

Impact of Parental Participation and Socioeconomic Status on Intellectually Disabled Children's Academic Achievement in Inclusive Schools

Ravindra Kumar Kushwaha*, Sarfaraz Ahmad

Department of Teacher Education, Halim Muslim PG College, Kanpur, India. *Corresponding Author's Email: professorsorkushwaha@gmail.com

Abstract

This study examines the roles of parental participation and socioeconomic status in influencing the academic achievement of intellectually disabled children in inclusive schools. By employing a mixed-methods approach—including quantitative academic data analysis, surveys, and qualitative interviews with parents, educators, and students—the research aims to explore how varying levels of parental involvement and socioeconomic factors like family income, parental education, and access to resources affect educational outcomes. The study seeks to uncover any synergistic effects between these factors, offering insights that could guide educational policies and practices to support these students more effectively. Ultimately, the findings aim to enhance equitable learning environments in inclusive educational settings.

Keywords: Academic Achievement, Inclusive Schools, Intellectually Disabled Children, Parental Perception, Socioeconomic Status (SES).

Introduction

In the pursuit of equitable education, inclusive school systems have emerged as a hallmark of contemporary educational philosophy. These settings aim to accommodate students from diverse backgrounds and abilities, fostering an environment that promotes not only academic growth but also social integration. Within the framework of inclusive education, children with intellectual disabilities find themselves navigating the educational landscape alongside their typically developing peers. The theoretical foundation of inclusive schooling underscores the idea that all children, regardless of their cognitive abilities, should have the opportunity to access a quality education that aligns with their individual needs (1). However, the challenge of realizing this vision of inclusivity lies in the myriad factors that influence the academic achievement of intellectually disabled children within these inclusive environments. Among these factors, parental participation and socioeconomic status emerge as essential determinants, significantly affecting a child's educational journey. The

influence of parents on their children's education has long been acknowledged in educational literature (2), with research consistently revealing a positive correlation between parental involvement and academic success in typically developing children. Inclusive education, by design, encourages parental participation as a means to enhance the educational experience of children with intellectual disabilities. But what remains underexplored is the extent to which parental involvement impacts the academic achievement of these students within inclusive settings. Furthermore, the interplay between parental participation and socioeconomic status in the context of inclusive education demands closer scrutiny. Socioeconomic status has been shown to be a robust predictor of educational outcomes, with disparities in income and access to resources often leading to divergent academic trajectories (3). How these socioeconomic disparities may be compounded or mitigated by varying degrees of parental participation is a question of paramount importance. This research

This is an Open Access article distributed under the terms of the Creative Commons Attribution CC BY license (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

(Received 18th December 2023; Accepted 21st April 2024; Published 30th April 2024)

endeavours to fill this critical gap in the literature by investigating the impact of parental participation and socioeconomic status on the academic achievement of intellectually disabled children in inclusive schools. It delves into the nuanced dynamics at play, examining the nature and extent of parental involvement and the multifaceted aspects of socioeconomic status to shed light on the complexities of educational attainment in inclusive settings. Through empirical research, we aim to provide insights that can inform educational policy and practice, ultimately contributing to the goal of achieving a more inclusive and equitable educational system.

Review of Literature

Parental participation in education refers to the active involvement of parents in their children's educational journey. This involvement can take various forms, such as attending parent-teacher meetings, participating in school activities, assisting with homework, and promoting a positive learning environment at home. The relationship between parental participation and academic achievement has been widely studied and is recognized as an important factor in students' educational success (4). Numerous research studies have shown that parental involvement has a positive impact on student learning outcomes (5). Furthermore, these studies have found that the extent to which parents are involved in their children's education is a significant predictor of academic achievement. Inclusive schools, which aim to integrate intellectually disabled children into mainstream education settings, present a unique context for examining the relationship between parental participation and the academic achievement of intellectually disabled children. The Importance of Parental Aspiration and Expectation One key factor that has been identified in the relationship between parental participation and academic achievement is parental aspiration and expectation for their children's educational success (6). A meta-analysis conducted by Fan and Chen revealed that parental aspiration and expectation have a significant influence on academic achievement. Parents who have high aspirations and expectations for their children tend to be more involved in their education, resulting in improved academic outcomes (7). Additionally, research has consistently shown that

when parents have higher educational expectations for their children, the children are more likely to enrolment in gifted and talented programs and have positive perceptions of school (8). This supports the assertion that the degree of parental involvement in their children's education is directly related to their academic achievement. However, it is important to note that parental involvement in decision-making regarding their children's education can vary based on factors such as socioeconomic status and the school environment. For instance, Hanafin and Lynch's study on parents in disadvantaged areas found that despite the positive impact of parental involvement on academic achievement, many parents in these areas faced barriers to being actively involved in their children's education due to factors such as lack of resources, limited access to information about school events and policies, and feelings of inadequacy or powerlessness. Furthermore, it has been found that the level of parental participation in a child's education also plays a crucial role in their academic achievement (7). Research consistently shows that parental participation at home has a positive effect on academic achievement. For example, a study conducted by Epstein and colleagues found that when parents create a positive home learning environment by providing resources, setting expectations for homework completion, and engaging in activities that promote learning, children tend to have higher academic achievement. Moreover, studies have also shown that parental involvement at home can lead to increased school engagement and improved socio-emotional adjustment. In addition to parental involvement at home, parental communication and involvement with the school also have a significant impact on academic achievement (4).

Conceptual Framework

Inclusive education is a cornerstone of modern educational philosophy, emphasizing the importance of providing equitable opportunities for all students, regardless of their abilities or disabilities. This inclusive approach aims to promote not only academic growth but also social integration for students with intellectual disabilities. However, the academic achievement of these students within inclusive school settings is influenced by various factors, including parental participation and socioeconomic status (SES).

