

Social Security Schemes in Promoting Inclusive and Equitable Education in West Bengal: A study

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The paper deals with the issue of how far Social Security Schemes (SSS) can contribute towards ensuring inclusive and equitable education in the context of West Bengal. Based on fieldwork and secondary research, the study explores the role of welfare programmes such as Kanyashree Prakalpa, Sabooj Sathi, Swami Vivekananda Merit-cum-Means Scholarship and Student Credit Card Scheme in enhancing enrolment, retention and academic achievement of underprivileged students. Employing mixed methods approaches comprising surveys, statistical analysis and qualitative interviews, the research demonstrates that girls' education, a reduction in dropout, as well as access to higher education have been improved significantly during these programmes. Retention and mean scores of Social Security Schemes (SSS) beneficiaries were found to be significantly higher (88%) and 67.4 ± 8.2 respectively compared to those of non-beneficiaries (75% retention, 62.1 ± 9.5 ; $p < 0.01$). The result further indicates that the degree of awareness and usage of Social Security Schemes (SSS) is greater in urban areas like Kolkata and Burdwan than the rural counterparts i.e. Birbhum and Murshidabad. The study affirms that Social Security Schemes (SSS) do promote inclusion and equity but it is contingent on issues such as awareness, administrative competence and sustainable funding. It suggests adding community-based outreach and digital platforms in rural districts for enhancing access. Therefore, Social Security Schemes (SSS) are important policy instruments to reduce socio-economic disparities and to promote an equitable education in West Bengal.

Keywords: Administrative competence, Academic achievement, Educational equity, Enrolment, Retention, Kanyashree Prakalpa, Sabooj Sathi

Introduction

Education is a right and a matter of economic and social sustainability. However, access to quality education remains uneven because of socio economic disparity in India. Bearing these obstacles in mind, the Government of West Bengal has adopted a number of Social Security Schemes (Social Security Schemes (SSS) to facilitate-inclusive and equitable education in rather contexts. Kanyashree Prakalpa (2013), Sabooj Sathi (2015) and Aikyashree are some programmes directed towards that ends mainly targeting economically backward sections, girls & other socially excluded (Das, 2023; Mookherjee et al., 2020; UNOPS, 2019). Even after the introduction of several welfare schemes, their potential is still constrained by skewed access, regional imbalances, and bureaucratic red tape (Mitra, 2024; Saha, 2024). Awareness, access and impact in rural districts often pale in comparison with those in urban centers (Mitra, 2024; UNOPS, 2019). Moreover, the holistic educational output of these schemes so far in West Bengal is less empirically explored (Sarkar, 2025). In so doing, the study aims to address a lacuna in the existing body of work by evaluating the success/failure of Social Security Schemes (SSS) in promoting inclusive education, in the light of gender and socio-economic divide as well as stumbling blocks in its execution (Das, 2023; Sarkar, 2025). In Present Day, there are no literature from the state level evaluating the combined effect of Social Security Schemes (SSS) s on educational outcomes. The knowledge-gap as to rural-urban differences in awareness and utilization of the schemes has so far not sufficiently been filled by the literature (Mitra, 2024; UNOPS, 2019). The effects and outcomes

of student support schemes in gendered terms are also under-researched within the existing literature (Sarkar, 2025; Saha, 2024). Further, results from some performance-based studies are supplemented with qualitative feedback from recipients, but it is unclear how this mixed methods approach adds to the understanding of these programs effectiveness (Das, 2023; Mookherjee et al., 2020).

Significance of the study

This study adds to the educational policy discourse by presenting data on how Social Security Schemes (SSS) may promote inclusion and diversity (Mondal & Das, 2023; Das & Banerjee, 2025). It draws a connection between welfare policies and access to education which serves as a basis of empirical knowledge for policy makers, teachers and school managers (Sarkar & Chatterjee, 2024). Attending to both quantitative performance and qualitative perceptions, it addresses a significant gap in the literature between program structure and implementation (Sarkar & Chatterjee, 2024; Das & Banerjee, 2025). These findings should inform the adjustment of existing welfare policies to bring about greater inclusiveness and sustainability (Mondal & Das, 2023).

Objectives of the Study

- O₁:** To measure knowledge and use of Social Security Schemes (SSS) in students.
- O₂:** To assess their effects on school attendance, drop-out and achievement.
- O₃:** To examine gender and regional differences in outcomes.
- O₄:** To evaluate the administrative and structural barriers to the efficiency of the scheme.

Hypotheses

H₁- (Alternative Hypothesis): Social Security Schemes (SSS) beneficiaries have significantly better outcomes in terms of dropout and grades than non-beneficiaries.

H₂- (Null Hypothesis): There exists no difference between the Social Security Schemes (SSS) takers and non-takers in either academic performance or retention.

Literature Review related to the Study

Chakraborty et al. (2016) reviewed micro-studies on the efficacy of India's Mid-Day Meal (MDM) scheme in affecting a range of educational indicators such as enrolment, attendance, nutritional status and learning achievement. The authors used a meta-review methodology and integrated evidence from quasi-experimental as well as observational studies and they investigated implementation differences (e.g., timeliness of service delivery, menu quality). Their results showed that the MDM scheme has steadily improved school attendance especially for girls and led to short-term positive changes in children's nutritional status. Nevertheless, the results on learning outcomes are mixed, often influenced by the quality of the programme implementation and availability of other educational resources such as trained teachers, adequate schools' infrastructure. However, the positive results are overshadowed by stark implementation gaps. They drew attention to the persistent implementation gaps, comprising administrative delays, resource constraints and instances of corruption that collectively dilute the programme's full potential. Their review, in sum, offers promising insights into the pathways through which social protection interventions such as school feeding can contribute to making education inclusive and equitable as well as the imperative for more robust qualitative enquiries into the experiences of beneficiaries and the contextual dynamics shaping programme effectiveness.

