

# Effect of Sports Participation on Learner Retention of Primary School Children in Karamoja Region, Uganda

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## ABSTRACT

Learner retention in Karamoja Primary Schools remains very low with only 24.2 % retention and 74.2% drop out rate. This threatens basic level skill acquisition. The study investigated the effect of sports participation on learner retention among primary school children in Karamoja region of Uganda. The specific objective of the study was to examine the effect of sports participation on learner among primary school children in Karamoja region of Uganda. The null hypothesis was stated as; sports participation has no significant effect on learner retention among primary school children in Karamoja region, Uganda. The study was anchored on James Coleman's Multiple Role Theory of extracurricular activities. The study provides empirical evidence on the power of sports to enhance learner retention in nomadic pastoralist marginalized high attrition areas contributing to the sporting role in achieving SDG3 (Good Health and Wellbeing), SDG4 (Quality Education) and the Primary objective of The UNESCO International Charter of Physical Education, Physical Activity and Sports. A descriptive cross sectional study design was adopted with a mixed methods approach of quantitative and qualitative. District Sports Officers (11), District Inspectors of Schools (11), head teachers (44), and sports teachers (88) were purposively sampled as these perform specific roles in facilitating, supervising, and implementing sports programs in schools. Class teachers (88) and pupils (352) were randomly sampled to give every respondent an equal chance of participation. Four primary schools per district were selected for the study. The breakdown of the effect of sports participation on learner retention focused on: willingness to stay in school, reduced dropout, reduced absenteeism, school belonging and continued enrollment across classes. The findings revealed that sports participation is associated with enhancing learner retention through increased willingness to stay in school (Mean=4.50, SD=0.832), reduced prolonged absenteeism (Mean=4.46, SD=0.841), and strengthened sense of school belonging (Mean=4.33, SD=0.820). A strong, positive, and statistically significant correlation was found between sports participation and learner retention ( $\rho = 0.725$ ,  $p < .001$ ). Critically, regression analysis established that sports participation explains 50.5% of the variance in learner retention ( $R^2 = 0.505$ ). Relationships among variables were established using Pearson correlation coefficients while null hypothesis was tested using simultaneous linear regression coefficients at a confidence interval of 99%. The study recommends that; (1) Ministry of Education and Sports should establish mandated structured sports as a formal learner retention strategy in all Karamoja primary schools. (2) District Education Officers should establish school-based leagues like intramurals and extramural leagues operating throughout the year (3) Schools should train coaches and prioritize female participation and prioritize recruiting female coaches to address gender-specific learner retention barriers. (4) Ministry of Education and Sports should link sports participation to scholarships, certificates, and progression incentives, as these emerged as powerful motivational tools.

**Key words:** Sports Participation, learner retention, Primary Education, Karamoja, Physical Education.

## INTRODUCTION

Sports participation refers to the active involvement of learners in structured and unstructured physical activities within the school setting, including games, athletics, and organized competitions. It is widely recognized as a multidimensional process that promotes physical fitness, psychosocial development, and cognitive functioning

(Mollet & Otieno, 2022). In this study, sports participation means the way learners get involved in sports activities daily at school and during competitions like interschool, under the guidance and instruction of sports teacher.

Learner retention refers to the continuous enrollment of pupils from one grade to the next, minimizing dropout and promoting steady progression through the primary school cycle. Quality Physical Education in schools promotes lifelong learning, develops skills, and improves cognitive performance (WHO, 2022). At the primary level, structured sports programs enhance physical fitness and positively affect school engagement (Demetriou et al., 2018). In Karamoja region, primary schools experience low learner retention (24.2%), high dropout rates (74.2%) and poor academic achievement (UBOSS 2024, UNICEF, 2024). If this state of affairs continues, Karamoja will experience abject poverty, social marginalization, and economic underdevelopment while Uganda risks failing to achieve SDG 3 (Good health and Wellbeing), SDG 4 (Quality Education) and the primary objective of The UNESCO International Charter of Physical Education, Physical Activity and Sports. There is no empirical evidence that sports participation has an effect on learner retention among children in primary schools in Karamoja. This study therefore examined the effect of sports participation on learner retention of primary school children in Karamoja. The study was guided by one Null hypothesis stated as Sports participation has no significant effect on learner retention of primary school children in Karamoja region.