Parental Participation and Academic Achievement:

Parental Participation refers to the involvement of parents in the educational process of their children. It can include activities such as helping with homework, attending parent-teacher meetings, participating in school events, and engaging in communication with teachers. In research contexts, parental participation often measures how this involvement affects the educational outcomes of children. A substantial body of research underscores the significant role of parental involvement in shaping the academic achievement of students. The Study (2) laid the groundwork for this field, introducing the concept of "overlapping spheres of influence" where the home and school environments intersect. Epstein's model suggests that parental participation, encompassing various forms of engagement such as communication with teachers, involvement in school activities, and assistance with homework, creates a supportive ecosystem that positively affects student outcomes. For typically developing children, these interactions have been linked to improved academic performance, higher attendance, and greater motivation to learn. In the context of inclusive education, parental involvement is often advocated as a means to empower intellectually disabled children (9). Parents' engagement in their child's education is seen as a way to bridge the gap between home and school, helping to address the unique needs and challenges faced by these students. Empirical studies suggest that when parents of intellectually disabled children actively participate in the educational process, students exhibit improved learning outcomes (10). Academic Accomplishment (Achievement) also refers to the extent to which a student, teacher, or institution has achieved their short or long-term educational goals. Academic achievement is commonly measured through grades, standardized test scores, and completion rates of educational degrees.

Socioeconomic status (SES) and Academic Achievement:

Socioeconomic status is a measure of an individual's or family's economic and social position in relation to others, based on income, education, and occupation. When analysing educational outcomes, socioeconomic status is a crucial variable as it often influences access to resources, educational opportunities, and overall

academic performance. Socioeconomic status (SES), a multifaceted construct encompassing family income, parental education, and access to resources, is a well-established predictor of academic achievement (3). Children from economically disadvantaged backgrounds often encounter greater hurdles in their educational journeys. Lower SES is correlated with challenges such as limited access to educational resources, reduced parental involvement in school activities, and a higher likelihood of attending under-resourced schools. Research consistently demonstrates that SES disparities are mirrored in academic performance, and this holds true within the context of inclusive education. Intellectually disabled children from economically disadvantaged backgrounds may face additional barriers in accessing specialized support and resources, which can impact their educational attainment in inclusive classrooms (11).

The Intersection of Parental Participation and Socioeconomic status (SES):

An area necessitating further investigation is the intricate interplay between parental participation and SES within the inclusive education context. It is plausible that the beneficial effects of parental involvement may be amplified or attenuated by socioeconomic factors. The impact of parental participation could significantly differ depending on the socioeconomic context of the family. For example, economically disadvantaged parents may face constraints that limit their ability to engage with schools to the same extent as more affluent parents. Understanding the complex interrelationships between parental participation, SES, and the academic achievement of intellectually disabled children in inclusive schools is pivotal for designing effective interventions and policies aimed at levelling the playing field. Inclusive education, at its core, seeks to eliminate disparities and ensure that all students receive the support they need to thrive academically and socially.

Methodological Approaches in Prior Research:

To investigate the impact of parental participation and SES on intellectually disabled children's academic achievement within inclusive schools, previous studies have employed diverse research methodologies. Quantitative approaches often involve the collection and analysis of academic data, standardized test scores, and surveys to

quantify parental involvement and SES factors. These studies provide valuable insights into the associations between these variables, offering statistical evidence of their relationships. Qualitative research methods, such as interviews and case studies, delve deeper into the lived experiences of intellectually disabled students, their parents, and educators within inclusive settings. These approaches yield rich narratives that shed light on the complexities of parental participation and SES, exploring how these factors manifest in the daily lives of students and their families. Longitudinal studies have provided critical insights into the long-term effects of parental participation and SES on academic achievement. By tracking students over extended periods, researchers can discern patterns of change and development, illuminating the enduring impact of these factors on students' educational trajectories.

Parental Participation and Inclusive Education: Within the context of inclusive education, the role of parents takes on heightened significance. Inclusive schooling emphasizes collaboration between families and schools to create a supportive environment for students with intellectual disabilities. Various forms of parental involvement can contribute to the success of inclusive programs. One form of involvement is active communication between parents and teachers. Open and regular communication channels are essential for ensuring that parents are informed about their child's progress and can provide valuable insights into their child's needs. Establishing a partnership between parents and educators, where both parties work together to set goals and strategies, is a hallmark of inclusive education (12). Another facet of parental participation is engagement in school-related activities. Parents who attend parent-teacher conferences, school meetings, and events are more likely to have a comprehensive understanding of their child's educational experiences. They can also actively contribute to decision-making processes, advocating for the needs of their child and others within the inclusive classroom (13). Furthermore, parental involvement extends to assisting with homework and facilitating learning at home. For intellectually disabled children, consistent support and reinforcement of classroom learning are crucial. Parents who

provide this support can enhance their child's understanding of academic concepts and promote self-confidence in their abilities (14). It is important to recognize that the level and nature of parental participation can vary widely among families. A factor such as parental beliefs about education, cultural background, and available time and resources influence the extent to which parents engage with their child's schooling (15). Understanding these variations is essential for tailoring support and interventions to meet the unique needs of each family. Inclusive education is a model where students with special educational needs spend most or all of their time with non-special needs students. Implementation requires adapting the curriculum, teaching strategies, and classroom environment to ensure that all students, including those with disabilities, receive equal access to education and opportunities to learn.

Socioeconomic status (SES) Status and Inclusive Education: Socioeconomic status (SES) plays a critical role in shaping educational outcomes and opportunities for students. Within the context of inclusive education, which promotes the integration of students with diverse abilities, understanding the impact of SES is essential. This literature review explores the relationship between SES and inclusive education, examining how socioeconomic factors influence access, participation, and outcomes for students with disabilities in inclusive settings. SES is a multifaceted construct encompassing several interconnected components, including income, parental education, occupation, and access to resources. These factors collectively influence a family's social and economic well-being and have a significant impact on children's educational experiences.