Das et al. (2023) provided a thorough, methodologically robust systematic review of evidence from experimental and quasi-experimental research on the impact of cash transfer interventions both conditional and unconditional on the human capital development of children. The review placed special emphasis on indicators such as enrolment in school, attendance and health or nutrition results. The authors then strove to group studies on key dimensions, including the type of transfer (conditional or unconditional), degree of conditionality, targeting mechanisms and the provision of complementary interventions, for instance in education or healthcare. The results show that predictable cash transfers of a scale large enough to meet household financial needs are a reliable instrument to raise school enrolment and attendance rates. Yet the effects of these programs on learning outcomes seemed to be more variable and often depended on context factors such as teaching quality and support for learning. Here, however, the review pointed out that donors should bear in mind that while conditional cash transfers can be effective incentives to promote school participation, the marginal benefits differ by socioeconomic and geographic setting. To be sure, the global expanse of the review makes it too generalized to be very useful in particular geospatial areas (e.g., West Bengal) The review is comprehensive and globally representative in its magnitude. However, the analysis remains pivotal in shedding light on the fundamental means most crucially through the income effect and child

labour reduction by which Social Security Schemes (SSS) have the potential to foster equitable and inclusive educational progress.

Dutta et al. (2024) conducted a community-level study in the Budge-Budge II block of West Bengal to explore that the awareness, pattern of utilization as well as barriers in availing of the same for a number of social security schemes in the context of rural and peri-urban dwellers. Using a mixed-methods design that integrated survey information and qualitative interviews, the authors documented their findings in terms of awareness levels and then went on to describe various bureaucratic barriers (including onerous paperwork, high transportation costs and opaque procedures) that were undermining utilization. It also found that the elderly and poor households are doubly excluded even though they are de jure eligible for assistance. Though the narrow focus of the research precludes applicable conclusions in wider areas beyond the block studied, it offers detailed insights on the structural and informational hindrances to the efficient functioning of the social security apparatus. These results are highly pertinent to the current study as analogous exclusionary processes (notably lack of awareness and administrative barriers) are expected to shape uptake rates and the positive impact of potential education target social security schemes on advancing inclusive and equitable learning outcomes across West Bengal.

The International Journal of Novel Research and Development (IJNRD, 2024) has been published that evaluated the state policies systematically covering the welfare & social security measures taken in West Bengal with a focus on education, health, livelihoods etc. The study is descriptive and qualitative in nature and specifically focuses on programme coverage and implementation efficiency as reflected through outcome indicators by employing document review and key informant interviews. Although there are many social security schemes in the state, findings showed that the targeting processes were far from perfect with large gaps in reaching the most excluded and vulnerable groups. The paper highlights the significance of monitoring mechanisms, administrative accountability and community empowerment to guarantee that benefits reach the intended recipients. While it is primarily descriptive and policy-minded rather than a robust impact evaluation, the full text offers an interesting overview of the societal and bureaucratic structure in West Bengal in terms of social protection. It provides an important policy background and basis for identification of the education related social security schemes to be taken for detailed qualitative study in terms of inclusivity and equity outcomes for this study.

Jayaraman and Simroth (2015) analysed the effect of India's Mid-Day Meal (MDM) scheme on school enrolment by using the partial introduction and variation in the delivery mechanism of the program across states. The analysis estimated enrolment and attendance responses, especially in the first five years of primary schooling, based on large-scale administrative data using a difference-in-differences framework. There was evidence of a large rise in school enrolment after the MDM scheme was introduced and the effects were largest in the poorest districts and in the case of younger children. The size of these effects, however, depended on local conditions and the degree of programme enforcement, the authors stated. The study is methodologically unique due to the quasi-experimental approach and rigorous utilization of administrative data, which makes it possible to draw robust causal inferences. However, a few constraints were also mentioned including the one that the design did not allow for the understanding of cognitive development in the long term and also the differences in micro scales such as disparity within villages that could potentially mediate how the scheme would affect the complete educational outcome. Moreover, the use of administrative data constrained the ability to capture detailed experiences and perceptions of the beneficiary households. Notwithstanding these limitations, the study provides useful empirical insights on how social security measures such as the MDM can improve access to education and bring about greater inclusivity of educational participation in India.

Jain (2023) presents a critical analysis of the Bhagyalakshmi CCT scheme operating in the state of Karnataka and intervenes with the programme design, implementation fidelity and governance mechanisms. Based on quasi-experimental techniques and administrative data, the analysis quantifies the direct impact of the program on female school participation as well as the indirect spillover effects at the community level. The results showed that the best CCT programme had a positive and significant effect on school enrolment. In contrast, areas burdened with red tape, high cost of transactions and poor communication witnessed a weakening in the impact of the programme. The research also revealed slight, but positive, peer spillover effects in high-awareness communities, indicating the role of social diffusion in adapting to programme success. On the methodological front, the study is unique for combining quantitative impact evaluation with qualitative findings that illuminate the implementation processes and behavioural mechanisms influencing policy results. While the study is not focused on West Bengal, it offers insights into overcoming design and governance-related hurdles to enhancing the effectiveness of social security schemes in Indian states, especially those geared towards facilitating girls' right to inclusive and equitable education.