## LITERATURE REVIEW

Sports cultivate discipline, time management, and personal responsibility, which directly reduces dropout risk According to Aquino and Reyes (2022); exploring the connection between athletics and academic success in Phillipines, and study by Garcia and Subia (2019); on High school Athlete; Their motivation, study habits, self-discipline and academic performance of Palayan City District, Nueva Ecija, Philippines, Athletic involvement enhances self-worth and intrinsic motivation, fueling persistence despite academic or social challenge. According to Arey & Levental, (2024); on the study Beyond the Game: The Influence of Varying Degrees of Sports Involvement on College Students' Self-Perceptions and Institutional Affiliation and the study by Liu and Tareh (2024); on Balancing Athletic and Academic Excellence: A Quantitative Study of Student-Athletes' Time Management Strategies; they emphasize that coaches act as key mentors, while team sports build essential social support networks that make leaving school more difficult. Furthermore, Owen et al. (2022); investigated Sport Participation and Academic Performance in Children and Adolescents: A Systematic Review and Meta-analysis, they concluded that increased "school connectedness" is a well-established mechanism through which sports protect against early school leaving.

African studies confirm these patterns but reveal significant implementation barriers. In Rwanda, Mukayiranga, and Andala (2021); investigated sports participation and students' academic performance in public secondary schools. They found out that there is a strong, positive correlation between sports participation and academic performance, with sports variables explaining 78.5% of the variance. However, Mollet and Otieno (2022); investigated the influence of sports participation on educational achievement of students in secondary schools in Arusha District, Tanzania. They identified critical infrastructural and human resource barriers, including inadequate facilities, lack of qualified coaches, and poor organization, which can cripple sports programs and nullify potential learner retention advantages. These findings suggest that while sports has big potential, its benefits are contingent upon effective implementation and institutional support.

A critical research gap persists regarding Uganda's nomadic pastoralist Karamoja region. Existing studies focus on well-resourced contexts in the Philippines, United States, Taiwan, and Israel, whose educational systems are not in tandem with conflict-affected, pastoralist settings. Even the few relevant African studies examine secondary education, overlooking primary schooling where dropout rates are most pronounced (Mukayiranga and Andala, 2021; Mollet & Otieno, 2022). No quantitative study has cross examined the effect of sports participation on learner retention in Karamoja region. This study therefore addressed this gap by focusing exclusively on primary schools in this marginalized, nomadic high-attrition region or setting.

## METHODOLOGY

### Research Design

The study employed a mixed methods approach in which quantitative and qualitative data were collected concurrently, analyzed separately, and then merged to provide a comprehensive understanding of the research problem. The study adopted a descriptive cross-sectional survey design because it collects data from a population at one specific point in time to describe the status of phenomena or relationships among variables as they exist naturally (Creswell & Creswell, 2018).

### Study area

The study was conducted in Karamoja region of North-Eastern Uganda situated approximately Latitude 1°30' and 4°00'N and Longitude 33°30' and 35°00'E. It is a semi-arid area well known for agro-nomadic pastoralism. It covers 27,528 Sqkms. Karamoja comprises of nine districts with two municipalities with the regional headquarters in Moroto. The region has a total population of approximately 2,461,127 Million (UBOS, 2025). It has expanse of savannah woodlands thorn bush-lands and open grasslands dominated by a low lying plateau punctuated by semi-arid conditions hence high temperature. Its inhabitants are Karamojongs a Nilotic ethnic group with mighty love for cattle. The Karamojongs practice nomadic pastoralism and because they are deep rooted in their culture, their attitude towards formal education is very minimal.

