

Analyzing Academic Attainment Among Students in Government and Non-Government Schools Based on Geographical Context

Anuradha R.*

Abstract

This paper has attempted to determine the level of education attained by students in Maharashtra state's government and non-government schools in relation to their locality. to investigate the methodical distinctions between the two categories of schools—urban and rural. Students attending non-government schools outperform those attending government schools in terms of academic achievement. 200 boys and girls in the 9th and 10th grades, 120 from the urban region and 80 from the rural area, selected by random sampling from government and non-government schools in the state of Maharashtra. Students took the Self-made Educational Achievement Test Forms A and B. For the study, the survey method was employed. The data has been analyzed using suitable statistical techniques, such as the t-test, mean, and standard deviation. Based on data analysis, it was discovered that pupils in urban areas score better academically than those in rural areas. This study examines students' academic performance in both government and non-government schools, highlighting the impact of geographic location on learning results. The goal of the research is to offer a thorough understanding of the elements causing educational gaps and to pinpoint viable remediation tactics. The purpose of the paper is to present a thorough understanding of the causes causing educational inequality by highlighting the impact of geographic location on educational results. Additionally, it looks for workable solutions to close these disparities and raise educational fairness in various geographical areas.

Keywords: Academic Attainment, Government Schools, Non-Government Schools, Academic Achievement, Educational Gaps.

INTRODUCTION

Education is crucial for developing a well-rounded and capable population since it is a basic catalyst for both individual and societal growth. Nonetheless, there are frequently noticeable differences in obtaining high-quality education, which can be attributed to a wide range of complex issues. Examining and contrasting student academic performance in government and non-government schools while focusing on the specific geographic setting in which these establishments function is the goal of this

research. Concern over regional disparities in educational performance has grown, leading to calls for a more thorough analysis of the complex factors behind these discrepancies.

The decision to concentrate on both public and private schools is based on the understanding that there are differences in the governance structures, resource distributions, and operational methods of educational environments. Through a comparative study of these two kinds of establishments, we hope to identify patterns and trends that clarify the

***Author for Correspondence**
Anuradha R.
E-mail: ani889464@gmail.com

Assistant Professor, Department of Education, R
Muddurangegowda College of Education, Karnataka, India

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relative effectiveness of each system in various geographic settings. Moreover, the investigation's key component is the geographic context, which acknowledges that differences in academic performance are driven by institutional issues as well as having a strong geographic foundation. The complex web of educational inequality is woven together by differences in infrastructure and resources, urban-rural splits, and regional economic variances. This study explores the relationship between school types and geographic regions in an effort to better understand the intricate processes that influence student accomplishment.

This study is especially important since it aims to inform evidence-based policies and actions by providing a thorough understanding of the causes causing educational inequality. Through an analysis of the complex interplay of academic achievement, school type, and geographic location, this study intends to provide important new information to educators, legislators, and other stakeholders working to build a more inclusive and equitable educational system. The study's conclusions ultimately aim to direct the creation of focused initiatives that tackle educational disparities at their core, promoting a more accessible and equitable education for pupils in a range of geographic areas and school kinds.

Institutional Diversity

- *Diversity in Institutions:* Both public and private schools are essential parts of the educational system, with different funding sources, governance arrangements, and resource distributions for each. This institutional diversity adds to the wider range of academic achievement and significantly influences students' educational experiences.
- *Regulatory Frameworks:* The relevant education departments set the policies that are followed by government schools, which are usually run and subsidized by the government. They frequently have to follow government-mandated administrative processes and standardized curricula. On the other hand, curriculum options, instructional strategies, and administrative procedures are frequently more flexible at non-government schools, which can be private or run by non-profit organizations. Gaining an understanding of these governance systems is necessary in order to understand the contextual elements that affect academic performance.
- *Sources of Funding:* Public monies given by government budgets are the main source of funding for government schools. Government interests and policies frequently dictate the funding for these schools. Conversely, non-government colleges might be able to support itself through endowments, tuition fees, or private donations. The ability of non-government schools to invest in infrastructure, teacher training, and other educational resources can be impacted by their financial autonomy, which in turn can have an impact on the overall quality of education.
- *Allocations of Resources:* There are clear differences in how resources are distributed between public and private educational institutions. Centralized resource distribution could help government schools by guaranteeing a minimal degree of consistency in resource availability across different areas. Because they are more autonomous, non-government schools are able to distribute resources according to their own needs and goals. The classroom environment, instructional materials, extracurricular activities, and support services are all impacted by this variability in resource allocation, and they can all have an effect on students' educational experiences.