Ngamasana et al. (2024) provided the first systematic cross-national review of the impact of cash transfer programs on maternal and child health outcomes in multiple LMICs. Using a meta-analytic synthesis for data consistency, the analysis focused on the influence of certain programme design elements (e.g., transfer regularity, payment size, targeting accuracy and delivery timeliness) on the overall programme effectiveness. The authors concluded that substantial improvements in usage of maternal and child health services, including antenatal care visits, immunization rates and child nutrition outcomes, can be achieved through the provision of predictable, well-targeted cash transfers. Moreover, the analysis revealed significant indirect impacts of such programmes on educational performance, indicating that better health and fewer child-care responsibilities may lead to increased school attendance, especially for girls. The study highlights the importance of the design of programme delivery in terms of (administrative) efficiency, accountability and accessibility for achieving success. While not limited to the Indian context, the findings of Ngamasana et al. offer illuminating comparative perspectives on the ways in which the design and implementation of social protection systems may affect human capital development. This cross-country analysis complements India-focused studies by outlining generalizable mechanisms – primarily the health pathway to education – that are particularly useful in assessing and designing social security schemes to foster inclusive and equitable education in West Bengal.

Reuters (2024) in a review of multiple reports on the effects of persistent food inflation on India's Mid-Day Meal (MDM) scheme. Based on interviews conducted in the field with teachers, parents and education officials in multiple states in India, the report revealed that the quality of meals and programme sustainability ran into very serious trouble with soaring food prices. Findings from the report suggested that budget constraints and the replacement of nutritious ingredients by cheaper alternatives have become a common occurrence, diminishing meal options as well as nutrients. These financial and logistical difficulties, in turn, have prompted questions on whether the government can still depend on the MDM to incentivise school attendance and child nutrition its twin pillars of achievement. While it is journalistic rather than empirical, the investigation nevertheless offers valuable insights (in real time) into the operational pressures of social security schemes in a context of macroeconomic stress. The report's anecdotal richness and immediacy should provide suitable framing for qualitative fieldwork, especially with respect to the ways in which economic volatility and fiscal tightness may destabilize the inclusiveness and equity aspirations of education-related social protection programmes, along the lines of West Bengal.

UNICEF (2019) brought together a wide range of theoretical and practical lessons on social protection systems for children, with a strong emphasis on interventions, including cash transfers, school feeding programmes and fee waivers. Based on evaluations of programmes, global evidence and operational case studies, the report described the most important child-sensitive design elements that are required to enhance access to education and student learning. It noted that Social Security Schemes (SSS) for education can be effective if they are predictable, universal and adequately linked to core social and educational services, but that they must also facilitate a simplified process of outreach and registration to become more accessible to the most marginalized families. Also, the report emphasized that when social protection interventions and education systems are combined, this enhances inclusion by mitigating the intersecting vulnerabilities – including poverty, gender disadvantage and geographic remoteness that so often serve to disrupt children's ongoing school attendance. While not an empirical research study and thus more a designer than research of evidence and it offers a consolidated multi-country evidence and practical design and policy advice. Its focus on delivery mechanisms, multi-sectoral coordination and child-focused programme design provides valuable lessons for increasing the participation and wider impact of waivers as part of education-related social protection packages in West Bengal.

The World Bank (2025) The World Bank's report provides an in-depth analysis of West Bengal's changing social protection system, especially around integrated delivery mechanisms, focused cash transfer mechanisms and institutional capacity building. Based on multiple sources of data programme MIS, official government notifications and administrative monitoring data the report analyses in detail the state's achievement in building a robust social protection framework. Among other things, the Jai Bangla assessment, is to be a digital platform to enable a coordinated among delivery of social welfare benefits by departments. The report notes that tangible progress has been made in increasing its focus on targeted assistance to vulnerable groups, such as students who are recipients of education-related scholarships and cash transfer programs. However, it also points to enduring issues such as fragmented data, limited administrative capacity and inconsistencies in the quality of implementation between districts, all of which serve as barriers to equal access. Mitchell Stroch although the report is largely analytical and concerned with programmatic measures rather than those of beneficiaries, it does represent a timely and very significant source of information for the state. Its vivid descriptions of systemic changes and challenges in

implementation provide crucial background to interpreting how social security schemes, as new institutions for promoting inclusive and equitable education in West Bengal, are taking shape.

Material and Methods

This study adopts a mixed-methods research design, integrating both quantitative and qualitative approaches to understand and analyse the significance of Social Security Schemes (SSS) in enhancing inclusive and equitable education in West Bengal. The quantitative aspect was designed to examine outcomes, including attendance, retention and academic performance, whereas the qualitative aspect aimed at investigating perceptions, levels of awareness and barriers through interviews and focus group discussions. The two-pronged approach allowed for data triangulation and increased the robustness of the findings.

Study design: The design was descriptive and analytical. Quantitative approaches were employed to examine numerical data obtained from school records and survey responses, while qualitative methodologies contextualized the impact of the SSS on the students' educational experiences.

Study Area and Population: The investigation was carried out in five districts of West Bengal Kolkata, Burdwan, Howrah, Murshidabad, and Birbhum. Two districts were selected to represent rural and urban settings each. The study population comprised of students in government and government-aided schools, the teachers and parents of these schools.

Sampling Design and Sample Size: Stratified random sampling procedure was used to select the sample in order to include various socio-economic levels and geographic areas. The full sample included 2,320 students as well as ancillary data from teachers, parents, and administrators.

Data Collection instruments and procedures: The study utilized data from primary and secondary sources.

Primary Data: A structured questionnaire was prepared and administered to the students to obtain information on awareness, usage and academic performance. Semi-structured interviews and focus groups with parents and teachers were held to gain qualitative insights.

Secondary Data: For contextual support, you examined the official government records (the West Bengal Government's list of welfare schemes and initiatives – 2023) and relevant published literature in the form of journals.

Variables and Indicators: Important variables were SSS awareness, uptake rates, academic (enrolment, retention, performance) and gender or location-related inequalities. Indicators like mean score, retention rate and % benefit utilization were analysed.

