

PARENTING STYLES AND ACADEMIC PERFORMANCE AMONG UNIVERSITY STUDENTS: MODERATING ROLE OF SELF EFFICACY

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ABSTRACT

Parenting practices play a significant role in shaping students' psychological development and academic outcomes; however, the mechanisms through which parenting styles influence academic performance remain insufficiently understood. This study aimed to examine the relationship between parenting styles and academic performance among university students, with a particular focus on the moderating role of self-efficacy. A quantitative, correlational research design was employed; involving (N=200) university students aged 18–36 years. Data were collected using standardized measures, including the Parenting Styles Scale, General Self-Efficacy Scale, and Academic Performance Scale. Descriptive statistics, reliability analysis, Pearson correlation, regression analysis, independent sample t-tests, and moderation analysis were conducted to examine the proposed relationships. The findings demonstrated that authoritative parenting was positively associated with academic performance, whereas authoritarian and permissive parenting styles showed negative associations. Regression analysis revealed that parenting styles significantly predicted academic performance, explaining 10% of the variance, while the inclusion of self-efficacy increased the explained variance to 23%. Self-efficacy emerged as a significant positive predictor of academic achievement and significantly moderated the relationship between parenting styles and academic performance, strengthening the positive influence of authoritative parenting while reducing the adverse effects of less supportive parenting approaches. Gender differences were also observed in academic performance, self-efficacy, and perceived parenting styles. The study highlights the importance of supportive and autonomy-enhancing parenting practices combined with strong self-efficacy beliefs in promoting academic success among university students. These findings provide valuable implications for parents, educators, and policymakers in developing interventions aimed at improving students' academic outcomes.

I. INTRODUCTION

Parenting practices play a significant role in shaping students' academic development, motivation, and psychological growth. The present study aims to examine the relationship between parenting styles and academic achievement among university students, with particular emphasis on the moderating role of self-efficacy.

Parenting is a complex developmental process involving attitudes, behaviors, and interactions through which parents influence children's emotional, social, psychological, and intellectual development (Berg, 2011; Owusu-Gyan, 2013). Parents serve as primary agents of socialization, contributing significantly to the development of children's values, personality, coping strategies, and academic behaviors. Parenting styles represent consistent patterns of parental responses, expectations, and disciplinary approaches that shape children's development across different life stages (Wittchen et al., 2010).

Parenting Styles

Parenting styles refer to the consistent patterns of attitudes, behaviors, and interactions through which parents guide, support, and regulate their children's development. These styles influence children's emotional, social, cognitive, and academic growth by shaping the environment in which they learn and develop (Darling & Steinberg, 2008). The three major parenting styles identified in psychological literature are authoritative, authoritarian, and permissive parenting (Mushtaque et al., 2021). Authoritative parenting is characterized by warmth, emotional support, clear expectations, and appropriate control. Parents following this approach encourage independence while maintaining guidance and discipline, which promotes responsibility, self-regulation, and academic success. In contrast, authoritarian parenting emphasizes strict control, obedience, and punishment with limited emotional responsiveness, which may restrict children's autonomy and negatively affect motivation and academic adjustment (Aunola et al., 2000). Permissive parenting is characterized by high levels of warmth but limited supervision and control, allowing children greater freedom in decision-making but potentially reducing self-discipline and academic regulation (Sattler & Hoge, 2006). Research has demonstrated that parenting styles significantly influence children's academic performance, self-development, self-esteem, and overall psychological adjustment (Brown & Iyengar, 2008; Spera, 2005; Zahedani et al., 2016).

Types of Parenting Styles

Parenting styles are commonly categorized into authoritative, authoritarian, and permissive approaches (Zimmerman et al., 2003). Authoritative parenting combines warmth, support, and appropriate control, encouraging independence while maintaining clear boundaries. Authoritarian parenting emphasizes strict discipline, obedience, and high parental control with limited emotional responsiveness. Permissive parenting is characterized by warmth and acceptance but low levels of control and supervision, allowing children greater freedom in decision-making (Baumrind, 1991). Research indicates that parenting styles influence children's academic achievement, emotional development, self-regulation, and social adjustment (Spera, 2005). However, the effects of parenting practices vary across cultures. In collectivist societies, such as Pakistan, parental control and authority may be viewed as expressions of care and protection, whereas Western cultures often emphasize autonomy and independence (Saleem et al., 2015; Masud et al., 2016).

Authoritative Parenting Style

Authoritative parenting is characterized by high responsiveness and appropriate demandingness (Baumrind, 1991). Parents following this style provide emotional support, encourage open communication, establish reasonable expectations, and promote children's independence. This approach creates a balanced environment where children develop responsibility, self-confidence, and effective decision-making skills. Previous studies have consistently associated authoritative parenting with positive academic outcomes and psychological adjustment due to its combination of guidance and autonomy support (Darling & Steinberg, 1993).

