

Impact of Parental Socio-economic Status on Academic Achievement among Undergraduates in Bharatpur, Chitwan

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Abstract

This study aimed to assess the impact of parental socio-economic status on students' academic achievement among undergraduates in Bharatpur, Chitwan. Socio-economic status refers to the social and economic condition of a family which is commonly determined by parental income, occupation and education level. This study applied a survey research design by distributing survey questionnaires to three hundred and eighty six (n=386) student selected through convenience sampling. Descriptive statistics and ordinal logistic regression are used for the data analysis.

The findings show that parental socio-economic status holds a significant measurable impact on undergraduate academic achievement in Chitwan, collectively accounting for 18.1% of the total variance in student Cumulative Grade Point Average. Household income stands out as the single most powerful determinant shifting likelihood on the student's Cumulative Grade Point Average. In the other hand, father education, father occupation and mother occupation did not show statistically significant effects on student Cumulative Grade Point Average. The study provides useful insights for educational institutional, government and society to take a measurable action to achieve better student's performance.

Keywords: *academic achievement, education level, income, occupation, socio-economics of parents*



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1. Introduction

Education is considered as primary base for social and economic development. In Nepal there has been significant expansion of higher education, with an increasing number of students enrolling in undergraduate programme across the various disciplines. Academic achievement is one of the most important indicators of student's educational progress. However academic success is not solely determined by a student's intellectual capabilities or hours of study, it is also influenced by different social and economic variables of the student family environment (Nachinaab et al., 2019). Socio economic status (SES) generally acts as a foundation pillar that influences the quality of resources, support systems and learning environment available to students, which is directly associated to the student ultimate success. SES is commonly measured through parental income, educational attainment and occupational status (Munir et al., 2023).

There has been extensive discussion about the relationship between parental SES and academic achievement in educational and sociological literature. Families with higher income levels are often better to provide the required educational materials (Soharwardi et al., 2020). Likewise, parents with higher

educational attainment are more likely to guide the students in educational decision-making (Pant, 2020). In the same way parents' occupation also matters since it reflects economic stability and social capital. Students can study in the same classroom and take the same examinations, but their resources and family support systems often differ significantly. Although Bharatpur has emerged as an important educational hub there is lack of critical localised data-driven research on how these socio-economic realities influence students' academic achievement right here in Bharatpur. This study addresses the gaps by examining how the above-mentioned factors influence academic performance.

2. Literature review

Review of theories

Social capital theory: This theory places a strong emphasis on how social networks, connections and cultural differences influence academic achievement (Israel et al., 2001). Families with higher socio-economic status typically have more powerful social networks, which help them to provide kids with better educational resources and opportunities. Parents with higher SES can also help their kids to thrive academically by passing their cultural capital which includes

behaviours knowledge and abilities that help their children to achieve academic standards (Turner, 2020).

Human capital theory: This theory focuses on economic value of education and parents with higher SES have the capacity to invest in their children education, which includes having access to home tutors, private education and extracurricular activities which help to improve their children academic performance. Parents with higher education levels can also mentor their children's academic performance and encourage them to achieve their target. On the other hand , parents with lower SES don't have the capacity to provide resources and limit their options due to financial constraints (Becker, 1993).

Empirical review

Jupakkal et al., (2024) examined the relationship between the academic achievement of grade 11 students and their parents' socio-economic status at sulu senior high school. A sample of 140 respondents were selected using random sampling and they provide their responses through the questionnaire method. According to the findings, many parents earn 5000 per month as farmers or fishermen and their economic status has a significant impact on their children educational attainment. However, their

parents' profession has no significant impact on their education.

Tompsett and Knoester (2023) examined how academic success, test scores, college expectations, extracurricular activities, family socio-economic position and school environment interact using multi-level modeling approaches and educational longitudinal study. It shows that students from households with higher socio-economic positions have cumulative advantages that are positively correlated with college attendance and have a higher chance of entering a more prestigious institution. The results emphasise the significance of understanding how social class, family resources and institutional factors affect the patterns of college attendance

According to Munir et al. (2023) parental engagement plays a crucial role in students success influencing academic performance attitudes about learning and socio economic growth. This study investigates various types of parental involvement including interactions with teachers' engagement in school events and assistance with assignment, assessing their impact on student achievement. It emphasises the advantage of parental engagement across different grade levels and socio-economic status such as enhanced motivation, self-esteem and a feeling of belonging. Furthermore, it

investigates methods to enhance parental involvement including educational program, outreach efforts and school-family collaborations highlighting the importance of a nurturing and inclusive school setting.

Wilder (2023) analysed the influence of parental engagement on students' academic achievement success by integrating results from nine meta-analyses. The findings consistently indicated a positive connection between parental engagement and academic achievement; the greatest effect was noted when parental involvement was characterised by parents aspirations for their children's educational achievement. Conversely, the least significant effect was observed when parental participation involved helping with homework.

