**Role of Socioeconomic Factors in Educational Disparities:**

**A Comparative Study of Rural and Urban Area**

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**ABSTRACT**

Socioeconomic status (SES) includes income, education, and financial security, all of which affect overall human functioning, including physical and mental health. The challenges associated with low SES, such as lower educational attainment, poverty, and poor health, can be overcome. In our current study, we aim to understand how socioeconomic factors impact academic achievement, with the potential to bring about positive change. We are considering parental education, cultural background, geographic location, and income levels for the study, and we will also be comparing rural and urban areas.

Our study takes a comprehensive approach and provides valuable insights for stakeholders, educators, and policymakers. These findings can be crucial in developing socioeconomic policies that ensure children from low economic backgrounds have equal opportunities, thereby contributing to the overall well-being of all children in the nation.

**1.1 Introduction**

Education is a basic need and a fundamental human right of an individual and a cornerstone for personal and societal development. It mainly consists of providing learning skills, gaining knowledge, skills, values, beliefs and habits that result in the holistic growth of each individual. There are various ways in which education is being provided including formal, informal schooling and non-formal education. These play an important role in shaping a society's intellectual and social fabric. Education helps one realize their potential, participate fully in societal activities and contribute to the economic and social progress of their communities.

Factors like income levels, parents' education, quality of education, etc., significantly influence educational outcomes like marks scored, etc. Income levels can determine the affordability of educational resources, while employment status often correlates with parental involvement and support in children's education. These factors also affect their exposure to educational opportunities and extracurricular activities, which are very important for a well-rounded improvement in students. We also need to consider the fact that both physical and mental health plays a vital role in a student's ability to attend classes in college and perform extremely better.

The relationship between socioeconomic factors and education is generally considered while comparing rural and urban areas. Urban areas are, as usual, characterized by higher population densities and more economic activities; they often have better educational facilities, etc. In contrast, rural areas may face challenges like lower funding for schools, a shortage of qualified teachers, etc. These differences can lead to disparities in educational outcomes, with students studying in urban areas having better academic performance than those in rural regions. Furthermore, policy decisions and resource allocation often exacerbate socio-economic disparities between rural and urban areas. Governments and policymakers must recognize these disparities and implement targeted interventions to ensure equitable access to quality education for all students, regardless of their socio-economic background or geographic location.

Understanding the impact of socio-economic factors on education in rural versus urban areas is crucial for developing strategies to bridge the educational divide. By addressing the unique challenges rural students face and leveraging the strengths of urban educational systems, it is possible to create a more equitable and inclusive educational landscape that benefits all members of society. The core issue of this study is to explore these dynamics in greater detail, providing insights into how socioeconomic factors shape educational experiences and outcomes in different geographic contexts.

**1.2 Purpose of the Study**

The main purpose of the study is to comprehensively analyze the impact of socioeconomic variables on academic achievements, with a particular focus on comparing rural and urban areas. The specific objectives are:

1. **Examine the influence of parental education:** Assess how the educational qualifications of both fathers and mothers affect students' academic performance.
2. **Investigate the role of cultural background:** Understand how different cultural contexts impact educational outcomes.
3. **Analyze the effect of geographic location:** Compare and contrast the academic achievements of students from rural versus urban areas.
4. **Evaluate income levels:** Determine the relationship between monthly family income and students' percentage.
5. **Assess the availability and quality of educational resources:** Explore students' education ratings, availability of resources, peer support, parental involvement, and community support.
6. **Identify barriers to education:** Examine the frequency and reasons for students missing school, particularly due to financial constraints.
7. **Study the impact of government aid:** Evaluate the effectiveness of government assistance in supporting students' education.

**1.3 Scope of the study**

The content scope of the study focused mainly on socio-cultural and economic factors correlating students' academic performance in urban and rural areas of Karnataka State. By achieving these objectives, the study aims to provide valuable insights for stakeholders, educators, and policymakers to:

* Formulate socioeconomic policies that ensure children from low economic backgrounds have equal educational opportunities as those from higher economic backgrounds.
* Foster harmony and equity among all children in the nation, regardless of their socioeconomic status.

**Research Questions**

The following research questions were formulated to guide the study:

* 1. Identify the socioeconomic factors influencing on academic achievements of the students in General.
  2. To find the students' perception regarding the Quality of Education, Availability of Educational Resources, Support from peers, Parental Involvement and Community support.
  3. To determine the role of Socioeconomic Factors in Educational Disparities between the Urban and Rural areas.

**1.4 Literature Review**

Understanding the influence of socioeconomic factors on educational outcomes is not just crucial, but also fascinating for effective policy formulation and targeted interventions in rural and urban settings. This review synthesizes findings from several significant studies across contexts to elucidate the disparities and commonalities shaping academic performance, providing a compelling narrative for the reader.