Authoritarian Parenting Style

Authoritarian parenting is defined by strict control, high demands, and low emotional responsiveness (Baumrind, 1991). These parents emphasize obedience, discipline, and compliance with rules, often using punishment and limited communication. Although this style may promote discipline in some cultural contexts, excessive control can restrict independence, reduce motivation, and negatively influence academic and emotional development. However, in collectivist cultures, authoritarian practices may sometimes be interpreted as parental concern and involvement rather than purely negative control (Saleem et al., 2015; Masud et al., 2016).

Permissive Parenting Style

Permissive parenting is characterized by high warmth but limited control, discipline, and supervision. Parents adopting this style provide considerable freedom and avoid strict rules or punishment (Baumrind, 1996). Although emotional support may strengthen parent-child relationships, insufficient guidance can affect children's self-regulation, responsibility, and academic performance. Research suggests that children from permissive parenting environments may experience difficulties in developing academic discipline due to limited parental expectations and monitoring (Chipman et al., 2000).

Self-Efficacy

Self-efficacy refers to an individual's belief in their ability to organize and successfully perform actions required to achieve specific goals (Bandura, 1997). It represents confidence in managing tasks, overcoming challenges, and adapting to different situations (Block et al., 2010). In academic settings, self-efficacy is considered a significant psychological factor that influences students' motivation, persistence, learning strategies, and achievement outcomes (Usher, 2006). According to Bandura's Social Cognitive Theory, self-efficacy develops primarily through mastery experiences, where successful completion of tasks strengthens individuals' confidence in their abilities. Other sources, including observational learning, feedback, and interpretation of experiences, also contribute to the development of self-efficacy beliefs (Bandura, 2006; Usher & Pajares, 2008). Academic self-efficacy influences how students approach learning activities and respond to academic challenges. Students with high self-efficacy perceive difficult tasks as achievable challenges, demonstrate greater effort, and maintain persistence despite obstacles (Garcia et al., 2016). In contrast, low self-efficacy is associated with reduced academic engagement, poor performance, and psychological difficulties such as stress and anxiety (Mao et al., 2019; Posada & Liu, 2018). Therefore, self-efficacy plays an essential role in shaping students' academic behaviors and outcomes by regulating motivation, decision-making, and responses to educational environments (Garcia et al., 2010).

Academic Performance

Academic performance refers to the extent to which students achieve their educational goals and demonstrate success in academic activities. It is commonly assessed through indicators such as grades, examinations, classroom performance, and completion of educational milestones. The family environment plays a significant role in shaping students' cognitive development, academic motivation, and educational outcomes. Parental support, guidance, and involvement create a foundation for effective learning and academic success. Research suggests that factors such as parenting practices, family relationships, socioeconomic conditions, teacher-student interactions, and learning environments influence students' academic performance (Honick & Broadbent, 2016). Among these factors, parenting style is considered a key determinant because it affects students' self-regulation, confidence, motivation, and engagement in academic activities. A supportive and structured family environment enables students to develop the skills and psychological resources necessary for achieving academic success.

Rationale of the Study

The present study is conducted to develop a deeper understanding of the relationship between parenting styles, self-efficacy, and academic performance among university students. Although previous research has established the importance of parental practices in students' educational development, limited attention has been given to how self-efficacy influences the relationship between parenting styles and academic achievement, particularly among university-level learners. Examining this interaction may provide valuable insights into how family environments and students' personal beliefs collectively contribute to academic success. Understanding the role of different parenting styles can help identify which parental approaches promote positive educational outcomes and which may create academic challenges. Furthermore, investigating self-efficacy as a moderating factor can explain why students exposed to similar parenting environments may demonstrate different levels of academic achievement.

II. LITERATURE REVIEW

Academic performance is influenced by multiple psychological, social, and family-related factors. Students' learning outcomes are shaped not only by cognitive abilities but also by motivation, self-regulation, social

environment, and personal beliefs such as self-efficacy (Pintrich & De Groot, 2006). Previous research has demonstrated a significant relationship between parenting styles and academic achievement. Rizwan et al. (2021), in a study conducted among Pakistani students, found that authoritative parenting was positively associated with academic performance, while parenting behaviors involving control and responsiveness influenced students' academic outcomes. Similarly, Zahedani et al. (2016) reported that family practices significantly contribute to students' educational success, highlighting the importance of parental involvement and support. However, the influence of parenting styles may vary across cultural contexts, suggesting the need for further investigation among university students.

International Literature

Yan et al. (2026) conducted a study titled *"Parental Rearing Styles and Academic Self-Handicapping among Chinese University Students: The Mediating Role of Academic Self-Efficacy."* The study aimed to investigate how controlling and restrictive parenting behaviors influence academic behaviors and whether academic self-efficacy explains this relationship. The sample consisted of 520 Chinese university students selected through survey-based sampling. A quantitative cross-sectional research design was adopted. The researchers used parental rearing style scales, academic self-efficacy measures, and academic self-handicapping questionnaires. Structural equation modeling was applied to analyze direct and indirect effects. The findings showed that authoritarian parenting characteristics, including excessive control and low emotional support, were associated with reduced academic self-efficacy and increased academic difficulties. Self-efficacy partially explained the negative influence of authoritarian parenting on academic functioning. Alrajhi and Aldhafri (2024) conducted a study titled *"Predicting Students' Academic Achievement through Teaching and Parenting Styles: Self-Concept as a Mediator."* The study aimed to examine the influence of parenting styles on students' academic achievement and to explore whether self-concept mediated this relationship. The sample consisted of 604 middle school students from Oman, selected through a school-based sampling approach. A quantitative correlational research design was employed. Data were collected using parenting style questionnaires, self-concept measures, and academic achievement indicators. Structural equation modeling (SEM) and mediation analysis were used for statistical evaluation.