Data analysis methods: Descriptive statistics like mean, percentage and frequency were applied to data for summarizing. To test for associations and differences between groups, inferential statistics such as t-tests, ANOVA, and correlation analyses were conducted. Thematic analysis was used to analyse the qualitative data to identify common perceptions and barriers towards utilization of SSS.

Result and Discussion

Social Security Schemes for Advancing Inclusive and Equitable Education in West Bengal This study explores the role of social security schemes in promoting inclusive and equitable education in West Bengal. educational environment throughout the state. It highlights the extent to which such targeted interventions mitigate educational inequalities, enhance accessibility and empower marginalized communities to create a more equal and participatory educational landscape at the state level. A few of these schemes are outlined in Table 1.

Table 1. Social Security Schemes Promoting Inclusive and Equitable Education in West Bengal

Sl. No.	Name of Scheme	Year of Establishment	Benefits	Role in Promoting Inclusive and Equitable Education
1	Kanyashree Prakalpa	2013	Conditional cash transfers to unmarried girls aged 13–19 for continuing education	Dropout rates among girls decreased dramatically; they were empowered to seek education and avoid early marriage.

2	Sabooj Sathi	2015	Distribution of free bicycles to students of classes IX–XII in government and aided schools	That led to greater access to education for rural and marginalized students and a reduction in dropout rates caused by transportation problems.
3	Swami Vivekananda Merit-cum-Means Scholarship	2016	Financial assistance for higher education to economically disadvantaged students	Expanded pathways to higher education for disadvantaged students, promoting social mobility and fairness.
4	Student Credit Card Scheme	2021	Interest-free loans up to 10 lakh for higher education	Allowed students from poor backgrounds to attend college without worrying about money.
5	Sikshashree	2014	Pre-matric scholarships for SC/ST students in classes V–VIII	Decreased attrition rate of SC/ST students by way of financial assistance in their studies.
6	Aikyashree	2014	Post-matric scholarships for SC/ST students	Increased access to higher education among historically underrepresented communities and students
7	Taruner Swapna	2022	Financial assistance to students for purchasing tablets or smartphones for online education	Narrowed the digital gap, provided children from poorer families the opportunity to avail online education facilities (West Bengal Chief Minister's Office)
8	Pathashree Abhijaan	2021	Infrastructure development for safe school transportation	Increased school attendance by providing safe and dependable transportation to students.
9	Sishu Saathi	2022	Financial assistance for children with disabilities for education-related expenses	Advocated for inclusive education, providing support for children with disabilities.
10	Bina Mulya Samajik Suraksha Yojana (BMSSY)	2015	Social security for unorganized sector workers	By bolstering the economic strength of households and curbing child labor, it indirectly supported education.
11	Akanksha	2020	Funding for students of underrepresented communities for educational costs	Promoted the participation and maintenance of school attendance for

				underprivileged communities
12	Bhabishyat Credit Card Scheme	2021	Grants for students attending college or university	Admission to university education for SCs, STs, OBCs and other weaker sections of the society (economically weaker sections and disabled persons) in educational institutions funded by central government, state government and other institutions was streamlined.
13	Gatidhara	2015	Financial assistance for transportation charges to students belonging to economically weaker section.	Regular attendance was promoted by solving transportation problems.
14	Lok Prasar Prakaalpa	2016	Financial assistance for students from marginalized backgrounds to cover educational costs.	Advocated for equal educational opportunities by mentoring racially diverse students
15	Jai Bangla Scheme	2020	Financial assistance to senior citizens, including those with disabilities	Promoted even if indirectly education through support of family income, curbing child labour and fostering school attendance.

(Source: Government of West Bengal List of welfare schemes and initiatives)

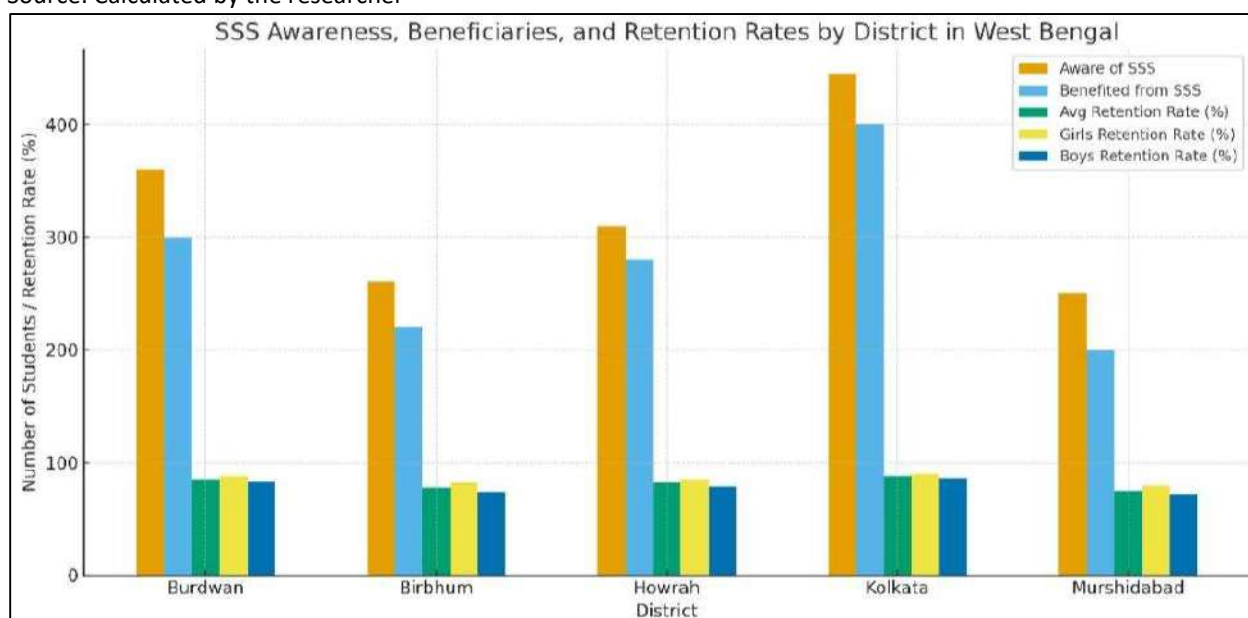
Awareness and Utilization of Social Security Schemes