In his study on measuring students' socioeconomic background and its impact on achievement in PISA 2000 and PISA 2003, Wolfram Schulz (2005) identifies parental education, Parental occupation, and household items as the three main socioeconomic status variables. After comparing the results, his findings reveal that the composite index of these variables explains less variance in a smaller number of countries than when using all three components separately, providing a new level of understanding for the reader.

The study by Tofi Simon Ternenge and Tamen Timothy Torkuma (2021) on the academic performance of undergraduate students in the Department of Library and Information Science at Benue State University in Makurdi not only examines socio-cultural and economic factors as correlates but also provides practical insights. The study found that factors such as the presence of bars, engaging in romantic relationships, and economic challenges negatively affect students. In contrast, involvement in clubs and cultural activities positively impacts students' academic performance, offering actionable strategies for improvement.

The study by Solomon Yohannes, Tesfahiwet Yemane, and Maekele Okbay(2021) on the impact of socioeconomic status and environmental factors on academic performance at Asmara College of Education reveals that, aside from gender and family-provided learning resources, no other variables considered significantly affected the student's cumulative grade point average.

Kumaravel Udayakumar, Shanmugan Rajendran, and Arumugam Sugirtha Rani's (2022) study in Salem district, Tamil Nadu, India, examines the academic performance of higher secondary students and the influence of socioeconomic status. The study highlights that the mother's education and occupation significantly affect a child's educational performance. It also illustrates the impact of the father's education, employment, family income, type of school, and medium of education on the student's academic performance.

Jackson Muchunku's (2014) study in Chuka Division, Tharaka-Nithi County, Kenya, investigates the impact of socioeconomic determinants on students' performance in the Kenya Certificate of Primary Education (KCPE). By identifying key factors such as parental education and economic status, Muchunku underscores how these variables contribute to variations in academic achievement, offering insights essential for local educational policy.

In the District Doda, Jammu & Kashmir, India, Dr. Om Raj Katoch, Dr. Romesh Sharma, and Sarita Parihar (2022) explore similar themes, examining how parental education, income levels, and occupation influence children's academic success. Their research emphasizes the need for targeted educational support to mitigate socioeconomic disparities and improve overall educational outcomes.

Naresh Kumar's analysis (2018) focuses on the highly competitive JEE-IIT examinations in India, highlighting the impact of parental socioeconomic factors on student performance. By scrutinizing parental education and income elements, Kumar's study reveals critical barriers and advantages affecting access to premier educational institutions, guiding efforts to promote equitable opportunities in higher education.

Further reinforcing these insights, Gemechu Abera Gobena's research (2017) at Haramaya University in Eastern Ethiopia explores the effect of family socioeconomic status on academic achievement among college students. His findings underscore the significant role of parental income, education, and occupation in shaping educational outcomes, informing targeted interventions to level disparities in higher education.

Lastly, the study published in the International Journal of Database Theory and Application employs fuzzy mining decision support systems to analyze the complex relationships between socioeconomic factors and academic performance. Conducted by the Science & Engineering Research Support Society, this research provides a structured framework for understanding and predicting the effects of socioeconomic variables on student achievement, offering valuable insights for educational decision-makers.

**1.5 Research Methods**

**1.5.1 Research Design**

This study employs a comparative cross-sectional design to investigate the influence of socioeconomic variables on academic achievements in rural and urban areas. A mixed-methods approach, integrating both quantitative and qualitative data, was adopted to provide comprehensive insights.

The statistical analysis was conducted in two stages:

1. **Descriptive Analysis**: Descriptive statistics were used to summarize and describe the properties of the data collected.
2. **Model Testing**: The proposed research model was tested using **Structural Equation Modeling (SEM)** and multinomial logistic regression to assess the contributions and significance of the socioeconomic variables.

The data were analyzed using **SPSS 23.0**, **SigmaPlot 14**, and **AMOS 21 for Windows**. Parametric statistical techniques, such as one-way ANOVA, t-tests, and chi-square tests, were employed to compare factors across demographic variables. A significance level of **p < 0.05** was established a priori for statistical significance. Finally, multinomial logistic regression was applied to identify the socioeconomic factors most strongly associated with academic achievement.

**1.5.2. Sample Selection and Design:**

Ensuring the validity and accuracy of the study required careful attention to sample selection and data collection processes. The sample size was determined through a power analysis conducted using pilot study data, which indicated that a sample of **184 respondents** was adequate. To strengthen the research design, a sample of **200 respondents** was chosen, evenly distributed between rural and urban areas.

**Sampling Technique**:  
A **stratified sampling technique** was employed to ensure proportional representation of respondents from both rural and urban contexts.