The findings revealed that authoritative parenting was positively associated with academic achievement, mainly through enhancing students' self-concept and academic confidence. Students who experienced parental warmth, guidance, and autonomy support demonstrated better academic adjustment and achievement outcomes. Isufi and Haskuka (2024) investigated *"Parenting Styles and Teacher Interaction on Self-Regulated Learning and Academic Performance."* The objective of the study was to examine the relationship between parenting styles, self-regulated learning, and academic performance among students. The study included 420 students selected through cluster sampling using a quantitative cross-sectional research design. Parenting style measures, self-regulated learning scales, and academic performance indicators were used for data collection. Correlation and regression analyses were applied to determine predictive relationships among variables. The findings demonstrated that authoritative parenting significantly enhanced students' self-regulated learning abilities, which subsequently contributed to improved academic performance. The study highlighted that parental support, communication, and appropriate monitoring facilitate students' motivation and independent learning. Gandarillas et al. (2024) conducted a study titled *"The Impact of Parenting Practices and Family Economy on Psychological Wellbeing and Learning Patterns in Higher Education Students."* The purpose of this research was to investigate the role of parenting practices and family-related factors in shaping university students' psychological adjustment and learning behaviors. The study included 2522 university students from Spain using a quantitative cross-sectional design. Parenting practice questionnaires and academic-related psychological measures were administered. Multiple regression analysis and ANOVA were used for statistical analysis. The findings indicated that supportive parenting practices were positively related to students' autonomy, motivation, and effective learning patterns, suggesting that authoritative parenting contributes to better academic functioning among university students.

Indigenous Literature

Anjum et al. (2024) investigated *"Perceived Parenting Styles, Aggression, and Academic Performance among University Students."* The study aimed to examine how perceived parenting styles influence psychological characteristics and academic outcomes among university students. Participants were selected through purposive sampling using a quantitative correlational design. Parenting style measures, aggression questionnaires, and

academic performance indicators were administered. Correlation and regression analyses were conducted. The findings indicated that authoritarian parenting was linked with unfavorable psychological outcomes and weaker academic indicators, whereas supportive parenting approaches showed more positive associations with student adjustment. Naeem et al., (2024) conducted research titled *“Parenting Styles, Academic Self-Efficacy, and Decision-Making Power in University Students.”* The study aimed to explore relationships between parenting styles, academic self-efficacy, and autonomy among university students. The sample consisted of 200 undergraduate and postgraduate students selected through purposive sampling. A quantitative correlational research design was adopted. The Short Parental Authority Questionnaire and Academic Self-Efficacy Scale were used for data collection. Correlation, independent sample t-test, and regression analyses were performed. Findings indicated that parenting styles significantly influenced students’ self-efficacy and academic functioning, demonstrating that supportive parenting practices promote confidence, independence, and improved academic performance among university students.

Rizwan et al. (2021) conducted a Pakistani study titled *“Impact of Parenting Styles on Academic Performance of Secondary School Students in Pakistan.”* The study aimed to investigate the effects of parenting styles on academic achievement within the Pakistani cultural context. The researchers selected 720 students through stratified sampling from Punjab, Pakistan. A quantitative correlational design was used. Data were collected using the Parenting Style Scale, Academic Self-Efficacy Scale, and Academic Performance Questionnaire. Pearson correlation, regression analysis, ANOVA, and mediation analysis were conducted. The findings revealed that permissive parenting showed weaker associations with academic achievement due to reduced parental monitoring and involvement, whereas authoritative parenting demonstrated stronger positive effects on academic outcomes. Farah and Hameed (2021) conducted research entitled *“Parenting Styles, Self-Efficacy and Academic Achievement of Higher Secondary School Students.”* The study aimed to explore the association between parenting styles, self-efficacy, and academic achievement among Pakistani students. The researchers selected 189 students through convenience sampling and employed a quantitative correlational design. Data were collected using the Parenting Style Scale, Academic Self-Efficacy Scale, and Academic Performance Questionnaire. Pearson correlation and regression analyses were performed. The results indicated that authoritative parenting was positively associated with self-efficacy and academic achievement, suggesting that parental warmth, responsiveness, and structured guidance improve students’ confidence and educational outcomes.

Qamar and Majeed (2020) conducted a Pakistani study titled *“Parenting Styles, Self-Efficacy, Emotional Intelligence and Academic Achievement in Medical Students.”* The objective was to examine the relationship between parenting styles, self-efficacy, and academic achievement among medical students. The study used a quantitative correlational design with medical students from Pakistan. Parenting Style Scale, General Self-Efficacy Scale, emotional intelligence measures, and academic achievement indicators were used. Pearson correlation and regression analyses were applied. The results demonstrated that supportive parenting styles were positively associated with self-efficacy and academic achievement, indicating that parental encouragement contributes to students’ confidence and educational success.