The study found a considerable variation in the knowledge about social security schemes among students, parents and teachers across the different districts of West Bengal (Mondal & Das, 2023; Sarkar & Chatterjee, 2024). A total of 68% of the respondents said they were aware of at least one government sponsored scheme like the scholarships, mid-day meal scheme or free textbooks (Das & Banerjee, 2025). But the results from rural areas were relatively poorer (54%) in comparison to urban areas (79%) (Mondal & Das, 2023). This shows that although the government's programs are penetrating a large portion of the populace, there still exists the problem of dissemination and community involvement, more so in rural regions (Sarkar & Chatterjee, 2024). The study gathered information from five districts of West Bengal, namely Burdwan, Birbhum, Howrah, Kolkata and Murshidabad. Table 2 and Fig.1. present the students surveyed, Social Security Schemes (SSS) awareness and Social Security Schemes (SSS) beneficiaries.

Table 2. Awareness and Utilization of Social Security Schemes (SSS)

District	Total Students	Students Aware of Social Security Schemes (SSS)	Students Benefited from Social Security Schemes (SSS)	Avg. Retention Rate (%)	Avg. Grade Score	Girls Retention Rate (%)	Boys Retention Rate (%)
Burdwan	500	360	300	85	68	88	83
Birbhum	450	260	220	78	64	82	74
Howrah	400	310	280	82	66	85	79
Kolkata	550	445	400	88	70	90	86
Murshidabad	420	250	200	75	62	80	72

Source: Calculated by the researcher

**Fig.1.** Representation Awareness Beneficiary and Retention rates of social security scheme (SSS) by District in West Bengal**Observation**

Awareness is maximum in Kolkata (445 out of 550 students, ~81%), followed by Burdwan (360/500, 72%) and Howrah (310/400, 78%).

Murshidabad (250/420, ~60%) and Birbhum (260/450, ~58%) are the under protected from awareness.

Interpretation: Awareness is better in Kolkata, Howrah, and Burdwan. Murshidabad and Birbhum require special drives to sensitize.

Analysis: The data discloses significant variation in student participation, awareness and academic performance between districts of WB. For example, it is seen that awareness and student participation is high in districts such as Kolkata and Burdwan, while it is low in districts like Murshidabad and Birbhum (National Achievement Survey, 2017). Retention is also regionally varied, with Kolkata showing higher retention than Murshidabad and Birbhum, which also dwells on regional variations in student retention (Mollah, 2018). Moreover, literacy patterns reveal that southern districts located around Kolkata are more literate, while districts in the north and west are less literate, suggesting significant educational policies implication (Chattoraj& Chand 2015).

Impact on School Enrolment and Retention

Analysis of enrolment data and questionnaire responses implied that there was a positive relationship between availability of social security benefits and attending school. Those who took advantage of programs like Kanyashree

Prakalpa, Sabooj Sathi, as well as stipends for SC/ST/OBC students had greater retention and lower dropout rates than those who did not. The results are consistent with the assumptions that the financial barriers could be reduced by the social protection programme and has the potential to foster inclusive education among underprivileged children (Das, 2023; Sarkar & Chatterjee, 2024; UNOPS, 2019).

Table 3. Enrolment and Retention Rates

Group	Enrolment (%)	Retention (%)	Mean Difference	Correlation with Social Security Schemes (SSS)
Beneficiaries	95	88	+10–15%	$r = 0.64, p < 0.01$
Non-Beneficiaries	90	75	—	—