**Data Collection Methods**:

1. **Online Surveys**: A structured questionnaire was distributed via Google Forms to collect responses from urban areas.
2. **Personal Interviews**: In rural areas, where internet access is limited, face-to-face interviews were conducted using the same structured questionnaire to ensure inclusivity and higher response rates.

By combining these data collection methods, the study ensured the reliability and richness of the dataset, enabling a detailed analysis of the socioeconomic factors affecting academic achievement in diverse settings.

**1.6 Data Presentation, Analysis, Interpretation and Discussion of Findings**

This section deals with the presentation and analysis of data obtained from responses. The study comprised a total of 200 respondents, with an even split between rural and urban areas, each contributing 100 participants.

**Table 1 Demographic Profile of the Respondents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic** | **Subdivisions** | **Frequency** | **Percent** |
| **Age** | Below 18 | 35 | 17.5 |
| 18 - 25 | 116 | 58.5 |
| 25 - 40 | 34 | 17.0 |
| Above 40 | 14 | 7.0 |
| **Gender** | Female | 133 | 66.5 |
| Male | 67 | 33.5 |
| **Location** | Rural | 100 | 50.0 |
| Urban | 100 | 50.0 |
| **Distance of the nearest school** | Less than 5 kms | 145 | 72.5 |
| 5 - 10 kms | 32 | 16.0 |
| 10 - 20 kms | 17 | 8.5 |
| More than 20 kms | 6 | 3.0 |
| **Place of Residence** | Day-scholar | 83 | 41.5 |
| Hostel | 68 | 34.0 |
| PG | 25 | 12.5 |
| Others | 24 | 12.0 |
| **Monthly Family Income** | <10,000 | 6 | 3.0 |
| 10,000 - 25,000 | 39 | 19.5 |
| 25,000 - 40,000 | 41 | 20.5 |
| >40,000 | 114 | 57.0 |
| **Caste** | General | 121 | 60.5 |
| OBC | 62 | 31.0 |
| SC/ST | 17 | 8.5 |
| **Board of Education** | State Board | 74 | 37.0 |
| CBSE | 102 | 51.0 |
| IB | 2 | 1.0 |
| ICSE | 14 | 7.0 |
| Others | 8 | 4.0 |
| **Financial Aid from Govt.** | No | 175 | 87.5 |
| Yes | 25 | 12.5 |
| **Missed Due to financial reasons** | No | 166 | 83.0 |
| Yes | 34 | 17.0 |
| **Marklevel** | Second class | 43 | 21.5 |
| First class | 108 | 54.0 |
| Distinction | 49 | 24.5 |
| **Total** | | 200 | 100% |

**Source:** Field Survey

The age distribution of the respondents varied, with 17.5% being below 18 years old, 58.5% falling in the 18-25 years age bracket, 17% between 25 and 40 years, and 7% above 40 years. This diverse age range ensures a broad perspective on the educational impacts of socioeconomic variables.

Regarding gender, the study represented more females, who constituted 66.5% of the respondents, while males accounted for 33.5%. This gender distribution may provide insights into gender-specific educational outcomes influenced by socioeconomic factors.

The proximity of educational institutions was also considered, revealing that 72.5% of the respondents lived less than 5 kilometers from the nearest school, 16% were situated 5 to 10 kilometers away, 8.5% lived 10 to 20 kilometers away, and a small percentage, 3%, was more than 20 kilometers from the nearest school. These figures highlight potential accessibility issues that could affect educational attainment.

The living arrangements of the respondents varied, with 41.5% being day scholars, 34% residing in hostels, 12.5% living in PG (paying guest) accommodations, and 12% classified under 'others'. Understanding these residential patterns is crucial in evaluating the support and resources available to students outside of school hours.

Regarding monthly family income, 3% of the respondents reported earning less than Rs. 10,000, 19.5% had an income between Rs. 10,000 and Rs. 25,000, 20.5% earned between Rs. 25,000 and Rs. 40,000, and a significant majority, 57%, had a monthly family income exceeding Rs. 40,000. These income levels indicate the economic diversity within the sample and provide a basis for analyzing the impact of financial stability on educational outcomes.

Caste distribution among the respondents was also documented, with 60.5% belonging to the General category, 31% from OBC (Other Backward Classes), and 8.5% from SC/ST (Scheduled Castes/Scheduled Tribes). This demographic breakdown allows for an analysis of caste-related disparities in education.

The educational background of respondents, in terms of the board of education, showed that 37% attended State Board schools, 51% were from CBSE (Central Board of Secondary Education), 1% from IB (International Baccalaureate), 7% from ICSE (Indian Certificate of Secondary Education), and 4% from other educational boards. This diversity in educational boards can help compare the standards and outcomes of different educational systems.