Ates (2021) used meta-analysis approach, showed the relationship between students' academic success and parental involvement. After searching various database the study identifies 53 studies that include elementary, middle, or high school students and their families with sufficient quantitative data. The study found that academic success is highly impacted by parental participation, and there is no significant difference in connection between course areas, schools level, and geographic location.

Pant (2020) analysed whether parental socio-economic status affects students' academic achievement. This study focuses on various correlated parental factors such as income, education, and occupation and their impact on students' performance. The data was collected using primary methods and analysed through thematic narrative analysis. This research finds that parents with high economic backgrounds show more interest in further studies, where as parents with low economic backgrounds focus more on employment rather than further education.

Soharwardi et al. (2020) investigated the relationship between students' academic achievement and their parents' socio-economic status. In this study, data is collected through structured questionnaire methods from more than 200 students. This study finds that parents with higher education have children with good academic performance, whereas children of parents with low educational backgrounds face problems in accessing educational resources.

Turner (2020) examined the impact of community and family on rural Australian students' decisions to pursue higher education, comparing rural and metropolitan statistics while incorporating qualitative narrative. Through an analysis of students sense

of belonging, the study explores how rural communities shape educational aspirations. Findings from six selected interview with rural Queensland suggest that while community influence is present, family plays a more dominant role.

Nachinaab et al. (2019) used chi-square analysis and forward selection stepwise linear regression analysis to examine the relationship between adult students' academic attainment and the socio-economic position of their parents. The findings suggest the impact of proxy parenting on educational attainment should be reevaluated by community groups, public group systems, colleges and policy research organizations.

Adhikari and Aryal (2019) examined factors influencing the performance of institutional schools in Chitwan district, Nepal. Using data from 90 participants through structured questionnaires and interview, the research evaluates school effectiveness based on the percentage of students' passing School Leaving Certificate examinations. Key factors affecting school performance include improvements in library and lab resources, parent- teacher interaction, drinking water and classroom facilities and teacher's perceptions on academic standards.

Azhar et al., (2014) examined the relationship between parents' socio-economic status and students' academic performance. In this study, 250 students were chosen who were 3rd level students based on their age, department, gender and roll number. This study reveals that students belonging to wealthier families perform better compared to those facing financial difficulties, and parents' education also boosts students' performance.

According to Israel et al. (2001) families and communities are essential in aiding young people to acquire the knowledge and skills necessary for high tech jobs in the global economy. This study applied social capital as a lens to analyze the impact of family and community on educational success in public schools. Information from the National Education This longitudinal Survey (NELS) indicates that both the process and structural dimensions of social capital contributes to success as well, though its influence is less strong.

3. Methodology

Study design sample and population

This study applied a descriptive research design to explore how parental socio economic status influence academic achievement. The target population consisted of undergraduate students

enrolled in colleges located in Bharatpur. A total of three hundred and eighty six (n=386) responses were collected through convenience sampling. The sample size was determined using Cochran formula to satisfy the standard requirement of 95% confidence level with a 5% margin of error, generally considered adequate for social science survey research (Chaokromthong, & Sintao, 2021).

Pilot testing and validity of instrument

Pilot test was conducted to examine the relevance of the survey instrument. Based on the feedback minor revision were made to improve the clarity of the survey instrument. To ensure validity of the instrument, the questionnaire items were developed on the basis of the objectives, conceptual framework and review of relevant literature, which helped maintain content validity.

Method of data collection and analysis

Primary data were gathered via a structured survey questionnaire administered directly to undergraduate students in Bharatpur. After collection, descriptive statistics were used to summarise the demographic characteristics of the respondents and inferential statistics were employed

to examine the relationship between parental socio-economic variables and academic achievement.

4. Results

Descriptive analysis

This section presents the results and analysis of the descriptive variables under investigation in tabular form.

The results show that respondents are female majority with 69.2%, while male respondent was 30.8%. In terms of age, almost all respondent (99.5%) are in the 18–25year age group. Semester-wise, the largest proportion of respondents are from the sixth semester (33.4%), followed by the second semester (26.2%). The smaller proportions are drawn from the fifth (1%) and seventh semester (0.5%) (see Table 1).

Inferential analysis

This part includes statistical tests examining the relationship between parental socio-economic status and students CGPA.

Findings in Table 2 presents the Chi-square test examining the relationship between parental socio economic variables and students CGPA. As students' CGPA was categorized into multiple groups, Chi square test was used to determine the whether the distribution

Table 1

Demographic profile of respondents

Variables	Categories	Respondents	Percent
Gender	Male	119	30.8
	Female	267	69.2
Age	Below 18	0	0
	18-25	384	99.5
	26 and above	2	0.5
	Second	101	26.2
	Third	27	7
Semester	Fourth	76	19.7
	fifth	4	1
	Sixth	129	33.4
	Seventh	2	0.5
	Eighth	47	12.2

of academic performance varied significantly across different parental socio-economic groups including monthly family income, parental education and occupation. The findings show that family monthly income had a highly significant association with students' CGPA ($\chi^2 = 84$, $p < 0.001$). In the same way mother's education level

was also found to be highly significant ($\chi^2 = 39$, $p < 0.001$). In contrast father education level ($\chi^2 = 30$, $p = 0.12$)¹ and father occupation ($\chi^2=30$, $p=0.60$) do not show statistically significant association with student CGPA. However, mother occupation showed marginal association ($\chi^2 = 39$, $p = 0.7$).

