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DIVERSITY AND ACADEMIC ACHIEVEMENT IN SECONDARY EDUCATION: IMPLICATIONS FOR INCLUSIVE PRACTICES

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Abstract
This study explores the relationship between socio-demographic factors and academic achievement in high school, focusing on generalizing conclusions on inclusive instructional practices. The research design adopted was the quantitative research design because it was based on the secondary data of 1000 students on Kaggle. The analysis was done in Python and the following statistics were applied to evaluate the influence of gender, race/ethnicity, parental education, socio-economic status, and test preparation on academic achievement: descriptive statistics, group comparison, correlations analysis, and multiple linear regression. These findings suggest that socio-demographic factors have a significant relationship with academic performance. The female students performed better in overall performance, and the males in mathematics. The socio-economic status and the preparation of tests proved to be good predictors and students who had higher socio-economic status and had undergone preparatory courses performed better. The level of parental education also positively correlated with performance in school. Its results indicate the necessity of equal access to educational opportunities and specific support measures to cope with differences. These lessons can be used to shape policies to support inclusive education. The study adds to the literature by using secondary data to indirectly measure inclusion based on performance gaps, which has practical implications to enhance equity in secondary education.

Keywords: *Academic Achievement; Diversity; Inclusive Education; Socio-Economic Status; Secondary Education; Educational Inequality; Student Performance*

1. Introduction

Diversity in education systems all over the world is being defined by the student as a socio-economic background, cultural distinctions, and learning requirements. This diversity in secondary education has opportunities and challenges for equitable learning outcomes. Inclusive education as a concept has received much attention as a model to deal with disparities and enhance equality of access to quality education for all learners. Inclusive education highlights the importance of the necessity to embrace different student communities and reducing obstacles that prevent academic achievement (Ainscow, 2020; UNESCO, 2020).

Although there are efforts to ensure inclusiveness in the world, academic achievement inequality persists, especially along socioeconomic and population lines. Studies have always revealed that gender, socio-economic status, the education of parents, and availability of learning resources play a huge part in determining student performance (Sirin, 2005; Reardon, 2011; Coleman, 1988). These inequalities lead to a question regarding the degree to which the educational systems are really inclusive and able to support all learners well.

The most well-known impactful determinant of academic achievement is socio-economic status (SES). Higher socio-economic students have better educational resources, facilitative learning conditions, and more academic support that helps them attain high performance (Bradley and Corwyn, 2002). Conversely, less advantaged students may be structurally disadvantaged and their education opportunities are limited due to factors like the inaccessibility to high-quality teaching and learning resources (OECD, 2019).

Gender academic performance is also an important issue of diversity in education. Previous studies have found certain overall tendencies, such as females being superior readers and writers compared to males, and males being superior in mathematics (Voyer & Voyer, 2014). These differences underscore the need to have gender sensitive education that will be able to address the various learning needs and help in equal learning outcomes.

Another significant factor that influences the academic performance of the students is parent education. The better the education of the parents, the more the educational support at home, the higher the educational goals and the outcomes (Davis-Kean, 2005). This relationship has indicated the linkage between family background and educational inequality and has demonstrated the need of the policies that assist in empowering the students who are part of the less fortunate households.

Besides socio-demographic conditions, enrollment in academic support programs, including test preparation courses, has been revealed to have a positive impact on student performance. These programs offer systematic learning and skill acquisition, which may improve academic performance (Buchmann et al., 2010). Nonetheless, such resources are not always equally available, which only contributes to the gap in education.

Although inclusive education policies are designed to deal with such inequalities, empirical studies may not provide direct indicators of inclusive practices. Consequently, numerous studies make use of proxy measures, including demographic traits and socio-economic factors, to evaluate academic achievement inequalities and create implications to include (Florian, 2014). This method will enable the researcher to establish trends of inequity and point out areas in which an inclusive intervention might be needed.

The present study assumes this stance and examines the relationship between diversity-related variables and academic achievement among high school students. The analysis of the role of gender, race/ethnicity, parental education, socio-economic status, and test preparation is based on a secondary dataset that was offered by Kaggle on student achievement. Although the dataset does not particularly deal with the problem of inclusive education practices, it illuminates the inequalities that can possibly restrict the inclusive outcomes.

These relationships should be interpreted so as to shape the educational policy and practice in a manner that would increase equity. With the identification of the key predictors of academic performance, teachers and policy makers will be able to develop particular remedies to address the poor performing groups and reduce the achievement gap. This is consistent with the inclusive education aim, which aims to see to it that every student, irrespective of his or her background, has an equal chance to excel (UNESCO, 2020).

