The influence of the school learning environment on the academic performance of girls in Nyaruguru district, Rwanda

.

ABSTRACT

|  |
| --- |
| This study investigates how school learning environments influence the academic performance of girls enrolled in the Malayika Mulinzi programme in Nyaruguru District, Rwanda.”  For information collection, the cross-section survey design was used for 116 respondents. The probabilistic sampling technique was applied to select the respondents. The SSPS was in use to analyses the data. The findings provide insights into prioritizing interventions that focus on the school infrastructure improvements. Therefore, the policymakers should advocate for increasing the fund allocate to school infrastructure development. |

***Keywords:*** *academic performance, learning environment,* school learning, education of the girls

**INTRODUCTION**

The education of the girls is important in any society. It leads to an improved standard of life for a big part of the community since educated girls would become women who are conscious of health issues, like hygiene and diet. Poor academic performance of the girls is thus an issue that would require a lot of consideration on ways to rectify it and reap benefits. Understanding the school environment and climate toward the academic performance of girls is crucial for identifying the factors that hinder or enhance their educational achievements.

Education is a fundamental human right and a cornerstone for social and economic development. Global initiatives such as Sustainable Development Goal 4 emphasize inclusive and equitable education to empower marginalized groups and address gender disparities. Being a fundamental right, education of girls called attention of different scholars. Some studies focus on the physical, social, and emotional aspects of the school environment and how these factors influence the academic outcomes of girls. And this pushes the development of a short research article on the influence of the school learning environment on the academic performance of girls in Nyaruguru district, Rwanda.

With the sample size of 454 participants; 394 students chosen randomly using stratified sampling, 40 teachers and 20 principals with interview guide selected using purposive sampling across the Somaliland. Yasins’ findings revealed that teacher quality and school facilities have significant effect on academic performance. The study also revealed student ability had no influence on the performance. Qualitative data results revealed that principals were not familiar with instructional leadership and were busy with student attendance, hygiene and student uniform. The study recommends the Ministry of Education to undertake policy review on the pre-service teacher training guidelines and adopt policies on innovative professional development programs. The study also recommends to allocate adequate budget for public by creating school capitation policies (Yasin G. M, 2023).

Wahito study finding shows that the girl child’s academic performance in Embakasi is influenced by cultural factors, availability of mentors, sexuality and family background. The study therefore recommends that the society should be enlightened on the need of educating the girlchild; the society should ensure that they are good role models to the girls (Wahito.K.M, 2013)

Daily, Mann, and Kristjansson (2019) conducted a study using data from middle and high school students in a Mid-Atlantic U.S. state to examine the influence of school climate on academic performance. Their survey measured multiple dimensions of the school environment, including teacher support, peer relationships, and school safety. The data were analyzed using regression models to explore the associations between these school climate factors and students’ academic achievement. The findings revealed that a positive school climate—characterized by supportive teacher-student interactions, safe school environments, and strong peer connections—had a significant positive impact on academic performance. Notably, the study highlighted that girls reported slightly higher levels of school connectedness, which was linked to better academic outcomes. The authors recommended that schools prioritize cultivating a positive climate through teacher training and systemic practices that enhance emotional and relational support for students.

Francis and Skelton (2005) analyses how school environment, particularly infrastructure quality, teacher engagement, and peer interactions, influences girls’ academic performance in the United Kingdom. Their qualitative study involved semi-structured interviews with both students and educators across various secondary schools. Findings revealed that emotionally supportive environments, clear academic expectations, and positive peer dynamics significantly enhanced girls' motivation and performance. Teacher encouragement and school climate were especially pivotal, not only in boosting academic engagement but also in supporting girls' emotional well-being. The researchers emphasized that schools should foster nurturing atmospheres grounded in respect, inclusivity, and high expectations to optimize academic outcomes for female students.