Geographical Disparities

- *Regional Differences:* When examining educational achievements, it is critical to comprehend the influence of regional location. Geographic disparities provide another level of complexity to the educational environment by affecting student accomplishment through a variety of factors specific to distinct places Perales et al. (2023) [1].
- *Acknowledgment of Geographical Context:* One important factor influencing how pupils experience their education is the location of the institutions. This context includes a variety of elements, including the actual locations of the schools, the neighborhood, and the socioeconomic

circumstances in the area. Understanding the importance of this setting is crucial to deciphering the nuances that lead to disparate academic results.

- *Urban-Rural Divides*: The division between urban and rural areas is one of the main features of geographical disparities. Better facilities, more access to educational resources, and a higher concentration of highly educated teachers are all advantages that urban schools frequently enjoy. On the other hand, scarce educational alternatives, long commutes, and little funding may provide difficulties for rural schools. Examining these differences between urban and rural areas sheds light on the discrepancies that pupils may experience in various environments.
- *Regional Economic Variations*: There are notable differences in economic conditions between regions, which have an effect on the general standard of education that pupils can get. Strong economic growth may encourage greater investment in education, resulting in better-equipped classrooms and improved student performance. On the other hand, areas that are struggling economically can find it difficult to allocate enough funds, which could result in differences in schooling. Analyzing regional differences in the economy aids in comprehending the ways in which economic variables influence disparities in academic performance.
- *Differences in Infrastructure and Resources*: Geographical differences also affect the resources and infrastructure that schools have access to. While rural communities may struggle with poor infrastructure and restricted access to crucial educational resources, urban locations may be home to state-of-the-art facilities, well-equipped laboratories, and sizable libraries. It is essential to analyse these differences in resources and infrastructure in order to comprehend how students' learning experiences can be impacted by the physical environment of schools.

OBJECTIVES

- To assess and measure the difference in academic achievement between Maharashtra kids attending government and non-government schools.
- To examine variables that may differ in academic performance between urban and rural settings, such as infrastructure, teacher quality, and access to educational resources.
- To pinpoint any gender-specific issues or patterns that could affect academic performance and advance a thorough knowledge of academic inequalities.

REVIEW OF LITREATURE

Al-Thani's [2] doctoral dissertation from 2023 focuses on Qatari secondary school pupils' desire for private tutoring (Hamid, M. O., & Mahmud, R. 2023) [3]. This study sheds light on the factors that influence the demand for private tutoring services, which advances knowledge of the supplemental education landscape. This study provides context-specific insights into the Qatari educational system, which could guide governmental decisions and educational initiatives targeted to secondary school students' needs and preferences.

The mediating function of the school attended in the relationship between family history and educational success is examined in Chesters' (2019) study [4]. This study, which was published in the Journal of Education Policy, investigates the question of whether socioeconomic disadvantages are made better or worse by schools. The results highlight the significance of school-level factors in influencing educational outcomes, adding to the larger conversation on educational equity. The intricate examination of the relationship among educational attainment, school attendance, and family history deepens our understanding of social disparities in education.

The study conducted in 2023 by Dadi et al. [5] investigates the middle school transitional pathways that First Nations pupils in Australia's Northern Territory take. This study emphasizes the need of identifying multiple transitional pathways and advances our understanding of the educational experiences of indigenous students. This research emphasizes the need for culturally responsive educational techniques and policies to improve educational outcomes for indigenous people by examining the challenges experienced by First Nations children in middle school (Marks, G. N. 2023) [6].

In this research, Dean (2018) [7] examines the effects of segregation on the academic performance of Australian Indigenous primary school pupils in the *Asia Pacific Journal of Education*. The research offers vital insights into the difficulties faced by Indigenous kids in the school system by exploring the effects of segregation. The report emphasizes how critical it is to understand and address how segregation affects the academic achievement of Indigenous pupils (Jahan, N., & Embong, A. M. 2023) [8]. The results add to the current conversation about educational fairness by highlighting the necessity of inclusive educational practices and policies that lessen the negative effects of student segregation on Indigenous people MacDonald et al. [9].