The primary objectives of this study are to examine the impact of socio-demographic factors, including gender, race/ethnicity, parental education, and socio-economic status, on academic performance among secondary school students. Moreover, the paper aims to examine inequality in student achievement among various demographic groups in order to establish trends of inequality. It also seeks to determine how academic support systems, especially the test preparation programs, affect performance. Finally, the research paper attempts to draw conclusions that are likely to be used in the context of inclusive education by analyzing the ways these apparent disparities can translate into the existence of unbreakable obstacles to equal chances of learning.

2. Methodology

2.1 Data Source

This study is based on a secondary dataset obtained from Kaggle titled "*Students' Performance in Exams*". (Seshapanpu, 2018) This database contains data about 1000 students of secondary schools and is popular in educational studies to measure academic performance and demographic factors. It incorporates student demographic and student performance variables, which is why it is applicable in studying the diversity-student performance relationship.

The variables included in the dataset are gender, race/ethnicity, parental level of education, lunch status, and test preparation course, as well as the scores of the students in mathematics, reading, and writing. The dataset lacks a direct measure of the inclusive education practices, but offers some proxies of diversity and socio-economic background. These variables make it possible to indirectly evaluate the differences in educational results, which are essential to comprehend

the consequences in relation to inclusive practices in secondary education.

2.2 Variables and Measures

The research uses both independent and dependent variables based on the data. The independent variables denote the important dimensions of diversity and socio-economic status. The variables gender and race/ethnicity are categorical variables (in binary form), and student diversity based on multiple groups is described. The educational background of the family is measured by the level of education of the parents, which gives the impact of the home environment on academic success. The status of lunch is a proxy of socio-economic status, which is categorized between standard and free/reduced lunch. The variable of the test preparation course is an indicator of the completion of a preparatory program by the student.

Regression analysis was done using all categorical variables converted to dummy variables, one of which was used as the reference group to avoid multicollinearity. As an example, the gender was referred to as female, and corresponding baseline categories were established for other categorical variables.

The dependent variables are the scores of the students in mathematics, reading, and writing. In order to offer a wholesome assessment of academic performance, a composite variable was calculated, known as the overall score, as the mean of the three subject scores. This measure of achievement is a composite measure that enables a holistic evaluation of student achievement and also minimizes dimensionality in the regression model.

2.3 Data Processing and Analytical Tool

Python, a popular programming language to process data and create statistical models, has been used to process the data. The analysis was performed with the help of Pandas (data manipulation), NumPy (numerical operations), Matplotlib and Seaborn (visualization) and Statsmodels (inferential statistics) libraries.

Data preprocessing was done prior to its analysis to ensure quality and consistency of data. This involved checking the missing values, data type checking and standardization of the variable formats. None of the values were missing and the data set was claimed to be complete to perform the analysis. The techniques of encoding categorical variables in the form of dummy variables and the continuous variables were left as they are.

2.4 Data Analysis Techniques

The research approach to be adopted in this study is descriptive and inferential statistics, whose purpose is to examine the relationship between diversity and academic success.

The descriptive statistics have been used to reflect the distribution of variables, mean, standard deviation, and the quartiles. This provided an impression of the performance and variance of students in subjects. Comparisons in groups were then conducted to examine the differences in academic performance within demographic variables such as gender, socio-economic backgrounds, and levels of parental education.

Correlation analysis was employed to identify the relationship between the variables of academic performance, particularly the relationship between mathematics, reading, and writing scores. This was done to ascertain internal consistency and interdependence of the outcome variables.

In the analysis, multiple linear regression was used to investigate the interaction effects of socio-demographic variables on academic performance. The regression equation can be defined as follows:

$$Y = \beta_0 + \beta_1(\text{Gender}) + \beta_2(\text{Race/Ethnicity}) + \beta_3(\text{Parental Education}) + \beta_4(\text{Lunch Status}) + \beta_5(\text{Test Preparation}) + \epsilon$$

where Y represents the overall academic score, β_0 is the intercept, β_i are the coefficients of the predictors, and $\epsilon$is the error term.

Multiple linear regression is appropriate because it is possible to analyze several predictors simultaneously, and their relative effect on the academic performance is also available. This method is especially appropriate in determining the differences related to the demographic and socio-economic variables.

In order to ascertain the validity of the regression findings, some of the major assumptions of linear regression were taken into account, such as linearity, independence of errors, homoscedasticity, and the lack of multicollinearity. These assumptions were checked using the standard diagnostic procedures in the Python environment on the data.