### Target Population

The study targeted 7938 respondents strategically selected from primary schools and District officials across nine districts and two municipalities of Karamoja, comprising 4,806 pupils in upper Primary classes (P.5-P7), 1866 class teachers, 736 sports teachers, 11 district sports officers, 11 District Inspectors of School, and 311 Headteachers. This diverse sample ensured insights from all levels involved in the delivery, supervision, and implementation of school sports programs. Out the above targeted population, the study involved the total sample of 594 respondents. The distribution of participants across these key stakeholder groups is summarized in Table 3.1

Table 3.1: Study Population, Sample Size, and Sampling Techniques

| Category                       | Population  | Sample Size | Sampling Technique |
|--------------------------------|-------------|-------------|--------------------|
| District Sports Officers       | 11          | 11          | Purposive          |
| District Inspectors of Schools | 11          | 11          | Purposive          |
| Head Teachers                  | 311         | 44          | Purposive          |
| Sports Teachers                | 736         | 88          | Purposive          |
| Class Teachers                 | 1866        | 88          | Simple Random      |
| Pupils (P.5-P.7)               | 4,806       | 352         | Simple Random      |
| <b>Total</b>                   | <b>7938</b> | <b>594</b>  |                    |

Source: Respective District Education Offices, 2025

### Sampling and sample size

Both probability and non-probability techniques were used. Purposive sampling targeted key informants such as district sports officers (11), district inspectors of schools (11), sports teachers(88) and head teachers (44) due to their expertise in sports policy and school management. Simple random sampling was applied to pupils (352)

and class teachers (88) to give every respondent an equal chance of participation, thereby reducing selection bias (Etikan et al., 2016). However, out of the 594 sample size, the following numbers responded as per the category; District sports Officers (11), District Inspectors of schools (07), Pupils (351) Headteachers (44), sports teachers (88) and class teachers (88). The total number of respondents was 589 out of 594 making 99.3% response rate. This demonstrates the high level of commitment and engagement from the researcher.

## **Data Collection Procedure and instruments.**

### **Data collection procedure.**

The research process was initiated with approval from Masinde Muliro University's Postgraduate Research Committee. Ethical clearance was then obtained from the Institutional Scientific and Ethics Review Committee (ISERC) of the University. This was preceded by seeking for ethical clearance from St. Francis Nsambya Hospital REC. The research permit was secured from the Uganda National Council for Science and Technology (UNCST). Official permission was granted by the respective district local governments to access the study sites. All participants provided informed consent. For minors, consent forms were sent to the parents and class teachers who consented on their behalf.

### **Data Collection Instruments**

The researcher used the structured questionnaire, Focus Group discussion guide and Key Informative Interview Guide for collecting data as detailed;

#### **Questionnaire**

The study achieved a 99.8 % response rate for the questionnaire survey (538 out of 539 targeted). For interviews, 7 out of 11 district inspectors of schools participated, yielding a 63.6% response rate. Focus group discussions with head teachers achieved a 100% response rate (44 out of 44). This brought the overall response rate to 99.3%, reflecting a high level of engagement across study categories. Despite the lower interview participation, data saturation was reached, ensuring sufficient depth to meet the research objectives, in line with Creswell and Creswell (2018). This high response rate enhances the credibility, representativeness, and robustness of the study's conclusions.

#### **Interview Guide**

The interview guide included sections on sports participation and learner retention the interviews were conducted with District Inspectors of Schools providing an opportunity for these officials to share their insights, experiences, and strategic perspectives on how sports participation impacts on learner retention in the Karamoja region, thereby enriching the data with detailed qualitative information.

#### **Focus Group Discussion Guide**

The FGD guide included open-ended questions organized under sections covering sports participation and learner retention. The discussions were held with head teachers from the sampled schools, with each FGD consisting of 8 to 10 participants. This approach captured their perspectives and experiences on the role of sports in promoting learner retention providing valuable insights into school-level challenges and opportunities.