In 2023, Dean, Downes, and Roberts [10–11] investigate curricular fairness and access challenges in the Australian government education system. This study, which was published in *SN Social Sciences*, looks at how equal and accessible the curriculum is for pupils from a variety of backgrounds. The study highlights potential differences in curricular availability, which adds to the larger discussion on inclusive education. Through an examination of Australia's public education system, the research offers valuable perspectives on how curriculum development and implementation can influence educational fairness (Doecke, E. 2023) [12]. For educators and legislators looking to develop a more inclusive curriculum that meets the varied needs of children, the findings are essential.

RESEARCH METHODOLOGY

Population and Sample

In this study, the population of Maharashtra state's urban and rural standard 9th and 10th grade pupils attending government and non-government secondary schools in Maharashtra was investigated.

Table 1. Sample of the study.

Variables	Government	Non-Government	Total
Type of School	50	20	70
Gender	30	30	60
Area	40	30	70
Total	120	80	200

The 200 polled kids are broken down into groups according to school type, gender, and geography in Table 1. Remarkably, 80 pupils are registered in non-government institutions, while the majority of kids, 120 in total, attend government schools. Thirty pupils of each gender attend both government and non-government schools, ensuring a balanced gender mix. Urban and rural localities are distinguished by the area variable, which groups 30 students from non-government schools and 40 students from government schools in each category. This essay lays the framework for a thorough investigation, enabling the study of differences in academic achievement between various school kinds, genders, and geographical areas. The distribution as shown in Figure 1 makes sure that the complex variables affecting the students' educational outcomes are thoroughly investigated.

Tools of Study

1. Educational Achievement Test Form–A (EAT-A)
2. Educational Achievement Test Form–B (EAT-B)

Research Method

In this study, the researcher used the survey approach.

Statistics Used

Mean, standard deviation and t-value was used to analyze data.

Hypothesis

H1: The average academic achievement scores of secondary school pupils in urban and rural areas will not differ much.

H2: The mean educational achievement scores of children attending government and non-government urban schools will not differ significantly.

H3: The mean scores of academic accomplishments of kids attending government and non-government schools in remote areas will not differ much.

H4: The mean academic achievement scores of male students attending government and non-government urban schools will not differ significantly.

H5: The mean academic achievement scores of female students attending government and non-government urban schools will not differ significantly.

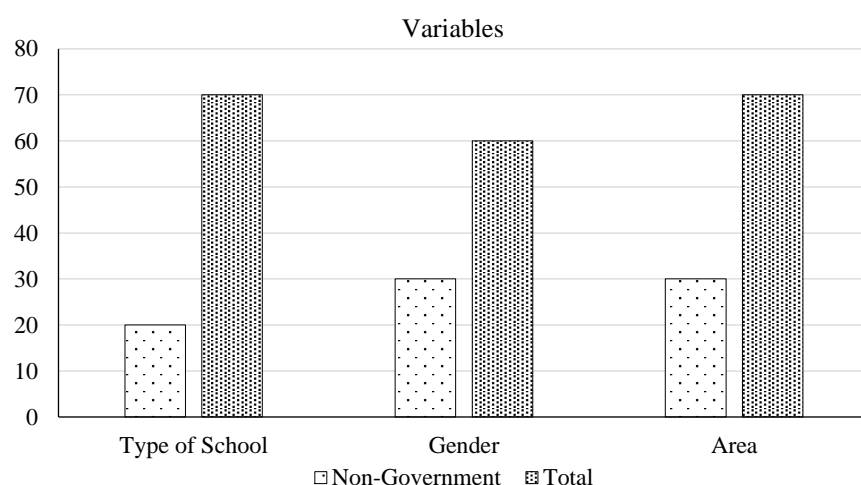


Figure 1. Sample of the study.

DATA ANALYSIS AND INTERPERTATION

H1: The average academic achievement scores of secondary school pupils in urban and rural areas will not differ much as shown in Table 2.

Table 2. An examination of secondary school pupils' academic performance in both urban and rural areas.