2.5 Ethical Considerations

The study utilizes a publicly available secondary dataset from Kaggle, which does not contain any personally identifiable information. Thus, no specific ethical issues are associated with the confidentiality of the participants or informed consent. The dataset has been utilized in academic and research purposes alone, and relevant references to the source of data have been taken.

3. Results and Analysis

3.1 Descriptive Statistics of Academic Performance

Table 1 shows the descriptive statistics of the variables of academic performance. The findings show that mathematics, reading, and writing have mean scores of 66.09, 69.17, and 68.05, respectively, and the overall mean score of 67.77. The standard deviations fall between 14.26 and 15.20, indicating there is moderate variation in the student performance in the subjects.

The lowest and highest values show that there is a large range of performance with scores as low as 0 in mathematics and

as high as 100 in all subjects. The quartile distribution also shows that half of the students had scores around 58-78 in overall performance, which represents a moderate pattern of academic performance distribution. The overall performance in academics can be seen in Figure 1, which presents a near-normal distribution with a slight skewness to the higher scores. The majority of the students are concentrated within the middle to high percentage band (60-80), which signifies a fairly good academic performance among the sample.

Table 1. Descriptive Statistics of Academic Performance Variables

Statistic	Math Score	Reading Score	Writing Score	Overall Score
Count	1000.00	1000.00	1000.00	1000.00
Mean	66.09	69.17	68.05	67.77
Std. Dev.	15.16	14.60	15.20	14.26
Min	0.00	17.00	10.00	9.00
25th Percentile	57.00	59.00	57.75	58.33
Median	66.00	70.00	69.00	68.33
75th Percentile	77.00	79.00	79.00	77.67
Max	100.00	100.00	100.00	100.00

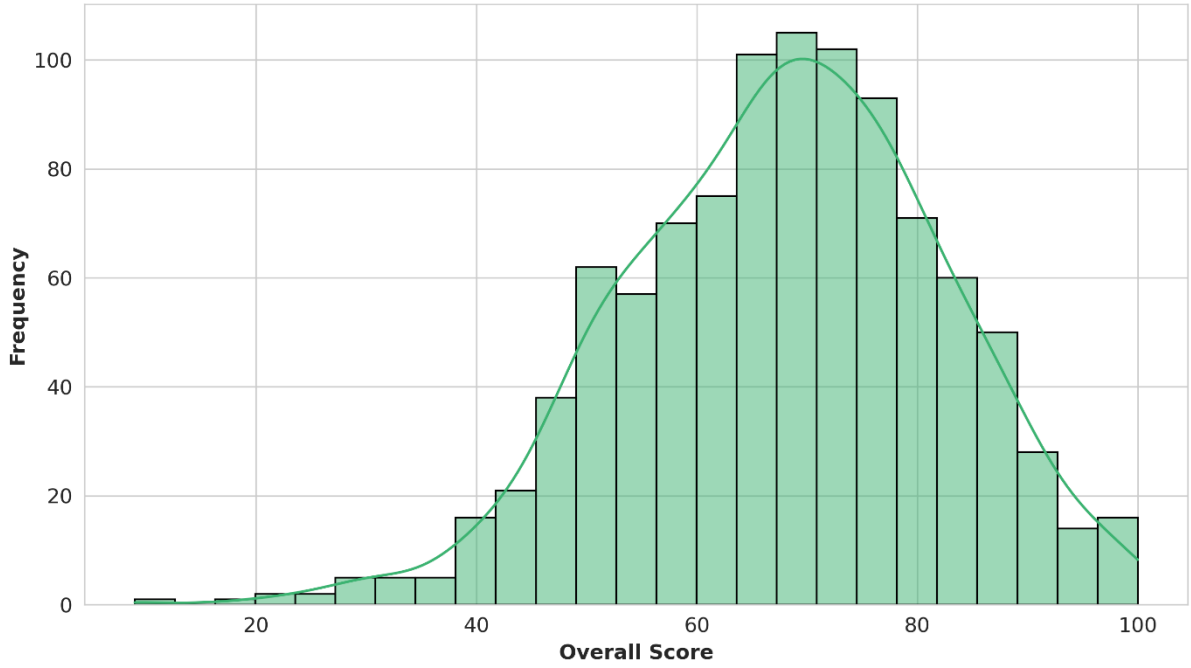

Figure 1. Distribution of Overall Academic Score

3.2 Gender Differences in Academic Performance

The results of gender variation in the academic performance are summarized in Table 2 and represented in Figure 2. Female students show superior performance in the reading (72.61) and writing (72.47) than their male counterparts (65.47 and 63.31, respectively). Nonetheless, male students are better than female students in mathematics, with the mean score being 68.73 and the mean score being 63.63, respectively.

