

Influence of Nomadic Pastoralism and Implications on Girl-Child Education in Baringo County, Kenya.

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ABSTRACT

This study examined the impact of nomadic pastoralism on girl-child education in Baringo County, Kenya. A descriptive research design was employed, targeting 1,008 secondary school girls from Tiaty sub-county. Using stratified random sampling, 286 participants were selected. Data collection involved questionnaires for students and interviews with principals and education officers. Quantitative data were analysed using SPSS version 25 for both descriptive and inferential statistics, while qualitative data were examined thematically using NVivo software. Descriptive findings indicated that 20% of girls believed that parental migration disrupted their education, 31% confirmed that moving with their parents affected their schooling, 46% had repeated a class due to nomadism, and 63% attributed school dropout to nomadic practices. Only 23% reported high academic performance, highlighting the negative effects of frequent mobility and unstable learning environments. Correlation analysis showed a significant positive relationship between nomadic pastoralism and educational performance ($r = 0.329$, $p < 0.05$). Regression analysis revealed that nomadic pastoralism accounted for 10.8% of the variance in educational performance ($R^2 = 0.108$), with a statistically significant beta value ($\beta = 0.329$, $p = 0.000$). The study concluded that nomadic pastoralism hinders girls' academic progression and limits their potential contribution to sustainable development. It recommends establishing boarding schools and mobile education units, improving infrastructure, implementing cultural sensitization programs, and training teachers to address the unique needs of nomadic learners. The Ministry of Education should also strengthen data tracking systems to monitor enrolment and performance trends in pastoralist regions.

Keywords: Nomadic pastoralism, mobility, girl child education

INTRODUCTION

According to World Bank (2018) and UNESCO (2018) the educational attainment of females significantly affects national trends in community development. Encouraging girls to pursue careers in secondary school is a crucial step in empowering them to be active members of their communities. VonDras (2017) emphasizes that for a country to achieve meaningful socio-economic growth, it must give due attention to girls, given their significant roles as caregivers, caretakers, and active contributors at the grassroots level. However, cultural norms within many communities continue to undermine women, limiting their ability to participate effectively in this development. (World Bank, 2018). The level of educational attainment in a country is an essential measure of its growth (UNESCO, 2018). Additionally, Etsey (2015) suggest that tackling harmful cultural behaviours might be a fruitful strategy for improving students' academic performance in Africa. Nomadic pastoralism poses a unique challenge to girls' educational performance among secondary schools in Tiaty East and West in Baringo County, amplifying existing barriers to academic success. Despite global recognition from organisations such as the World Bank (2018) and UNESCO (2018) of the pivotal role of females' education in community development, the nomadic lifestyle prevalent in these areas complicates efforts to encourage girls to pursue secondary education and become active participants in their communities. Cultural norms intertwined with nomadic pastoralism often prioritise boys' education, perpetuating gender disparities in enrolment and academic

achievement. Early marriages and limited access to educational resources further compound these challenges, contributing to a persistent gender gap in secondary school enrolment in Baringo County. While the county government has implemented policies to safeguard girls' educational prospects, sub-counties like Tiaty continue to lag in performance compared to others within the county. Thus, a comprehensive examination of the cultural variables influenced by nomadic pastoralism is essential to develop targeted interventions that address the specific educational needs of girls in these communities, promoting gender equality and socio-economic growth.

Specific Objective

The specific objective was:

To assess the effects of nomadic pastoralism on girl-child education in Baringo County, Kenya

Research Hypotheses

H₀₁: Nomadic pastoralism has no significant effect on girl-child education in Baringo County, Kenya

REVIEW OF RELATED LITERATURE

Effects of nomadic pastoralism and Implications on girl-child education in Baringo County, Kenya.

Roughly 10% to 50% of the estimated 25–40 million school-aged children live in pastoralist homes, according to estimates (Oxfarm, 2021). About 15% to 25% of the world's 100 million unschooled kids live in nomadic or pastoralist tribes. Girls from pastoralist homes have significantly lower rates of participation and completion, which are already poor. Children from pastoralist and nomadic households frequently lack access to education, an inherent human right. Despite their nomadic lifestyle, these children must get a relevant and high-quality education if we are to reach the Sustainable Development Goal (SDG) for education (UNESCO, 2020).