#### **Validity**

To ensure validity, all instruments underwent rigorous expert review by academic supervisors and the Institutional Scientific and Ethics Review Committee. The questionnaire's construct validity was confirmed through a pilot study in Katakwi district and Exploratory Factor Analysis, which showed all items had factor loadings between .552 – .723 (KMO value .834, Bartlett's Test  $p=.000$ ). Furthermore, the instrument demonstrated strong reliability, with items achieving Cronbach's Alpha values of .826, indicating high internal consistency.

## Reliability

The validity of the instruments was ensured through content and construct validation. For the questionnaire, content validity was established through expert review by academic supervisors. These experts evaluated the relevance, clarity, and coverage of the items to ensure alignment with the study objectives. The construct validity of the questionnaire was tested through pre-testing conducted in Katakwi district with 48 participants drawn from four primary schools. The validity of the interview and focus group discussion guides was established through content validity, also reviewed by the supervisors to ensure that the tools adequately captured the depth and scope of the study variables. Katakwi is a neighboring district with similar characteristics to Karamoja. Based on the feedback received, some items were reworded for clarity and the questionnaire layout was adjusted to improve logical flow.

## Data analysis

Quantitative data from questionnaires were entered in Excel, cleaned, and analyzed in SPSS v27. Descriptive statistics (frequencies, means, percentages, medians, interquartile ranges) summarized respondent characteristics and perceptions, while inferential techniques such as Spearman's correlation and linear regression with bootstrapping (5,000 resamples) tested the relationship between sports participation and learner retention (Ott & Longnecker, 2010; Hayes, 2022). Qualitative data from interviews and FGDs were transcribed, coded thematically in NVivo v15, and analyzed using both inductive and deductive approaches to capture patterns and contextual insights.

## Ethical Considerations

Data were anonymous and handled with strict confidentiality to ensure ethical integrity. The study observed ethical principles of informed consent, confidentiality, beneficence, and integrity (Kessio & Chang'ach, 2020). For minors, consent forms were sent to class teachers, and only children whose class teachers provided consent were included.

# RESULTS AND DISCUSSION

## Presentation of results

The table below shows the descriptive responses for the effect of sports participation on learner retention.

Table 4.1: Descriptive statistics for the effect of sports participation on learner retention

| S/N | Items                                                                      | SD (%)  | D (%)    | NS (%)   | A (%)      | SA (%)     | Mean | $\sigma$ |
|-----|----------------------------------------------------------------------------|---------|----------|----------|------------|------------|------|----------|
| 1   | Sports activities increase pupils' willingness to stay in school.          | 3 (0.7) | 16 (3.6) | 33 (7.3) | 98 (21.8)  | 300 (66.7) | 4.50 | 0.832    |
| 2   | Pupils who participate in sports are less likely to drop out of school.    | 8 (1.8) | 21 (4.7) | 37 (8.2) | 188 (41.8) | 196 (43.5) | 4.20 | 0.871    |
| 3   | Sports participation strengthens pupils' sense of belonging to the school. | 2 (0.4) | 13 (2.9) | 29 (6.4) | 199 (44.2) | 207 (46.0) | 4.33 | 0.820    |
| 4   | Pupils involved in sports are more likely to continue schooling each year. | 5 (1.1) | 24 (5.3) | 35 (7.8) | 216 (48.0) | 170 (37.8) | 4.16 | 0.869    |