The score of total performance is also better among female students (69.57) as compared to male students (65.84), indicating a gender variation in academic performance in favor of females. The scoring distribution by gender, as illustrated in Figure 2, shows that the female students have higher overall scores, whereas the performance among male students is more spread out. The boxplot also displays variability and proves the superior median performance of females.

Table 2. Gender-wise Comparison of Academic Performance

Gender	Count	Math Score	Reading Score	Writing Score	Overall Score
Female	518	63.63	72.61	72.47	69.57
Male	482	68.73	65.47	63.31	65.84

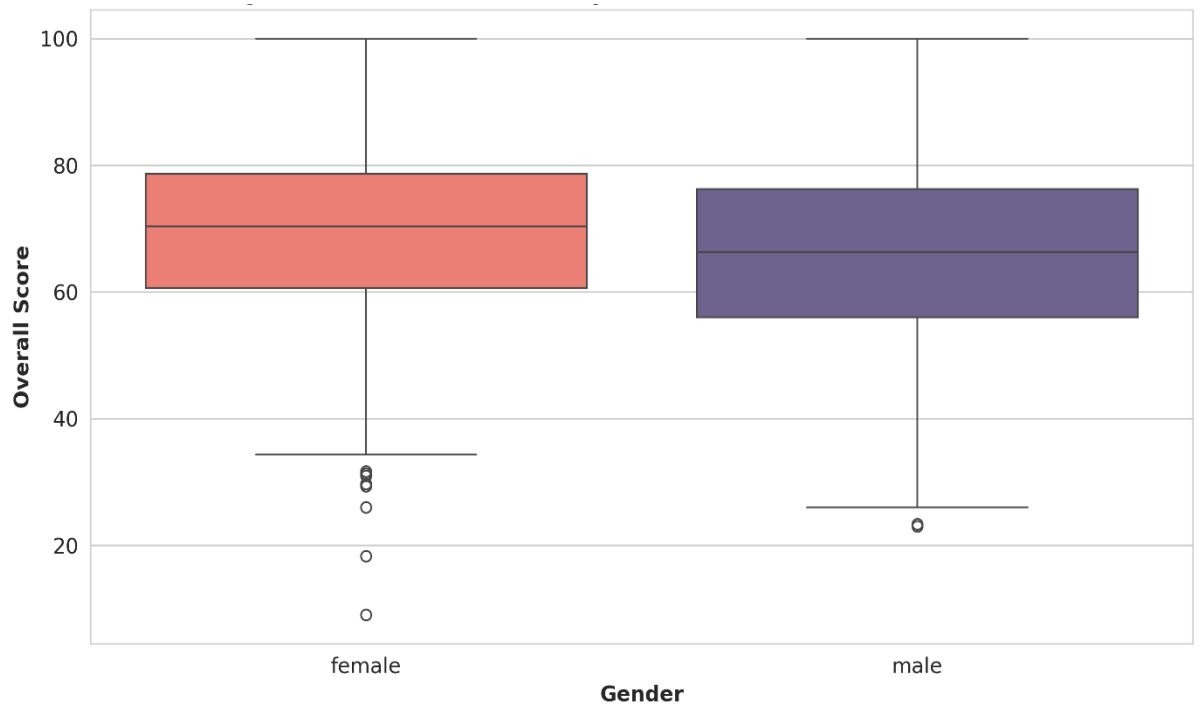

Figure 2. Gender-wise comparison of subject scores

3.3 Impact of Socio-Economic Status and Test Preparation

The influence of socio-economic status and participation in test preparation programs is presented in Table 3 and Figure 3. Students of standard lunch status, as a proxy of higher socio-economic status, are always performing better than those who get free or reduced lunch.

Moreover, students who underwent the test preparation course have a significantly higher score in all subjects than those who did not attend. Indicatively, students who had standard lunch and had had preparation had a total score of 75.51 compared to the 68.30 that students who did not complete the course had.

Students who have standard lunch status, as illustrated in Figure 3, have significantly higher mean scores than students with free/reduced lunch. This observation highlights the importance of socio-economic factors in influencing education.

