
**BEYOND SCHOOL ENROLMENT: EXAMINING LEARNING
POVERTY AMONG SECONDARY SCHOOL STUDENTS IN WEST
BENGAL**

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Doi: <https://doi-doi.org/101555/ijarp.6405>**ABSTRACT**

Learning poverty has emerged as a major educational challenge, reflecting the gap between school enrolment and the acquisition of essential foundational literacy and numeracy skills. It significantly influences students' academic achievement, cognitive development, and future educational opportunities. The present study examined the prevalence of learning poverty among secondary school students in West Bengal and explored its relationship with selected socio-demographic variables, namely gender, locality, family type, and social category. A quantitative research approach employing a cross-sectional survey design was adopted. A total of 521 secondary school students were selected through a simple random sampling technique from four districts of West Bengal: Kolkata, Howrah, Jalpaiguri, and Alipurduar. Data were collected using a self-developed Learning Poverty Assessment Questionnaire (Cronbach's $\alpha = 0.84$) and analysed using descriptive statistics and the chi-square test. The findings revealed that learning poverty is a significant educational concern, with 35.9% of students experiencing moderate learning poverty and 26.5% experiencing severe learning poverty. Statistically significant differences were observed with respect to gender, locality, family type, and social category. Female and urban students demonstrated comparatively higher levels of learning poverty, while family structure and social background also showed significant associations with students' learning outcomes. The findings suggest that learning poverty is shaped by the combined influence of educational, social, and demographic factors rather than by school enrolment alone. The study highlights the need for early identification of learning gaps, strengthened foundational literacy and numeracy programmes, learner-

centred instructional practices, and targeted remedial interventions to improve learning outcomes among secondary school students. The findings are expected to assist educators, policymakers, and researchers in designing evidence-based strategies to reduce learning poverty and promote equitable, quality education in West Bengal.

KEYWORDS: Learning Poverty, Secondary School Students, Foundational Literacy and Numeracy, West Bengal, Socio-demographic Factors, Learning Outcomes, School Education.

1. INTRODUCTION

In contemporary educational discourse, increasing attention has shifted from expanding access to education towards ensuring meaningful learning for every student. Education is no longer viewed merely as a mechanism for increasing school enrolment or completing prescribed curricula; rather, it is recognised as a lifelong process that fosters intellectual development, critical thinking, problem-solving ability, creativity, and responsible citizenship. A quality education system is expected to equip learners with the foundational knowledge and competencies required to participate successfully in academic, social, and economic life. Although remarkable progress has been achieved worldwide in improving school enrolment over the past few decades, evidence increasingly suggests that attendance alone does not guarantee effective learning. Many students remain in school for several years without acquiring the essential literacy and numeracy skills appropriate for their age and grade level. Consequently, educational researchers and policymakers have shifted their attention from measuring educational success solely through school participation to evaluating whether students are actually learning. This changing perspective has brought the issue of learning poverty to the forefront of global educational research and policy discussions (United Nations, 2015; World Bank, 2019; UNESCO, 2023). Learning poverty has emerged as one of the most significant educational challenges of the twenty-first century because it reflects the gap between school participation and actual learning achievement. The World Bank (2019), in collaboration with the UNESCO Institute for Statistics, introduced the concept of learning poverty to describe children who are unable to read and understand a simple age-appropriate text by around ten years of age while also accounting for children who remain out of school. Although this definition focuses primarily on foundational reading proficiency, the concept represents a much broader educational concern. Students who fail to acquire basic literacy and numeracy skills during the early years of schooling often experience cumulative learning difficulties as they progress through higher grades. Such

deficiencies limit their ability to understand subject content, think critically, communicate effectively, solve problems, and participate meaningfully in classroom learning. Therefore, learning poverty is increasingly recognised not merely as a literacy problem but as an indicator of the overall quality, effectiveness, and equity of education systems. The importance of addressing learning poverty extends far beyond academic performance. Foundational literacy and numeracy constitute the building blocks upon which higher-order cognitive abilities, lifelong learning, and future employability are developed. Students possessing strong foundational competencies generally demonstrate greater confidence, motivation, classroom participation, and academic achievement, whereas those experiencing learning poverty often encounter persistent educational difficulties, reduced self-confidence, lower academic engagement, and increased risks of grade repetition and school dropout. These learning deficits may continue into adulthood, affecting employment opportunities, productivity, social mobility, and overall quality of life (World Bank, 2022; OECD, 2023). Consequently, reducing learning poverty has become an essential objective not only for improving educational quality but also for promoting inclusive social development and sustainable economic growth. Theoretical perspectives in educational psychology provide important explanations for understanding the development of learning poverty. Jean Piaget (1972) viewed learning as an active cognitive process through which learners construct knowledge by interacting with their environment. He argued that effective learning depends upon learners' developmental readiness and opportunities to explore, discover, and reorganise knowledge. Complementing this cognitive perspective, Lev Vygotsky (1978) emphasised that learning is fundamentally a social process occurring through interaction with teachers, peers, and more knowledgeable individuals. His concept of the Zone of Proximal Development highlights the importance of instructional guidance and collaborative learning in enabling students to achieve competencies beyond their independent capabilities. Likewise, Jerome Bruner (1966) advocated instructional scaffolding, suggesting that carefully structured teaching enables learners to gradually develop conceptual understanding and independent learning skills. Similarly, David Ausubel (1968) argued that meaningful learning occurs when new knowledge is systematically connected with learners' prior experiences and existing cognitive structures. Collectively, these theoretical perspectives suggest that learning poverty results not simply from individual limitations but also from inadequate instructional support, ineffective teaching practices, and limited opportunities for meaningful learning. Within educational settings, learning poverty is influenced by multiple institutional and instructional factors. Schools play a crucial role in determining whether students successfully acquire