|    |                                                                                                                             |          |           |           |            |            |      |       |
|----|-----------------------------------------------------------------------------------------------------------------------------|----------|-----------|-----------|------------|------------|------|-------|
| 5  | Sports activities help pupils cope better with school challenges.                                                           | 4 (0.9)  | 18 (4.0)  | 27 (6.0)  | 200 (44.4) | 201 (44.7) | 4.28 | 0.829 |
| 6  | Sports participation reduces prolonged absenteeism (missing many days of school).                                           | 4 (0.9)  | 15 (3.3)  | 25 (5.6)  | 146 (32.4) | 260 (57.8) | 4.46 | 0.841 |
| 7  | Pupils who engage in sports show stronger commitment to completing each school year.                                        | 8 (1.8)  | 28 (6.2)  | 45 (10.0) | 181 (40.2) | 188 (41.8) | 4.14 | 0.921 |
| 8  | Sports programs help schools retain pupils across different class levels.                                                   | 2 (0.4)  | 15 (3.3)  | 26 (5.8)  | 200 (44.4) | 207 (46.0) | 4.32 | 0.774 |
| 9  | Sports participation enhances pupil motivation to stay enrolled in school.                                                  | 3 (0.7)  | 12 (2.7)  | 19 (4.2)  | 190 (42.2) | 226 (50.2) | 4.38 | 0.775 |
| 10 | The focus and discipline learned in sports help pupils remain attentive and engaged in school.                              | 4 (0.9)  | 14 (3.1)  | 29 (6.4)  | 182 (40.4) | 221 (49.1) | 4.34 | 0.850 |
| 11 | Sports participation improves pupils' problem-solving skills, helping them overcome academic barriers to staying in school. | 19 (4.2) | 58 (12.9) | 67 (14.9) | 180 (40.0) | 126 (28.0) | 3.75 | 1.022 |
| 12 | Sports participation shapes positive pupil behaviour, which supports continued school attendance and retention.             | 5 (1.1)  | 16 (3.6)  | 31 (6.9)  | 180 (40.0) | 218 (48.4) | 4.31 | 0.843 |

The results show that sports participation is associated with enhancing learner retention. Most respondents agreed 216 (48%) or strongly agreed (66.7%) that sports increase pupils' willingness to stay in school, with a mean of 4.50 (SD=0.832). Similarly, 57.8% strongly agreed and 32.4% agreed that sports reduce prolonged absenteeism, yielding a mean of 4.46 (SD=0.841). Sense of school belonging was also rated highly, with 46.0% strongly agreeing and 44.2% agreeing (mean=4.33, SD=0.820). However, problem-solving skills as a pathway to learner retention recorded the lowest mean (3.75, SD=1.022), with only 68.0% agreeing or strongly agreeing, suggesting this mechanism is less clearly observed.

The qualitative findings indicate that sports participation is associated with enhancing learner retention through multiple interconnected pathways. Pupils love school because of play, develop social connectedness, and build friendships with teammates and coaches. As one key informant noted:

*"Pupils are motivated to come to school because of sports and its accrued benefits like scholarships, recognition and some rewards like trophies. The many friends they make at school coupled with the friendly sports teachers encourage pupils to be willing to stay in school" (FGD4, 1<sup>st</sup> December 2025).*

Another informant highlighted the role of guidance and counselling:

*"Pupils who participate in sports are always given guidance and counselling. This keeps them in high gear and in the mood of not dropping out of school" (FGD5, 1<sup>st</sup> December, 2025).*

The findings also reveal that sports instil discipline, time management, resilience, and emotional regulation. One FGD participant noted:

*"Sports encourages motivation and concentration among pupils. They tend to be disciplined. They keep time. They are alert in class. They solve their problems and are willing to learn" (FGD2, 3<sup>rd</sup> December 2025).*

Health and regular attendance emerged as another key theme. A key informant explained:

*"Continuous engagement in sports makes pupils more likely to attend school regularly. Regular training and competition create a structured routine, which encourages consistent school attendance" (KII1, 27<sup>th</sup> November, 2025).*

Role modelling and guidance were also emphasized. One key informant stated:

*"Inspirations from coaches and games teachers demonstrating the values of education motivate pupils to participate in school. Skill development through sports pushes pupils to a more active role in the school and therefore, get motivated to remain in school" (KII4, 30<sup>th</sup> November, 2025)*

Table 4.2: Spearman Correlation Analysis between sports participation and learner retention

| Correlations                                                 |                         |                      |                   |
|--------------------------------------------------------------|-------------------------|----------------------|-------------------|
| Spearman's rho                                               |                         | Sports Participation | Learner Retention |
| Sports Participation                                         | Correlation Coefficient | 1.000                | .725**            |
|                                                              | Sig. (2-tailed)         | .                    | .000              |
|                                                              | N                       | 520                  | 520               |
| Learner Retention                                            | Correlation Coefficient | .725**               | 1.000             |
|                                                              | Sig. (2-tailed)         | .000                 | .                 |
|                                                              | N                       | 520                  | 520               |
| **. Correlation is significant at the 0.01 level (2-tailed). |                         |                      |                   |