Table 3. Academic Performance by Lunch Status and Test Preparation Course

Lunch Status	Test Preparation	Math Score	Reading Score	Writing Score	Overall Score
Free/Reduced	Completed	63.05	69.87	70.35	67.76
Free/Reduced	None	56.51	61.60	58.74	58.95
Standard	Completed	73.53	76.22	76.77	75.51
Standard	None	68.13	69.18	67.60	68.30

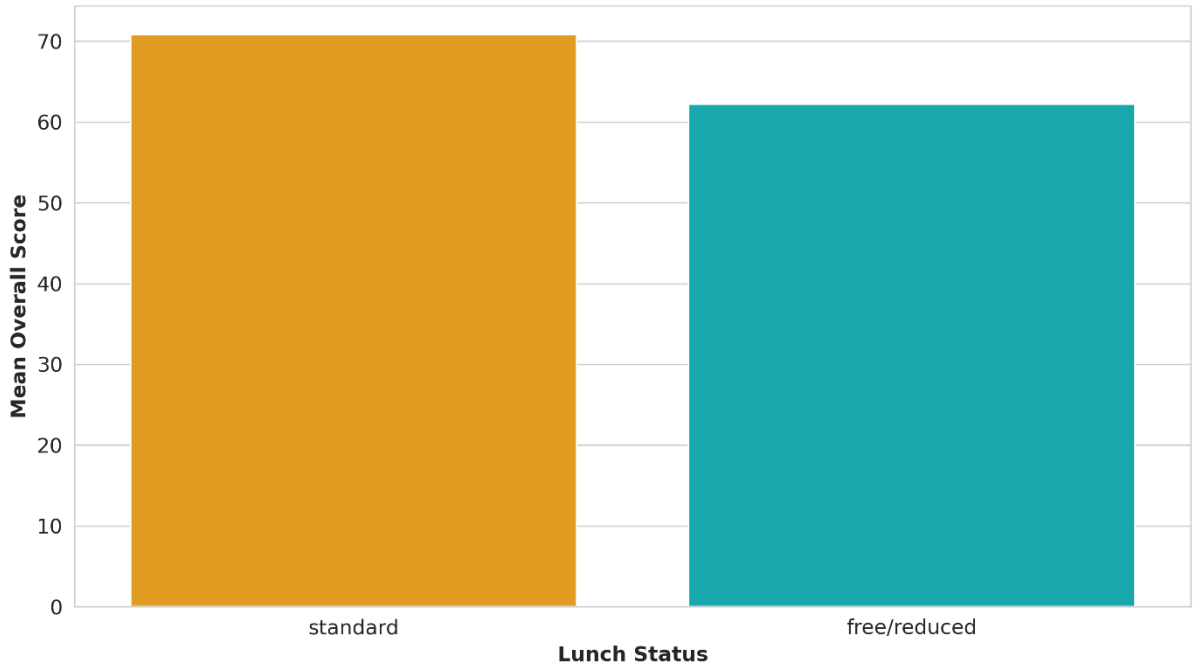

Figure 4. Academic Performance by Lunch Status

3.4 Influence of Parental Education on Academic Performance

The relationship between parental education levels and student performance is illustrated in Figure 4. Students with parents who have better educational levels, especially bachelor's and master's, are more likely to score better in their academic results than their counterparts whose parents have lesser educational levels. Figure 4 also shows clearly a positive direction in the relationship between parent education and student performance, which underlines the role of family background in determining success in education.