foundational competencies necessary for future academic progress. Research consistently demonstrates that qualified teachers, learner-centred pedagogy, formative assessment, positive classroom environments, and adequate learning resources significantly enhance students' learning outcomes. John Hattie (2009) identified teacher effectiveness, constructive feedback, and classroom climate among the strongest determinants of student achievement. Similarly, Darling-Hammond (2017) argued that professionally prepared teachers who employ differentiated instruction and continuous assessment substantially improve learning outcomes across diverse student populations. Conversely, overcrowded classrooms, inadequate instructional materials, limited academic support, and ineffective teaching practices may contribute to persistent learning deficits. These findings indicate that reducing learning poverty requires continuous improvement in instructional quality rather than merely increasing school participation. Learning outcomes are also shaped by broader social, economic, and environmental conditions. Urie Bronfenbrenner's (1979) Ecological Systems Theory explains that children's development occurs through continuous interaction with multiple environmental systems, including family, school, peer groups, neighbourhoods, and wider social institutions. Likewise, Pierre Bourdieu (1986) argued that unequal distribution of economic, cultural, and social capital influences educational opportunities and academic achievement. Students from supportive families with greater educational resources, parental involvement, and favourable learning environments are generally better positioned to achieve positive educational outcomes. Conversely, disparities in socio-economic status, locality, family support, and social background may create unequal learning opportunities that contribute to learning poverty. These theoretical perspectives emphasise that learning achievement cannot be understood solely through classroom experiences but must also consider the wider social and environmental contexts within which students develop. Within the Indian educational context, learning poverty remains a major concern despite substantial improvements in school enrolment and educational access. National and international assessments consistently indicate that a considerable proportion of Indian students continue to experience difficulties in acquiring foundational literacy and numeracy competencies appropriate for their grade level (World Bank, 2019; NCERT, 2022; ASER Centre, 2023). Recognising these challenges, the National Education Policy (NEP 2020) identifies Foundational Literacy and Numeracy (FLN) as the highest educational priority and advocates competency-based learning, continuous assessment, teacher professional development, and equitable educational opportunities. Similarly, national initiatives such as NIPUN Bharat seek to strengthen foundational learning by improving teaching practices, curriculum

implementation, and early learning support. These policy initiatives acknowledge that meaningful learning, rather than school attendance alone, should become the primary indicator of educational success. In West Bengal, secondary school students experience diverse educational, social, and economic conditions that may influence their learning outcomes. Variations in school infrastructure, teaching quality, family educational support, locality, and socio-economic background contribute to differences in students' learning experiences across districts. Although numerous educational programmes have focused on improving school participation and educational access, comparatively limited research has examined learning poverty among secondary school students within the state. Existing studies have generally concentrated on literacy achievement, academic performance, or primary education without comprehensively investigating learning poverty among adolescents or examining how socio-demographic characteristics influence its prevalence. Consequently, region-specific evidence capable of informing educational planning and targeted interventions remains limited. Despite increasing global and national attention to learning poverty, relatively little empirical research has explored its prevalence among secondary school students in West Bengal, particularly with reference to gender, locality, family type, and social category. Understanding how learning poverty varies across these socio-demographic characteristics is essential for designing evidence-based educational policies, targeted remedial programmes, and inclusive instructional strategies capable of addressing students' diverse learning needs. This limitation in the existing literature highlights an important research gap that warrants systematic investigation. Therefore, the present study seeks to examine the prevalence of learning poverty among secondary school students in West Bengal and analyse its relationship with selected socio-demographic variables, namely gender, locality, family type, and social category. By identifying the extent and distribution of learning poverty across different student groups, the study aims to contribute to a deeper understanding of the factors associated with foundational learning among adolescents. The findings are expected to provide valuable evidence for teachers, school administrators, curriculum planners, and policymakers in designing effective interventions that strengthen foundational literacy and numeracy, reduce educational inequalities, and improve learning outcomes. In essence, addressing learning poverty is fundamental to ensuring that education fulfils its broader purpose of developing knowledgeable, confident, skilled, and socially responsible citizens. Schools that prioritise meaningful learning, equitable educational opportunities, effective teaching practices, and supportive learning environments can significantly reduce learning poverty and enable every student to acquire the foundational

competencies necessary for lifelong learning, productive employment, and active participation in society.

2. Literature Review

Learning has always been regarded as the central objective of formal education. Schools are expected not only to enrol children but also to ensure that they acquire the knowledge, skills, and competencies necessary for lifelong personal, academic, and social development. However, increasing evidence from both developed and developing countries indicates that attending school does not automatically guarantee meaningful learning. A considerable number of students complete several years of schooling without mastering even the most basic literacy and numeracy skills expected for their age. This growing concern has shifted the focus of educational research from school participation towards actual learning outcomes, leading to the emergence of the concept of learning poverty. The idea highlights that educational success should not be measured merely by school enrolment or years of attendance, but by whether learners acquire the essential competencies needed to participate effectively in education and society (World Bank, 2019; UNESCO, 2023). The concept of learning poverty gained international prominence through the work of the World Bank and the UNESCO Institute for Statistics, which defined it as the inability of children to read and comprehend a simple age-appropriate passage by approximately ten years of age, after accounting for those who remain out of school (World Bank, 2019). Although this definition primarily focuses on foundational reading ability during the primary years, it reflects a much broader educational problem. Students who fail to develop essential literacy and numeracy skills in the early stages of schooling often continue to experience learning difficulties throughout secondary education and beyond. These early deficits accumulate over time, making it increasingly difficult for learners to understand complex concepts, participate actively in classroom learning, and achieve expected academic standards. Consequently, learning poverty has become an internationally recognised indicator for evaluating the effectiveness and equity of education systems. Educational psychologists have long argued that learning develops progressively through interaction between cognitive growth, instructional experiences, and social environments. Jean Piaget (1972) proposed that children actively construct knowledge by interacting with their surroundings, gradually progressing through different stages of cognitive development. Similarly, Lev Vygotsky (1978) emphasised that learning is fundamentally a social process, where children develop higher-order thinking through interaction with teachers, peers, and more knowledgeable individuals.

His concept of the Zone of Proximal Development suggests that appropriate instructional guidance enables learners to achieve competencies that would otherwise remain beyond their independent capabilities. These theoretical perspectives imply that learning poverty should not be viewed simply as a reflection of students' individual abilities but rather as an outcome influenced by the quality of educational support, instructional practices, and learning opportunities available to them. Complementing these perspectives, Jerome Bruner (1966) argued that meaningful learning occurs when instruction is carefully structured to match learners' developmental levels while gradually extending their understanding through appropriate scaffolding. Likewise, David Ausubel (1968) maintained that new knowledge is learned more effectively when it is meaningfully connected with learners' existing cognitive structures. These educational theories collectively emphasise that effective teaching plays a decisive role in preventing learning difficulties. When classroom instruction fails to address learners' individual needs, foundational learning gaps may gradually widen, eventually resulting in persistent learning poverty. Therefore, improving instructional quality remains one of the most effective approaches to strengthening foundational learning competencies. Learning poverty has important consequences extending far beyond classroom performance. Students who experience inadequate foundational learning frequently struggle with reading comprehension, written communication, mathematical reasoning, critical thinking, and problem-solving. Such difficulties often reduce students' confidence, motivation, and engagement with school activities, thereby limiting their opportunities for future academic success. Longitudinal research suggests that children who fail to master foundational literacy during the early years are considerably more likely to experience lower educational attainment, increased school dropout, restricted employment opportunities, and reduced socio-economic mobility in adulthood (World Bank, 2022; OECD, 2023). Consequently, reducing learning poverty has become not only an educational priority but also a developmental objective linked to poverty reduction, economic growth, and social inclusion. International organisations have repeatedly highlighted that improving learning outcomes requires greater attention to the quality of education rather than merely expanding access to schools. The United Nations Sustainable Development Goal 4 (SDG-4) explicitly advocates inclusive, equitable, and quality education that enables all learners to acquire relevant knowledge and skills necessary for lifelong learning (United Nations, 2015). Similarly, UNESCO (2021) argued that educational systems should prioritise competency development, equitable learning opportunities, and supportive learning environments capable of addressing diverse student needs. These policy perspectives recognise that learning poverty cannot be