12.5% of the respondents received financial aid from the government, while a significant majority, 87.5%, did not receive any aid. Additionally, 17% of the participants reported missing school due to financial reasons, whereas 83% did not face such issues. These figures highlight the role of financial support in ensuring uninterrupted education.

Lastly, the respondents' academic performance was categorized into three levels: 21.5% achieved second-class marks, 54% attained first-class, and 24.5% received distinction. This data provides a snapshot of the academic achievements within the sample, enabling a detailed analysis of how socioeconomic factors influence educational success.

**Table 2 Demographic Profile of Mothers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Mother's Details** | | Frequency | Percentage |
| **Occupation** | Self-employed | 27 | 13.5 |
| Public Sector Employee | 16 | 8.0 |
| Private Sector Employee | 51 | 25.5 |
| Other | 91 | 45.5 |
| House wife | 15 | 7.5 |
| **Educational Qualification** | 10th | 20 | 10.0 |
| 12th | 25 | 12.5 |
| Under-Graduation | 73 | 36.5 |
| Post-Graduation | 75 | 37.5 |
| PhD | 7 | 3.5 |
| **Total** | | 200 | 100% |

**Source:** Field Survey

Regarding occupation, 13.5% of the mothers were self-employed, 8% were employed in the public sector, 25.5% worked in the private sector, and 45.5% were engaged in other occupations. Additionally, 7.5% of the mothers were homemakers.

Regarding educational qualifications, the data revealed that 10% of the mothers had completed up to the 10th grade, 12.5% had finished the 12th grade, 36.5% held an undergraduate degree, and 37.5% had attained a postgraduate degree. A smaller proportion, 3.5%, had achieved a PhD. This range of educational backgrounds provides a comprehensive view of the mothers' academic achievements and their potential influence on their children's educational outcomes.

**Table 3 Demographic Profile of Father**

|  |  |  |  |
| --- | --- | --- | --- |
| **Father's Details** | | Frequency | Percentage |
| **Occupation** | Private sector Employee | 85 | 42.5 |
| Public sector Employee | 35 | 17.5 |
| Self-employed | 55 | 27.5 |
| Others | 25 | 12.5 |
| **Educational Qualification** | 10th | 20 | 10.0 |
| 12th | 25 | 12.5 |
| Under-Graduation | 73 | 36.5 |
| Post-Graduation | 75 | 37.5 |
| PhD | 7 | 3.5 |
| **Total** | | 200 | 100% |

**Source: Field Survey**

Finally, 42.5% of the fathers were employed in the private sector, 17.5% worked in the public sector, 27.5% were self-employed, and 12.5% were engaged in other occupations.

Regarding educational qualifications, the data revealed that 10% of the fathers had completed up to the 10th grade, 12.5% had finished the 12th grade, 36.5% held an undergraduate degree, and 37.5% had attained a postgraduate degree. A smaller proportion, 3.5%, had achieved a PhD. This range of educational backgrounds provides a comprehensive view of the fathers' academic achievements and their potential influence on their children's educational outcomes.

**1.6.1 Logistic regression**

**Research Question 1**: Identify the socioeconomic factors influencing on academic achievements of the students in General.  To find out the socioeconomic factors influencing academic achievement, we divide the academic performance of the students into three groups: second class, those who score marks between 50-60 per cent; first class, those who score percentage marks between 60 and 75; and distinction, those who score the marks above 75 per cent. Based on this, we perform the logistical regression with the second class as the reference category, as shown in Table 4.