The correlation analysis revealed a strong, positive, statistically significant relationship between sports participation and learner retention among primary school children in Karamoja, with a Spearman correlation coefficient of ( $\rho = 0.725$ ). This relationship was significant at the 0.01 level (2-tailed), with a p-value of 0.001. These results reject the hypothesis, sports participation has no significant effect on learner retention among primary school children in Karamoja region, Uganda. This indicates that increased sports participation is associated with higher learner retention. The magnitude of the correlation coefficient represents a strong positive relationship according to standard benchmarks. There is a high positive relationship between sports participation& learner retention at  $R = 0.725$ . The Correlation is significant at 0.001 which is below the threshold of 0.005.

Table 3.3: Regression Analysis between sports participation and learner retention

| Coefficients |   |                             |      |                           |      |
|--------------|---|-----------------------------|------|---------------------------|------|
|              |   | Unstandardized Coefficients |      | Standardized Coefficients |      |
|              | B | Std. Error                  | Beta | t                         | Sig. |

|                                          |          |                   |            |             |                   |
|------------------------------------------|----------|-------------------|------------|-------------|-------------------|
| (Constant)                               | 1.188    | .149              |            | 7.979       | .000              |
| Sports Participation                     | .734     | .034              | .711       | 21.385      | .000              |
| a. Dependent Variable: Learner Retention |          |                   |            |             |                   |
| R                                        | R Square | Adjusted R Square | Std. Error | F Statistic | Sig.              |
| .711 <sup>a</sup>                        | .505     | .504              | .36241     | 457.299     | .000 <sup>b</sup> |

The regression analysis indicated a statistically significant positive relationship between sports participation and learner retention among primary school children in Karamoja. The R Square value of 0.505 showed that sports participation explains 50.5% of the variance in learner retention, with the model's F-statistic of 457.299 and p-value of 0.001 confirming statistical significance. The unstandardized coefficient ( $B = 0.734$ ) and standardized Beta ( $\beta = 0.711$ ) indicate that each one-unit increase in sports participation improves learner retention by 0.734 units, reflecting strong predictive strength. The t-value of 21.385 and p-value of 0.001 further support the significance of this relationship.

To validate the regression results, bootstrapping with 5,000 resamples was conducted. The bootstrapped estimate for sports participation ( $B = 0.734$ , Bootstrap Bias = 0.002) remained consistent with the standard regression coefficient, indicating minimal bias. The bootstrap standard error (0.040) was slightly higher than the standard error (0.034), and the bootstrapped p-value remained significant at  $p < .001$ , confirming that the relationship between sports participation and learner retention is robust and not an artifact of normality violations or outliers (Efron & Tibshirani, 1993).

While these findings confirm the hypothesis, the remaining 49.5% of variance suggests that factors such as safe school environment, parental support, teacher engagement, school feeding programs, and cultural attitudes toward education also play critical roles in enhancing learner retention. Therefore, while sports participation is a significant predictor, a comprehensive approach integrating multiple interventions is necessary to optimize learner retention in the Karamoja region.