Kalkan and Dağlı (2021) examined the influence of school climate on student engagement and academic performance in secondary schools using survey data from 667 students. Their findings indicated that a positive school climate—characterized by supportive teacher-student relationships, a sense of safety, and a strong sense of belonging—significantly reduced student burnout and enhanced academic motivation and outcomes. These scholars emphasized the importance of nurturing teacher behaviors, peer collaboration, and emotional safety in promoting students' academic success. They recommended that schools invest in initiatives that build supportive and inclusive environments, including teacher training programs focused on emotional intelligence and student engagement.

In India, a 2024 systematic review published in BMC Public Health synthesized findings from multiple studies addressing the school environment’s impact on emotional health and academic outcomes among students, with a strong focus on female learners. The review revealed that school environments marked by physical safety, emotional support from teachers, and a collaborative peer culture positively influenced girls' academic achievement and psychological well-being. It was also noted that schools with inadequate infrastructure or poor student-teacher rapport often saw lower academic engagement among girls. The study concluded that improvements in school climate and teacher capacity-building are crucial to enhancing girls’ educational success, particularly in underserved areas.

Allen et al. (2020) conducted a global meta-analysis on school belonging and academic success among adolescents, drawing data from various educational settings, including both high- and low-income countries. While not exclusively focused on girls, the study showed that school belonging, a product of supportive relationships with teachers and peers, school safety, and inclusive climate—was significantly correlated with better academic performance and emotional resilience among students. The researchers recommended that schools adopt a socio-ecological approach to nurture belonging, which in turn supports girls' academic growth and well-being, especially during critical schooling years.

The reviewed literature highlights the multifaceted role of the school learning environment in shaping the academic performance of girls. The studies span developed, developing countries, and Rwanda, revealing commonalities and contextual differences in how physical, social, and emotional aspects of the learning environment affect academic outcomes.

Studies across contexts emphasize the significance of adequate infrastructure in promoting academic performance. For instance, Francis and Skelton (2005) explored how school environment, particularly infrastructure quality, teacher engagement, and peer interactions, influences girls’ academic performance in the United Kingdom. The researchers emphasized that schools should foster nurturing atmospheres grounded in respect, inclusivity, and high expectations to optimize academic outcomes for female students.

The role of teacher-student relationships, peer interactions, and collaborative learning also emerged as central to academic performance. As Kalkan and Dağlı (2021) examined the influence of school climate on student engagement and academic performance in secondary schools. Their findings indicated that a positive school climate—characterized by supportive teacher-student relationships, a sense of safety, and a strong sense of belonging—significantly reduced student burnout and enhanced academic motivation and outcomes. These scholars emphasized the importance of nurturing teacher behaviors, peer collaboration, and emotional safety in promoting students' academic success. They recommended that schools invest in initiatives that build supportive and inclusive environments, including teacher training programs focused on emotional intelligence and student engagement.

It can confidently conclude that the school learning environment plays a pivotal role in shaping the academic performance of girls. Across developed and developing contexts, the importance of physical infrastructure, supportive social interactions, and emotional safety is consistently emphasized.

**Methods**

This study used descriptive survey design, collecting information by administering the questionnaires and interviewing the respondents. It has also combined both qualitative and quantitative approaches. Noted that descriptive design is used preliminary to allow the researcher to gather information, summarize, present, and interpret them for clarification. Stratified and simple random sampling techniques were used to select a representative sample of 116 participants, including students, teachers, and guardian angels.

results and discussion

The topic of this study is the influence of the school learning environment on the academic performance of girls under the Malayika Mulinzi programme in Nyaruguru District, Rwanda. The results obtained from the analysis with existing literature provide a comprehensive understanding of the challenges and opportunities affecting the academic outcomes of girls.

