with psychological control as a mediator. It underscores the importance of addressing parental educational anxiety to improve the ASE of primary school students in Zhejiang province.

Keywords: Parental Educational Anxiety, Academic Self-Efficacy, Primary School Students, Parental Psychological Control, Zhejiang Province.

RESUMEN

La ansiedad educativa de los padres se refiere a la angustia emocional que experimentan los padres en relación con el rendimiento académico de sus hijos y el éxito futuro. En los últimos años, este fenómeno ha ganado una atención significativa, donde las presiones educativas son altas en China. El objetivo de la investigación es investigar cómo la ansiedad educativa de los padres afecta la autoeficacia académica de estudiantes de primaria. Se encuestaron 487 estudiantes junto con sus padres en las escuelas primarias. Los participantes fueron recogidos entre varias escuelas de la provincia de Zhejiang. Como instrumento de recogida de datos se utilizó el cuestionario estructurado que evalúa la ansiedad, el control psicológico y la autoeficacia de los padres. La encuesta mide la ansiedad educativa de los padres, que se analizó a través de encuestas de ansiedad y estrés sobre el éxito académico del niño. El control psicológico de los padres se mide por la sobre participación y los comportamientos restric. La ansiedad educativa de los padres (PEA),

la participación de apoyo de los padres (PSI), la confianza de los padres (PC), la comunicación positiva padre-hijo (PCC), la autoeficacia académica (ASE), el apoyo de salud mental de los padres (PHMS) y los talleres educativos para los padres (EWP) se midieron mediante el cuestionario. El modelo de ecuaciones estructurales (meb) se utiliza para evaluar los efectos mediadores de las variables. Además, se emplea ANOVA para evaluar las diferencias en los resultados. El análisis reveló que los niveles más altos de ansiedad educativa de los padres afectaron negativamente la autoeficacia académica de los estudiantes, con el control psicológico como mediador. Subraya la importancia de abordar la ansiedad educativa de los padres para mejorar la capacidad de adaptación de los estudiantes de primaria en la provincia de Zhejiang.

Palabras clave: Parental Educational Anxiety, Academic Self-Efficacy, Primary School Students, Parental Psychological Control, Zhejiang Province.

INTRODUCTION

In China, elementary school pupils experienced enormous pressure due to the competitive character of the educational system. The Chinese government has made attempts to increase educational access and quality, yet academic competitiveness remains a major aspect in students' lives.⁽¹⁾ Other sources of pressure include high expectations from parents, along with a focus on key subjects like Chinese, Mathematics, and English. The pressure increase as most students participate in supplementary classes and enrichment programs.⁽²⁾ Parental educational anxiety refers to the tension and emotional distress parents experience regarding their child's academic performance and success.⁽³⁾

Anxiety is typically caused by societal pressures, competitive school environments, and high expectations of accomplishment. Parents can become overly concerned and adopt controlling or restrictive habits to guarantee their child achieves academically.⁽⁴⁾ While some level of concern can motivate positive involvement, excessive anxiety can negatively impact both parents and children.⁽⁵⁾ It may lead to increase pressure on children, and reduced academic self-efficacy, ultimately hindering their confidence and learning outcomes. Addressing this anxiety is crucial for fostering healthier parent-child dynamics.

The primary school student's ability to carry out academic functions and to obtain educational success is called the academic self-efficacy.⁽⁶⁾ This self-assurance inspires their motivation and the persistence while facing problems. More and more highly academic, self-efficacious students tend to take challenging tasks maintain high levels of attention and build resilience towards getting proper academic performances.⁽⁷⁾ On the contrary, low self-efficacy may lead to avoidance behaviors, reduced effort, and fear of failure. For primary school students, developing an environment with supportive teachers and parents is very important in the development of self-efficacy as it shapes their attitudes towards learning and their long-term academic success.⁽⁸⁾

The influence of parental educational anxiety (PEA) on primary school students' academic self-efficacy (ASE) in Zhejiang Province is examined. It explores the role of parental concerns about academic performance and psychological control behaviors, such as over-involvement and restrictions, in mediating this relationship. Data collected from surveys of both parents and students will provide insights into these dynamics, offering strategies to manage educational pressures and improve parent-child relationships and student outcomes.