Area	N	Mean	SD	σD	t-value	Significant
Urban	120	71.30	14.25	0.62	4.12	S
Rural	80	66.25	15.36	0.71		

With 120 students in the urban category and 80 students in the rural category, the data comparison shows the academic accomplishment scores of pupils in urban and rural locations. Students in rural areas have a mean score of 66.25, with a somewhat greater standard deviation of 15.36, compared to students in urban areas who have a mean score of 71.30 with a standard deviation of 14.25. There is a substantial difference in the mean scores of the two groups, as indicated by the estimated t-value of 4.12. The fact that the 'S' appears in the 'Significant' column indicates that there is a statistically significant difference. This result suggests that, generally speaking, urban students do better academically than their rural counterparts. The standard deviations give an indication of how variable each group is; for example, a smaller range of scores in metropolitan areas may indicate more consistent academic achievement than a broader range in rural areas. The present statistical research provides significant insights into the influence of geographic location on academic achievements as shown in Figure 2. It emphasizes the necessity of implementing focused interventions to mitigate the educational gaps that exist between students from urban and rural areas.

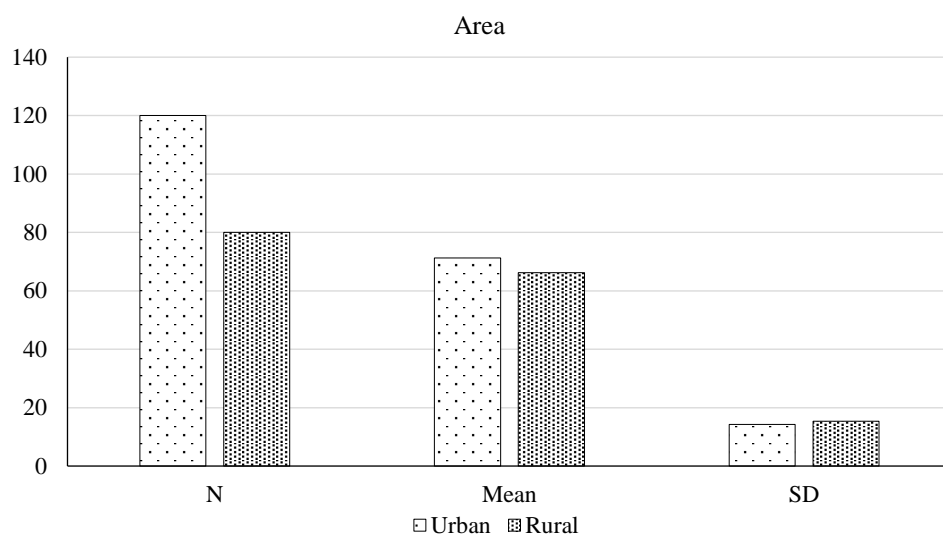


Figure 2. An examination of secondary school pupils' academic performance in both urban and rural areas.

H2: The mean educational achievement scores of children attending government and non-government urban schools will not differ significantly as shown in Table 3.

Table 3. An examination of the academic performance of Gove students.

Area	School Type	N	Mean	SD	ΣD	t-value	Significant
Urban	Government	50	70.18	15.41	0.71	3.12	S
Urban	Non-government	70	69.18	15.23			

The data that is supplied examines the academic achievement scores of urban pupils, with a focus on government and non-government schools. With 50 pupils, the government school category had a mean score of 70.18 and a standard deviation of 15.41. On the other hand, the group of non-government schools, which comprises 70 students, has a significantly lower mean score of 69.18, along with a standard deviation of 15.23. The computed t-value of 3.12 indicates a statistically significant difference in mean scores between government and non-government schools in metropolitan regions, with the cumulative difference (ΣD) coming in at 0.71. The statistical significance of this difference is further supported by the 'S' under the 'Significant' column. This result suggests that, in an urban setting, kids attending government schools perform better than their peers attending non-government schools on average. Within each type of school, the standard deviations show variations in academic achievement; government schools show a marginally greater range of results as shown in Figure 3. This analysis clarifies the complex academic dynamics that exist in urban environments and highlights the significance of taking school type into account when addressing educational inequality.

H3: The mean scores of academic accomplishments of kids attending government and non-government schools in remote areas will not differ much as shown in Table 4.