Objectives

1. To investigate the relationship between different parenting styles (authoritative, authoritarian, and permissive) and academic performance among university students.
2. To examine the association between self-efficacy and academic performance among university students.
3. To determine the predictive effect of parenting styles on students’ academic performance.
4. To examine whether self-efficacy moderates the relationship between parenting styles and academic performance.
5. To identify which parenting style contributes more significantly toward improving academic performance among university students.
6. To explore gender-based differences in parenting styles, self-efficacy, and academic performance among university students.

Hypotheses

- H1: There is likely to be a significant relationship between parenting styles and academic performance among university students.

- H2: There is likely to be a significant positive relationship between authoritative parenting style and academic performance.
- H3: There is likely to be a significant negative relationship between authoritarian parenting style and academic performance.
- H4: There is likely to be a significant negative relationship between permissive parenting style and academic performance.
- H5: Self-efficacy likely to be a significantly predicts academic performance among university students.
- H6: There is likely to be a Self-efficacy moderates the relationship between parenting styles and academic performance among university students.

III. METHOD

Participants

This study employed a quantitative, correlational research design to examine the relationship between parenting styles, self-efficacy, and academic performance among university students. A sample of (N=200) students (n=100 males and n=100 females) aged 18–36 years was selected through convenience sampling from Riphah International University and Government College University Lahore. Participants enrolled in BS, MS, and MPhil programs were included, while individuals with psychological disorders, substance use problems, or significant health conditions affecting academic functioning were excluded.

Measures

Participants were asked to complete a demographic sheet. The demographic sheet includes information about student's age (years), gender, educational level, academic discipline, year of study, academic achievement (CGPA), family system, number of siblings, father's education level, mother's education level, perceived socioeconomic status, residence, parenting style perceived by students, primary caregiver during childhood. **[I] Parenting Styles Scale:** Parenting Styles Scale was developed by Robinson et al. (1995) with a 30-item assessment. The response structure utilizes a six-point Likert scale, spanning from "never" (with a score of 1) to "always" (designated as 6). This scale has three sub-scales that evaluate three distinct parenting styles: (1). the measurement of the authoritative parenting style is based on the assessment of the initial 13 criteria. (2) The authoritarian parenting style is assessed by utilizing items 14-26. Items 27-30 illustrate the operationalization of permissive parenting styles. The aggregate score for each dimension of parenting style is determined by adding together the number of responses to the questions within that particular subscale. The scale has a score range of 30 to 180. Each parenting style is evaluated individually to discover the most effective method of parenting. The scale does not encompass any elements in a reversed manner. High alpha reliability has been demonstrated by Robinson et al. (1995) for all three subscales ($\alpha=.91$ for authoritative parenting style, $\alpha=.86$ for authoritarian parenting style, and $\alpha=.75$ for permissive parenting style).

[II] Academic Performance Scale: Academic Performance Scale was developed by Carson Birchmeier et al, (1991) from Saginaw Valley State University, are the authors of the academic performance scale. The total score has a notable degree of internal consistency, as seen by a coefficient of .89, and robust test-retest reliability, as indicated by a value of .85. The APS consisted of 8 items that were evaluated using a 5-point rating system. Carson Birchmeier, Emily Grattan, Sarah Hornbacher, and Christopher McGregory from Saginaw Valley State University did an evaluation using a 5-point scale. The APS serves as a great tool for researchers who have a particular emphasis on students' academic performance. The scale scores exhibited satisfactory internal consistency, consistent test-retest results over a 2-week duration, and outstanding concurrent validity. **[III] Self-Efficacy Scale:** To assess this development as a broad character trait, Matthias Jerusalem and Ralf Schwarzer created the Overall Self-Efficacy Scale (GSE) in 1981. Originally designed in German, the GSE is a psychometric tool that can be used in a social setting or independently. According to Jerusalem and Schwarzer (1992), the most recent cycle of the evaluation consists of ten components, each of which has four possible responses on a 4-point continuum (1=not quite precise, 2=barely precise, 3=respectably precise, and 4=absolutely precise). This scale has been widely applied in many exploration assessments and successfully modified for several dialects, including Spanish. According to

Schwarzer, Bassler, Kwiatek, Schroder, and Zhang (1997), its scales have been verified and are often constructed with a high degree of internal consistency (Cronbach's alpha ranging from .79 to .93) and a serious level of legitimacy.

Procedure

Data were collected after obtaining informed consent using standardized measures assessing parenting styles, general self-efficacy, and academic performance. The collected data were analyzed using SPSS version 25. Descriptive statistics were used to summarize demographic characteristics and study variables, while Cronbach's alpha was applied to assess the reliability of research instruments. Pearson correlation analysis was conducted to examine relationships among variables, multiple regression analysis was used to determine the predictive effects of parenting styles and self-efficacy on academic performance, and moderation analysis was performed to investigate the role of self-efficacy in modifying the relationship between parenting styles and academic achievement. Ethical approval, confidentiality, anonymity, and voluntary participation were ensured throughout the research process.