- To investigate the influence of parental anxiety on the ASE of 487 primary school students.
- To formulate a hypothesis for evaluating the effect of parental anxiety.
- To explore parental psychological control in mediating the affiliation between anxiety as well as ASE.
- To provide a comprehensive and statistical data analysis using structural equation modeling (SEM) and analysis of variance (ANOVA) to understand key interactions.

In Section II, the related literature is reviewed, examining various approaches in understanding parental educational anxiety's effects on self-efficacy. Hypothesis and analytical methods employed in the research are detailed in Section III. Section IV presents the findings from the statistical analysis with a discussion in Section V. The research is concluded with a summary of the research limitations, and future works in Section VI.

The family socioeconomic status (SES) influenced students' test anxiety was investigated.⁽⁹⁾ The method involved a survey by utilizing high school students in china. The findings demonstrated a relationship between higher family SES and less test anxiety, increased self-efficacy, and improved access to learning resources. The association among academic achievement and parental practices, with cognitive exam anxiety acting as a mediation factor was investigated.⁽¹⁰⁾ Assessment tests and a questionnaire-based survey measuring parenting styles and anxiety were administered to 231 students. From the result, there was an adverse association between academic achievement and assessment anxiety.

The link between exams as well as educational anxiety was examined.⁽¹¹⁾ Self-reports on exam anxiety, educational stress, and parental expectations were evaluated using a survey. The experimental outcomes

provided a positive link between educational stress and test nervousness. The parents' attitudes towards online learning (PATOL) as well as their children's perceived online learning ineffectiveness (POLI) were explored.⁽¹²⁾ It made use of reliable survey data gathered through snowball sampling from parents of middle school students. The findings demonstrated a negative relationship between PATOL and POLI and a positive relationship between PATOL and PSE. The children's academic burnout was affected by PEA was examined.⁽¹³⁾ A survey was conducted by utilizing 259 parent-child pairs. Results showed that parental anxiety positively predicted children's academic burnout, with parental burnout fully mediating this relationship. Better family function reduced the effect of worry on parental burnout, thereby moderating its effect.

The parental involvement in online learning with the moderating effects of parental education level was investigated.⁽¹⁴⁾ Parents of middle school pupils were surveyed and statistical analysis was utilized. A positive relationship between parental involvement and satisfaction was revealed. The offspring's educational outcomes were influenced by both paternal emotional problems and anxiety.⁽¹⁵⁾ Data from a longitudinal cohort that assessed mental health symptoms at age 10 indicated that children of mothers with anxiety had poorer academic performance. There were no effects observed for maternal depression or paternal emotional problems.

The mediation of educational self-efficacy in academic worry and psychological distress over three years was explored.⁽¹⁶⁾ A random intercept cross-lagged panel model was used with data from adolescents. The results showed that academic stress directly affected psychological distress. Parental satisfaction affects students' learning engagement, considering factors like gender and parental education level was investigated.⁽¹⁷⁾ Survey data from parents and students was analyzed, revealing that parental satisfaction positively predicted learning engagement. From the results, students' anxiety completely mediated the mentioned association, according to mediation analysis.

METHODS

The section describes the development of hypothesis extensive information-gathering techniques well-structured assessment questions, and the methods were tested.

Hypothesis Development

The hypotheses are formulated to explore the link between parental anxieties on students' ASE. Figure 1 represents a conceptual diagram for the hypothesis.

Hypothesis 1: Parental Supportive Involvement (PSI) greatly improves students' Academic Self-Efficacy (ASE) by fostering a growth-oriented learning atmosphere, offering emotional support, and giving encouragement.

Hypothesis 2: Parental Educational Anxiety (PEA) negatively affects students' ASE by creating a stressful environment that undermines students' academic confidence and motivation.

Hypothesis 3: Parental Confidence (PC) in their child's academic abilities positively influences students' ASE by fostering greater independence and belief in their academic capabilities.

Hypothesis 4: PC enhances positive Parent-Child Communication (PCC), which consequently enhances Parental Mental Health Support (PMHS), fostering a more encouraging home environment for pupils.

Hypothesis 5: Attending Educational Workshops for Parents (EWP) gives parents better resources to help their kids' academic growth and lower stress levels, which has a positive impact on PCC.