eliminated simply by increasing enrolment rates; rather, systematic improvements in curriculum implementation, teacher effectiveness, classroom practices, assessment systems, and educational governance are essential for ensuring meaningful learning. The role of teachers remains central to reducing learning poverty. Numerous educational studies have demonstrated that effective teaching practices significantly influence students' academic achievement irrespective of their socio-economic backgrounds. John Hattie (2009), through his synthesis of over 800 meta-analyses on educational achievement, concluded that teacher quality, constructive feedback, classroom climate, and visible learning practices have substantial effects on student learning outcomes. Similarly, Darling-Hammond (2017) emphasised that professionally prepared teachers who employ learner-centred pedagogies, continuous assessment, and differentiated instruction contribute significantly to improved student achievement. These findings suggest that strengthening teacher capacity remains one of the most effective educational investments for reducing learning poverty and promoting equitable learning opportunities. Learning poverty is also closely associated with the availability of supportive educational environments. Schools characterised by positive teacher–student relationships, inclusive classroom practices, adequate instructional resources, and safe learning environments tend to produce stronger educational outcomes than schools lacking these characteristics. Research conducted by OECD (2023) indicates that students perform better academically when they experience supportive school climates, effective classroom management, and opportunities for active participation in learning. Conversely, overcrowded classrooms, limited teaching resources, excessive examination pressure, and inadequate academic support often contribute to persistent learning difficulties. Therefore, educational quality should be understood as a multidimensional concept encompassing teaching effectiveness, school leadership, learning resources, and students' emotional engagement with learning rather than merely curriculum completion.

Beyond classroom instruction, students' learning outcomes are strongly influenced by family, social, and economic conditions. Educational research consistently demonstrates that the home environment shapes children's learning experiences by influencing study habits, motivation, access to educational resources, and parental support. James Coleman (1988) argued that family social capital, reflected through parental involvement, communication, and educational expectations, plays a significant role in children's academic achievement. Likewise, Pierre Bourdieu (1986) explained that families possessing greater economic, cultural, and social capital are generally better equipped to provide learning opportunities that facilitate educational success. These perspectives suggest that learning poverty is not merely

an individual educational problem but also a reflection of broader social inequalities that affect students' access to quality learning experiences.

The interaction between learners and their surrounding environments has been comprehensively explained through Bronfenbrenner's Ecological Systems Theory (1979). According to this theory, children's development occurs through continuous interaction with multiple environmental systems, including family, school, peers, community, and wider social institutions. Educational outcomes therefore emerge from the combined influence of these interconnected environments rather than from individual ability alone. This ecological perspective provides a useful framework for understanding why learning poverty varies across students belonging to different demographic and social backgrounds. Within the Indian educational context, learning poverty continues to present a major policy concern despite considerable progress in expanding school enrolment. National assessments and international reports consistently indicate that many students struggle to achieve expected foundational literacy and numeracy competencies even after several years of formal schooling (World Bank, 2019; ASER Centre, 2023; NCERT, 2022). Recognising this challenge, the National Education Policy (NEP 2020) identifies Foundational Literacy and Numeracy (FLN) as the highest educational priority and advocates competency-based learning, continuous assessment, teacher development, and equitable learning opportunities for all children. These initiatives reflect a growing recognition that educational quality must be measured through learning achievement rather than school attendance alone. In West Bengal, students study within diverse educational, social, and economic contexts that may influence their learning outcomes. Variations in educational infrastructure, school resources, family support, locality, and socio-economic conditions create different learning experiences for students across districts. While several state-level initiatives have sought to improve educational participation and foundational learning, evidence specifically examining learning poverty among secondary school students remains limited. Most existing studies have focused on enrolment, achievement scores, or literacy levels without comprehensively analysing learning poverty across different socio-demographic groups. Although the literature provides valuable insights into the determinants of learning outcomes, relatively little empirical research has investigated learning poverty among secondary school students in West Bengal, particularly with reference to gender, locality, family type, and social category. Most previous investigations have concentrated on primary education or national-level assessments, leaving an important gap regarding adolescents studying at the secondary level. Understanding how learning poverty varies across different socio-demographic groups is essential for designing

evidence-based educational interventions that respond to local educational realities. Overall, the reviewed literature indicates that learning poverty is a multidimensional educational challenge shaped by the interaction of instructional quality, family environment, socio-economic conditions, demographic characteristics, and broader educational contexts. While international and national studies have substantially improved understanding of foundational learning, region-specific evidence concerning secondary school students in West Bengal remains comparatively scarce. Therefore, the present study seeks to bridge this gap by examining the prevalence of learning poverty and analysing its relationship with selected socio-demographic variables. The findings are expected to contribute to educational research and support the development of more inclusive policies and targeted interventions aimed at improving foundational learning outcomes among secondary school students in West Bengal.

2.1 Research Objectives

1. To find out the rate of prevalence of Learning Poverty among Secondary School Students in West Bengal.
2. To find out the relationship of Learning Poverty with regard to Gender.
3. To find out the relationship of Learning Poverty with regard Locality.
4. To find out the relationship of Learning Poverty with regard to Family type.
5. To find out the relationship of Learning Poverty with regard to Social Category.

2.2 Hypotheses

- 1 **H₀1:** There is no significant difference in the rate of prevalence of Learning Poverty with respect to Gender among Secondary School Students in West Bengal.
- 2 **H₀2:** There is no significant difference in the rate of prevalence of Learning Poverty with respect to Locality among Secondary School Students in West Bengal.
- 3 **H₀3:** There is no significant difference in the rate of prevalence of Learning Poverty with respect to Family type among Secondary School Students in West Bengal.
- 4 **H₀4:** There is no significant difference in the rate of prevalence of Learning Poverty with respect to Social category among Secondary School Students in West Bengal.