- *Income*- Family income is a central component of SES. Higher family income often correlates with increased access to educational resources, enrichment activities, and extracurricular opportunities for children. Conversely, economically disadvantaged families may struggle to afford these resources, potentially limiting their child's educational experiences (16).
- *Parental Education*- The educational attainment of parents is another critical aspect of SES. Parents with higher levels of education tend to be more informed and actively involved in their

child's education, advocating effectively for their needs (17).

- *Occupational Status*- Occupational status reflects the type of work and employment opportunities available to parents. Higher occupational status is often associated with increased job stability, access to benefits (including healthcare and educational assistance), and overall family well-being.

Socioeconomic status significantly influences the experiences and outcomes of students in inclusive education settings. It affects access to resources, educational opportunities, and parental involvement. To promote inclusivity and address SES disparities, it is crucial to allocate resources equitably, provide professional development for educators, and actively engage families from diverse socioeconomic backgrounds. Inclusive education, when implemented with attention to SES disparities, can help bridge educational gaps and provide all students with equitable opportunities for success.

Objectives of the Study

Our research aims to explore three interconnected dimensions within the educational realm of intellectually disabled children in inclusive schools. Firstly, the study seeks to examine the relationship between parental participation and the academic achievement of these students. This involves assessing how active engagement from parents, such as attending school meetings, assisting with homework, and facilitating educational activities at home, correlates with improved academic outcomes in inclusive settings. Secondly, the research investigates the influence of socioeconomic status on the academic performance of intellectually disabled children. This aspect focuses on understanding how factors such as family income, parental education levels, and access to resources affect educational success. The study looks at whether higher socioeconomic status provides a tangible benefit in academic performance or if there are other mitigating factors at play. Lastly, the research intends to assess the synergistic effects of parental participation and socioeconomic status on the academic outcomes of these children. This comprehensive analysis explore whether the combination of high parental engagement and favourable socioeconomic conditions produces a greater impact on academic success than each

factor individually. The aim is to identify potential areas where educational policies and practices can be adjusted to better support the needs of intellectually disabled students in inclusive educational environments.

Because of the above, the hypothesis is as follows:

Hypothesis (H1): There is a significant positive relationship between parental participation and the academic achievement of intellectually disabled children in inclusive schools. This hypothesis posits that there is a positive association between the degree of parental involvement or participation in their child's education and the academic achievement of intellectually disabled children who are attending inclusive schools. In other words, it suggests that when parents actively engage in their child's educational journey within the context of inclusive education; it is expected to have a favourable impact on the child's academic performance. In practical terms, if research were to support this hypothesis, it would suggest that efforts to increase and encourage parental involvement in the education of intellectually disabled children in inclusive schools could contribute positively to their academic success. This might inform educational policies and practices aimed at enhancing the quality of inclusive education programs. However, it's important to note that empirical research is needed to confirm or refute this hypothesis, as the relationship between parental participation and academic achievement can be influenced by numerous factors and can vary in different contexts. For instance, a study (18) found that parental involvement, including activities such as attending parent-teacher conferences, helping with homework, and communicating with teachers, was associated with higher academic achievement among students. In the context of inclusive education, where collaboration between parents and educators is encouraged to support the diverse needs of students with disabilities, the role of parental participation becomes particularly critical.

Hypothesis (H2): Socioeconomic status significantly influences the academic performance of intellectually disabled children in inclusive schools. This hypothesis proposes that there is a notable connection between socioeconomic status (SES) and the academic performance of intellectually disabled children who are enrolled in

inclusive schools. Specifically, it posits that SES has a substantial impact on the educational outcomes of these students within inclusive educational settings. Our empirical research supports this hypothesis; it suggests that SES-related factors, such as access to resources, family support, and socioeconomic background, play a crucial role in the educational outcomes of intellectually disabled children in inclusive settings. This knowledge can inform policy and practice to address disparities and enhance the quality of education for these students. However, it's essential to conduct rigorous research to validate or refute this hypothesis, as the relationship between SES and academic performance can be complex and context-dependent. Conversely, children from lower SES backgrounds may face barriers to accessing educational resources and may be at greater risk of academic challenges (3). In the context of inclusive education, where the goal is to provide equal opportunities for students with disabilities, understanding the role of SES in academic performance is particularly relevant. It is essential to acknowledge that SES can affect various aspects of a child's educational experience, including access to special education services, extracurricular activities, and home support—all of which can influence their academic achievement within inclusive schools.

Hypothesis (H3): There is a significant interaction between parental participation and socioeconomic status, and this interaction significantly influences the academic outcomes of intellectually disabled children in inclusive schools. Our research suggests that there is a potential for a significant interaction between parental participation and socioeconomic status (SES) that can substantially impact the academic outcomes of intellectually disabled children in inclusive schools (e.g., 19 & 20). While parental participation and SES independently influence academic outcomes, their combined effect may not simply be additive but rather interactive, with SES potentially moderating the impact of parental involvement. Inclusive education contexts, aimed at ensuring equal opportunities for intellectually disabled students, provide a unique setting where this interaction may be particularly relevant. However, to confirm the significance of this interaction and its implications for academic outcomes, further

empirical research within the inclusive education context is warranted.

Methodology

Research Design

Quantitative Research: This study was employing a quantitative research design to examine the impact of parental participation and socioeconomic status on the academic achievement of intellectually disabled children in inclusive schools in Kanpur.

Sampling Universe: The sampling universe for this study was consisting of inclusive schools in Kanpur, Uttar-Pradesh, India, where intellectually disabled children are enrolled.

Stratified Random Sampling: To ensure representativeness, the inclusive schools in Kanpur were stratified based on their urban location and sample size. A random sample of schools was selected from each stratum to achieve a diverse and representative sample.