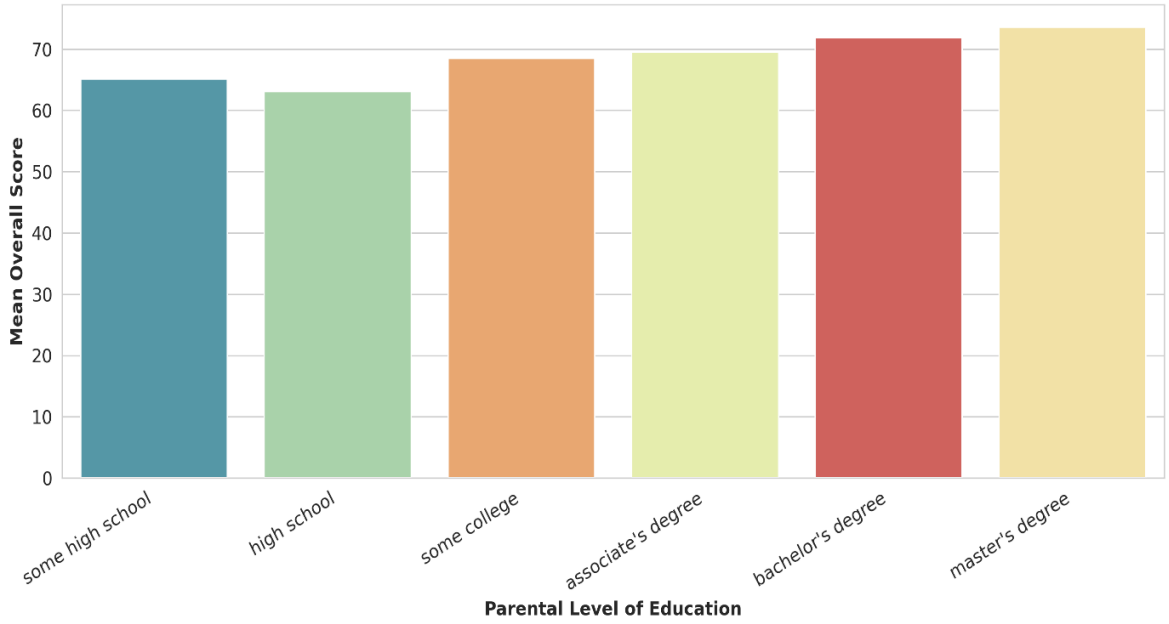

Figure 5. Scatter plot of reading and writing scores

3.5 Correlation Analysis

The correlation table suggests that there is a strong and positive correlation between the three subject scores and overall performance. The correlation of reading and writing (r = 0.95) is the highest, then reading and overall score (r = 0.97). There are also strong correlations with mathematics and overall performance (r = 0.92), which validates the internal consistency of the measures of academic performance.

3.6 Multiple Linear Regression Analysis

Table 4 shows the results of this multiple linear regression analysis. Approximately 24.2% of the overall academic performance is explained by the model (R2 = 0.242), which shows a moderate degree of explanation.

A number of predictors are statistically significant. There is a negative coefficient of gender ($\beta = -3.724$, $p < 0.001$), which implies that male students receive a lower overall mark than female students. Socio-economic status, represented by standard lunch, has a strong positive effect ($\beta = 8.775$, $p < 0.001$), suggesting that students from higher socio-economic backgrounds perform significantly better.

Test preparation also plays a crucial role, with students who did not complete the course scoring significantly lower ($\beta = -7.639$, $p < 0.001$). Moreover, some race/ethnicity groups (Groups D and E) demonstrate much better performance in contrast to the reference group.

Education levels of parents are mixed and higher education levels are mostly connected with good performance and low education levels (e.g. high school) are associated with poor performance in school.

Table 4. Multiple Linear Regression Results Predicting Overall Academic Performance

Variable	Coefficient	Std. Error	t-value	p-value
Constant	66.9408	1.7750	37.7140	0.0000
Gender (Male)	-3.7242	0.7955	-4.6818	0.0000
Race/Ethnicity (Group B)	1.5290	1.6116	0.9487	0.3430
Race/Ethnicity (Group C)	2.3855	1.5093	1.5806	0.1143
Race/Ethnicity (Group D)	5.1258	1.5398	3.3288	0.0009
Race/Ethnicity (Group E)	6.9285	1.7081	4.0563	0.0001
Parental Education (Bachelor's)	2.5356	1.4240	1.7806	0.0753
Parental Education (High School)	-5.1725	1.2298	-4.2059	0.0000
Parental Education (Master's)	4.0922	1.8377	2.2268	0.0262
Parental Education (Some College)	-0.9275	1.1823	-0.7845	0.4329
Parental Education (Some High School)	-4.5400	1.2639	-3.5919	0.0003
Lunch (Standard)	8.7751	0.8275	10.6050	0.0000
Test Preparation (None)	-7.6386	0.8302	-9.2008	0.0000

4. Discussion

The findings of this study provide useful information on the relationship between diversity-associated variables and academic achievement in high schools with significant relational implications on inclusive education practices. Based on the findings, it can be seen that the overall distribution of academic performance among the student groups is not even but is instead associated with the socio-demographic and situational factors such as the gender and socio-economic status of the students, the level of parental education, and the availability of academic support. Such trends point to continued disparities that can jeopardize the objectives of inclusive education.