Because of their constant movement, nomads and pastoralists face a significant barrier to formal schooling. This mobility may include both day trips and longer journeys. Mobile children, like pastoralists and nomads, cannot participate in conventional schooling during the academic day. For children from families who do not identify as nomadic or pastoral, the challenges faced when travelling remain the same. Every kid, irrespective of their family's classification as nomadic or pastoral, is entitled to a quality, foundational education. Women in pastoralist and nomadic communities, on the other hand, do far worse academically and have significantly less access to school than men. To create education policies and programs that are fair to girls and boys, lawmakers should learn why nomads and pastoralists choose to send their children to school, as well as what the girls' and families' aspirations are. Further comprehensive research is required on pastoralists, nomads, and specifically on women and girls. Lack of access to education is a fundamental human right (Kerosi & Olando, 2021).

Engdasew and Wogasso (2021) indicate that nomadic and pastoralist families see education as a fundamental component of broader issues such as fragility, alternative income sources, and employment opportunities. They enrol their children, especially their sons, in school to ensure they possess alternatives should their lifestyle be disrupted by war, natural catastrophes, or other factors. Some individuals feel that obtaining a formal education would facilitate their employment opportunities outside pastoralism. When it comes to sending their children to school, nomad and pastoralist parents have high standards; they want their children to get certification and learn about topics that are relevant to their culture and way of life.

Educational challenges faced by nomadic pastoralists in Mongolia were studied by Krätli (2019). The research used a cross-sectional survey approach and chose a sample of 300 houses by stratified random selection. Data were gathered using surveys and interviews and analysed employing descriptive statistics. The results demonstrated that nomadic pastoralism considerably restricted access to formal education, leading to many youngsters discontinuing their schooling to participate in herding tasks. This study effectively highlights the educational challenges faced by nomadic pastoralists but is limited by its focus on Mongolia. Also Ihuoma (2022) used a descriptive research design to examine factors hindering nomadic girls' education in Nigeria, identifying poverty, religious beliefs, insecurity, and parental attitudes as major barriers. The study found that nomadic lifestyles disrupt regular school attendance, leaving girls most disadvantaged. The author recommended mobile

learning, vocational training, and stronger policy support to improve access and achieve Sustainable Development Goal 4. Flexible education models were emphasized as critical for empowering nomadic girls and enhancing their social and economic participation.

In His study Abubakari (2024) conducted a qualitative study titled Factors Influencing Participation of Pastoral Nomadic Fulani Children in Primary Education in Ghana to explore why many Fulani children remain excluded from formal schooling. The research was carried out in the Northeast Region and used interviews, observations, and focus group discussions involving students (including dropouts), parents, teachers, and education authorities. Drawing on the 4-A's framework—accessibility, availability, acceptability, and adaptability—and adding affordability as a fifth dimension, the study systematically examined how structural and cultural factors shape educational exclusion. The findings showed that all five factors limited participation, while cultural norms such as early marriage, adherence to pastoralist values, and widespread poverty further entrenched barriers. Abubakari emphasized that without context-sensitive interventions that account for both logistical and cultural realities, efforts to improve enrolment and retention among nomadic Fulani children are unlikely to succeed.

Ekeno, Bitok, and Matere (2024) conducted a descriptive survey study titled Influence of Periodic Mobility of Nomadic Pastoralist Parents on Retention of Early Years Learners' Education in Turkana East Sub County, Kenya to examine how seasonal migration affects educational retention among young children. The research was anchored in Bronfenbrenner's Ecological Systems Theory, recognizing the role of environmental factors in child development. The study targeted a population of 402 respondents, including 300 ECDE teachers, 101 parents, and one Sub-County Director of Education. From this population, a sample of 121 participants was selected using proportional sampling to ensure representation across the three wards in Turkana East. Data collection instruments comprised structured and semi-structured questionnaires and interview schedules. Quantitative data were analyzed with descriptive statistics in SPSS version 25, while qualitative responses were examined thematically. The findings showed that the periodic mobility of nomadic pastoralist parents significantly disrupted children's access to and continuity in early education. The authors concluded that unless interventions such as mobile schools, feeding programs, and supportive policies are implemented, retention challenges will persist and compromise educational progress for learners in pastoralist communities. After Free Primary Education (FPE) was introduced nationwide in Kenya in 2003, the Gross Enrolment Rate reached 104%. The overall development was impeded by regional differences; for example, just 17% of pastoralist females were educated, and in pastoralist regions, the Gross Enrolment Rate was as low as 25%. Low enrolment rates are exacerbated by the transient nature of pastoralist families (Datzberger, 2022).