2.3 Delimitations of the Study

This study is subject to the following delimitations:

- 1 **Sample Size:** The study involved 521 secondary school students from different schools across West Bengal.

- 2 **Districts and Institutions Covered:** The sample was drawn from secondary school students enrolled in selected schools across four districts of West Bengal: Kolkata, Howrah, Jalpaiguri, and Alipurduar.
- 3 **Geographical Scope:** The study was confined to four districts of West Bengal and did not include participants from the remaining districts of the state or from other states of India.
- 4 **Participant Criteria:** The participants in the study were secondary school students from West Bengal enrolled in Classes IX and X.
- 5 **Variables Considered:** The study focuses on Mental Health with reference to selected background characteristics such as Gender, Locality, Family type and Social Category.
- 6 **Time Frame:** The data for the study were collected over a specific period, reflecting the conditions and circumstances that existed at the time of data collection.

3. METHODOLOGY

3.1 Study Design

This study employed a cross-sectional survey design to accomplish its research objectives. The design facilitated the assessment of the prevalence of learning poverty among secondary school students in West Bengal and enabled the examination of differences in learning poverty across selected demographic and background characteristics.

Population and Sample: The target population consisted of secondary school students from the selected districts of West Bengal, namely Kolkata, Howrah, Jalpaiguri, and Alipurduar. From this population, a sample of 521 students was selected using the simple random sampling technique.

Variables: The primary focus of this study was learning poverty. In addition, the study examined how learning poverty varied across selected demographic and background characteristics, including gender, locality, family type, and social category.

Data Collection Tools: Standardized measurement scales and structured questionnaires were used to assess learning poverty and gather relevant background information from the participating students.

Data Analysis: The collected data were analyzed using appropriate statistical techniques, including descriptive statistics and the chi-square test, to examine patterns and differences in learning poverty among secondary school students in West Bengal. This approach facilitated a systematic and rigorous analysis of the prevalence and distribution of learning poverty within the study population.

3.2 Instrument for Data Collection

To assess the principal variable of the study, the researcher developed a Learning Poverty Assessment Questionnaire specifically for the present investigation. The instrument was designed to measure the level of learning poverty among secondary school students by assessing both their foundational learning competencies and the educational conditions that influence learning. The development of the questionnaire was guided by the concept of learning poverty, which refers to the inability of students to achieve age-appropriate foundational literacy and numeracy skills despite being enrolled in school. In developing the instrument, relevant literature on foundational learning, learning outcomes, and contextual factors influencing students' academic achievement was thoroughly reviewed to ensure comprehensive coverage of the construct.

The questionnaire consists tasks related to reading comprehension, vocabulary, sentence formation, writing skills, arithmetic operations, numeracy, measurement, geometry, data interpretation, and logical reasoning, thereby providing an objective assessment of students' learning achievement.

Before the final administration, the questionnaire underwent content validation to establish its appropriateness and representativeness. The draft instrument was reviewed by experts in the field of education and educational research, who evaluated the relevance, clarity, language, and adequacy of each item. Based on their recommendations, necessary modifications were incorporated to improve the overall quality and content coverage of the instrument.

The reliability of the instrument was determined through a pilot study using Cronbach's Alpha. The questionnaire demonstrated a Cronbach's alpha coefficient of 0.84, indicating good internal consistency and suggesting that the instrument provides reliable and consistent measurements of learning poverty among secondary school students. This level of reliability confirms that the questionnaire is suitable for empirical investigation.

Structure of Learning poverty questionnaire

The distribution of items across dimensions is as follows:

Table 3.1 Dimensions of Learning poverty questionnaire.

Dimensions	Items no
Reading Comprehension	1–2
Vocabulary and Language Skills	3–4
Writing Skills	5–6
Mathematics and Numeracy	7–12

Scoring Procedure

Responses are scored as:

Table 3.2 Scoring Procedure.

Scoring	
Yes	5
Almost	4
Sometimes	3
Very Rarely	2
Never	1

The scoring ranges are interpreted as follows:

Score Interpretation

Table 3.3 Learning Poverty Level

Severe Learning Poverty	0–19
Moderate Learning Poverty	20–29
Low Learning Poverty	30–39
No Learning Poverty / Adequate Learning	40–50

Higher scores indicate stronger foundational literacy and numeracy competencies and therefore reflect a lower level of learning poverty. Conversely, lower scores indicate inadequate mastery of essential learning skills and suggest a higher level of learning poverty.

4. RESULTS

4.1 Descriptive Analysis

Descriptive statistical methods were employed to assess the prevalence and characteristics of learning poverty among secondary school students in West Bengal. The analysis considered a range of demographic and socio-educational variables to provide a comprehensive understanding of how learning poverty is distributed across the study population and to identify key patterns and variations associated with different student backgrounds.

Table 4.1 Showing overall Percentage distribution of Learning Poverty among Secondary School Students in West Bengal.

			Total
Learning poverty	No learning poverty / Adequate learning	Count	138
		% of Total	26.5%
	Low learning poverty	Count	58
		% of Total	11.1%
	Moderate learning poverty	Count	187
		% of Total	35.9%
	Severe learning poverty	Count	138

		% of Total	26.5%
Total		Count	521
		% of Total	100.0%

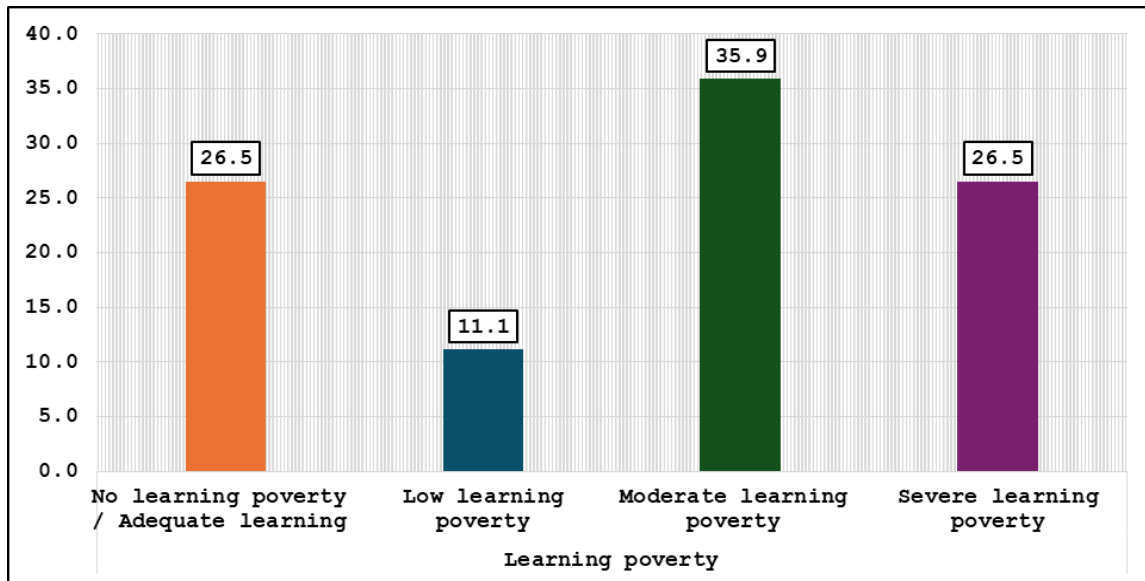


Figure 4.1 Presenting overall Percentage distribution of Learning Poverty among Secondary School Students in West Bengal.