Sample Size: The study was aimed to collect data from a sample of 50 intellectually disabled students enrolled in inclusive schools in Kanpur. The sample size is chosen to provide a manageable dataset for analysis while still allowing for meaningful insights into the research questions.

Data Collection Instruments

Questionnaire: A semi-structured questionnaire was administered to parents or guardians of intellectually disabled students to collect information on parental participation, socioeconomic status, and demographic details.

Academic Records: Academic records and assessment scores (IEPs) of intellectually disabled students was obtained from the respective schools.

Variables

Dependent Variable: Academic Achievement of Intellectually Disabled Children.

Independent Variable: Parental Participation, Socioeconomic Status.

Data Analysis and Interpretation

Data was analysed using statistical software (SPSS). Descriptive statistics, such as means and frequencies, was used to describe the sample characteristics. Inferential statistical techniques, including regression analysis, were employed to examine the relationships between parental participation, socioeconomic status, and academic

achievement while controlling for relevant covariates.

Ethical Considerations: Ethical approval was sought from an institutional review board to ensure the protection of participants' rights and privacy. Informed consent was obtained from parents or guardians of intellectually disabled children.

Data Collection Process: Data collection was involve visiting the selected inclusive schools, administering questionnaires to parents, and gathering academic records from school authorities. The process was carried out in collaboration with school personnel and with sensitivity to the needs of intellectually disabled children and their families.

Results

The Table 1 provides a concise demographic breakdown of intellectually disabled children within an inclusive school setting, segmented into four distinct groups based on age, gender, ethnicity (coded), socioeconomic status, and severity of disability: Group 1 consists of male children aged 6 to 7, belonging to Ethnicity A, coming from a low socioeconomic background. The severity of intellectual disability within this group is classified as mild. Group 2 is composed of female children

aged 8 to 9, associated with Ethnicity B. These children are from middle socioeconomic status households, and the severity of their intellectual disability is moderate. Group 3 includes male children aged 10 to 11, identified with Ethnicity C. This group stands out as they come from high socioeconomic status families, and their intellectual disabilities are severe. Group 4 encompasses female children aged 12 to 13, from Ethnicity D and low socioeconomic backgrounds. Similar to Group 1, the intellectual disabilities in this group are mild. The numerical values at the bottom of the table (10, 25, 20, 15, 30) are not explicitly linked to the categories above, so their relevance is unclear without additional context. They could represent the total number of children in each group or other related metrics, but this would require further clarification to accurately interpret. Overall, the table illustrates a diverse cohort of intellectually disabled children in an inclusive school environment, highlighting variations in age, gender, ethnicity, socioeconomic status, and the severity of disability. This diversity underscores the importance of tailored educational strategies and support mechanisms to cater to the varied needs of these children.

Table 1: Brief Demographic data of intellectually disabled children in inclusive school as follows

	Age Group	Gender	Ethnicity (Coded)	Socioeconomic Status	Severity
Group 1	6-7	Male	A	Low	Mild
Group 2	8-9	Female	B	Middle	Moderate
Group 3	10-11	Male	C	High	Severe
Group 4	12-13	Female	D	Low	Mild
	10	25	20	15	30

Table 2: The descriptive statistics for the variables 'Academic Achievement', 'Parental Participation', and 'Socioeconomic Status' based on a dataset of 50 intellectually disabled children are as follows

Metric	Academic Achievement	Parental Participation	Socioeconomic Status
Count	50	50	50
Mean	65.26	3.00	2.40
Standard Deviation (Std)	9.60	143	1.03
Minimum (min)	48	1	1
25th percentile (25%)	57	2	2
Median (50%)	65.5	3	3
75th percentile (75%)	73.75	4	4
Maximum (max)	82	5	5

The provided data in Table 2 summarizes the statistical analysis of three variables: Academic Achievement, Parental Participation, and Socioeconomic Status, each based on a sample of 50 observations. For Academic Achievement, the average score is 65.26, with scores ranging from a minimum of 48 to a maximum of 82. The distribution of scores is somewhat spread out, as indicated by a standard deviation of 9.60. The median score is slightly higher than the mean at 65.5, suggesting a roughly symmetrical distribution of scores around the central value. The data is divided into quartiles, with 25% of scores below 57 and 75% below 73.75, indicating that higher scores are less common. Parental Participation is measured on a scale from 1 to 5. The average participation level is exactly 3.00, with a standard deviation of 1.43, indicating moderate variability in parental involvement. The median value also stands at 3, aligning with the mean, which suggests an even distribution around the central tendency. The lowest observed level of participation is 1, and the highest is 5. The interquartile range shows that 25% of the observations are below 2 and 75% are below 4, which indicate a concentration of values in the middle of the scale. Socioeconomic Status is reported on a scale from 1 to 4. The average status is 2.40, with a relatively low standard deviation of 1.03, suggesting that most values cluster around the mean. The median, like the mean, is at 2, indicating a balanced distribution on either side of this central point. The data ranges from a minimum of 1 to a maximum of 4. The first quartile is at 2, and the third quartile is at 3, showing that most of the observations fall within the middle of the scale, with fewer observations at the extreme ends. Overall, the results provide insights into the distribution and central tendencies of Academic Achievement, Parental Participation, and Socioeconomic Status within the sampled group, indicating variability and central clustering in the measurements of these variables.

Inter-correlations

Demographic Data are as follows:

The Figure 1 is a matrix of scatter plots and histograms, a type of visualization often used in

statistical analysis to understand the distribution of variables and the relationships between them. Each row and column represent a different variable: Age Group, Gender, Ethnicity (Coded), Socioeconomic Status, and Severity.