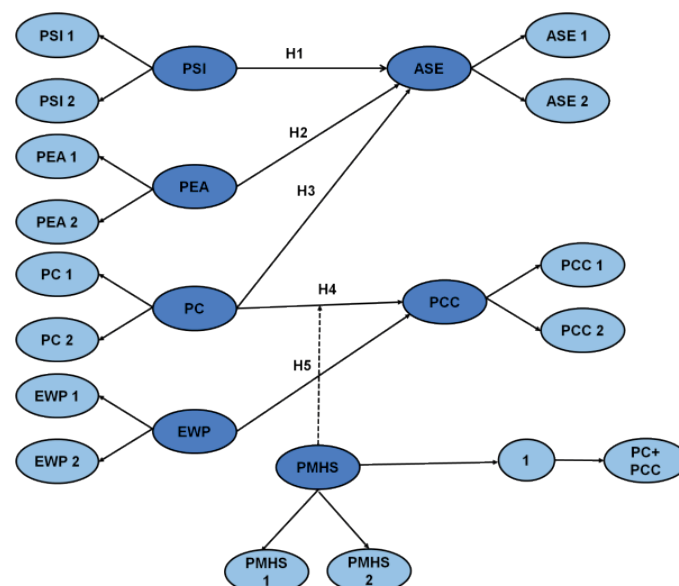


Figure 1. Conceptual Diagram for Hypothesis

Variables

Parental Educational Anxiety (PEA): The emotional distress that parents experience regarding their children's academic performance, which can affect how parents interact with and support their children.

Educational Workshops for Parents (EWP): Programs aimed at reducing PEA provides parent's advice on better assisting their kid's academic development.

Parental Supportive Involvement (PSI): Parental actions that provide emotional encouragement, academic help, and a supportive home learning environment, potentially mitigate the effects of anxiety.

Academic Self-Efficacy (ASE): Students approach learning and their level of motivation are influenced by their belief in their ability to succeed academically.

Parental Confidence (PC): Parents' belief in their child's academic abilities can influence their level of anxiety and the types of support provided.

Parental Mental Health Support (PMHS): Support that parents receive to manage their own stress or anxiety, which may influence how parents interact with their children and affect the child's ASE.

Parent-Child Communication (PCC): The quality and openness of communication between parents and children, which create a more encouraging as well as less stressful environment for learning students.

Questionnaire design

The purpose of the questionnaire was to assess the variables influencing students' ASE, parental involvement, and educational anxiety. Table 1 presents questions based on the variables such as PEA, PSI, PC, PCC, ASE, PMHS and EWP. Each variable has two questions. It also examined the role of parental psychological control, emotional support, and communication on students' beliefs in their academic capabilities. The survey utilized to calculate the frequency and intensity of these factors used a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5), providing valuable insights into parental behaviors and educational interventions influence on students' academic outcomes.

Table 1. Questionnaires for the participants

Variables	Questions
PEA	How often do you feel anxious about your child's academic performance and future success?
	In what ways does your anxiety about your child's education affect your relationship with them?
PSI	How does your participation in your child's education, such as offering homework assistance or engaging in class discussions, affect their academic achievement?
PC	Which actions do you take to ensure that your child feels supported in their learning?
	How confident are you in your child's ability to succeed academically on their own?
PCC	How does your belief in your child's academic capabilities impact your approach to supporting their education?
	How often do you engage in open discussions with your child about their academic challenges and achievements?
	In what ways does positive communication with your child influence their motivation and confidence in school?
ASE	How confident are you in your ability to succeed academically and meet school expectations?
PMHS	What internal factors contribute most to your belief in your academic capabilities?
	How has receiving support for your own mental health helped you manage the stress related to your child's education?
	How does mental health support influence your ability to be a more effective and supportive parent in your child's education?
EWP	How educational workshops for parents have helped reduce your anxiety about your child's academic performance?
	In what ways do these workshops provide useful strategies for improving your child's academic outcomes?

Statistical Methods

By using the statistical methods on the statistical package for the social sciences (SPSS-IBM) for ANOVA and SPSS-analysis of moment structures (SPSS-AMOS) version 29 is implemented for SEM analysis, to examine the impact of parental educational anxiety on the ASE.

- Structural Equation Modeling (SEM): It is utilized to analyze associations among variables. It can examine the factors like PEA and supportive involvement that influence students' ASE. It identifies direct and indirect effects, revealing the relationships between these variables.
- ANOVA: It analyzes the mean values of three or more groups to identify any potential differences among groups. It helps to assess whether variations in parental anxiety, confidence, and involvement influence students' ASE.