Figure 4.1 and Table 4.1 present the overall distribution of learning poverty among secondary school students in West Bengal (N = 521). The findings reveal that the largest proportion of students, 187 (35.9%), fall under the Moderate Learning Poverty category, indicating that more than one-third of the participants experience a noticeable level of learning difficulties that may hinder their academic progress if appropriate support is not provided. A total of 138 students (26.5%) are classified under the Severe Learning Poverty category, reflecting substantial learning deficits that require immediate educational interventions and targeted remedial strategies. Similarly, another 138 students (26.5%) are found in the No Learning Poverty/Adequate Learning category, suggesting that approximately one-fourth of the students possess learning competencies appropriate for their educational level. In contrast, the smallest proportion of students, 58 (11.1%), belong to the Low Learning Poverty category, indicating relatively minor learning challenges that can be effectively addressed through timely academic support and classroom-based interventions.

Overall, the findings suggest that learning poverty is a significant concern among secondary school students in West Bengal, with more than sixty percent of the participants exhibiting moderate to severe levels of learning poverty. These results underscore the urgent need for systematic identification of learning gaps, implementation of evidence-based remedial

programmes, and strengthening of instructional practices to improve students' foundational learning outcomes and reduce the prevalence of learning poverty across schools.

Table 4.2 Showing variable-wise Percentage distribution of Learning Poverty among Secondary School Students in West Bengal.

			Learning Poverty				Total
			No learning poverty / Adequate learning	Low learning poverty	Moderate learning poverty	Severe learning poverty	
GENDER	MALE	Count	59	22	52	36	169
		% within GENDER	34.9%	13.0%	30.8%	21.3%	100.0%
	FEMALE	Count	79	36	135	102	352
		% within GENDER	22.4%	10.2%	38.4%	29.0%	100.0%
LOCALITY	RURAL	Count	101	38	101	79	319
		% within Locality	31.7%	11.9%	31.7%	24.8%	100.0%
	URBAN	Count	37	20	86	59	202
		% within Locality	18.3%	9.9%	42.6%	29.2%	100.0%
FAMILY TYPE	Joint	Count	47	34	78	58	217
		% within FAMILY TYPE	21.7%	15.7%	35.9%	26.7%	100.0%
	Nuclear	Count	91	24	109	80	304
		% within FAMILY TYPE	29.9%	7.9%	35.9%	26.3%	100.0%
SOCIAL CATEGORY	SC	Count	37	18	67	46	168
		% within Social Category	22.0%	10.7%	39.9%	27.4%	100.0%
	General	Count	51	26	89	60	226
		% within Social Category	22.6%	11.5%	39.4%	26.5%	100.0%
	OBC	Count	33	7	22	31	93
		% within Social Category	35.5%	7.5%	23.7%	33.3%	100.0%
	ST	Count	17	7	9	1	34
		% within Social Category	35.5%	7.5%	23.7%	33.3%	100.0%

		% within Social Category	50.0%	20.6%	26.5%	2.9%	100.0 %
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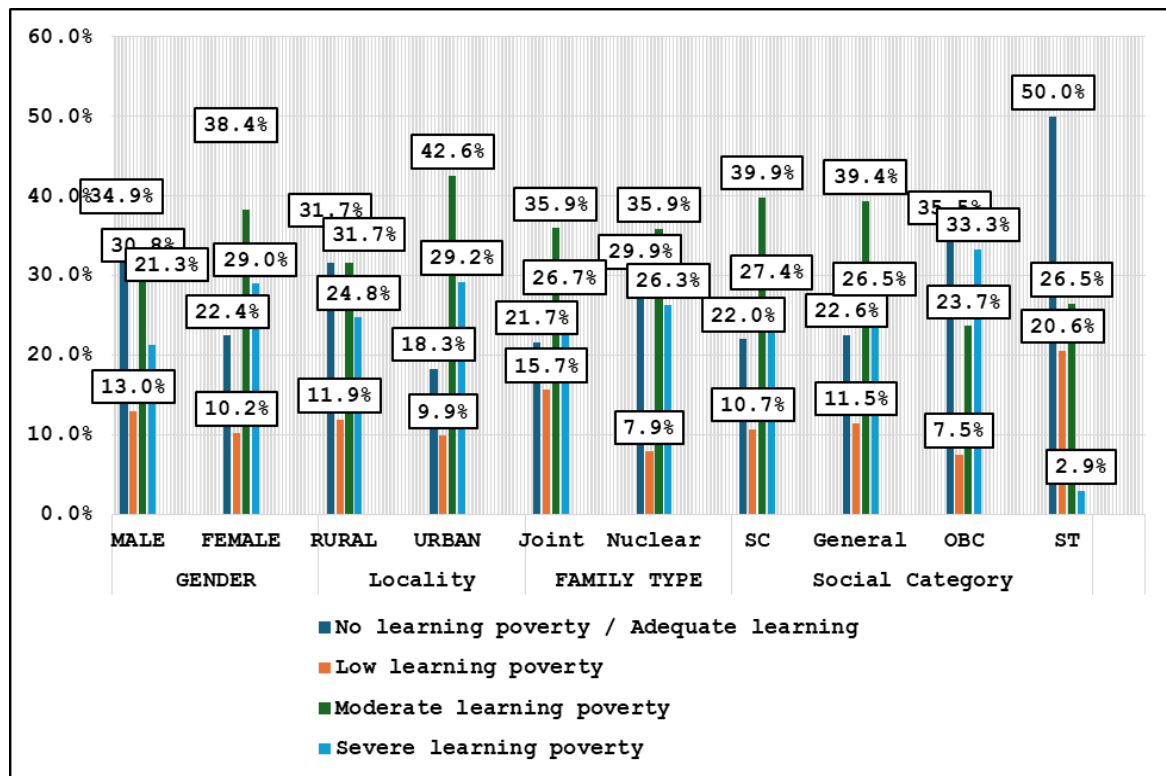


Figure 4.2 Presenting variable-wise Percentage distribution of Learning Poverty among Secondary School Students in West Bengal.