Some of the key findings of the study include the fact that there exist gender differences in academic achievement. It was found that the female students performed better in reading and writing in comparison to the male students, and the males performed better in mathematics, as compared to females. This has been observed to be in line with previous studies that show gender differences in academic performance that are subject-specific (Hyde, 2014; Else-Quest et al., 2010). But the general improved performance of female students can also indicate that the education systems might be more geared towards learning styles and abilities that give preference to female students. Inclusive education-wise, this brings to the fore the necessity of using pedagogical techniques that cater to the needs of learners with varying learning preferences, besides providing uniform achievement results in both sexes (Younger & Warrington, 2005).

Socio-economic status came to be one of the strongest predictors of academic performance, as was shown by the substantial difference between students with standard lunch and students receiving free or reduced lunch. The students with high levels of socio-economic status attended school and scored higher, thus confirming the already established correlation between economic assets and educational achievement (White, 1982; Caldas and Bankston, 1997). This disparity is a pointer of structural disparities in access to learning institutions, including quality instruction, learning amenities and positive conditions. The models of inclusive education also emphasize the importance of reducing such barriers by ensuring even-handed access to resources and special consideration of the disadvantaged students (Slee, 2011).

The significance of the test preparation programs in enhancing academic performance was also an important finding. The scores of the students who received test preparation courses were far much better than those students who did not receive the courses. This means that a systematic learning support plays a critical role in improving learning results. Such programs are, however, not evenly spread and students possessing greater socio-economic status have a greater likelihood of attending. This further adds another dimension of inequality, where those students who have already had an advantage are further reinforced with the help of other educational materials (Bray, 2013). Inclusion-wise, this brings out the need to have academic support programs to all students, and most importantly those with disadvantaged backgrounds.

Another factor of student achievement was the parental education. Students with parents with higher education levels had a higher achievement on academic performance; this can be attributed to the existing literature on the importance of family background in determining academic performance (Eccles, 2005). Parental education is currently linked with increased academic support at home, increased expectations, and involvement in the learning process. In contrast, less educated students who have less educated backgrounds might not have this support, and this can be blamed on the poor academic performance. This observation aids in the need to engage families in the learning process and come up with interventions

that cater to the needs of students irrespective of their homes (Hill and Tyson, 2009).

The correlation test also enhanced the fact that there were very strong relationships between the variables of academic performance, especially the reading and writing scores. This implies that literacy skills are of key importance in the general academic performance. The degree of association is high, which means that enhancement in one area can have a positive impact on the performance in other areas, which signifies the use of integrated teaching and learning methods (Graham and Hebert, 2011). In the case of inclusive education, this underlines the significance of building the fundamental skills that are beneficial to all students.

The regression analysis also gave in-depth insights into the overall effects of a combination of various predictors on academic performance. The model attributed a moderate percentage of variation, which means that socio-demographic variables are significant, but other factors that cannot be observed can also lead to academic performance. Other factors such as gender, socio-economic status, and test preparation were important predictors, and all showed strong correlations with performance. Such results support the notion that academic performance is influenced by a complicated interaction between individual and environmental factors (Rumberger, 2011).

The implications of the results in terms of inclusive education include systemic interventions that should tackle disparities on various levels. Schools and universities should implement policies that will support equity by making resources of high quality available to everyone, offering specific services to disadvantaged learners, and engaging in inclusive pedagogy that would meet the needs of learners with disabilities (Mitchell and Sutherland, 2020). In addition, the findings indicate that inclusive education cannot be perceived as a mere reaction to a disability situation but as a more inclusive approach towards handling all instances of inequality in education.

Despite its contributions, this study has several limitations that should be pointed out. Firstly, the secondary data restricts the scope of the analysis since the data do not entail direct measurements of the inclusive education practices. Rather, the research is based on proxy variables, like socio-economic status and demographic factors, which might not adequately reflect the intricacy of inclusion. Second, the cross-sectional nature of the data makes it impossible to establish causal relationships between variables as the analysis is done based on associations and not longitudinal data. Third, the data does not give any context variables like the school-level variables, teacher variables, and learning conditions, which could also affect academic performance. Finally, the moderate value of the regression model represents the explanatory power which does not imply the existence of additional variables that are not included in the research but may have an impact on the establishment of the academic outcomes.

Future research should address these gaps by relying on more detailed data that capture the direct measures of inclusive education practices, such as classroom practices, teacher attitudes, and institutional policies. Longitudinal research would provide a better understanding of the influence of socio-demographic factors on academic achievement over time and allow us to draw more definitive causal conclusions. Further research might also be conducted to examine how school-level factors, such as quality of teaching, curriculum, and institutional support systems, facilitate inclusive education. The knowledge can also be improved with the help of qualitative approaches, such as interviews and case studies, to adopt the experience of students and teachers. Lastly, studies ought to be conducted on the development and evaluation of specific interventions with the goal of mitigating disparities and promoting inclusion in various educational settings.