The information provided focuses on rural kids' academic attainment levels, differentiating between government and non-government schools as shown in Figure 4. With 30 pupils, the government school category had a mean score of 70.82 and a standard deviation of 15.42. On the other hand, the 50 pupils in the non-government school category have a higher mean score of 72.10 with a standard deviation of 16.21. In rural areas, there is a statistically significant difference in mean scores between government and non-government schools, as indicated by the computed t-value of 3.63 and the cumulative difference (ΣD) of 0.83. This distinction's statistical importance is highlighted by the presence of 'S' under the 'Significant' column. As a result, the data indicates that, generally speaking, children at rural

non-government schools perform better than their peers in government schools. Within each type of school, the standard deviations show differences in academic achievement; non-government institutions show a slightly greater range of results. This analysis sheds light on the particular academic dynamics of rural communities, highlighting the importance of taking school type into account when addressing educational gaps and customizing solutions to the particulars of rural education.

H4: The mean academic achievement scores of male students attending government and non-government urban schools will not differ significantly as shown in Table 5.

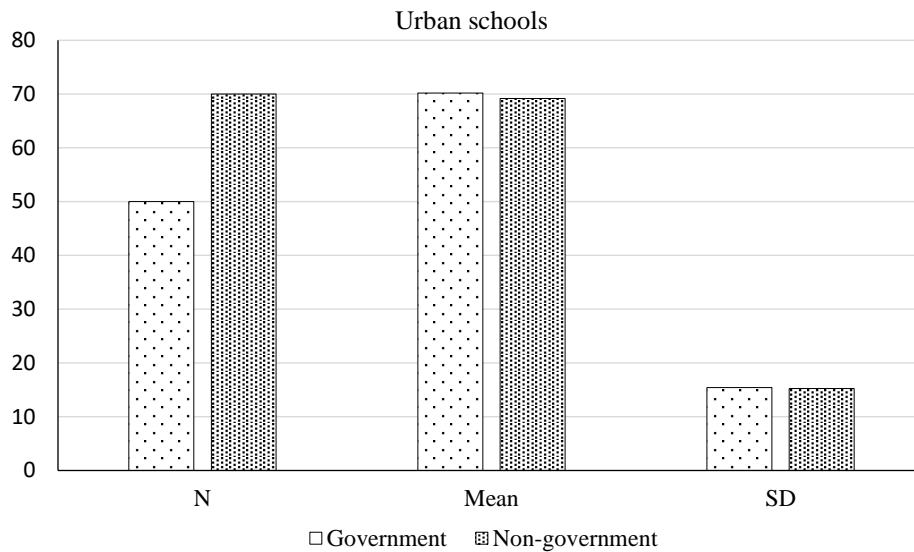


Figure 3. An examination of the academic performance of Gove students.

Table 4. An examination of the academic performance of pupils in rural government and non-government schools.

Area	School Type	N	Mean	SD	ΣD	t-value	Significant
Rural	Government	30	70.82	15.42	0.83	3.63	S
Rural	Non-government	50	72.10	16.21			

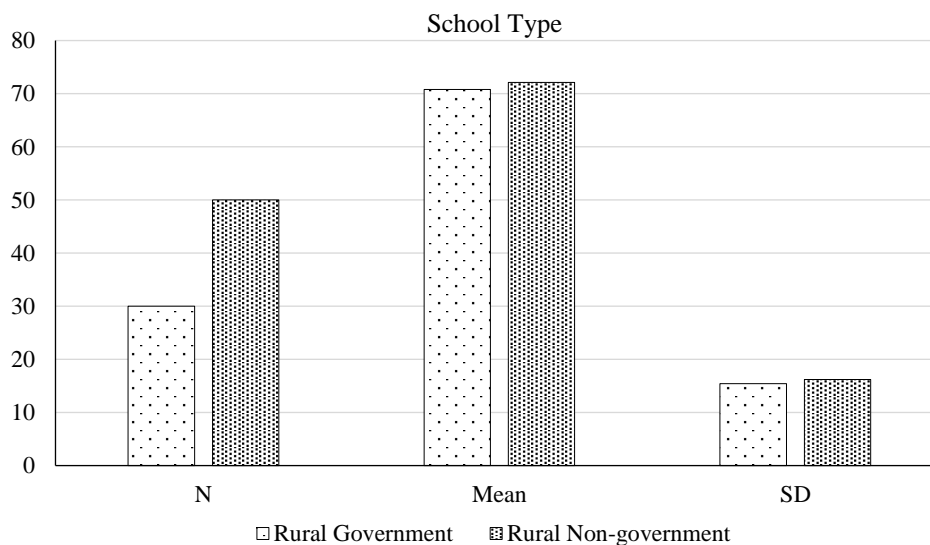


Figure 4. An examination of the academic performance of pupils in rural government and non-government schools.