Table 4.2 presents the descriptive statistics of learning poverty among secondary school students in West Bengal across gender, locality, family type, and social category variables. The analysis highlights variations in the distribution of learning poverty among students belonging to different demographic and socio-educational backgrounds.

Gender Variable – Learning poverty was found to be comparatively higher among female students than male students. Among female students, 29.0% were classified under the Severe Learning Poverty category, compared to 21.3% of male students. Likewise, a greater proportion of female students (38.4%) fell into the Moderate Learning Poverty category than male students (30.8%). In contrast, a higher percentage of male students (34.9%) were placed in the No Learning Poverty/Adequate Learning category, whereas only 22.4% of female students belonged to this category. The proportion of students with Low Learning Poverty was relatively similar between males (13.0%) and females (10.2%). These findings suggest that female students in the present study exhibit comparatively higher levels of learning poverty than their male counterparts.

Locality Variable – Learning poverty was evident among both rural and urban students, although differences emerged across the categories. Among urban students, 29.2% were classified under the Severe Learning Poverty category, compared to 24.8% of rural students. Similarly, a larger proportion of urban students (42.6%) fell within the Moderate Learning Poverty category, whereas 31.7% of rural students were represented in this category. Conversely, rural students demonstrated a higher percentage in the No Learning Poverty/Adequate Learning category (31.7%) than urban students (18.3%). The percentage of students with Low Learning Poverty was fairly comparable between rural (11.9%) and urban (9.9%) groups. These findings indicate that learning poverty persists across both localities, with urban students showing relatively higher proportions of moderate and severe learning poverty.

Family Type Variable – Learning poverty was observed among students from both joint and nuclear families, with only slight variations across categories. Students belonging to joint families recorded a marginally higher proportion in the Severe Learning Poverty category (26.7%) compared to students from nuclear families (26.3%). The proportion of students experiencing Moderate Learning Poverty was identical in both family types (35.9%). However, students from nuclear families showed a higher percentage in the No Learning Poverty/Adequate Learning category (29.9%) than those from joint families (21.7%). In contrast, Low Learning Poverty was more prevalent among students from joint families (15.7%) than among those from nuclear families (7.9%). Overall, the findings suggest that learning poverty is prevalent among students irrespective of family type, with only modest differences in its distribution.

Social Category Variable – Learning poverty was found across all social categories, although the level of severity varied considerably among the groups. Students belonging to the Other Backward Classes (OBC) category demonstrated the highest proportion in the Severe Learning Poverty category (33.3%), followed by Scheduled Caste (SC) students (27.4%) and General category students (26.5%). In contrast, students from the Scheduled Tribe (ST) category recorded the lowest proportion in the Severe Learning Poverty category (2.9%) and the highest proportion in the No Learning Poverty/Adequate Learning category (50.0%). Furthermore, both SC (39.9%) and General category students (39.4%) exhibited relatively higher percentages in the Moderate Learning Poverty category compared to OBC (23.7%) and ST (26.5%) students. Students from the ST category also showed the highest proportion in the Low Learning Poverty category (20.6%). These findings indicate that

although learning poverty is present across all social groups, its severity differs noticeably among the categories.

Overall, the findings indicate that learning poverty among secondary school students in West Bengal varies according to gender, locality, family type, and social category. Female students and urban students demonstrate comparatively higher proportions of moderate and severe learning poverty, while differences between joint and nuclear family students are relatively limited. Variations are also evident across social categories, particularly in the distribution of severe learning poverty. The considerable proportion of students falling within the Moderate and Severe Learning Poverty categories across all demographic groups highlights the need for early identification of learning gaps, targeted remedial instruction, and inclusive educational interventions to improve foundational learning outcomes and reduce learning poverty among secondary school students.

4.2 Hypothesis Testing

4.2.1 H₀₁: Learning Poverty and Gender

The analysis indicates that the computed chi-square value for gender is χ^2 (3, N = 521) = 11.869 with a p-value of 0.008. Since the p-value is less than the 0.01 level of significance ($p < 0.01$), the result is highly statistically significant. Therefore, the null hypothesis (H₀) is rejected. This suggests that there is a significant difference in learning poverty between male and female students.

4.2.2 H₀₂: Learning Poverty and Locality

The computed chi-square value for locality is χ^2 (3, N = 521) = 13.790 with a p-value of 0.003. As the p-value is less than the 0.01 level of significance ($p < 0.01$), the result is highly statistically significant. Therefore, the null hypothesis (H₀) is rejected. This indicates that learning poverty differs significantly between rural and urban students.

Table 4.3 Chi-square Test showing variable wise differences in Learning poverty based on H₀₁, H₀₂, H₀₃, and H₀₄.

Variable	Category	N	df	χ^2	Level of Sig.	Remarks
Gender	Male	169	3	11.869	.008	Sig* ($p < .01$)
	Female	352				
Locality	Rural	319	3	13.790	.003	Sig* ($p < .01$)
	Urban	202				
Family type	Joint	217	3	10.155	.017	Sig* ($p < .05$)
	Nuclear	304				
Social Category	SC	168	9	31.429	.000	Sig*
	General	226				

	OBC	93				(p<.01)
	ST	34				

Sig* - Significant, NS - Not Significant

4.2.3 H₀₃: Learning Poverty and Family Type

The computed chi-square value for family type is χ^2 (3, N = 521) = 10.155 with a p-value of 0.017. Since the p-value is less than the 0.05 level of significance ($p < 0.05$), the result is statistically significant. Therefore, the null hypothesis (H_0) is rejected. This suggests that there is a significant difference in learning poverty between students belonging to joint and nuclear families.

4.2.4 H₀₄: Learning Poverty and Social Category

The computed chi-square value for social category is χ^2 (9, N = 521) = 31.429 with a p-value of 0.000. As the p-value is less than the 0.01 level of significance ($p < 0.01$), the result is highly statistically significant. Therefore, the null hypothesis (H_0) is rejected. This indicates that learning poverty differs significantly among students belonging to different social categories (SC, General, OBC, and ST).