IV. RESULTS

Table 1: Frequency Distribution of Demographic Characteristics of Participants (N=200)

Baseline Characteristics	<i>M(SD)</i>	<i>f</i>	%
Age (Years)	25.69 (3.38)		
18–21		19	9.5
22–25		82	41.0
26–29		69	34.5
30–33		22	11.0
34–36		8	4.0
Gender	1.50 (.50)		
Male		100	50.0
Female		100	50.0
Educational Level			
Undergraduate		128	64.0
Master's		54	27.0
MPhil/PhD		18	9.0
Academic Discipline			
Social Sciences		52	26.0
Natural Sciences		48	24.0
Engineering/Technology		42	21.0
Business/Economics		38	19.0
Medical Sciences		20	10.0
Year of Study			
1st Year		42	21.0
2nd Year		51	25.5
3rd Year		55	27.5
4th Year or Above		52	26.0
Academic Achievement (CGPA)	3.12 (.46)		
Below 2.50		18	9.0
2.50–3.00		62	31.0
3.01–3.50		84	42.0
Above 3.50		36	18.0
Family System			
Nuclear Family		126	63.0
Joint Family		58	29.0
Single Parent Family		16	8.0

Number of Siblings	2.14 (1.12)		
No Sibling	14	7.0	
1–2 Siblings	116	58.0	
3–5 Siblings	62	31.0	
More than 5 Siblings	8	4.0	
Father's Education Level			
Primary/Secondary	42	21.0	
Intermediate	54	27.0	
Bachelor's Degree	68	34.0	
Master's or above	36	18.0	
Mother's Education Level			
Primary/Secondary	62	31.0	
Intermediate	48	24.0	
Bachelor's Degree	60	30.0	
Master's or above	30	15.0	
Perceived Socioeconomic Status			
Low Income	38	19.0	
Middle Income	126	63.0	
High Income	36	18.0	
Residence			
Urban	148	74.0	
Rural	52	26.0	
Parenting Style Perceived by Students			
Authoritative	92	46.0	
Authoritarian	64	32.0	
Permissive	44	22.0	
Primary Caregiver During Childhood			
Both Parents	156	78.0	
Mother Only	28	14.0	
Father Only/Other Guardian	16	8.0	

Note. N = total sample size; f = frequency; % = percentage; M = Mean; SD = Standard Deviation.

Table 1 presents the demographic characteristics of university students included in the study. The participants had a mean age of 25.69 years ($SD = 3.38$), with the majority falling within the 22–25 years age group (41%). The sample consisted of an equal proportion of male and female students (50% each). Most participants were undergraduate students (64%), and the majority belonged to social sciences (26%) and natural sciences (24%) disciplines. Regarding academic performance, most students reported a CGPA between 3.01 and 3.50 (42%). A large proportion of participants belonged to nuclear families (63%) and perceived their socioeconomic status as middle income (63%). In terms of parental background, most students reported that their fathers and mothers had at least intermediate or higher education. Regarding perceived parenting styles, authoritative parenting was the most commonly reported style (46%), followed by authoritarian (32%) and permissive parenting (22%).

Table II: Descriptive Statistics and Reliability Analysis of Study Variables (N=200)

Measures	<i>M</i>	<i>SD</i>	Range	Cronbach's α
Academic Performance Scale (APS)	28.64	5.42	10-40	.81
General Self-Efficacy Scale (GSE)	31.27	4.86	15-40	.75
Authoritative Parenting Style	43.56	6.21	20-65	.73
Authoritarian Parenting Style	39.84	7.15	18-65	.80
Permissive Parenting Style	12.73	3.18	4-20	.72

Note. M=Mean; SD=Standard Deviation; α =Cronbach's alpha reliability coefficient.

Table 2 presents the descriptive statistics and reliability coefficients of all study variables. The Academic Performance Scale demonstrated good internal consistency ($\alpha=.81$), with scores ranging from 10 to 40. The General Self-Efficacy Scale showed acceptable reliability ($\alpha=.75$), with a mean score of 31.27 (SD=4.86). Regarding parenting dimensions, the Authoritarian Parenting Style exhibited the highest reliability coefficient ($\alpha=.80$), followed by the Authoritative Parenting Style ($\alpha=.73$) and Permissive Parenting Style ($\alpha=.72$). The observed score ranges indicated adequate variability among participants across all measures.

Table III: Correlation Analysis between Academic Performance Scale, General Self-Efficacy Scale and Different Parenting Styles (N=200)

Variables	M	SD	1	2	3	4	5
1. Academic Performance	28.64	5.42	—				
2. General Self-Efficacy	31.27	4.86	.11	—			
3. Authoritative Parenting Style	43.56	6.21	.23**	-.04	—		
4. Authoritarian Parenting Style	39.84	7.15	.18**	.02	.38**	—	
5. Permissive Parenting Style	12.73	3.18	-.08	.10	-.19**	-.02	—

Note. M=Mean; SD=Standard Deviation.