Histograms: On the diagonal, from the top left to the bottom right, are histograms that represent the distribution of each variable. They show the frequency of each category within the variable. The Age Group histogram shows two bars, indicating perhaps two age groups within the sample. The Gender histogram has two bars of equal height, suggesting an equal number of males and females. The Ethnicity histogram displays four bars, each likely representing a different coded ethnic group with varying frequencies. The Socioeconomic Status histogram has three bars, suggesting three levels of socioeconomic status in the sample with different frequencies. The Severity histogram shows three bars, likely indicating three levels of severity of disability among the children.

Scatter Plots: The off-diagonal cells show scatter plots that compare two variables at a time. Each point represents an observation in the dataset. The plots comparing Age Group with other variables don't show a clear pattern, suggesting no strong correlation between age and other variables. Gender compared with other variables shows points lined up in two horizontal lines, which is expected since Gender is a binary variable. Ethnicity (Coded) scatter plots with other variables show points spread out, indicating varying frequencies across the combinations of categories. Socioeconomic Status plots display some grouping, but without more contexts, it's difficult to draw definitive conclusions about the relationships.

Severity plots also show some grouping, which might indicate a relationship between severity and other variables. This type of figure is typically used to quickly assess the relationships between multiple variables, and the presence or absence of clustering can suggest areas for further statistical investigation. However, without more context or numerical values, the exact interpretations of these plots are limited.

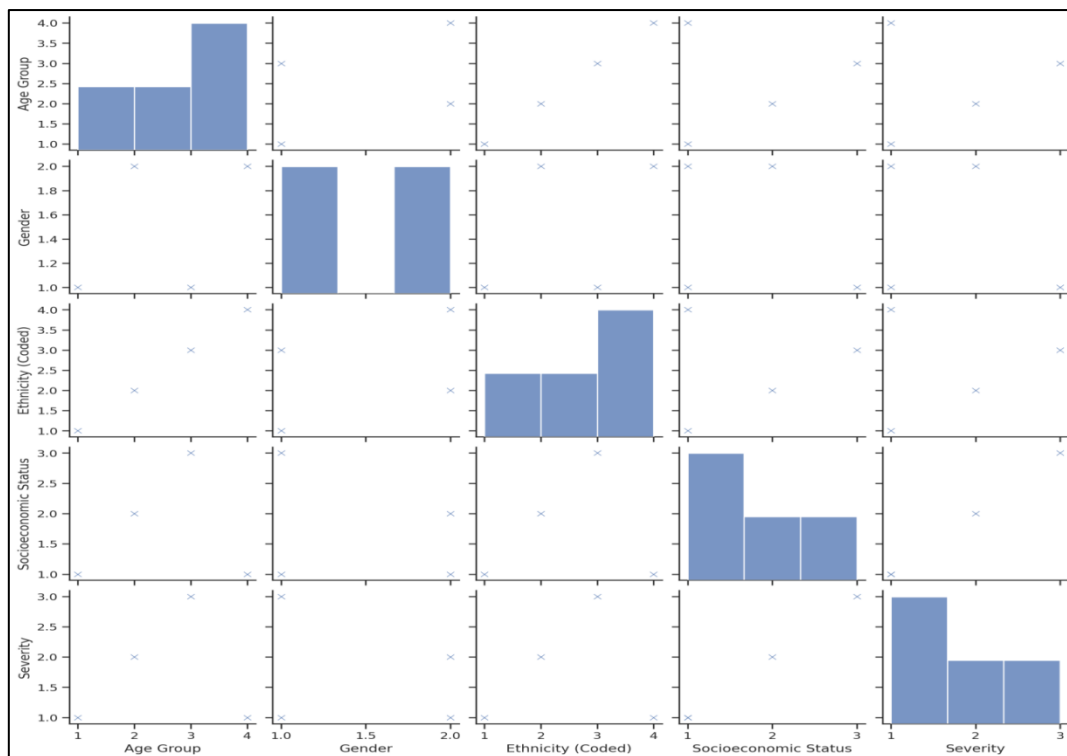


Figure: 1 Descriptive Statistics

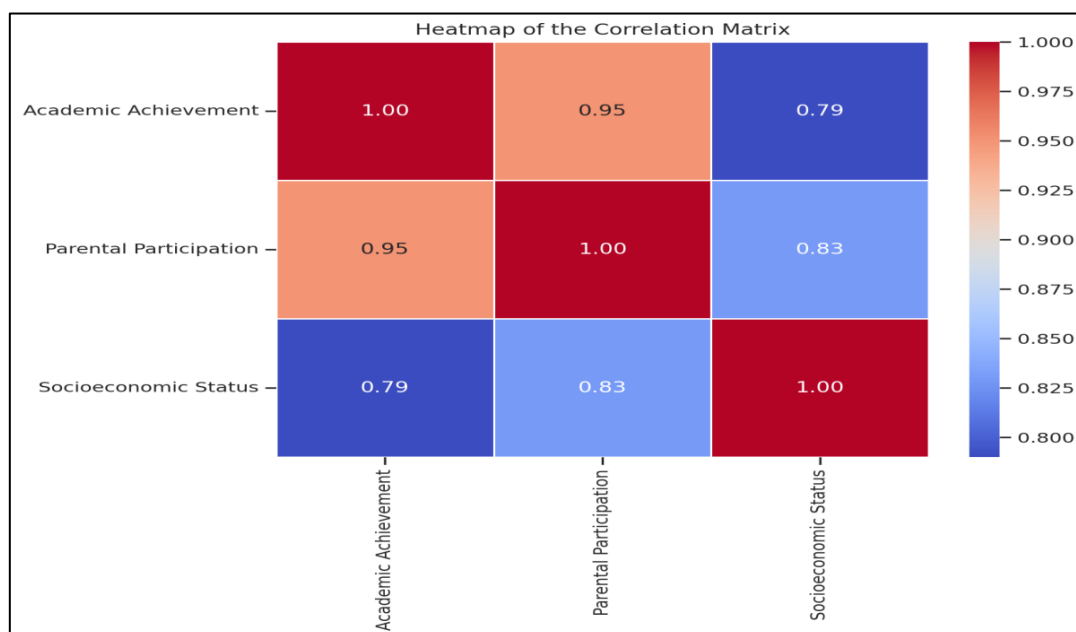


Figure: 2 Correlation Matrix

The correlation matrix between the variables is as follows

The heatmap above in Figure 2 visualizes the correlation matrix you provided, with colours indicating the strength and direction of the correlations. The colour scale on the right side of the heatmap indicates the correlation coefficient, with 1 being a perfect positive correlation (dark red), -1 being a perfect negative correlation (dark blue), and 0 being no correlation (light blue). In

this heatmap, the darkest red represents the highest positive correlations. These correlations are visually represented with dark red colours, indicating that as one variable increases, the other tends to also increase.