4.3 Major Findings

The analysis revealed a highly significant difference in learning poverty between male and female students, indicating that gender plays an important role in shaping students' learning outcomes. Female students demonstrated comparatively higher proportions of learning poverty than male students, particularly in the Moderate Learning Poverty (38.4%) and Severe Learning Poverty (29.0%) categories. In contrast, a larger proportion of male students (34.9%) belonged to the No Learning Poverty/Adequate Learning category. This pattern may be associated with differences in educational opportunities, learning environments, socio-cultural expectations, self-confidence, classroom participation, and access to academic support, all of which may influence students' learning achievement.

A highly significant difference was observed in learning poverty based on locality, suggesting that students' residential environments influence their learning outcomes. Urban students demonstrated comparatively higher proportions of learning poverty, particularly in the Moderate Learning Poverty (42.6%) and Severe Learning Poverty (29.2%) categories, whereas rural students showed relatively higher representation in the No Learning Poverty/Adequate Learning (31.7%) category. This difference may be influenced by variations in academic competition, school-related stress, lifestyle patterns, classroom pressure, and differences in learning experiences across rural and urban settings.

The findings further showed a significant difference in learning poverty with respect to family type, indicating that family environment contributes to students' learning outcomes. Students belonging to joint families demonstrated a slightly higher proportion of severe learning poverty (26.7%) and a substantially higher proportion of low learning poverty (15.7%) than students from nuclear families, while students from nuclear families showed a greater proportion in the No Learning Poverty/Adequate Learning (29.9%) category. Although the differences were comparatively modest, the findings suggest that family structure may influence students' educational experiences through variations in parental attention, home learning support, family responsibilities, and the availability of academic resources.

A highly significant difference was also found in learning poverty across different social categories, indicating that social background contributes to variations in students' learning achievement. Students belonging to the Other Backward Classes (OBC) category demonstrated the highest proportion of Severe Learning Poverty (33.3%), while Scheduled Caste (SC) and General category students exhibited comparatively higher proportions in the Moderate Learning Poverty category (39.9% and 39.4%, respectively). In contrast, Scheduled Tribe (ST) students showed the lowest proportion of severe learning poverty (2.9%) and the highest representation in the No Learning Poverty/Adequate Learning (50.0%) category. These differences may reflect variations in socio-economic conditions, educational opportunities, family support, school resources, and learning environments across different social groups.

Overall, the findings suggest that learning poverty among secondary school students in West Bengal is influenced by multiple socio-demographic factors such as gender, locality, family type, and social category. Female students, urban students, and certain social groups demonstrated comparatively higher levels of learning poverty, while differences based on family type were statistically significant though relatively less pronounced. The substantial proportion of students experiencing moderate and severe learning poverty highlights the urgent need for comprehensive educational policies, early identification of learning gaps, targeted remedial instruction, strengthened foundational literacy and numeracy programmes, and inclusive school-based interventions to improve learning outcomes and reduce learning poverty among secondary school students in West Bengal.

5. DISCUSSION

The present study found a highly significant difference in learning poverty between male and female secondary school students in West Bengal. Female students exhibited comparatively higher levels of moderate and severe learning poverty than male students, while male students were more likely to belong to the no learning poverty/adequate learning category. These findings suggest that gender remains an important determinant of students' learning outcomes and that female students in the present context may experience greater educational disadvantages. The present finding is consistent with the UNESCO Global Education Monitoring (GEM) Report (2020), which highlighted that gender-related inequalities continue to influence students' learning outcomes in many developing countries. Similarly, the World Bank (2019) reported that although school enrolment has improved considerably, girls often face barriers such as unequal access to educational resources, household responsibilities, and socio-cultural expectations that adversely affect foundational learning. Research conducted by ASER Centre (2023) also demonstrated that learning outcomes differ across gender groups, particularly where disparities in educational opportunities and home support persist. However, the finding is not entirely consistent with the National Achievement Survey (NAS, 2021), which reported relatively small or negligible gender differences in learning achievement among Indian school students in several grade levels. Likewise, OECD (2023) reported that in several countries participating in PISA, gender differences in overall learning performance were either minimal or favoured female students in reading achievement. These contrasting findings may be attributed to differences in educational contexts, assessment frameworks, socio-cultural environments, and regional disparities between international and local populations. Overall, the present findings indicate that gender-sensitive educational interventions and targeted academic support are essential to minimise learning inequalities among secondary school students. The present study revealed a highly significant difference in learning poverty between rural and urban students. Urban students demonstrated comparatively higher proportions of moderate and severe learning poverty than rural students. This finding suggests that locality significantly influences students' learning experiences and educational outcomes. The findings are consistent with studies conducted by the World Bank (2019) and UNICEF (2022), both of which recognised that geographical context influences learning outcomes through differences in school environments, academic pressure, educational quality, and socio-economic conditions. Similarly, UNESCO (2021) emphasised that although urban schools often possess better infrastructure, students frequently encounter greater academic competition, psychological

stress, and performance pressure, which may negatively influence effective learning. Nevertheless, the present findings differ from those reported by the Annual Status of Education Report (ASER Centre, 2023), which observed comparatively poorer foundational learning among rural students in several Indian states because of limited educational resources, teacher shortages, and inadequate learning facilities. Likewise, Pratham (2023) suggested that rural learners generally experience greater learning deficits than their urban counterparts. The discrepancy may reflect regional differences within West Bengal, variations in school quality, sampling characteristics, and contextual educational factors. These findings suggest that locality-related educational challenges should be addressed through context-specific interventions rather than assuming that one setting is universally disadvantaged. The present study demonstrated a statistically significant difference in learning poverty between students belonging to joint and nuclear families. Students from joint families showed slightly higher proportions of severe learning poverty, whereas students from nuclear families demonstrated relatively higher representation in the adequate learning category. The findings are partially supported by Coleman (1988), whose theory of social capital emphasised that family environment significantly influences children's educational development. Similarly, Epstein (2018) argued that parental involvement and supportive home environments contribute substantially to students' academic success. Research by Desforges and Abouchaar (2003) further highlighted that family support and home learning environments strongly predict educational achievement. However, the present findings are not fully consistent with Sirin (2005), whose meta-analysis suggested that socio-economic status exerts a much stronger influence on academic achievement than family structure itself. Likewise, OECD (2023) reported that after controlling for socio-economic differences, family composition alone explains relatively little variation in students' learning performance across countries. These inconsistencies may result from cultural differences, family functioning, parental education, and household learning practices rather than family structure alone. Therefore, the present findings indicate that the quality of family support may be more influential than family composition in determining students' learning outcomes. The present study found a highly significant difference in learning poverty across different social categories. Students belonging to the OBC category demonstrated the highest proportion of severe learning poverty, whereas Scheduled Tribe (ST) students showed the lowest proportion of severe learning poverty and the highest proportion of adequate learning. The finding is broadly consistent with UNESCO (2020) and the World Bank (2019), which acknowledged that social inequalities continue to shape educational opportunities and learning outcomes.