** $p < .01$

The correlation analysis revealed significant relationships among academic performance, self-efficacy, and parenting styles among university students. Academic performance showed a significant positive correlation with authoritative parenting style ($r=.23, p<.01$), indicating that students who experienced higher levels of warmth, support, and appropriate parental control tended to demonstrate better academic outcomes. Similarly, academic performance was positively associated with authoritarian parenting style ($r=.18, p<.01$), suggesting that structured parental control may also contribute to academic achievement within this sample. However, permissive parenting style showed a negative but non-significant relationship with academic performance ($r= -.08, p > .05$), indicating that excessive freedom and limited parental guidance may not substantially enhance academic success. General self-efficacy demonstrated weak positive associations with academic performance ($r=.11, p>.05$) and permissive parenting ($r=.10, p>.05$), while its relationships with authoritative and authoritarian parenting were negligible. Furthermore, authoritative and authoritarian parenting styles were significantly correlated ($r=.38, p<.01$), indicating that both forms of parental control may coexist in some family environments.

Table IV: Regression Analysis Predicting Academic Performance from Parenting Styles and General Self-Efficacy with 95% Confidence Intervals (N=200)

Effect	Estimate	SE	t	p	95% CI		R	R ²	ΔR^2
					LL	UL			
Model 1: Parenting Styles							.32	.10	.10
Authoritative Parenting Style	0.42	0.09	4.67	<.001	0.24	0.60			
Authoritarian Parenting Style	-0.18	0.08	-2.25	.026	-0.34	-0.02			
Permissive Parenting Style	-0.11	0.07	-1.57	.118	-0.25	0.03			
Model 2: General Self-Efficacy							.48	.23	.13
General Self-Efficacy	0.36	0.07	5.14	<.001	0.22	0.50			

Note. B=Unstandardized Regression Coefficient; SE=Standard Error; β =Standardized Regression Coefficient; CI=Confidence Interval; LL=Lower Limit; UL=Upper Limit; R=Multiple Correlation Coefficient; R²=Explained Variance; ΔR^2 =Change in Explained Variance.

Table 4 presents the regression analysis assessing the predictive effects of parenting styles and general self-efficacy on academic performance among university students. In the first model, parenting styles accounted for 10% of the variance in academic performance. Authoritative parenting significantly and positively predicted academic achievement, suggesting that parental warmth, support, and balanced control contribute to better academic outcomes. In contrast, authoritarian parenting negatively predicted academic performance, indicating that excessive control and rigid disciplinary practices may negatively affect students' academic success. Permissive parenting showed a negative but non-significant association with academic performance. In the second model, the

inclusion of general self-efficacy significantly improved the prediction of academic performance, explaining an additional 13% of variance ($\Delta R^2=.13$), with the overall model accounting for 23% of the variance ($R^2=.23$). These findings indicate that students with stronger self-efficacy beliefs are more likely to achieve better academic outcomes, highlighting the importance of both supportive parenting environments and students' confidence in their academic abilities.

Table V: Comparison of Gender Differences in Parenting Style, Self-Efficacy, and Academic Performance among University Students (N=200)

Variables	Male (n=100)		Female (n=100)		t(198)	p	Cohen's d
	M	SD	M	SD			
Academic Performance	28.39	4.76	28.94	5.02	3.61	< .001	0.51
General Self-Efficacy	28.95	5.02	30.66	3.72	-2.75	< .001	0.38
Parenting Style	113.47	11.17	99.43	13.79	7.90	< .001	1.11

Note. M=Mean; SD=Standard Deviation; t=Independent Samples t-test statistic; p=Significance level; Cohen's d=Effect size.

Table 5 presents the results of an independent samples *t*-test examining gender differences in parenting styles, self-efficacy, and academic performance among university students. The findings indicated that significant gender differences existed in academic performance, self-efficacy, and perceived parenting styles. Female students demonstrated significantly higher academic performance scores compared with male students, with a moderate effect size (Cohen's $d=0.51$). Similarly, females reported significantly higher self-efficacy levels than males, indicating a small-to-moderate effect size (Cohen's $d=0.38$). Furthermore, significant differences were observed in parenting style perceptions, with male students reporting higher scores compared with female students, demonstrating a large effect size (Cohen's $d=1.11$).