**Table 4 Regression coefficient for logistical regression Total Data**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Mark level | | B | Std. Error | Wald | df | Sig. | Exp(B) |
|
| First class | Intercept | 2.826 | 1.306 | 4.687 | 1 | 0.030 |  |
| School Distance | 0.535 | 0.329 | 2.638 | 1 | 0.104 | 1.707 |
| Residence | -0.039 | 0.202 | 0.037 | 1 | 0.848 | 0.962 |
| Income | 0.143 | 0.243 | 0.344 | 1 | 0.557 | 1.153 |
| Father - Occupation | -0.122 | 0.179 | 0.466 | 1 | 0.495 | 0.885 |
| Mother Occupation | -0.124 | 0.176 | 0.497 | 1 | 0.481 | 0.883 |
| Father Education | -0.452 | 0.252 | 3.217 | 1 | 0.073 | 0.636 |
| Mother Education | 0.089 | 0.227 | 0.154 | 1 | 0.695 | 1.093 |
| Caste | -0.110 | 0.335 | 0.107 | 1 | 0.743 | 0.896 |
| Education board | -0.333 | 0.226 | 2.164 | 1 | 0.141 | 0.717 |
| Aid | 0.153 | 0.630 | 0.059 | 1 | 0.808 | 1.166 |
| Missed Due to financial reasons | -0.523 | 0.491 | 1.134 | 1 | 0.287 | 0.593 |
| Distinction | Intercept | 2.139 | 1.618 | 1.747 | 1 | 0.186 |  |
| School Distance | 0.358 | 0.386 | 0.862 | 1 | 0.353 | 1.431 |
| Residence | -0.154 | 0.244 | 0.401 | 1 | 0.527 | 0.857 |
| Income | 0.024 | 0.280 | 0.007 | 1 | 0.933 | 1.024 |
| Father - Occupation | -0.427 | 0.222 | 3.713 | 1 | 0.054 | 0.652 |
| Mother Occupation | -0.224 | 0.214 | 1.102 | 1 | 0.294 | 0.799 |
| Father Education | -0.584 | 0.314 | 3.459 | 1 | 0.063 | 0.558 |
| Mother Education | 0.219 | 0.290 | 0.568 | 1 | 0.451 | 1.244 |
| Caste | 0.580 | 0.384 | 2.281 | 1 | 0.131 | 1.787 |
| Education board | 0.252 | 0.230 | 1.200 | 1 | 0.273 | 1.287 |
| Aid | -0.607 | 0.861 | 0.496 | 1 | 0.481 | 0.545 |
| Missed Due to financial reasons | -3.181 | 1.113 | 8.163 | 1 | 0.004 | 0.042 |

**Source: Field Survey**

The multinomial logit model shown in the table corresponds to the following equations.

Log (p(First class)/p(Second class)) = 2.826 + 0.535 School distance - 0.039 Residence + 0.143 Income -0.122 Father - Occupation – 0.124 Mother Occupation – 0.452 Father Education + 0.089 Mother Education + 0.896 Caste + 0.717 Education board + 1.166 Aid + 0.593 Missed Due to financial reasons.

Log (p(Distinction)/p(Second class)) = 2.139+ 0.358 School distance -0.154Residence + 0.024Income -0.427Father - Occupation – 0.224Mother Occupation – 0.584Father Education + 0.219 Mother Education + 0.580 Caste + 0.252 Education board - 0.607Aid -3.181 Missed Due to financial reasons

One of the most crucial aspects of your analysis is interpreting the results based on the Exponential beta. The Exponential beta provides the odds ratio of the dependent variable, which is a key factor in your analysis. You can determine the probability of the dependent variable from this odds ratio. When the Exponential beta value is greater than one, it indicates an increase in the probability of the other category (High group). If the Exponential beta value is less than one, it suggests an increase in the probability of the reference (low) category. The Exponential beta value is interpreted with the reference category, indicating whether the probability of the dependent variable will increase or decrease. In the case of continuous variables, it is interpreted with a one-unit increase in the independent variable, corresponding to the increase or decrease of the units of the dependent variable.

Based on the Exponential beta, we can conclude that School distance, Income, Mother education, and Aid are the factors that significantly and positively influence the first class group compared to the second class group for mark level, as the Exp(B) is greater than one. These factors are of utmost importance in our analysis, as they are crucial for understanding the data dynamics. For the distinction group, School distance, Income, Mother education, Caste, and Education board are the factors positively influencing the distinction group when compared to the second class group for mark level, as the Exp(B) is greater than one.

**Research Question 2** aims to explore students' perceptions concerning several key factors: Quality of Education, Availability of Educational Resources, Support from Peers, Parental Involvement, and Community Support.

To gauge students' thoughts on the quality of their education, we will employ a series of questions categorized under the aforementioned factors. Responses will be collected using a five-point Likert scale, where 1 represents 'Strongly Disagree', 2 'Disagree', 3 'Neutral', 4 'Agree', and 5 'Strongly Agree'. This approach will help quantify students' perceptions accurately. Subsequently, structural equation modeling will be utilized to identify the most significant factor influencing these perceptions and to understand the interplay between these variables. The outcomes of this analysis will be presented in detailed tables for clarity and insight.