METHODOLOGY

This study adopted a descriptive research design to provide a comprehensive understanding of the population and issues examined (Longe, 2023). Conducted in Tiaty Sub-County, Baringo County, Kenya, the research targeted 1,008 secondary school girls, along with school principals, Sub-County Directors from the Ministry of Education, Quality Assurance Officers, and Examination Officers. A sample size of 286 female students was determined using Slovin's formula, and stratified random sampling was applied to ensure proportional representation across different school types and locations. Students were selected by grouping schools into strata and then randomly sampling within each group. For the qualitative component, purposive sampling was used to identify 13 principals and 6 education officers with extensive experience and direct knowledge of sociocultural practices affecting girls' education. Data were collected through questionnaires administered to students and semi-structured interviews conducted with principals and education officials. Ethical approval was obtained from the university's ethics committee, and all participation was voluntary. Informed consent was secured from all respondents, with parental consent and student assent obtained for minors. Confidentiality was upheld by using unique codes instead of names, and all records were securely stored with restricted access. Participants were informed of their right to withdraw from the study at any time without any consequences. Quantitative data were analyzed using IBM SPSS Statistics (Version 25), applying descriptive and inferential statistics to explore variable relationships. Regression analysis was conducted to assess the impact of nomadic pastoralism on academic performance. Qualitative data were transcribed and analyzed thematically using NVivo (Version 12) to identify key themes and patterns that enriched the study's findings.

DATA ANALYSIS RESULTS AND DISCUSSION

Descriptive Analysis

The study evaluated how nomadic pastoralism affects girls' educational performance. To this end, several questions were asked and the findings presented below:

Effect of nomadism on the girl child education

The respondents were asked if their households' travel from one location to another in search of water and pasture affected their academic achievement. The findings are summarized in Table 1.

Table 1: Does the Movement of Parents from One Place to another in search of Water and Pasture affect your Educational Performance?

Movement of Parents	Frequency	Per cent
No	194	80.
Yes	48	20
Total	242	100.0

According to the responses, just 20% believe their parents' movement from one location to another in quest of water and pasture impacts their academic achievement, while the majority, 80%, disagree. While this may appear to be a minority, qualitative insights indicate this group experiences severe educational instability. A principal explained:

“The majority of children from nomadic pastoral families are frequently withdrawn from school due to their parents' movements. Continuity in education becomes impossible.”

This disruption is not only logistical but also psychological, as constant relocation impairs the ability to build stable peer and teacher relationships further impeding learning

Whether going with parents during movement affects Schooling

The researcher sought to find out whether the respondents moved with their parents from one place to another in search of water and pasture, and their responses are in Table 2.

Table 2: Does Movement with Parents affect Schooling

Moving with parents affects schooling	Frequency	Per cent(%)
Yes	76	31
No	166	69
Total	242	100.

Out of the 242 girls, 76(31 %) stated that movement with their parents from one place to another in search of water and pasture affects their schooling, while 166 (69%) disagreed with the assertion. From the interviews, it emerged that cultural expectations and a lack of boarding options force many girls to accompany their parents during migration seasons. One education officer noted:

“Most parents see girls as helpers during migration. They fetch water, cook, and tend to the young ones—school is secondary.”

Although livestock is the primary source of income and livelihood for pastoralist communities. Moving to areas with abundant water and pasture ensures the well-being and productivity of their livestock, which directly impacts their economic stability. Students often move with their parents to assist in herding, caring for the animals, and learning valuable skills related to animal husbandry and traditional economic practices.

In some pastoralist communities, parents prioritize children's education by leaving them with relatives or enrolling them in boarding schools in settled areas, ensuring continuity and stability. Older students may stay behind to fulfill community responsibilities while parents focus on resource-seeking activities. Local schools in traditional grazing areas cater to pastoralist communities, enabling children to receive an education without the need for constant migration.