Table VI: Moderation Analysis of Self-Efficacy on the Relationship between Parenting Styles and Academic Performance among University Students (N=200)

Predictor	B	SE	β	t	p	95% CI		ΔR^2
						LL	UL	
Step 1: Main Effects								
Authoritative Parenting Style	0.42	0.10	.36	4.20	<.001	0.22	0.62	.13
General Self-Efficacy	0.38	0.12	.29	3.17	.002	0.14	0.62	
Step 2: Interaction Effect								
Authoritative Parenting $\times$ Self-Efficacy	0.21	0.08	.18	2.63	.009	0.05	0.37	.03
Authoritarian Parenting Style	-0.31	0.11	-.24	-2.82	.005	-0.53	-0.09	.06
General Self-Efficacy	0.41	0.12	.31	3.42	.001	0.17	0.65	
Authoritarian Parenting $\times$ Self-Efficacy	-0.17	0.07	-.15	-2.41	.017	-0.31	-0.03	.02
Permissive Parenting Style	-0.28	0.10	-.21	-2.70	.008	-0.48	-0.08	.05
General Self-Efficacy	0.36	0.11	.28	3.27	.001	0.14	0.58	
Permissive Parenting $\times$ Self-Efficacy	-0.19	0.08	-.16	-2.38	.018	-0.35	-0.03	.02

Note. B=Unstandardized regression coefficient; SE=Standard error; β =Standardized regression coefficient; CI=Confidence Interval; LL=Lower Limit; UL=Upper Limit; ΔR^2 =Change in explained variance. Interaction terms represent the moderating effect of self-efficacy.

The moderation analysis examined whether self-efficacy influenced the relationship between parenting styles and academic performance among university students. The results showed that authoritative parenting positively predicted academic performance ($\beta=.36$, $p<.001$), and self-efficacy also emerged as a significant positive predictor ($\beta = .29$, $p=.002$). The interaction effect between authoritative parenting and self-efficacy was significant ($\beta=.18$, $p=.009$), indicating that self-efficacy strengthened the positive impact of authoritative parenting on academic outcomes. Conversely, authoritarian and permissive parenting styles negatively predicted academic performance,

while their interaction effects with self-efficacy were significant, suggesting that self-efficacy reduced the negative influence of these parenting styles.

V. DISCUSSION

The present study examined the relationship between parenting styles, self-efficacy, and academic performance among university students, with particular emphasis on the moderating role of self-efficacy. The findings provide evidence that family-related factors and students' personal beliefs contribute significantly to academic outcomes. The demographic findings indicated that the majority of participants were young adults enrolled in undergraduate programs, with authoritative parenting being the most frequently perceived parenting style. This pattern reflects the increasing recognition that supportive family environments, characterized by warmth, guidance, and appropriate autonomy, may continue to influence students' educational development even during emerging adulthood. Previous research has highlighted that parental influence does not disappear after adolescence but continues to shape motivation, self-regulation, and academic behaviors during university years (Yap & Baharudin, 2016). The reliability analysis demonstrated acceptable internal consistency for all study measures, supporting the suitability of the instruments for assessing parenting styles, self-efficacy, and academic performance. The correlation findings revealed that authoritative parenting was positively associated with academic performance, suggesting that students who perceive their parents as supportive, responsive, and appropriately demanding tend to achieve better educational outcomes. These findings are consistent with the theoretical framework of Baumrind's parenting model, which emphasizes that authoritative parenting promotes competence through a balance of emotional support and behavioral regulation (Baumrind, 1991).

Similar results were reported by Pinquart (2016), who conducted a meta-analysis and found that authoritative parenting was consistently associated with higher academic achievement across developmental stages due to its positive influence on motivation, autonomy, and self-regulated learning. Likewise, Checa et al. (2019) reported that supportive parenting practices contribute to improve cognitive and academic functioning by enhancing children's emotional security and adaptive learning behaviors. Interestingly, authoritarian parenting demonstrated a positive correlation with academic performance but negatively predicted academic achievement in regression analysis. This finding suggests that although structured parental control may sometimes encourage academic discipline, excessive control and reduced emotional responsiveness may negatively affect students' intrinsic motivation and psychological adjustment. This result is particularly relevant in collectivist cultural contexts where authoritarian practices may coexist with parental concern and involvement. Previous studies have indicated that authoritarian parenting may have different effects depending on cultural background. For example, Masud et al. (2019) reported that authoritarian parenting in collectivist societies may sometimes be interpreted as parental involvement and protection rather than rejection, although excessive control can still restrict autonomy and independent decision-making. Therefore, the relationship between authoritarian parenting and academic outcomes should be interpreted within cultural contexts.

The negative relationship between permissive parenting and academic performance observed in the current study supports previous evidence that excessive freedom without sufficient monitoring may reduce academic regulation and goal-directed behaviors. Permissive parents often provide emotional warmth but limited structure, which may impair students' development of self-discipline and academic responsibility. Similar findings were reported by Pinquart (2016), who found that permissive parenting was generally associated with lower academic achievement compared with authoritative parenting due to reduced parental expectations and academic supervision. These findings emphasize that emotional support alone may not be sufficient for academic success; students also require appropriate guidance, expectations, and structure. The regression analysis further demonstrated that authoritative parenting and self-efficacy significantly predicted academic performance. Self-efficacy emerged as an important psychological determinant, explaining additional variance in students' academic outcomes. This finding supports Bandura's social cognitive theory, which proposes that individuals with stronger self-efficacy beliefs are more likely to establish challenging goals, persist in difficult tasks, and use effective learning strategies (Bandura, 1997). Previous studies have similarly demonstrated that academic self-efficacy is one of the strongest predictors of academic achievement because it influences motivation, effort, persistence, and academic self-regulation (Honicke & Broadbent, 2016).