## DISCUSSION

In lieu of the study findings, it was reported that sports participation explains 50.5% of variance in learner retention, this aligns with Mukayiranga, and Andala (2021); sports participation and students' academic performance in public secondary schools in Rwanda, found out that there is a strong, positive correlation between sports participation and academic performance; with sports variables explaining 78.5% of the variance. The strong correlation ( $p=0.725$ ) exceeds that reported in similar contexts, possibly due to extreme deprivation in Karamoja region making sports participation unique powerful incentive (Datzberger, 2022). This supports Garcia and Subia (2019); High School Athlete; Their motivation, study habits, self-discipline and academic performance of Palayan City District, Nueva Ecija, Philippines, they found out that non-school athletes were 57% more likely to drop out. According to Owen et al. (2022); Sport Participation and Academic Performance in Children and Adolescents: A Systematic Review and Meta-analysis, they concluded that increased "school connectedness" is a well-established mechanism through which sports protect against early school leaving. The high mean score for willingness to stay in school (Mean=4.50) confirms Aquino and Reyes' (2022); exploring the connection between athletics and academic success in Phillipines; who argued that athletic involvement fosters non-cognitive skills and psychological assets directly transferable to academic persistence. However, the lower agreement on problem-solving skills (Mean=3.75) suggests that cognitive transfer pathways may require more methodological integration, a condition likely absent in under-resourced Karamoja schools (Mollet & Otieno, 2022).

The result that sports participation reduces prolonged absenteeism (Mean=4.46) agrees with Liu and Taresh (2024); Balancing Athletic and Academic Excellence: A Quantitative Study of Student-Athletes' Time Management Strategies; they argued that structured team environments create routine, accountability, and mentor relationships that make prolonged absences more difficult. The finding that sports strengthen school

belonging (Mean=4.33) aligns with Arey and Levental (2024); Beyond the Game: The Influence of Varying Degrees of Sports Involvement on College Students' Self-Perceptions and Institutional Affiliation; they found out that even occasional sports involvement enhances students' connection to their institution. Furthermore, Owen et al. (2022), identified increased school connectedness as a well-established protective mechanism against dropout. Qualitatively, respondents emphasized that friendships formed with teammates and the guidance of coaches transform schools from mere academic institutions into meaningful social communities. This relational mechanism is particularly powerful in pastoralist contexts where alternative sources of institutional affiliation are limited (Kamau et al., 2015). The high agreement on motivation (92.5%) further supports Ngangbam's (2023): Sports and Physical activities on Academic Performance and Overall personal development; observed that athletic engagement sustains academic motivation even during early adolescence when developmental vulnerabilities typically produce declines.

The current study extends empirical literature by providing the first quantitative evidence from a high-attrition, nomadic pastoralist region in Uganda, filling the critical gap identified by Mollel and Otieno (2022) in Tanzania and Datzberger (2022) in Karamoja. Unlike previous studies that focused on secondary education in stable, well-resourced areas, this research focused on primary schools where dropout rates are very high. The  $R^2$  value of 0.505 indicates that 49.5% of learner retention variance is explained by other factors, consistent with Brown et al. (2017), who identified safe environment, school feeding programs, parental support, and cultural attitudes as critical determinants of educational outcomes in Karamoja. This suggests that while sports participation is a powerful effective intervention, it should be implemented alongside complementary interventions such as teacher training, infrastructure improvement, and community engagement to maximize learner retention, Go back to School campaigns, enacting of by-laws and compulsory boarding for all Karamoja primary schools (UNICEF, 2023; World Bank, 2018).

## CONCLUSIONS

Sports participation is associated with enhancing learner retention in Karamoja's primary schools by increasing pupils' willingness to stay in school, reducing prolonged absenteeism, and strengthening their sense of belonging. The discipline, focus, and life skills cultivated through sports translates directly into improved motivation and sustained enrollment. Sports participation accounts for over half of the explained variance in learner retention outcomes, making it a powerful, associative evidence-based strategy for combating dropout in marginalized, nomadic pastoralist settings.

## RECOMMENDATIONS

- ☐ The Ministry of Education and Sports should establish mandated structured sports as a formal learner retention strategy in all Karamoja primary schools including minimum weekly sports hours and basic equipment provisioning.
- ☐ The Ministry of Education and Sports should link sports participation to scholarships, certificates, and progression incentives, as these emerged as powerful motivational tools.
- ☐ The District Education Officers should establish school-based leagues like intramurals and extramural leagues operating throughout the year with very minimal resources.
- ☐ Schools should train coaches and prioritize female participation and prioritize recruiting female coaches to address gender-specific learner retention barriers.

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