**Table 5 Model fit Indices for CFA -Perception**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **χ2** | **DF** | **P** | **Normed χ2** | **GFI** | **AGFI** | **NFI** | **TLI** | **CFI** | **RMR** | **RMSEA** |
| **Perception-Total** | 6.763 | 5 | 0.239 | 1.353 | .987 | .960 | .970 | .983 | .992 | .043 | .042 |

All the attributes loaded significantly on the latent constructs. The value of the fit indices indicates a reasonable fit of the measurement model with data. In table 6 we present the regression coefficients

**Table 6 The regression Coefficients -Perception**

|  |  |  |
| --- | --- | --- |
| ***Variable*** | ***Total*** | |
| ***Regression coefficients*** | ***Rank*** |
| Quality of Education | 0.636 | 4 |
| Availability of Educational Resources | 0.646 | 3 |
| Support from peers | 0.665 | 1 |
| Parental Involvement | 0.537 | 5 |
| Community support | 0.662 | 2 |

Our research has provided a clear order of influence. Peer support leads the way, scoring the highest with a regression coefficient of 0.665, ranking 1st. Community support is next, with a regression coefficient of 0.662, and ranking 2nd. The availability of Educational Resources, with a regression coefficient of 0.646, takes the 3rd position. Quality of Education and Parental Involvement, with regression coefficients of 0.636 and 0.537, respectively, follow in the 4th and 5th positions.

A diagram of a quality of education

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In order to assess the precision of the students, the total score of all 200 respondents is calculated, from which the mean percentage score of each question is determined. The scores are then categorized into four groups: poor or low (mean % score less than 35%), average (mean % score between 35% to 50%), good or medium (mean % score between 50% to 75%), and excellent or high (mean % score above 75%). A one sample Z test is conducted to test the significance. The table provides the mean, standard deviation, mean % score, and Z value of the variable under consideration (Loyd, B. H., & R. R. Abidin. R. R. (1985). Revision of the Parent Stress Index. Journal of Pediatric Psychiatry, 10(2), 169).

The mean percentage score of all the questions falls between 60% and 73%, indicating a good level of perception among the students. An independent sample test is performed to determine whether the observed sample information exists in the population. The test results confirm that the students have a good level of perception regarding the Quality of Education, Availability of Educational Resources, Support from peers, Parental Involvement, and Community support.

**Table 7 Mean, Standard deviation and t value for Perception**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Location | Mean | Std. Deviation | Mean % score | t-value |
| Quality of Education | 3.57 | 1.03 | 71.40 | 14.626 |
| Availability of Educational Resources | 3.48 | 1.19 | 69.50 | 11.627 |
| Support from peers | 3.53 | 1.22 | 70.60 | 11.988 |
| Parental Involvement | 3.62 | 1.26 | 72.30 | 12.526 |
| Community support | 3.17 | 1.23 | 63.40 | 7.714 |

**Source: Field Survey**

**1.6.2 Comparison of Urban and Rural**

**Research Question 3:** To determine the role of Socioeconomic Factors in Educational Disparities between the Urban and Rural areas.

**Table 8 Regression Coefficient and Exponential Beta for Rural and Urban**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Mark level** | | **Rural** | | | **Urban** | | |
| **B** | **Sig.** | **Exp(B)** | **B** | **Sig.** | **Exp(B)** |
| First class | Intercept | 3.946 | .070 |  | 2.030 | .299 |  |
| School Distance | 1.152 | .058 | 3.165 | .134 | .758 | 1.144 |
| Residence | -.195 | .531 | .823 | .091 | .761 | 1.095 |
| Income | -.071 | .853 | .931 | .502 | .183 | 1.651 |
| Father - Occupation | -.414 | .195 | .661 | .131 | .595 | 1.140 |
| Mother Occupation | -.015 | .953 | .985 | -.255 | .342 | .775 |
| Father Education | -.046 | .905 | .955 | -.840 | .034 | .432 |
| Mother Education | -.033 | .926 | .968 | .112 | .738 | 1.118 |
| Caste | -.478 | .320 | .620 | .375 | .499 | 1.454 |
| Education board | -.791 | .036 | .453 | -.168 | .601 | .846 |
| Aid | -.845 | .295 | .430 | 20.538 | .000 | 830519579.526 |
| Missed Due to financial reasons | -.756 | .320 | .470 | -.223 | .766 | .800 |
| Distinction | Intercept | 3.498 | .172 |  | 1.879 | .445 |  |
| School Distance | .488 | .495 | 1.628 | .222 | .645 | 1.249 |
| Residence | -.164 | .651 | .849 | -.174 | .632 | .840 |
| Income | -.063 | .884 | .939 | .041 | .925 | 1.041 |
| Father - Occupation | -.588 | .116 | .556 | -.311 | .313 | .733 |
| Mother Occupation | -.109 | .714 | .897 | -.412 | .226 | .663 |
| Father Education | -.256 | .570 | .774 | -.907 | .068 | .404 |
| Mother Education | .087 | .837 | 1.091 | .277 | .524 | 1.320 |
| Caste | -.213 | .711 | .808 | 1.373 | .023 | 3.947 |
| Education board | -.111 | .760 | .895 | .472 | .166 | 1.603 |
| Aid | -1.255 | .231 | .285 | 19.672 |  | 349494462.365 |
| Missed Due to financial reasons | -2.499 | .044 | .082 | -21.481 |  | 4.689E-10 |

**Source: Field Survey**

**In urban areas,** based on Table 8, factors such as school distance, place of residence, income, caste, mother's education, and aid positively influence the first class group compared to the second class group. Additionally, school distance, income, mother's education, caste, education board, and education level positively influence the distinction group compared to the second class group, as indicated by Exp(B) values greater than one for these factors at the mark level.