RESULTS

The outcomes acquired by the suggested model are delivered in this section. The SEM and ANOVA are employed to determine relationships between parental educational anxiety and students' ASE.

Participants

Data was collected from 487 primary school students and their parents from Zhejiang Province were selected through random sampling to ensure diversity. Demographic details, including grade level, refer to the specific year of education a student from Grade 1 to Grade 5 in primary school. Parental education level reflects the highest education completed by parents, which influences their support for their children's learning. These factors impact students' ASE and educational anxiety. Table 2 represents the participant's details.

Table 2. Demographic Detail of Participants	
Demographic Characteristic	N=487
Gender	
Male	245
Female	242
Grade Level	
GL 1	110
GL 2	120
GL 3	115
GL 4	90
GL 5	52
Parental Education Level	
High School or Below	98
College	180
Graduate or Higher	209
Parental Occupation	
Skilled Workers	150
Professionals	220
Others (e.g., farmers, service)	117

Structural Equation Modeling (SEM)

Table 3 provides an overview of the questionnaire distribution, return rate, and participation activity throughout the survey process. It also highlights the ratio of usable responses versus those deemed of inadequate quality. These findings offer a comprehensive insight into participant involvement and the reliability of the data, enhancing the understanding of the effectiveness of the survey methodology.

Measurement model

The estimation framework for the variables and indicators, assessing reliability, internal consistency, and convergent validity, is shown in Table 4. It includes indicator loadings, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE), all indicating that the variables in the model are highly reliable and valid. Figure 2 illustrates the structure and efficiency of the measurement model.

Table 5 shows discriminant validity, with diagonal values (0,87 for PEA) representing the square roots of AVE, and off-diagonal values (0.65 between PEA and PSI) show correlations. Validity is confirmed as diagonal values exceed off-diagonal correlations, indicating stronger associations with their own indicators.

Table 3. Details of Responses

Details about the responses	Overall Frequency
Distributed Questionnaire	600
Returned Questionnaire	550
Not Returned	50
The questionnaire returned in the usual condition	521
Questionnaire which is unacceptable quality	29
Total response rate	91,67 %
Appropriate rate of reaction	86,83 %

Table 4. The measurement model's result values

Variable	Indicator	Loading		CR	AVE
PSI	PSI1	0,85	0,89	0,92	0,77
	PSI2	0,84			
ASE	ASE1	0,84	0,88	0,91	0,73
	ASE2	0,82			
PEA	PEA1	0,83	0,87	0,91	0,74
	PEA2	0,81			
PC	PC1	0,82	0,86	0,90	0,71
	PC2	0,80			
PCC	PCC1	0,81	0,85	0,89	0,72
	PCC2	0,79			
PMHS	PMHS1	0,86	0,90	0,93	0,76
	PMHS2	0,85			
EWP	EWP1	0,83	0,87	0,91	0,74
	EWP2	0,80			

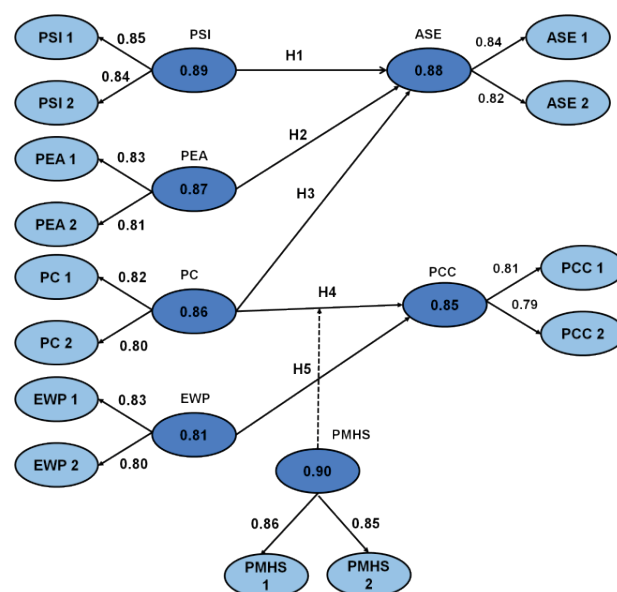
**Figure 2.** Architecture for Measurement Model that Combines Loading and Values