Repeating a class because of Nomadism.

The researcher sought to establish whether the respondents had repeated forms as a result of nomadism, and the findings are shown in Table 3.

Table 3:Repeating Form

Repeating Form	Frequency	Per cent
Yes	110	46
No	132	54
Total	242	100

The findings in Table 3 indicate that 46% stated that they had repeated form as a result of nomadism, while 54% said they had not repeated

Whether nomadism leads to school dropout

The researcher required the respondents to determine whether or not nomadic pastoralism has an impact on school dropout, as shown in Table 4.

Table 4: Does Nomadism Lead to School Dropouts?

Effects of Nomadism	Frequency	Per cent
Yes	153	63
No	89	37
Total	242	100.0

The results of the study revealed that 63 % of the respondents indicated that nomadism had an effect on girls' school dropout, while 37 % said it did not .This implies that nomadism caused school dropout. The constant movement not only interrupts learning schedules but also imposes emotional stress and disorientation. Principals described students who return from migration as

“demotivated, unfocused, and behind syllabus-wise.” The absence of consistent classroom instruction leads to knowledge gaps and low self-esteem, especially among girls balancing education with domestic duties

Position during End Term Exams

The researcher inquired about the girl's performance during end year exam, and the results are in Table 4.

Table 4:Position in End Term Exams

Position	Frequency	Per cent
High	55	23.
Medium	170	70
Poor	17	7
Total	242	100

The findings indicated that 23% stated their performance was high, 70% stated medium, while 7% stated their performance in the end-term exams was poor. Nomadic lifestyles often involve frequent relocation, which can disrupt a student's study routine. Moving to new locations frequently can make it challenging for students to establish a consistent study schedule and find a conducive environment for learning. Lack of stability and continuity in studying can lead to difficulties in adequately preparing for exams, potentially impacting a student's performance.

Nomadic lifestyles often lead to educational discontinuity, causing students to navigate frequent transitions between schools and systems, disrupting learning consistency and creating knowledge gaps. This constant adaptation can amplify emotional stressors, such as isolation and anxiety, stemming from leaving familiar environments and support networks behind, potentially impacting students' concentration, focus, and motivation during end-term exams.

Inferential Statistics Findings

Correlation analysis between Nomadic Pastoralism and Girl child Education

This correlation analysis was done to help in answering the to assess the relationship between nomadic pastoralism and education performance as shown in Table 5.

Table 5. Correlation between Nomadic Pastoralism and Education Performance

		Nomadic Pastoralism
Education Performance	Pearson Correlation	.329*
	Sig. (2-tailed)	.000
	N	242

** Correlation is significant at the 0.05 level (2-tailed).

Based on the results the study established that there exists a strong positive and significant relationship ($p = .000$, $r=0.329$) between nomadic pastoralism and girls education performance. Therefore, the findings imply that nomadic pastoralism influences education performance. Children in pastoral areas face marginalization and exclusion, often leading to irregular school attendance and incomplete elementary education, exacerbated by the challenges of retention due to periodic droughts and nomadic lifestyle, leaving schools and teachers without students during relocations (Ali, 2019).

Regression Analysis

Regression analysis was used in the study to determine the degree of the association between the independent and dependent variables, as Table 6 illustrates the findings.

Table 6: Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig.F Change
1	.329 ^a	.108	.105	.32138	.108	29.143	1	240	.000
a. Predictors: (Constant), Nomadic_Pastoralism									

The results demonstrate that the independent variables under investigation account for 10.8% of the variation in project implementation, whereas additional factors not included in this study account for 46.3% of the variation. While the effect size is moderate, qualitative data shows the depth and complexity of this impact is much more profound at the household and community level.

Regression Coefficients

In Table 7, the regression coefficient results indicate the extent to which the nomadic pastoralism can predict education performance

Table 7: Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.306	.102		12.829	.000
	Nomadic_Pastrolism	.328	.061	.329	5.398	.000
a. Dependent Variable: Nomadic Pastoralism						
Predictors: (Constant), Sustainable Development						

The beta value of 0.329 means that for every 0.329 units, the use of nomadic pastoralism led to a corresponding 1 positive unit in Sustainable Development. In addition, these results indicate that the nomadism pastoralism is statistically significant ($p=0.000$ where $p < 0.05$) in offering an explanation of Sustainable Development

The beta value in Table 4.35 helps in testing the hypothesis: "HO1: There is no significant effect of nomadic pastoralism ". Therefore, this study rejected the null hypothesis at 0.95 significant interval since the beta value, $0.329 \neq 0$.