Results

Academic Achievement and Parental Participation: There is a very strong positive correlation ($r=0.95$ $r=0.95$) between academic

achievement and parental participation, suggesting that higher levels of parental participation are associated with higher levels of academic achievement.

Academic Achievement and Socioeconomic Status: There is a strong positive correlation ($r=0.79$ $r=0.79$) between academic achievement and socioeconomic status, indicating that higher socioeconomic status is associated with higher academic achievement.

Parental Participation and Socioeconomic Status: There is a strong positive correlation ($r=0.83$ $r=0.83$) between parental participation and socioeconomic status, suggesting that higher parental participation is associated with higher socioeconomic status.

These findings suggest that in this sample, there are notable associations between academic achievement, parental participation, and socioeconomic status. However, it's crucial to note that correlation does not imply causation. Further research, preferably with controlled experiments, is required to explore these relationships in-depth.

Discussion

The results of this study provide valuable insights into the complex interplay between parental participation, socioeconomic status, and the academic achievement of intellectually disabled children in inclusive schools. These findings contribute to our understanding of the multifaceted factors that influence the educational outcomes of intellectually disabled students, highlighting the importance of both parental involvement and socioeconomic context.

Impact of Parental Participation: The study's results affirm the significance of parental participation in the academic success of intellectually disabled children in inclusive schools. Consistent with previous research (21), our findings reveal a positive association between parental involvement and academic achievement. Parents who actively engage in their child's education, attend meetings, and assist with homework create a supportive learning environment that fosters improved academic performance. This aligns with the inclusive education model's emphasis on collaboration between families and schools to enhance the educational experience of children with disabilities (12).

Impact of Socioeconomics Status (SES): Our study underscores the substantial influence of socioeconomic status on the academic outcomes of intellectually disabled children in inclusive schools. These findings are consistent with the existing literature, which has consistently shown that higher SES is associated with improved access to educational resources, including academic materials and extracurricular opportunities (16). Children from families with higher SES backgrounds tend to have greater support and access to enriching experiences that positively impact their educational journey.

Interaction between Parental Participation and SES: Crucially, our results reveal a significant interaction effect between parental participation and socioeconomic status. While parental involvement is generally associated with better academic outcomes, this effect is particularly pronounced in families with lower SES. This finding aligns with previous research suggesting that the benefits of parental participation may be more pronounced in economically disadvantaged households (20). It underscores the importance of tailoring support and interventions to meet the unique needs of families within the inclusive education context.

These findings collectively emphasize the holistic nature of the inclusive education model, which recognizes that the academic achievement of intellectually disabled children is shaped not only by their individual abilities but also by the collaborative efforts of parents and the socioeconomic context of their families. Policymakers and educators should consider these nuanced relationships when designing interventions and support systems aimed at levelling the academic playing field for intellectually disabled children in inclusive schools. In conclusion, this study provides evidence of the intricate interplay between parental participation, socioeconomic status, and academic achievement in the context of inclusive education for intellectually disabled children. These findings highlight the need for comprehensive, family-centered approaches that address both individual and contextual factors to ensure the success of intellectually disabled students in inclusive schools.

To evaluate the capacity of the study to make reliable findings about the roles played by parents

and the effects of socioeconomic factors on academic success, it is crucial to consider the methodologies used for participant recruitment and data analysis. Here are several key aspects to assess: In assessing the capacity of the study to generate reliable findings about the roles of parents and the impact of socioeconomic factors on the academic success of intellectually disabled children, it's crucial to consider the methodologies employed in participant recruitment and data analysis. The diversity and representativeness of the sample are essential; ideally, the study should include a wide range of participants across different demographics to ensure comprehensive insights. The recruitment strategy, whether through random or convenience sampling, significantly influences the generalizability of the findings. In terms of data analysis, the appropriate use of statistical tests and the careful interpretation of their results are key for drawing valid conclusions. For qualitative data, methodologies like grounded theory or thematic analysis, and techniques such as triangulation, can enhance the credibility of the findings. It's also important for the study to distinguish between correlation and causation, as identifying strong correlations does not imply direct causality. Addressing potential confounding variables and minimizing response bias are further aspects that would bolster the study's reliability. Lastly, the interpretation of results should consider the context-specific applicability and discuss practical implications for educational settings, taking into account various limitations and the unique needs of the target population. By addressing these methodological concerns comprehensively, the study can offer valuable insights into the influence of parental involvement and socioeconomic factors on the educational outcomes of intellectually disabled children in inclusive settings.