5. Conclusion

This study examined the relationship existing between socio-demographic factors and academic achievement among secondary school students, and concluded to include inclusive education policies. The findings indicate that academic performance is strongly connected with the following variables: gender, socio-economic status, parental education, and enrollment of test preparation program. In particular, the socio-economic status and academic assistance were identified as powerful predictors of performance, which means that the inequality of academic performance still exists. The results show that the achievement gaps are not individual, and depend on structural and contextual variables on a broader level. These trends point to the necessity to adopt inclusive education systems that are supportive of the needs of various students and which are useful in reducing learning barriers. Even though the level of inclusive practices was not directly determined with the help of the dataset, the inequalities identified can be utilized to make important conclusions regarding the spheres where the introduction of inclusive interventions may be necessary. The study, in general, contributes to the information on the role of diversity in academic success and the significance of equal distribution of resources, special support programs and inclusive teaching strategies. By eradicating these differences, the educational systems will be one step closer to the objective of providing learning opportunities to all students in accordance with equality, which underlines the grounds of inclusive and equitable education.

References

1. Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. Nordic journal of studies in educational policy, 6(1), 7-16.
2. Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. Annual review of psychology, 53(2002), 371-399.
3. Bray, M. (2013). Shadow education: Comparative perspectives on the expansion and implications of private supplementary tutoring. Procedia-social and behavioral sciences, 77, 412-420.
4. Buchmann, C., Condron, D. J., & Roscigno, V. J. (2010). Shadow education, American style: Test preparation, the SAT, and college enrollment. Social forces, 89(2), 435-461.

5. Caldas, S. J., & Bankston, C. (1997). Effect of school population socioeconomic status on individual academic achievement. The Journal of Educational Research, 90(5), 269-277.
6. Coleman, J. S. (1988). Social capital in the creation of human capital. American journal of sociology, 94, S95-S120.
7. Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: the indirect role of parental expectations and the home environment. Journal of family psychology, 19(2), 294.
8. Eccles, J. S. (2005). Influences of parents' education on their children's educational attainments: The role of parent and child perceptions. London review of education, 3(3).
9. Else-Quest, N. M., Hyde, J. S., & Linn, M. C. (2010). Cross-national patterns of gender differences in mathematics: a meta-analysis. Psychological bulletin, 136(1), 103.
10. Florian, L. (2014). What counts as evidence of inclusive education?. European journal of special needs education, 29(3), 286-294.
11. Graham, S., & Hebert, M. (2011). Writing to read: A meta-analysis of the impact of writing and writing instruction on reading. Harvard educational review, 81(4), 710-744.
12. Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: a meta-analytic assessment of the strategies that promote achievement. Developmental psychology, 45(3), 740.
13. Hyde, J. S. (2014). Gender similarities and differences. Annual review of psychology, 65, 373-398.
14. Mitchell, D., & Sutherland, D. (2020). What really works in special and inclusive education: Using evidence-based teaching strategies. Routledge.
15. OECD. (2019). PISA 2018 results (Volume I): What students know and can do. OECD Publishing. https://doi.org/10.1787/5f07c754-en
16. Reardon, S. F. (2011). The widening academic achievement gap between the rich and the poor: New evidence and possible explanations. In G. J. Duncan & R. J. Murnane (Eds.), Whither opportunity? Rising inequality, schools, and children's life chances (pp. 91–116). Russell Sage Foundation.
17. Rumberger, R. W. (2011). Dropping out: Why students drop out of high school and what can be done about it. Harvard University Press.
18. Seshapanpu, J. (2018). Students performance in exams [Data set]. Kaggle. https://www.kaggle.com/datasets/spscientist/students-performance-in-exams
19. Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. Review of educational research, 75(3), 417-453.
20. Slee, R. (2011). The irregular school: Exclusion, schooling and inclusive education. Routledge.
21. UNESCO. (2020). Global education monitoring report 2020: Inclusion and education—All means all. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000373724
22. Voyer, D., & Voyer, S. D. (2014). Gender differences in scholastic achievement: a meta-analysis. Psychological bulletin, 140(4), 1174.
23. White, K. R. (1982). The relation between socioeconomic status and academic achievement. Psychological bulletin, 91(3), 461.
24. Younger, M., & Warrington, M. (2005). Raising boys' achievement (Research Report No. 636). Department for Education and Skills.