Table 1-The primary dependence of academic performance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables |  | **Statistical Test** | | | |
| **Mean Rank** | **Std** | **Chi-square** | **Df** | **P** |
| Qualification | 4.81 | 0.381 | 137.987 | 8 | 0.000 |
| Training | 4.89 | 0.395 |  |  |  |
| Method of teaching | 4.34 | 0.256 |  |  |  |
| Motivation | 4.66 | 0.346 |  |  |  |
| Gender | 4.50 | 0.307 |  |  |  |
| School infrastructure | 4.58 | 0.329 |  |  |  |
| Teacher attitude | 4.03 | 0.000 |  |  |  |

The analysis demonstrated that teacher attitude was ranked as the most crucial factor affecting performance, emphasizing the significant influence of teachers on the educational outcomes of girls. Other critical factors included teaching methods, motivation, and school infrastructure. ighlighting areas that might require less immediate intervention. These findings underscore the importance of enhancing teacher-related factors and improving school resources to foster better academic outcomes for girls. Teacher qualification is challenged by the suggestion of having the teachers with emotional supporting skills to support the girls. Beyond the experts of teachers in different domain, the emotions supporting skills is needed in school environment.

School is an environment that plays a pivotal role in determining students’ academic performance. In this study, teacher attitudes emerged as the most critical factor affecting academic performance. The girls who felt that are considered and encouraged by their teachers performed better. Francis and Skelton (2005) Findings revealed that emotionally supportive environments, clear academic expectations, and positive peer dynamics significantly enhanced girls' motivation and performance.The bachelors’ holders are a crew of teachers in Nyaruguru District as it was revealed by the study. And It did not be a point of discussion as the teacher’s recruitment process is clear.

Almost scholars recommended the addition trainings to the teacher for instance Kalkan and Dağlı (2021) recommended the schools to invest in teacher training programs focused on emotional intelligence and student engagement support. In other words, the teachers are not familiarly with psychosocial support techniques.

4. Conclusion

To conclude, the research findings of the study on the influence the school learning environment on the academic performance of girls, respondents reported that the qualification of teaching personnel with chi-square of 137.9 which is positive as more than 50% of teachers are bachelor degree holder. Teachers need the professional training specifically on how to offer emotional support to girls as it is crucial for them. The teaching methods need an improvement, the girl’s sensitiveness needs to be incorporated in teaching methodology to help them feeling their value. It has been observed that supportive teacher-student relationships, the motivating environment brought the positive result from girls’ academic performance. The school infrastructure brought attention of scholars as the factor influencing the academic performance of girls when the school is equipped with good infrastructure, the academic performance is high. The teachers’ attitude toward girls was ranked as the most crucial factor affecting their performance; investing in professional development for teachers to foster positive relationships with students is needed for assisting the girls. Clear behavioral and academic expectations should be communicated to the students to maintain the learning objectives achieved. Mental health resources should also be integrated into the school environment to support students' emotional well-being.

**Consent**

As per international standards or university standards, Participants’ written consent has been collected and preserved by the author(s).

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

References

Allen, K.-A., Kern, M. L., Donohue, L., & Waters, L. (2020). Fostering school belonging in secondary schools using a socio-ecological framework: A meta-analysis. *Educational Psychology Review, 32*, 663–689. https://doi.org/10.1007/s10648-019-09463-3

BMC Public Health. (2024). Influences of school climate on emotional health and academic achievement in India: A systematic review. *BMC Public Health, 24*, Article 21268. https://doi.org/10.1186/s12889-024-21268-0

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.

Daily, S. M., Mann, M. J., & Kristjansson, A. L. (2019). School climate and academic achievement in middle and high school students. *Journal of School Health, 89*(3), 173–180. <https://doi.org/10.1111/josh.12726>

Francis, B., & Skelton, C. (2005). *Reassessing gender and achievement: Questioning contemporary key debates.* Routledge. <https://www.routledge.com/Reassessing-Gender-and-Achievement/Francis-Skelton/p/book/9780415314978>

Kalkan, F., & Dağlı, E. (2021). The relationships between school climate, school belonging, and school burnout in secondary school students. *International Journal of Contemporary Educational Research, 8*(4), 59–79. https://doi.org/10.33200/ijcer.878682

Wahito.K.M. (2013). *Factors influencing the academic performance of girls in secondary schools.* Nairobi.

Yasin G. M. (2023). *Determinants of academic performance of pupils in public primary.* Somaliland country.