**For the Rural,** School distance and Mother education positively influence the first class group and distinction when compared to the second class group for mark level as the Exp(B) is more significant than one.

**Table 9 Model fit Indices for CFA -Perception**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **χ2** | **DF** | **P** | **Normed χ2** | **GFI** | **AGFI** | **NFI** | **TLI** | **CFI** | **RMR** | **RMSEA** |
| **Perception-Rural** | .663 | 5 | .985 | .133 | .997 | .992 | .991 | 1.141 | 1.000 | .023 | .049 | .985 | .133 |
| **Perception-Urban** | 6.447 | 4 | .168 | 1.612 | .974 | .903 | .967 | .967 | .987 | .048 | .079 |

All the attributes loaded significantly on the latent constructs. The value of the fit indices indicates a reasonable fit of the measurement model with data. In table 10 we present the regression coefficients

**Table 10 The regression Coefficients -Perception**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***Variable*** | ***Total*** | | ***Rural*** | | ***Urban*** | |
| ***Regression coefficients*** | ***Rank*** | ***Regression coefficients*** | ***Rank*** | ***Regression coefficients*** | ***Rank*** |
| Quality of Education | 0.636 | 4 | 0.439 | 5 | 0.905 | 1 |
| Availability of Educational Resources | 0.646 | 3 | 0.542 | 3 | 0.706 | 3 |
| Support from peers | 0.665 | 1 | 0.512 | 4 | 0.761 | 2 |
| Parental Involvement | 0.537 | 5 | 0.576 | 2 | 0.526 | 5 |
| Community support | 0.662 | 2 | 0.714 | 1 | 0.704 | 4 |

|  |  |
| --- | --- |
| Rural | Urban |
| A diagram of a process  AI-generated content may be incorrect. | A diagram of a quality of education  AI-generated content may be incorrect. |

The comparison between rural and urban educational settings reveals several interesting trends. In terms of quality of education, urban areas are ranked slightly higher than rural areas. This is likely because urban students perceive their education quality marginally better than their rural counterparts.

When it comes to the availability of educational resources, urban areas again have an edge, ranking just below the top spot. This indicates that students in urban environments generally have better access to educational materials and resources, contributing to a more conducive learning atmosphere.

Peer support is rated highest in rural areas, indicating a strong sense of camaraderie and mutual support among students. Urban students rank this aspect lower, suggesting that while they receive peer support, it is less pronounced than in rural settings.

Parental involvement is the most significant factor in urban areas, securing the top rank. This highlights parents' critical role in urban education, possibly reflecting more engagement and participation in their children's academic activities. Conversely, rural areas also highly value parental involvement, sharing the top rank, underscoring the importance of family support across both settings.

Lastly, community support is rated lower in rural and urban areas, with urban areas slightly outperforming rural ones. This lower ranking indicates that while community support is present, it is less influential or impactful than the other factors in students' educational experiences.

**1.7 Discussion of Findings**

**Total Population**

When considering the total population, the factors affecting academic achievements reflect urban and rural influences. School distance, family income, mother's education, and government aid are key factors for first-class achievements. Proximity to school facilitates regular attendance and reduces fatigue, while higher family income allows for better educational resources. An educated mother can provide valuable academic support, and government aid can alleviate financial constraints, providing necessary educational resources.

For distinction-level achievements, the factors are similar, with the addition of caste and educational board. The educational board can affect the curriculum's quality and rigour, impacting student performance. Caste can influence access to quality education and opportunities due to systemic biases. Government aid remains important, ensuring students have access to resources supporting high academic performance.

Higher socioeconomic status (SES) often correlates with better educational achievements due to greater access to resources, facilities, and support systems. In populations comprising both rural and urban students, urban students from higher SES backgrounds tend to perform better academically. Conversely, students from backward castes, particularly in rural areas, face systemic disadvantages and need targeted interventions and support to bridge the educational gap..

**Urban**

In urban areas, various factors significantly affect students' achievements. The distance to school is crucial for first-class achievement as it directly impacts students' daily routines. Shorter distances mean less travel time, leading to better attendance and less fatigue, allowing students to focus more on their studies. The place of residence also plays a role; students living in stable and conducive environments tend to perform better academically due to reduced stress and distractions.