Table 2

Association between parental socio-economic variable and student CGPA

Independent variable vs student CGPA	Chi-square value (X ²)	df	p- value	Results
Family monthly income	84	12	<0.001	Highly significant
Mother education level	39	16	<0.001	Highly significant
Father educational level	22	16	0.121	Not significant
Mother occupation	39	20	0.07	Marginally significant
Father occupation	30	20	0.60	Not significant

Table 3

Model fit statistics

Statistical test	Coefficient	P-value	Result
Chi- square	70.468	0.001	Highly significant
Nagelkerke pseudo R ²	0.181		18.1%(variance)

The results reported the goodness of fit statistics for the ordinal regression model estimated to assess the effect of parental socio-economic status on students CGPA. The model chi-square was statistically significant ($\chi^2 = 70.468$, $p = 0.001$). In addition, the Nagelkerke Pseudo R² show 18.1% of the variance in students' academic achievement (see Table 3).

Table 4

Ordinal logistic regression estimates of parental socio-economic variables on students CGPA

Predictors	Estimate (B)	SE	Wald	df	P-value
Family income (reference below 20000)					
20001 to 50000	1.360	0.560	5.897	1	0.015
50001 to 100000	1.027	0.319	10.370	1	0.001
100001 and above	0.020	0.285	0.005	1	0.944
Mother education (reference 'no formal education)					
Basic education	1.372	0.715	3.686	1	0.055
Secondary education	1.198	0.684	3.067	1	0.080

Table 4 presents the ordinal logistic regression estimates for the parental socio-economic variables. The dependent variables student CGPA, was measured as an ordinal categories with ordered categories. The analysis estimated the probability of students of students belonging to higher CGPA categories using the logit link function. During model estimation, one category of each independent variable was treated as the reference category, against which the remaining are compared. The results indicate that family monthly income was the most significant determinant of students' academic achievement. The coefficients for family income between Rs twenty thousands one to fifty thousands ($B = 1.360$, $p = 0.015$) and fifty thousand one to one lakh ($B = 1.360$, $p = 0.001$) were positive and statistically significant, while monthly income of family above one lakh was not significant ($p = 0.944$). Mother education level also showed positive impact, basic education of mother ($B = 1.372$, $p =$

0.55) and secondary level education of mother ($B = 1.198$, $p = 0.80$), but the academic categories of mother were not significant at the 5% percent level. Likewise, father educational level, mother occupation and father occupation were not significant predictors of CGPA, as all corresponding p -values exceeded the 0.05 level of significance.

5. Discussion

The findings reveal that parental socio-economic status has a major influence on the academic achievement of undergraduate students in Bharatpur, Chitwan. Among the variables examined, family monthly income appeared as the strongest predictor of students CGPA, as it was highly significant in the chi-square analysis and remained statistically significant in the ordinal regression model. This suggests that household economic ability plays a major role in shaping the academic performance consistent with Jupakkal et al., (2024) who found that parental economic status had a significant effect on student educational attainment as well as Azhar et al. (2014), who reported that the student from wealthier families performed better academically than those from financially weak backgrounds. Another important finding reveals that mother education plays major role in students' academic achievement. This findings

are associated with Soharwardi et al. (2020), who emphasised that children of highly educated parents performed better academically. By contrast, the present study did not find statistically significant relationships for father's education and father's occupation, while mother's occupation showed only a weak or borderline association with academic achievement. The above-mentioned results indicate that not all dimensions of parental socio-economic status influence student performance in the same way.

6. Conclusion

The study examined the relationship between parental socio-economic status and academic achievement of undergraduate students in Bharatpur, Chitwan. The findings indicate that parental socio-economic status significantly affects students' academic outcomes, but the extent of influence differs across various socio-economic factors. Precisely, family monthly income was found to be most significant variables of student CGPA, while mother education also showed a positive but comparatively weaker influence. On the other hand, parental occupational status and father education did not demonstrate statistically significant relationships with academic achievement. The study concludes that economic resources and

parental educational backgrounds has major role in academic achievement among undergraduates. This study support the significant ground of interconnection between economic factors, social standard with students' CGPA. Thus, colleges must realize that not all students start from same economic support and support must be given.

Transparency statement

The author confirms that this study has been conducted with honesty and in full adherence to ethical guidelines.

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Conflict of interest

The authors declare there are no conflicts of interest.

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