DISCUSSION

The study found that nomadic pastoralism significantly disrupts girl-child education in Baringo County, with nearly half of the respondents reporting class repetition and most acknowledging that nomadic movement contributes to school dropout. These findings confirm that nomadic lifestyles, characterized by frequent migration, are incompatible with the structure and demands of formal education, particularly for girls. In

Ethiopia, Dyer (2006) found that pastoralist girls experience higher dropout rates and lower literacy levels due to seasonal migration. Similar to Baringo, Ethiopian pastoralist communities prioritize livestock over education, often pulling girls out of school to assist in domestic and herding tasks. Engdasew and Wogasso (2021) further support this, noting that despite recognizing the value of education, pastoralist parents often lack the means and consistent access to ensure sustained schooling, especially for girls.

In Nigeria's northern pastoralist regions, Abbo et al. (2019) found that nomadic Fulani communities had female literacy rates below 30%, attributing this to long distances to schools and cultural expectations that girls focus on home responsibilities. These findings mirror the situation in Tiaty, where the movement in search of pasture leads to academic disengagement, especially among girls, due to logistical and socio-cultural limitations.

Globally, Krätli (2019) documented that in Mongolia, nomadic children particularly girls faced educational discontinuities, poor school performance, and marginalization. Although the socio-cultural contexts differ, the recurring theme is the incompatibility of sedentary education systems with mobile livelihoods.

Comparatively, in Kenya, research by Kerosi and Olando (2021) also found that nomadic practices in Turkana and Samburu counties had similar outcomes: low school retention, early marriages, and weak educational foundations for girls. In these counties, over 60% of nomadic girls drop out before completing secondary education—a trend consistent with the 63% dropout rate reported in Baringo.

Furthermore, while 31% of the Baringo girls surveyed reported migrating with their parents and 46% had repeated classes due to nomadism, these figures closely align with findings from Ali (2019) in Somaliland, where over 50% of pastoralist children failed to complete primary education. These children, like those in Baringo, lack consistent classroom instruction, mentorship, and protection from early marriage.

Importantly, this study adds to the discourse by linking educational disruption not just to dropout, but also to reduced participation in sustainable development. Girls who drop out due to nomadism are less likely to participate in decision-making, economic ventures, or leadership further entrenching inequality and underdevelopment.

CONCLUSION

Nomadic pastoralism negatively impacts girl-child education through instability, disrupted learning, and weakened school retention. The lifestyle's mobility conflicts with structured academic schedules, leading to lower performance and reduced participation in long-term development. Addressing these educational barriers is vital for achieving inclusive and equitable education, gender parity, and sustainable growth.

RECOMMEDATIONS

To address the negative impact of nomadic pastoralism on girl-child education in Baringo County, this study recommends the establishment of more boarding schools and rescue centres to provide safe, stable learning environments for girls during migration periods. Additionally, the introduction of mobile schools and flexible, community-based education models can help bridge the accessibility gap caused by the nomadic lifestyle. Cultural sensitisation programs targeting parents, elders, and local leaders should be intensified to challenge entrenched norms that devalue girls' education. Infrastructure investment such as in roads, dormitories, water, and transport, is critical to improving access in remote regions. Teachers deployed to pastoralist areas should be trained to handle the unique challenges of these settings and be supported through appropriate incentives. The Ministry of Education must strengthen monitoring frameworks to track enrolment, attendance, and dropout trends and develop policies responsive to nomadic realities. The implications of this study suggest that unless structural, cultural, and logistical barriers are addressed, pastoralist girls will remain excluded from national education and development goals. Therefore, future studies should explore the effectiveness of mobile education interventions in nomadic areas, assess long-term educational outcomes among pastoralist girls who access boarding facilities, and examine the role of digital learning technologies in bridging the education gap in mobile communities.

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