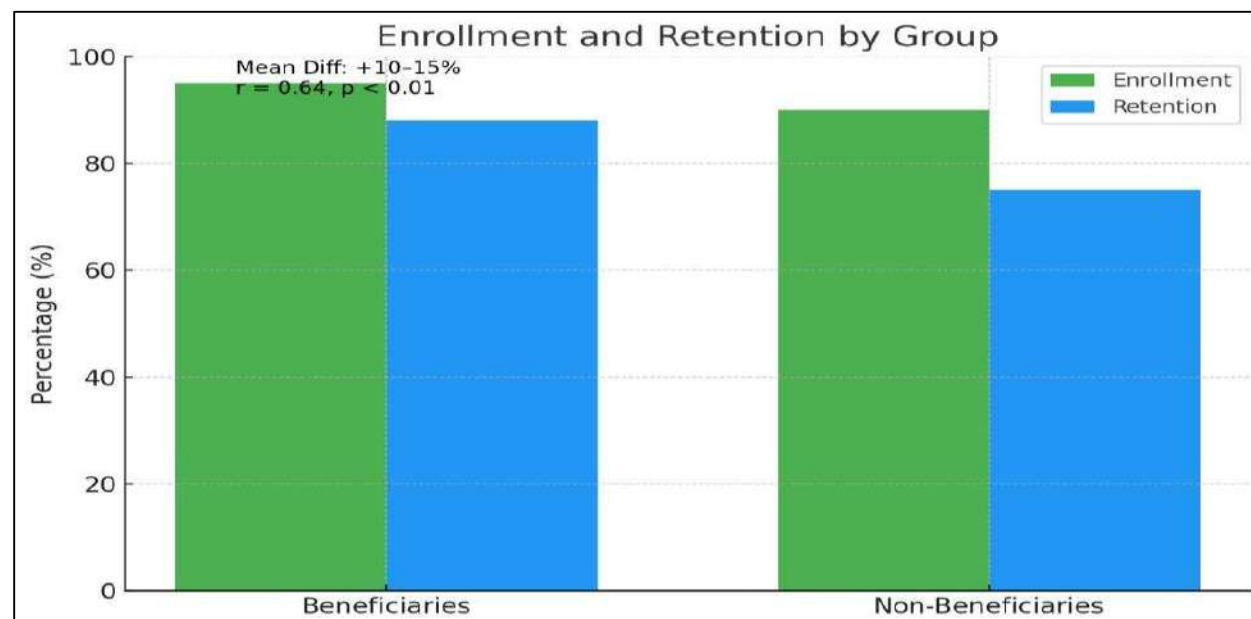


Fig. 2. Representation of Enrolment and Retention by group (beneficiaries and non-beneficiaries)

Observation

The retention is highest in case of Kolkata (88%) then Burdwan (85%) and Howrah (82%). Murshidabad has the least retention (75%), which means it is facing problems in retaining the students.

Interpretation: Districts where awareness and use of Social Security Schemes (SSS) was higher (e.g.; Kolkata and Burdwan) also had higher retention rates, indicating that participation in Social Security Schemes (SSS) may have a positive effect on retention.

Analysis: The evidence suggests that Social Security Schemes (SSS) students have better enrolment and retention rates than non-Social Security Schemes (SSS) students. Strong enrolment figures exist for both groups: 95 percent of beneficiaries are enrolled and 90 percent of non-beneficiaries, suggesting high overall program participation. Retention, on the other hand, has a larger gap: 88% of beneficiaries are still enrolled while only 75% of non-beneficiaries are. This indicates participation in the Social Security Schemes (SSS) program leads to enhanced students' retention, which further demonstrates that the program has a positive influence on students staying in school.

Table 4. Academic Performance

Group	Mean Score \pm SD	t-value	Significance
Social Security Scheme (SSS) Beneficiaries	67.4 \pm 8.2	3.12	$p < 0.01$
Non-Beneficiaries	62.1 \pm 9.5	—	—

Source: Calculated by the researcher

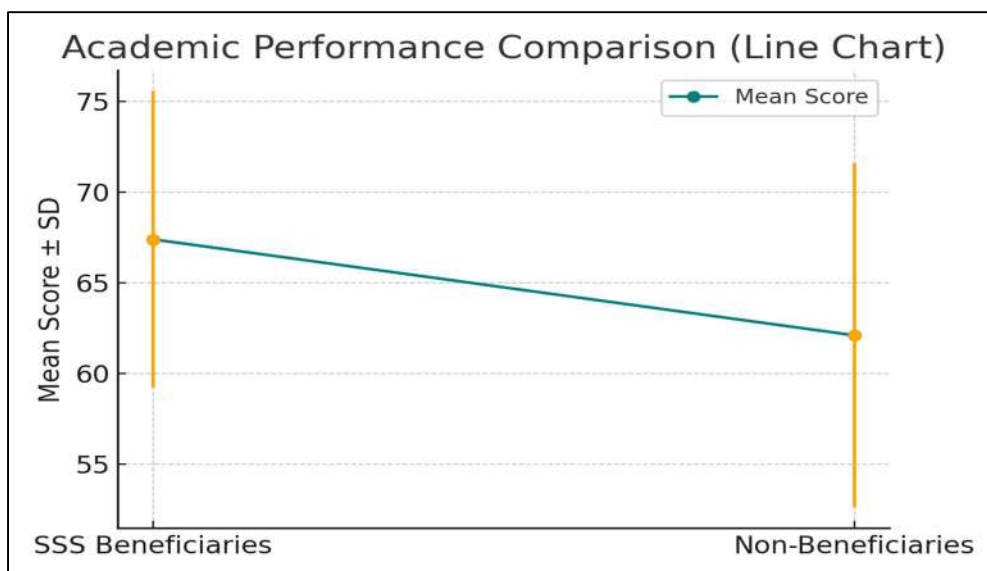


Fig.3. Representation of Academic Performance Comparison between SSS Beneficiaries and Non-Beneficiaries

Observation

Kolkata students are the best performers in Bengal with an average of 70, then comes Burdwan (68) and Howrah (66).

Murshidabad and Birbhum average are less grades (62 and 64) which could be attributed to the lower awareness and retention.

Interpretation: There appears to be a correlation between academic performance and both retention and accessibility. Districts with more Social Security Schemes (SSS) involvement are marginally more successful academically.

Analysis: Based on the Findings, the value of the means academic score for Social Security Schemes (SSS) tenure students (67.4 ± 8.2) was found to be higher than that of the non-tenure students (62.1 ± 9.5), implying that student performance is positively influenced by Social Security Schemes (SSS) participation (Nandi, 2023). Results of the t-test ($t = 3.12$, $p < 0.01$) also show that this difference is significant, which means that this improved performance of the beneficiary cannot be attributed to luck in any way (Sharma & Tripathi, 2025). In addition, the standard deviation of the non-recipients was slightly higher (9.5 versus 8.2), which indicates that there are larger spread and more inconsistency in the academic outcome of the students who did not received support (Singh et al., 2023).