Table 5. An examination of the academic performance of male students in metropolitan government and non-government schools.

Area	School Type	Gender	N	Mean	SD	σD	t-value	Significant
Urban	Government	Boys	50	71.36	13.25	0.82	0.99	S
Urban	Non-government	Boys	30	68.39	15.36			

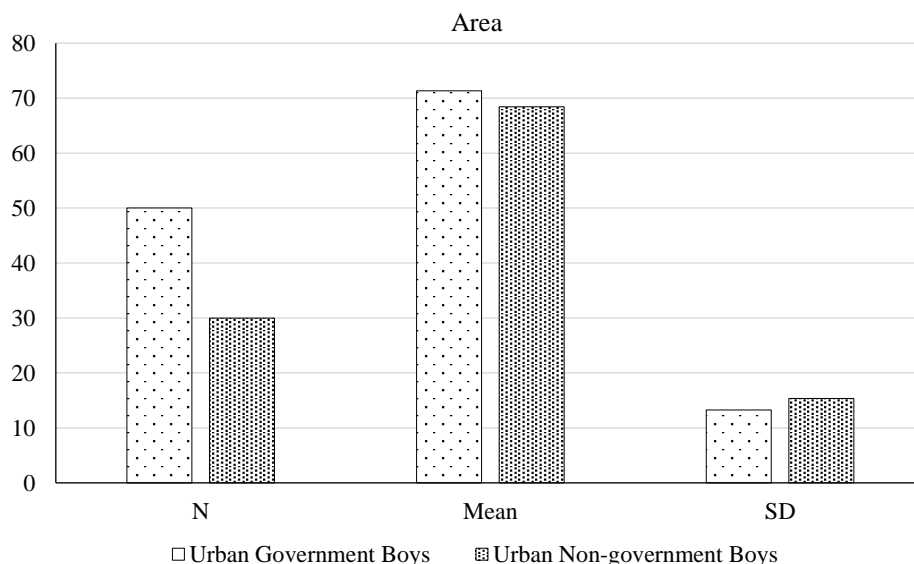


Figure 5. An examination of the academic performance of male students in metropolitan government and non-government schools.

This study examines male students' academic achievement scores in metropolitan regions, focusing on the distinctions between government and non-government institutions. For the 50 males in the government school category, the mean score is 71.36 with a standard deviation of 13.25. The non-government school group, which includes 30 boys, on the other hand, has a mean score that is marginally lower—68.39—with a standard deviation of 15.36. The mean scores of boys attending government and non-government schools in metropolitan regions differ statistically significantly, as indicated by the computed cumulative difference (σD) of 0.82 and the t-value of 0.99. The statistical significance of this difference is attested to by the 'S' in the 'Significant' column. This suggests that male pupils who attend government schools in metropolitan environments perform better on average than their counterparts who attend non-government institutions. Within each type of school, the standard deviations suggest different degrees of academic performance dispersion; government schools show a marginally narrower range of results as shown in Figure 5. This analysis highlights the need of taking gender and school type into account when developing focused interventions to reduce educational inequities and offers subtle insights into the academic dynamics unique to metropolitan areas Koul et al. (2023) [13].

H5: The mean academic achievement scores of female students attending government and non-government urban schools will not differ significantly as shown in Table 6.

The offered data pertains to female students' academic accomplishment scores in metropolitan regions, with a specific focus on distinguishing between government and non-government schools. For the 40 girls in the government school category, the mean score is 41.22 with a standard deviation of 14.62. On the other hand, the 40 females in the non-government school category have a much higher mean score of 50.15 with a standard deviation of 15.23. There is a statistically significant difference in mean scores between girls in government and non-government schools in metropolitan regions, as indicated by the t-value of 4.15 and the computed cumulative difference (σD) of 2.12. The statistical significance of this difference is attested to by the 'S' in the 'Significant' column. This shows that,

generally speaking, female students who attend non-government schools perform better than those who attend government schools in metropolitan areas. Within each type of school, the standard deviations suggest different degrees of academic performance dispersion; government schools show a marginally greater range of results as shown in Figure 6. This analysis highlights the importance of both school type and gender in understanding and addressing educational inequities among female students. It provides subtle insights into the academic dynamics unique to metropolitan regions.