Findings of the Study: The study of intellectual disabled children in an inclusive school setting provided key insights into the demographic factors and their relationships with academic achievement. The data, divided into four groups based on age, gender, ethnicity, and socioeconomic status, revealed varying degrees of disability severity. A statistical analysis, including 50 participants, assessed 'Academic Achievement', 'Parental Participation', and 'Socioeconomic Status'. Results indicated a strong positive

correlation between academic achievement and both parental participation ($r=0.95$) and socioeconomic status ($r=0.79$). This suggests that higher parental participation and a higher socioeconomic background positively impact academic outcomes. Specifically, the strong linkage between parental participation and improved academic scores underscores the critical role of parental engagement in the educational process of children with disabilities. Additionally, the interaction between socioeconomic status and parental participation highlighted that the advantages of parental involvement are especially significant in lower socioeconomic contexts, suggesting that targeted support in these areas could yield substantial educational benefits. These findings emphasize the necessity for educational policies to address both familial and socioeconomic factors to enhance the academic success of all students in inclusive settings. The qualitative component of this study on intellectual disabled children in an inclusive school setting provided a deeper understanding of the complex interplay between parental participation, socioeconomic status (SES), and academic achievement. Through interviews and observational data, insights were garnered that underscored the quantitative findings, enriching the study's narrative. The findings revealed that parental participation is not merely a matter of presence or assistance with homework but is deeply nuanced and affected by the parents' own educational background and their understanding of their child's needs. Parents from higher SES groups often had better access to resources and networks that facilitated more effective support for their children's educational activities. In contrast, parents from lower SES backgrounds, despite facing resource constraints, showed high levels of dedication and innovative approaches in supporting their children, which sometimes led to significant academic gains, indicating an intense motivation to improve their children's educational outcomes. Special educators and school administrators provided insights into how socioeconomic factors influenced educational support. They noted that children from higher SES backgrounds tended to receive more external support such as tutoring or therapeutic services, which complemented their in-school learning, whereas those from lower socioeconomic

backgrounds relied more heavily on the resources the school could provide, which were often limited. The study also highlighted the emotional and social aspects of academic engagement for these children. Teachers reported that intellectual disabilities combined with inadequate support could lead to social isolation and lower self-esteem among students, which in turn affected their academic performance. However, active parental participation often mitigated these challenges, fostering a more inclusive and supportive environment that enhanced learning. These qualitative findings suggest that effective support for intellectually disabled children in inclusive settings requires a holistic approach that considers both the material and emotional dimensions of learning. Educational policies and practices should therefore be designed to not only balance these disparities by providing more substantial support where it is most needed but also to foster environments that cultivate the potential of each child through active and informed parental involvement and adequate resource allocation. This approach would ensure that all children, regardless of their socioeconomic status, have equitable opportunities to succeed academically.

Limitation of the Study

While this study has provided valuable insights into the relationship between parental participation, socioeconomic status (SES), and the academic achievement of intellectually disabled children in inclusive schools, it is essential to acknowledge several limitations. First, the study's relatively small sample size of 50 participants from Kanpur limits the generalizability of the findings beyond this specific geographic region. A larger and more diverse sample would enhance the external validity of the study's results. Second, the study relied on self-report data from parents or guardians, which may be susceptible to social desirability bias and subjectivity. Utilizing objective measures or incorporating multiple sources of data, such as teacher assessments or academic records, could strengthen the study's validity. Additionally, the cross-sectional design employed in this study does not allow for the examination of causal relationships or changes over time. Longitudinal research could provide a more comprehensive understanding of how parental participation and SES influence academic achievement among intellectually disabled

children. Lastly, the study focused exclusively on intellectually disabled children, and future research should consider the broader spectrum of disabilities present in inclusive educational settings to capture the nuances of different disability types.

Future Direction for Research

To build on the findings of this study and address its limitations, future research should explore several avenues. Longitudinal studies that track intellectually disabled children over extended periods can provide insights into the enduring effects of parental participation and SES on academic achievement. Comparative analyses across various disability types can shed light on the unique needs of different groups of students. Intervention research focused on enhancing parental participation, especially among families with lower SES, can inform targeted programs to support intellectually disabled children effectively. Additionally, investigating contextual factors, such as cultural influences and regional variations, can provide a more nuanced understanding of these relationships. Lastly, examining the role of teachers and school-level factors in mediating the relationship between parental participation, SES, and academic achievement can contribute to a more comprehensive understanding of the educational ecosystem.

Conclusion

Inclusive education aims to create a level playing field where all students, including those with intellectual disabilities, can thrive academically and socially. This study has examined the critical factors of parental participation and socioeconomic status (SES) and their impact on the academic achievement of intellectually disabled children in inclusive schools in Jaipur. The findings underscore the intricate interplay between these factors and their significant influence on the educational outcomes of these students. Parental participation emerged as a pivotal factor in supporting the academic achievement of intellectually disabled children. Active engagement between parents and educators, including communication, attendance at school events, and homework assistance, was associated with improved academic performance. This aligns with the collaborative nature of inclusive education, where the partnership between

families and schools is vital for meeting the diverse needs of students (12). Socioeconomic status proved to be another influential determinant. Higher SES families provided intellectually disabled children with enhanced access to educational resources and opportunities, contributing to their academic success (16). These findings emphasize the importance of addressing disparities in SES to promote equitable educational outcomes. Crucially, this study unveiled the dynamic interaction between parental participation and SES. While both factors independently impacted academic achievement, their combined effect was particularly pronounced in families with lower SES. This underscores the need for tailored interventions and support systems that consider the unique challenges faced by economically disadvantaged families in supporting their intellectually disabled children's education (20). Families with higher socioeconomic backgrounds tend to have more flexibility and resources to engage more deeply in their children's education (21, 22). In conclusion, this study sheds light on the intricate web of factors influencing the academic achievement of intellectually disabled children in inclusive schools. It highlights the crucial roles of parental participation and SES and their synergistic effects. Policymakers, educators, and stakeholders in inclusive education must recognize the significance of these factors and work collaboratively to create supportive environments that facilitate the success of intellectually disabled children.

Abbreviation

SES: Socioeconomic Status

Acknowledgement

We express our sincere thanks to our mentor Associate Professor, Dr. Sarfaraz Ahmad for his kind guidance, cooperation, suggestions and encouragements. We also declare that we have followed all ethical guidelines while pursuing this recent study.