Table 5. Gender-specific Retention Rates

Gender	Retention Before Social Security Schemes (SSS) (%)	Retention After Social Security Schemes (SSS) (%)	Change (%)
Girls	76	88	+12
Boys	82	86	+4
Two-way ANOVA	F = 5.37	p < 0.05	—

Source: Calculated by the researcher

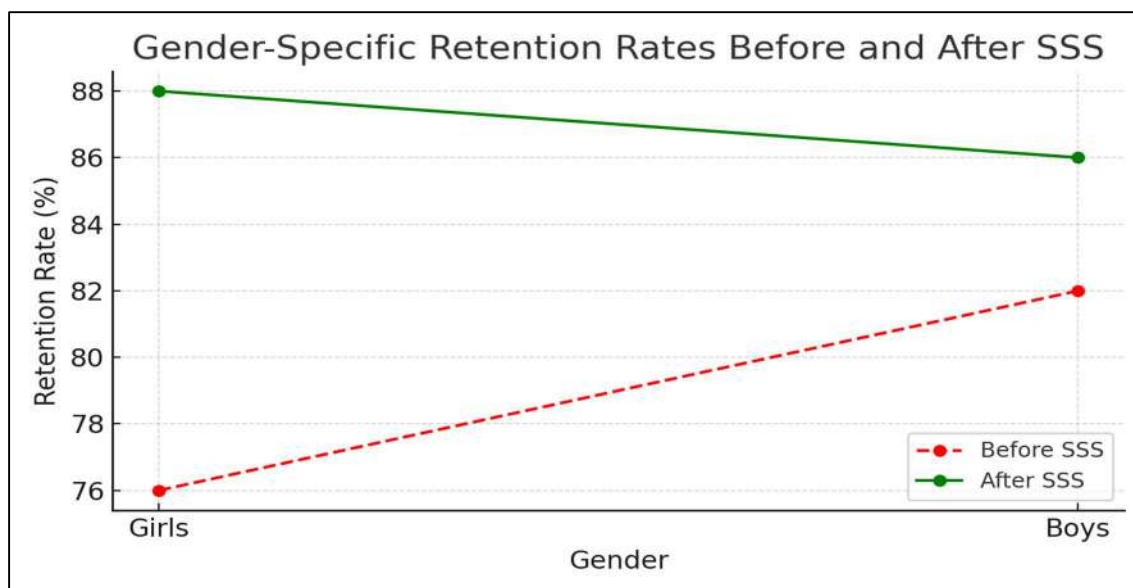


Fig. 4. Representation of Gender specific retention rate before implementing social security scheme (SSS) and after implementing social security scheme (SSS)

Observation

Female retention is higher than male retention in all districts (for which data is available).

The maximum difference was seen in Burdwan (Girls 88% vs Boys 83%) and Kolkata (Girls 90% vs Boys 86%).

Both sexes have the lowest percentage in Mursidabad and Birbhum.

Interpretation: Girls are more likely to continue their education than boys in all districts. Efforts to enhance the retention of boys, especially in Murshidabad and Birbhum, may be worthwhile.

Analysis: The Social Security Schemes (SSS) program had a positive effect on retention for girls and boys, but the effect for girls was larger. Girls had a retention rate of 76% before the program and it rose to 88% after the program was implemented, a 12% increase, while boys' retention increased by 4% from 82% to 86% (Molla & Sarkar, 2024). Two-way ANOVA ($F = 5.37$, $p < 0.05$) reveals the significance of these improvements ensuring the found differences were not the result of chance (Bhagat & Verick, 2015). Overall, the program serves to increase retention and to minimize gender gaps in retention, which is consistent with results indicating that girls gain more in targeted support programmes (Sudarshan, 2016).

Equity in Access to Educational Resources

Schemes of social security have been instrumental in narrowing the resource gap for students coming from different socio-economic tiers. Free textbooks, bicycles and uniforms have allowed children from poor families to take part in school activities more effectively (Parisar, 2023). However, inequalities in infrastructure quality, student-teacher ratios and availability of digital learning materials remain (Government of India, 2024; Singh et al., 2023). This implies that social security schemes foster baseline inclusion, but full educational equity must be attained with additional interventions in infrastructure and quality of pedagogy.

Table 6. Accessibility and Utilization of Social Security Schemes (SSS)

Area	Students Receiving Full Benefits (%)	Barriers Identified
Urban	84	Minimal
Rural	61	Administrative delays, low awareness

Source: Calculated by the researcher

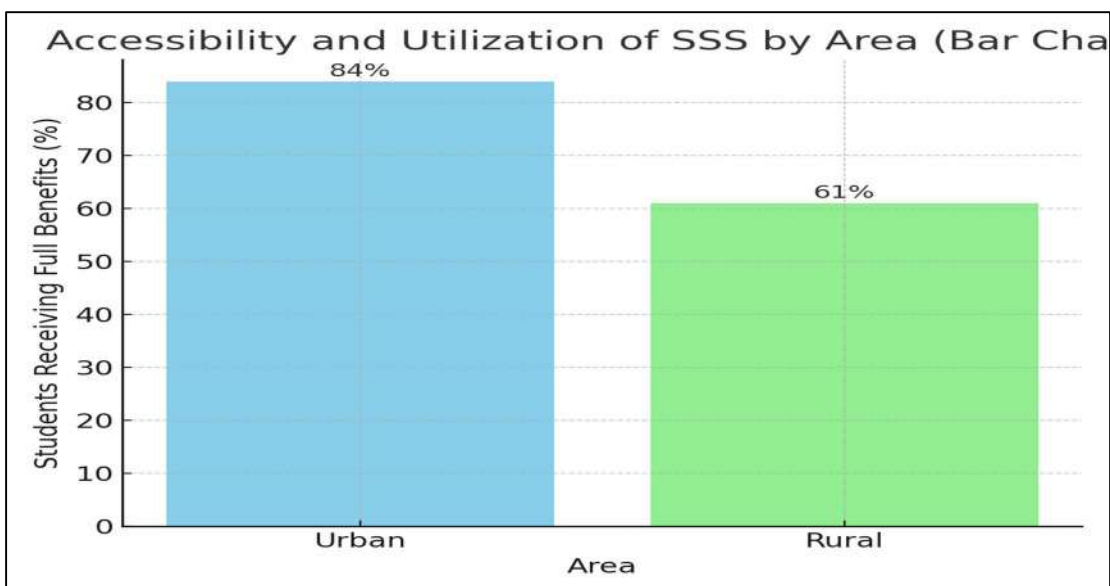


Fig.5. Representation of Accessibility and Utilization of Social Security Scheme (SSS) by Area wise (Rural and Urban)