Table 5. Measurement Model's Discriminant Validity

Variables	PEA	PSI	PC	PCC	ASE	PMHS	EWP
PEA	0,87	0,65	0,68	0,62	0,60	0,63	0,59
PSI	0,65	0,88	0,70	0,67	0,72	0,69	0,61
PC	0,68	0,70	0,85	0,64	0,66	0,71	0,65
PCC	0,62	0,67	0,64	0,86	0,68	0,73	0,66
ASE	0,60	0,72	0,66	0,68	0,85	0,74	0,70
PMHS	0,63	0,69	0,71	0,73	0,74	0,90	0,71
EWP	0,59	0,61	0,65	0,66	0,70	0,71	0,88

Structural Model

The hypothesis testing results show significant relationships, with strong path coefficients and low p-values. The coefficients of the paths reflect the strength and direction of these relationships. The R^2 values indicate moderate to strong explanatory power, while standard errors reflect estimate precision. Standard errors (SE) highlight the precision of the estimates, and the results are classified as either “Well-Supported” or “Supported,” based on the statistical significance and strength of the relationships.

Table 6. Outcome Values for Structural Model

Hypothesis	Coefficient of Path	t-value	p-value	R2	Standard Error (SE)	Results
H1: PSIASE	0,38	5,15	0,000	0,52	0,06	Well-Supported
H2: PEAASE	0,42	5,75	0,000	0,45	0,07	Supported
H3: PCASE	0,40	4,95	0,000	0,50	0,08	Well-Supported
H4:PCPMHSPCC	0,36	5,10	0,000	0,48	0,08	Supported
H5:EWPPCC	0,44	6,25	0,000	0,53	0,07	Well-Supported

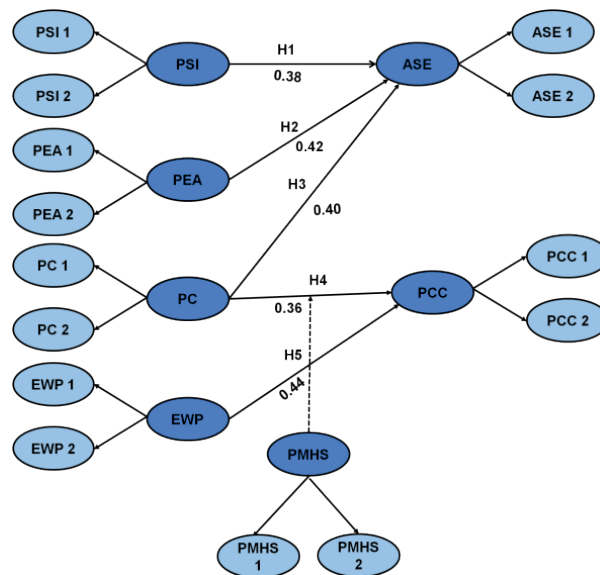
**Figure 3.** Framework for Structural Model using B Values

Table 6 and Figure 3 show that higher PEA negatively impacts ASE ($\beta = 0,42$, $t = 5,75$, $p < 0,001$), supporting the hypothesis that parental educational anxiety undermines students' ASE. PSI positively influences ASE ($\beta = 0,38$, $t = 5,15$, $p < 0,001$), reinforcing the role of parental support. PC also positively affects ASE. PC leads to improved PMHS, which enhances PCC, and EWP strengthens PCC, which contribute to a more supportive academic environment.

ANOVA

The variables are evaluated by the ANOVA metrics, which are expressed in Table 7. The outcomes are based on variables and their F-value expressed in Figure 4.

Table 7. Outcome Values of ANOVA					
Variables	df	MS	SS	F-value	p-value
PEA					
Between Groups	3	6,88	20,64	5,93	0,0002
Within Groups	483	3,11			
PSI					
Between Groups	3	5,43	16,29	5,22	0,0004
Within Groups	483	3,01			
PC					
Between Groups	3	6,12	18,37	6,14	0,0001
Within Groups	483	2,87			
PCC					
Between Groups	3	7,15	21,46	7,34	0,0001
Within Groups	483	3,28			
ASE					
Between Groups	3	4,62	13,86	5,38	0,0004
Within Groups	483	3,09			
PMHS					
Between Groups	3	6,12	18,36	6,12	0,0002
Within Groups	483	3,04			
EWP					
Between Groups	3	6,56	17,94	6,07	0,0002
Within Groups	483	2,85			