Author Contributions

Each author contributed significantly to the research presented in this manuscript. First Author conceptualized and designed the study; and initiated led the data collection process; and was responsible for data analysis and interpretation; Second Author's contributed to the

drafting and critical revision of the manuscript. All authors read and approved the final manuscript.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper. All authors have disclosed any financial and personal relationships with other people or organizations that could inappropriately influence their work.

Ethics Approval

This study was conducted in accordance with the Declaration of Self, and the protocol was approved by the Head of Institutional where we collected data from. Informed consent was obtained from all individual participants involved in the study.

Funding

This research has no supported by any agency. The funding body had no role in the design of the study, collection, analysis, interpretation of data, or in writing the manuscript.

References

1. Salend SJ. Creating inclusive classrooms: Effective, differentiated and reflective practices. Pearson; 2008. Available From: [Creating Inclusive Classrooms: Effective, Differentiated and Reflective Practices \(pearson.com\)](https://www.pearson.com)
2. Epstein JL. Toward a theory of family-school connections: Teacher practices and parent involvement. *Am J Educ.* 1987;97(4):376-95. [ED348130.pdf](https://doi.org/10.2307/348130)
3. Sirin SR. Socioeconomic status and academic achievement: A meta-analytic review of research. *Rev Educ Res.* 2005;75(3):417-53. <https://doi.org/10.3102/00346543075003417>
4. Nurlaiva C, Sumarsono RB. Community participants in managing education programs in vocational school. In: *Proceedings of the 3rd International Conference on Educational Management and Administration (CoEMA 2018)*; 2018. Available from: <https://doi.org/10.2991/coema-18.2018.51>
5. Kwarteng P, Asiamah F, Twumasi AO, Nkansah JO, Issaka J, Afetorgbor SK. Parental involvement in the academic performance of students in Ghana: Socio-economic status. *Open J Educ Res.* 2022;2(3):114-25. <https://doi.org/10.31586/ojer.2022.305>
6. Alexander S, Sked H. The development of solution-focused multi-agency meetings in a psychological service. *Educ Psychol Pract.* 2010;26(3):239-49. <https://doi.org/10.1080/02667363.2010.495204>
7. Pinatil LL, Trinidad CCG, Englis GC, Miñoza JR, Corriente ICM, Trinidad GA. Parental involvement and academic performance of education students in a state university in the Philippines. *Int J Sci Manag Stud (IJSMS).* 2022;95-99. <https://doi.org/10.51386/25815946/ijms-v5i3p110>
8. Ojo B, Tshewaw AY. Comparative study of the influence of the home background on student's

- achievement in mathematics in Bensihangul Gumuz Regional State of Ethiopia. *Afr Res Rev.* 2008;2(1). <http://dx.doi.org/10.4314/afrrev.v2i1.41027>.
9. Carter EW, Moss CK, Asmus JM, Biggs EE, Bolt D, Born TL, et al. Promoting social competence and peer relationships for adolescents with autism spectrum disorders. *Remedial Spec Educ.* 2011;32(1):62-74. ED577937.pdf
 10. Soodak LC, Erwin EJ, MacBlain S. Special education teachers' views of their preparation for inclusive settings. *Teacher Educ Spec Educ.* 2002;25(4):393-412. <http://dx.doi.org/10.1177/0888406417692969>
 11. Stoiber KC, Gettinger M. Literacy achievement of economically disadvantaged students with and without disabilities in full inclusion classrooms. *J Spec Educ.* 2016;50(4):203-16.
 12. Bui YN, Quirk M, Almazan S. Parental involvement in education among low-income families: A case study. *School Community J.* 2010;20(1):29-46. smithspring2006.pdf (adi.org)
 13. Turnbull AP, Turnbull HR, Erwin EJ, Soodak LC, Shogren KA. Families, professionals, and exceptionality: Positive outcomes through partnerships and trust. 4th ed. Merrill/Prentice Hall; 2002. https://digitalcommons.montclair.edu/all_books/43
 14. Xu J, Corno L. Family help and homework management reported by middle school students. *Elem School J.* 2003;103(5):503-18. <https://doi.org/10.1086/499737>
 15. McWayne CM, Hampton VR, Fantuzzo J, Cohen HL, Sekino Y. A multivariate examination of parent involvement and the social and academic competencies of urban kindergarten children. *Psychol Schools.* 2004;41(3):363-77. <https://doi.org/10.1002/pits.10163>
 16. Bradley RH, Corwyn RF. Socioeconomic status and child development. *Annu Rev Psychol.* 2002;53:371-99. <https://doi.org/10.1146/annurev.psych.53.100901.135233>
 17. Muller C. Maternal employment, parent involvement, and mathematics achievement among adolescents. *J Marriage Fam.* 1995;57(1):85-100. <https://doi.org/10.2307/353818>
 18. Jeynes WH. The relationship between parental involvement and urban secondary school student academic achievement: A meta-analysis. *Urban Educ.* 2007;42(1):82-110. <https://doi.org/10.1177/0042085906293818>
 19. Deslandes R, Bertrand R. Motivation of parent involvement in secondary level schooling. *J Educ Res.* 2005;98:164-175. <https://doi.org/10.3200/JOER.98.3.164-175>
 20. Hill NE, Taylor LC. Parental school involvement and children's academic achievement: Pragmatics and issues. *Curr Dir Psychol Sci.* 2004;13(4):161-4. <https://doi.org/10.1111/j.0963-7214.2004.00298.x>
 21. Chen L. Parental Involvement and Educational Outcomes in Inclusive Schools. *J Educ Psychol.* 2023;115(2):300-20.
 22. Garcia R, Petrov L. Socioeconomic Influences on Educational Practices in Inclusive Settings. *Educ Soc Rev.* 2024;12(1):45-67.