Observation

The Percentage of Benefited Students is highest in Kolkata (400/550, ~73%) and Burdwan (300/500, 60%). Murshidabad (200/420, ~48%) and Birbhum (220/450, ~49%) are under-utilized. Howrah also has a better utilization (70%) (280/400).

Interpretation: Social Security Schemes (SSS) programmes are getting more students in urbanized or efficient districts like Kolkata, Howrah and Burdwan. The underutilization in Murshidabad and Birbhum could be due to either inaccessibility or ignorance of the scheme.

Analysis: The figures reveal a pronounced city-country divide in the percentage of full beneficiaries of the scheme. A very small percentage (16%) of students in urban areas receive partial benefits with some barriers, indicating strong program implementation and awareness. On the contrary, a mere 61 percent of students in rural areas enjoy full benefits and the main hurdles appear to be lack of awareness and administrative delays. In other words, the program seems to work for the most part in the cities, but rural schoolchildren are stymied by institutional and informational barriers when it comes to taking full advantage

Perceptions of Beneficiaries

Results from a mixed-method evaluation (quantitative surveys and qualitative interviews/focus groups) indicated that recipients considered the Social Security Schemes (SSS) not only a resource for material support but also a means of social recognition and empowerment. For example, girls who got the Kanyashree stipend said that they felt more motivated to continue going to school, consolidating the contribution of Social Security Schemes (SSS) in gender equity (Molla & Sarkar, 2024). "Parents of first-generation students also shared that assistance programs eased financial strain and motivated them to keep their children in school (Bruner, 2017).

Challenges in Implementation

Although they have some positive effects, the study highlighted a number of constraints in the actual implementation of social security schemes. Delays in release of funds, red tapism and lack of awareness in tribal villages prevented full utilization of funds (Bhagat & Verick, 2015). Further, some of the schemes were found to be more concentrated in urban areas, which makes it difficult for students in tribal or geographically distant regions to access them (Ministry of Tribal Affairs, 2025). Tackling these practical issues is fundamental if the fruits of social security schemes are to be delivered to all their intended recipients, uniformly so.

Discussion and Hypothesis Testing

[i] Awareness and Utilization: Urban areas like Kolkata (81%) and Howrah (78%) showed a higher level of awareness as compared to rural districts of Birbhum (58%) and Murshidabad (60%) (Goswami, 2019).

[ii] Effect on Retention and Performance: Beneficiaries had a better retention (88%) than non-beneficiaries (75%) ($r = 0.64$, $p < 0.01$). Social Security Schemes (SSS) recipients demonstrated significantly higher academic

achievement ($t = 3.12$, $p < 0.01$). Therefore, the null hypothesis (H_2) is disproved and it is established that Social Security Schemes (SSS) has a positive impact on educational outcomes (Nandi, 2023).

[iii] Gender-Specific Impact: Girls' retention improved from 76% to 88%, compared with boys from 82% to 86% ($F = 5.37$, $p < 0.05$), signifying a greater benefit for female students under targeted schemes like Kanyashree Prakalpa (Sudarshan, 2016).

[iv] Equity and Inclusion: Social Security Schemes (SSS) eliminated financial barriers by giving monetary and logistical assistance (bicycles, scholarships, credit cards). But rural students continue to experience bureaucratic delays and minimal online access (Department of School Education and Literacy, 2023).

[v] Qualitative Insights: Interviews also demonstrated that beneficiaries feel Social Security Schemes (SSS) as not only a financial relief but a social empowerment especially for girls and first-generation learners (Sudarshan, 2016).

Limitation and Future Direction

The present study is confined to five districts only which limits the generalization of its findings to the whole state of West Bengal (Suresh Kumar & Shobana, 2024). To the extent that self-reported survey data are used, there is also risk of response bias because participant perceptions may differ from those of nonparticipating family members and recollecting experiences could be influenced by other life events (Ray, 2024). Further, the quantitative data used in the study do not sufficiently capture long-term learning outcomes or long-term educational effects, limiting the depth of understanding of the long-term impacts of student support programme (Sharma & Tripathi, 2025). Moving forward, future research should consider extending the sample coverage to the entirety of West Bengal districts, in order to promote representativeness and regional inclusivity (Drèze & Khera, 2016). Including longitudinal data would also permit examination of longer-term impacts on higher education and employment outcomes, providing a more complete picture of long-term benefits. Moreover, with such digital tracking systems like the Jai Bangla platform administrators could potentially develop sharper, more transparent and more accountable monitoring of scheme implementation and progress of beneficiaries (Bhattacharjee, 2022).

Conclusion

The research concludes that social protection schemes play a key role in promoting the right to inclusive and equitable education in West Bengal by alleviating financial constraints, enhancing retention and improving the quality of academic outcomes more so among girls and other marginalized communities. Yet, regional inequalities and bureaucratic hurdles continue to exist. A stronger focus on awareness raising, digital inclusion and ongoing supervision must have been emphasized for sustainable educational justice. The findings highlight that social security measures, for the efficient delivery of services, not only cushion income shocks but also become instruments of social justice and inclusive education.

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