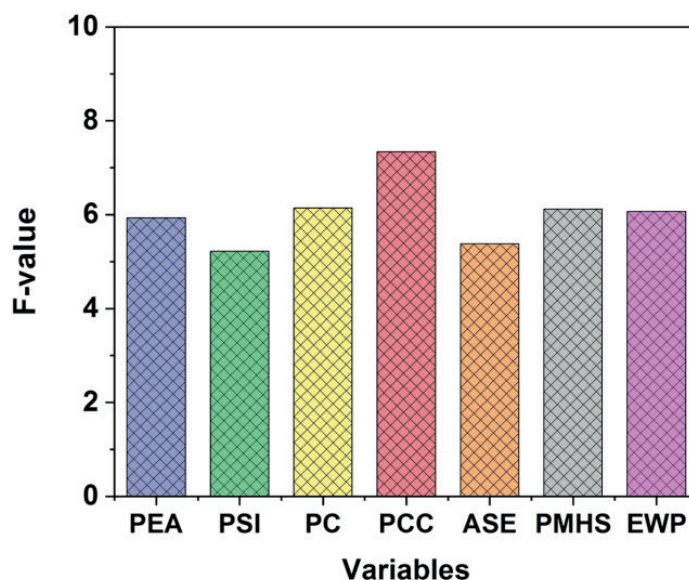


Figure 4. Comparison between Variables and its F-value

The ANOVA results show significant differences between groups for PEA ($F = 5,93$, $p = 0,0002$), PSI ($F = 5,22$, $p = 0,0004$), PC ($F = 6,14$, $p = 0,0001$), PCC ($F = 7,34$, $p = 0,0001$), ASE ($F = 5,38$, $p = 0,0004$), PMHS ($F = 6,12$, $p = 0,0002$), and EWP. These findings demonstrate that ASE gets impacted negatively by parental educational concern, with parental psychological control serving as a significant moderating factor.

DISCUSSION

The affiliation among educational worry affects self-efficacy in primary school students was evaluated. Parental supportive involvement fosters a nurturing environment, while parental confidence reduces

psychological control, encouraging greater student independence. The research underscores the importance of addressing parental anxiety and fostering positive communication to enhance students' academic performance and self-belief. To account the latent components and indirect effects, SEM provides a more comprehensive, in-depth knowledge of the connections between student results and parental anxiety. ANOVA is useful for analyzing group differences and gives a more comprehensive view of the more categorical effects of variables like PEA and PSI on ASE. The limitation of the existing system is primarily dependent on self-reported data, which can prompt bias. Furthermore, the cross-sectional design reduces the capacity to conclude connection. The research addresses these issues by employing SEM for a more rigorous examination of connections and includes a large, diverse sample from several primary schools, hence increasing the ability to generalize of the findings. The research underscores the importance of addressing parental anxiety and fostering positive communication to enhance students' academic performance and self-belief.

CONCLUSION

The present research examined ASE in primary school students in Zhejiang Province with respect to PEA and its influence on children's academic confidence. Structured questionnaires distributed to 487 participants. It utilized to assess PEA, PC, PCC, PMHS, EWP and ASE. SEM and ANOVA were used to examine the interrelationships among the variables. The findings revealed Hypothesis 2 showed PEA negatively influenced the ASE of the students, and the significant mediator was parental PC. It demonstrates the extending parents' anxieties regarding their kid's education might boost students' self-esteem. The limitations of the research are self-reported data, which might lead to bias, and it was only done regionally, limiting the generalization of results. The long-term effects of parental anxiety on students and the effects in other regions and educational systems should be researched.