Table 6. An examination of the academic performance of female students in urban government and non-government schools.

Area	School Type	Gender	N	Mean	SD	σD	t-value	Significant
Urban	Government	Girls	40	41.22	14.62	2.12	4.15	S
Urban	Non-government	Girls	40	50.15	15.23			

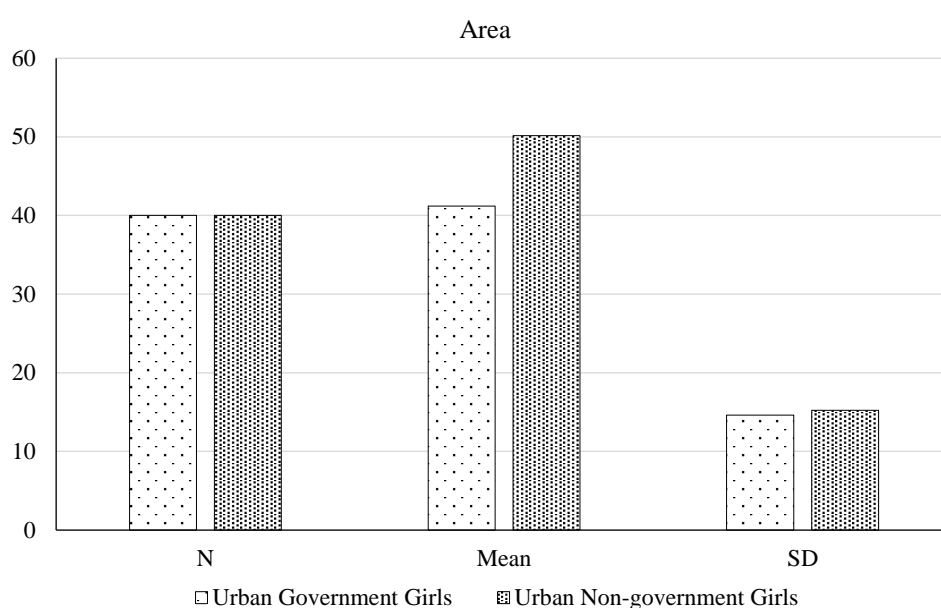


Figure 6. An examination of the academic performance of female students in urban government and non-government schools.

CONCLUSION

Non-government schools are unquestionably superior than government schools because they offer better facilities, a higher teacher to student ratio, a clean and hygienic atmosphere, and more opportunities for extracurricular and personality development. Even though government schools might not be able to provide all of these amenities, sending their kids to government schools is still preferable to not sending them to school at all for those who cannot afford private education. To sum up, this research has offered a thorough examination of academic achievement among children attending government and non-government schools, with a particular emphasis on the impact of geographic location. Through the analysis of students' academic performance in urban and rural settings, significant understanding of the complex factors influencing educational outcomes has been attained. The results highlight the notable differences that exist, with urban kids typically outperforming their rural counterparts. In addition, a thorough analysis of different school kinds in urban and rural environments showed clear trends, highlighting the fact that pupils attending non-government schools typically perform better academically than those attending government schools. Further complexities were brought to light by the gender-specific analysis conducted in metropolitan areas, which showed differences in academic achievement between females attending government and non-government schools. These findings lay the groundwork for focused interventions and policy by adding important data to the continuing discussion on educational disparities.

Recommendation

After examining academic achievement between students in government and non-government schools in relation to their geographic environment, a number of recommendations are made to improve educational results and alleviate disparities:

Targeted Interventions for Rural Schools: Given that academic performance is poorer in rural areas, policymakers and educators should create and execute interventions that are specifically designed to address the difficulties that kids in rural school's experience.

Equitable Resource Allocation: To guarantee that both government and non-government schools, especially those in urban and rural areas, have access to comparable educational facilities, teaching materials, and extracurricular activities, government authorities and educational institutions should place a high priority on equitable resource allocation.

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