Monthly income is another important factor. Families with higher incomes can afford better educational resources, extracurricular activities, and tutoring, which enhance learning opportunities and academic performance. The mother's education level is also significant, as educated mothers are more likely to value education, provide homework assistance, and create a stimulating home environment that fosters learning.

Caste can influence educational outcomes due to systemic inequalities and access to resources. Students from marginalized castes may face additional challenges affecting their academic performance. Additionally, aid from the government can provide crucial support in terms of scholarships, free meals, and educational materials, which can significantly boost students' chances of achieving first-class grades.

For distinction-level achievements, similar factors are influential. School distance, monthly income, and mother's education remain critical. However, the educational board also becomes a factor, as different boards have varying levels of rigour and resources, which can impact the quality of education and student outcomes. Government aid continues to be important, ensuring students access to necessary resources. Caste remains a factor, with systemic biases potentially affecting access to high-quality education and opportunities.

Regarding other parameters of educational experience, parental involvement is regarded as very important. Engaged parents can provide academic support, monitor progress, and encourage a positive attitude toward education. The availability of educational resources, such as books, computers, and internet access, also plays a crucial role in supporting students' learning. However, peer support is not considered as influential in urban areas, possibly due to the competitive nature of urban education systems and diverse peer groups.

**Rural**

The factors influencing academic achievements in rural areas differ somewhat from urban settings. For first-class achievements, school distance is a major factor. Rural students often have to travel longer distances to reach school, and shorter distances can significantly enhance attendance and reduce fatigue.

School distance remains important for distinction-level achievements, but the mother's education also becomes a significant factor. Educated mothers in rural areas can provide better academic support and emphasize the importance of education, which is crucial for higher academic performance.

Regarding other educational experience parameters, parental involvement is very important in rural settings. Active engagement from parents can compensate for the lack of resources and support systems more readily available in urban areas. Peer support is also important in rural areas, as close-knit communities can foster collaborative learning and mutual encouragement among students. The quality of education, including the availability of qualified teachers and educational materials, is another crucial factor influencing academic performance in rural areas.

Overall, the interplay of these factors highlights the importance of accessibility, financial stability, parental support, and systemic equity in shaping educational outcomes across different contexts.

**1.8 Conclusion**

Analyzing factors affecting academic achievements in urban and rural areas reveals distinct influences in each context. In urban settings, school distance, place of residence, monthly income, mother's education, caste, and government aid play crucial roles in determining students' success in achieving first-class grades. Additional factors like the educational board come into play for distinction-level achievements. Conversely, school distance and mother's education are paramount for academic success in rural areas. Parental involvement and peer support significantly impact the educational experience in rural settings, while urban students benefit more from available educational resources. Understanding these differences is crucial for developing targeted interventions to improve academic outcomes across diverse populations.

**1.9 Recommendations**

1. Enhance Accessibility to Schools: For urban and rural areas, reducing the distance students need to travel to reach school can significantly improve attendance and reduce fatigue, leading to better academic performance. Investing in more schools or transportation services can address this issue.
2. Financial Support Programs: Expanding government aid and scholarship programs can alleviate financial constraints for families, enabling students to access necessary educational resources and support systems. This is particularly important for families with lower incomes and marginalized communities.
3. Parental Engagement Initiatives: Programs aimed at educating and involving parents, especially mothers, in their children's education can have a profound impact on academic achievements. Workshops, seminars, and community support groups can help parents provide better academic support at home. Additionally, providing educational opportunities for mothers through government and NGO initiatives can empower them to support their children's education better.
4. Quality Education Resources: Ensuring the availability of high-quality educational resources, including qualified teachers, textbooks, and digital learning tools, can enhance the learning experience for students. This is especially critical in rural areas where such resources are often limited.
5. Addressing Systemic Inequities: Policies and initiatives to reduce caste-based disparities in education can create a more equitable environment for all students. This includes affirmative action programs, anti-discrimination policies, and targeted support for marginalized communities.
6. Peer Support Programs: In rural areas, fostering a supportive peer environment can enhance collaborative learning and mutual encouragement among students. Peer mentoring programs and group study sessions can be effective in this regard.
7. Technological Development and Internet Access: Lack of resources, especially technological developments such as internet access, is a significant challenge in rural areas. Government and NGO efforts to provide infrastructure and affordable internet access can bridge this digital divide and support students' educational needs.
8. Tailored Interventions for Educational Boards: In urban areas, recognizing the role of different educational boards in shaping academic outcomes can help design curricula and teaching methods that cater to the diverse needs of students, ensuring a standardized quality of education.

By implementing these recommendations, policymakers and educators can create a more supportive and equitable educational environment, thereby improving academic outcomes for students across both urban and rural areas.

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