REFERENCES

1. Zhang, Wei & Koshmanova, Tetyana. (2021). From Personal Experiences of Transformative Learning on Educational Challenges and Reforms in Secondary School in China. *International Journal of Education (IJE)*. <https://doi.org/10.5121/ije.2021.9304>
2. Song, A. and Ren, Z. (2022) 'Distressing experiences of Chinese schooling winners: School infiltration in Chinese family parenting', *Cogent Education*, 9(1). <https://doi.org/10.1080/2331186X.2022.2034245>
3. Chen, G., Oubibi, M., Liang, A. and Zhou, Y., 2022. Parents' educational anxiety under the "double reduction" policy based on the family and students' personal factors. *Psychology research and behavior management*, pp.2067-2082. <https://doi.org/10.2147/PRBM.S370339>
4. Wu, Q., 2024. Chinese Immigrant Mothers' Role Identity and Parental Involvement With Young Children (Doctoral dissertation, Temple University).
5. Jules, M.A., Maynard, D.M.B., Lowe, G., Lipps, G. and Gibson, R.C., 2021. A psycho-social analysis of depression, anxiety and student engagement: Effects of parenting practices. *Clinical child psychology and psychiatry*, 26(1), pp.110-120. <https://doi.org/10.1177/1359104520972447>
6. Al-Abyadh, M.H.A. and Abdel Azeem, H.A.H., 2022. Academic achievement: influences of university students' self-management and perceived self-efficacy. *Journal of Intelligence*, 10(3), p.55. <https://doi.org/10.3390/jintelligence10030055>
7. Supervía, U.P., Bordás, S.C. and Robres, Q.A., 2022. The mediating role of self-efficacy in the relationship between resilience and academic performance in adolescence. *Learning and Motivation*, 78, p.101814. <https://doi.org/10.1016/j.lmot.2022.101814>
8. Xu, B., 2024. Mediating role of academic self-efficacy and academic emotions in the relationship between teacher support and academic achievement. *Scientific Reports*, 14(1), p.24705. <https://doi.org/10.1038/s41598-024-75768-5>
9. Xu, X., Xia, M. and Pang, W., 2021. Family socioeconomic status and Chinese high school students' test anxiety: Serial mediating role of parental psychological control, learning resources, and student academic self-efficacy. *Scandinavian Journal of Psychology*, 62(5), pp.689-698. <https://doi.org/10.1111/sjop.12750>
10. Albulescu, I., Labar, A.V., Manea, A.D. and Stan, C., 2023. The mediating role of anxiety between parenting styles and academic performance among primary school students in the context of sustainable education. *Sustainability*, 15(2), p.1539. <https://doi.org/10.3390/su15021539>

11. Zheng, G., Zhang, Q. and Ran, G., 2023. The association between academic stress and test anxiety in college students: The mediating role of regulatory emotional self-efficacy and the moderating role of parental expectations. *Frontiers in Psychology*, 14, p.1008679. <https://doi.org/10.3389/fpsyg.2023.1008679>
12. Liu, X., Zhao, L. and Su, Y.S., 2022. Impact of parents' attitudes on learning ineffectiveness: The mediating role of parental self-efficacy. *International journal of environmental research and public health*, 19(1), p.615. <https://doi.org/10.3390/ijerph19010615>
13. Wu, K., Wang, F., Wang, W. and Li, Y., 2022. Parents' education anxiety and children's academic burnout: The role of parental burnout and family function. *Frontiers in Psychology*, 12, p.764824. <https://doi.org/10.3389/fpsyg.2021.764824>
14. Shao, M., He, W., Zhao, L. and Su, Y.S., 2022. The influence of parental involvement on parent satisfaction: The moderating effect of parental educational level and the number of children. *Frontiers in Psychology*, 12, p.752802. <https://doi.org/10.3389/fpsyg.2021.752802>
15. Ayano, G., Lin, A., Dachew, B.A., Tait, R., Betts, K. and Alati, R., 2022. The impact of parental mental health problems on the educational outcomes of their offspring: Findings from the Raine Study. *Australian & New Zealand Journal of Psychiatry*, 56(5), pp.510-524. <https://doi.org/10.1177/00048674211025633>
16. Kristensen, S.M., Larsen, T.M.B., Urke, H.B. and Danielsen, A.G., 2023. Academic stress, academic self-efficacy, and psychological distress: A moderated mediation of within-person effects. *Journal of youth and adolescence*, 52(7), pp.1512-1529. <https://doi.org/10.1007/s10964-023-01770-1>
17. Oubibi, M., Chen, G., Fute, A. and Zhou, Y., 2023. The effect of overall parental satisfaction on Chinese students' learning engagement: Role of student anxiety and educational implications. *Heliyon*, 9(3). <https://doi.org/10.1016/j.heliyon.2022.e12149>

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The authors declare that there is no conflict of interest.

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