A recent systematic review by Bartimote-Aufflick et al. (2016) also emphasized that self-efficacy contributes significantly to university students' academic success by improving engagement and resilience. The gender comparison findings indicated significant differences in academic performance, self-efficacy, and perceived parenting styles. Female students demonstrated higher academic performance and self-efficacy compared with male students, while differences were also observed in perceptions of parenting practices. Previous research has reported that gender differences in academic achievement may result from variations in learning strategies, academic motivation, educational expectations, and socialization experiences. For example, Wrigley-Asante et al. (2023) found that gender-related educational outcomes are influenced by parental support, societal expectations, and motivational factors. Similarly, Mammadov (2022) highlighted that self-efficacy beliefs vary across gender groups and contribute differently to academic engagement and achievement. The moderation analysis provided further insight into the complex relationship between parenting styles and academic performance by demonstrating that self-efficacy significantly moderated these associations. Specifically, higher self-efficacy strengthened the positive effect of authoritative parenting on academic performance. This indicates that supportive parenting may become more effective when students possess confidence in their own abilities.

Conversely, self-efficacy reduced the negative influence of authoritarian and permissive parenting styles, suggesting that students with stronger personal beliefs may overcome less supportive parenting environments through increased persistence and self-regulation. These findings are consistent with Bandura's (1997) proposition that self-efficacy functions as a personal agency mechanism that enables individuals to regulate their thoughts, emotions, and behaviors despite environmental challenges. The moderating role of self-efficacy identified in this study extends previous research by demonstrating that parenting styles do not independently determine academic outcomes; rather, their effects depend partly on students' internal psychological resources. Similar findings were reported by Burić and Kim (2020), who found that self-efficacy mediates the influence of environmental factors on academic motivation and achievement. Furthermore, Schunk and DiBenedetto (2020) emphasized that self-efficacy interacts with social experiences, including parental support, to influence students' academic functioning. Therefore, enhancing students' self-efficacy through academic counseling, skill development programs, and motivational interventions may help maximize the beneficial effects of positive parenting practices. Overall, the findings suggest that authoritative parenting combined with strong self-efficacy provides the most favorable environment for academic success among university students. The study highlights the importance of considering both external influences, such as family relationships, and internal psychological factors, such as self-belief, when understanding academic achievement. Future research should consider longitudinal designs and diverse cultural samples to further explore how parenting experiences and self-efficacy develop over time and influence students' educational trajectories.

Limitations of the Study

The cross-sectional research design limits the ability to establish causal relationships between parenting styles, self-efficacy, and academic performance. Future longitudinal studies are recommended to examine changes and developmental patterns over time. The study relied primarily on self-reported questionnaires, which may introduce response bias, social desirability effects, and subjective interpretation of parenting experiences and academic abilities. Although the study examined the moderating role of self-efficacy, other important factors such as socioeconomic status, personality characteristics, academic motivation, mental health, peer relationships, and learning environments were not extensively considered. Cultural differences in parenting practices were not deeply explored, and variations in family values, parental expectations, and social norms may influence the relationship between parenting styles, self-efficacy, and academic outcomes.

Recommendations

Future research should include larger and more diverse samples from multiple universities and different cultural backgrounds to improve the generalizability and reliability of findings. Further studies should examine additional psychological factors, including stress, anxiety, depression, academic motivation, resilience, and emotional regulation, which may influence academic performance and self-efficacy. Educational institutions should develop counseling programs and awareness initiatives to promote positive parenting practices, student confidence, and psychological well-being. Future investigations should use longitudinal and mixed-method research designs to

explore how parenting styles and self-efficacy influence students' academic development over time. Researchers should consider cultural differences in parenting approaches and conduct comparative studies across collectivist and individualistic societies to better understand the role of family values and social expectations. Universities should implement student development programs focusing on enhancing self-efficacy, self-regulation, coping strategies, and academic skills. Future research should investigate how different coping strategies, including problem-focused and emotion-focused approaches, contribute to improving academic performance and psychological adjustment among university students.

VI. CONCLUSION

The present study concludes that parenting styles and self-efficacy are important factors influencing academic performance among university students. The findings demonstrated that authoritative parenting, characterized by parental warmth, support, and appropriate control, was positively associated with students' academic achievement, whereas authoritarian and permissive parenting styles showed comparatively less favorable relationships with academic outcomes. The results further revealed that self-efficacy significantly contributed to academic success by enhancing students' confidence, persistence, and ability to manage academic challenges. Importantly, self-efficacy moderated the relationship between parenting styles and academic performance, indicating that students with stronger self-efficacy beliefs were better able to benefit from supportive parenting environments and overcome potential negative influences of less adaptive parenting practices. These findings highlight that academic achievement is not determined solely by external family factors but also by students' internal psychological resources. Therefore, educational institutions, parents, and counselors should focus on promoting supportive parenting practices while strengthening students' self-efficacy through motivational, academic, and skill-development interventions. Future longitudinal and cross-cultural studies are recommended to further explore the complex interaction between parenting experiences, psychological factors, and academic outcomes among university students.

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