Similarly, NITI Aayog (2021) reported that socio-economic and social disparities influence students' access to quality education and academic achievement. Studies by Kingdon (2007) also highlighted that caste-related inequalities remain associated with educational attainment in India. However, the specific pattern observed in the present study differs from findings reported by ASER Centre (2023) and UNICEF (2022), where Scheduled Tribe students generally demonstrated comparatively poorer foundational learning than other social groups because of geographical isolation and educational disadvantage. In contrast, the present investigation found that ST students exhibited comparatively lower levels of severe learning poverty. This difference may reflect regional characteristics of the sampled districts, successful state educational initiatives, community-level support, or sampling variation. The findings therefore suggest that although social background continues to influence learning outcomes, educational inequalities are context-specific and require localised policy responses.

The overall findings demonstrate that learning poverty among secondary school students in West Bengal is significantly associated with several socio-demographic characteristics, including gender, locality, family type, and social category. The findings generally support the ecological perspective of learning proposed by Bronfenbrenner (1979), which emphasises that children's educational development is shaped through continuous interaction between individual characteristics and multiple environmental systems, including family, school, and society. The results also reinforce the conceptual framework of learning poverty proposed by the World Bank (2019), which argues that learning outcomes are influenced not only by school attendance but also by social, economic, family, and educational contexts. Although several findings align with previous international and national studies, certain differences—particularly regarding locality and social category—indicate that learning poverty is strongly shaped by regional and contextual factors. Consequently, educational policies should prioritise equitable access to quality instruction, targeted remedial programmes, strengthened foundational literacy and numeracy initiatives, and context-specific interventions to reduce learning poverty among secondary school students in West Bengal.

6. Educational Implications

The findings of the present study have several important educational implications for policymakers, school administrators, teachers, curriculum developers, and parents. The high prevalence of moderate and severe learning poverty among secondary school students indicates that school enrolment alone is insufficient to ensure meaningful learning. Therefore,

educational efforts must shift from focusing solely on access to education toward ensuring that students acquire the foundational literacy and numeracy skills necessary for lifelong learning.

First, the substantial proportion of students experiencing learning poverty highlights the need for early identification of learning gaps. Schools should implement periodic diagnostic assessments to identify students with inadequate foundational competencies at the earliest possible stage. Timely identification would enable teachers to provide appropriate remedial instruction before learning difficulties become more severe.

Second, the significant differences observed across gender, locality, family type, and social category suggest that educational interventions should be responsive to students' diverse backgrounds. Rather than adopting a uniform instructional approach, schools should develop inclusive strategies that address the specific academic needs of different groups of learners. Such an approach would help reduce educational inequalities and ensure equitable learning opportunities for all students.

Third, the findings emphasise the importance of strengthening foundational literacy and numeracy throughout secondary education. Although foundational skills are generally expected to be acquired during the primary years, the present study demonstrates that many secondary school students continue to struggle with basic learning competencies. Schools should therefore integrate structured remedial programmes, bridge courses, and competency-based learning activities into the regular curriculum to support students who have fallen behind.

Fourth, teachers play a crucial role in reducing learning poverty. The findings indicate the need for continuous professional development programmes that equip teachers with effective instructional strategies, differentiated teaching methods, formative assessment techniques, and classroom interventions designed to support learners with varying academic abilities. Well-trained teachers are better positioned to identify learning difficulties and provide targeted academic assistance.

Fifth, greater emphasis should be placed on creating supportive learning environments both within schools and at home. Active collaboration among teachers, parents, and school leaders can significantly improve students' motivation, attendance, and academic engagement. Schools should regularly communicate students' learning progress to parents and encourage their participation in supporting children's educational development.

Sixth, the study highlights the importance of evidence-based educational planning. Educational authorities should utilise school-level learning assessment data to design targeted

intervention programmes, allocate educational resources efficiently, and monitor improvements in students' learning outcomes. Data-driven decision-making can contribute to more effective implementation of educational policies aimed at reducing learning poverty.

Seventh, schools should encourage the use of learner-centred and activity-based pedagogical practices that actively engage students in the learning process. Interactive teaching methods, collaborative learning, problem-solving activities, and technology-supported instruction can improve students' conceptual understanding and reduce persistent learning deficits.

Finally, the findings underscore the need for coordinated policy initiatives aligned with the objectives of the National Education Policy (NEP 2020) and the Sustainable Development Goal 4 (SDG 4), which emphasise equitable, inclusive, and quality education for all. Government agencies, educational institutions, and local communities should work collaboratively to strengthen foundational learning, expand remedial education programmes, improve teacher capacity, and ensure that every student acquires the essential competencies required for academic success and lifelong learning.

Overall, the present study demonstrates that reducing learning poverty requires a comprehensive educational approach that extends beyond increasing school enrolment. Sustained efforts to improve instructional quality, strengthen foundational learning, provide targeted academic support, and create inclusive educational environments are essential for enhancing learning outcomes among secondary school students in West Bengal.

7. CONCLUSION

The present study examined the prevalence of learning poverty among secondary school students in West Bengal and explored its relationship with selected socio-demographic factors, namely gender, locality, family type, and social category. The findings reveal that learning poverty remains a significant educational concern, with a considerable proportion of students experiencing moderate and severe levels of learning poverty. This indicates that school enrolment alone is insufficient to ensure the acquisition of essential foundational literacy and numeracy skills required for successful learning. The study demonstrated that gender significantly influences learning poverty, with female students exhibiting comparatively higher levels of moderate and severe learning poverty than male students. Locality also emerged as a significant factor, as urban students showed relatively higher levels of learning poverty than their rural counterparts. Furthermore, family type and social category were found to have significant associations with learning poverty, suggesting that students' learning outcomes are shaped by variations in family environments, educational

opportunities, and socio-cultural conditions. These findings collectively indicate that learning poverty is influenced by a combination of individual, family, and social factors rather than by educational access alone. They highlight the importance of strengthening foundational learning through quality classroom instruction, timely identification of learning gaps, targeted remedial support, and inclusive educational practices. Overall, the study underscores the need for collaborative efforts involving teachers, parents, school administrators, and policymakers to reduce learning poverty among secondary school students. By improving the quality of teaching, ensuring equitable learning opportunities, and providing appropriate academic support, schools can help every learner acquire the foundational competencies necessary for lifelong learning and future academic success.

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