

Determinants of sports performance of athletes in Nigeria National School Sports Festival

Lawal, O. T.^{*}, Mubarak, U., Sani, M. U., Oloyede, M. A., & Brinemigba, E. E.

Department of Human Kinetics and Health Education, Ahmadu Bello University, Zaria – Nigeria

*Corresponding Author: lawalolataofeeko43@gmail.com

Abstract

The study assessed the determinants of sports performance by athletes in the Nigeria National Sports Festival. To achieve this purpose, the ex-post facto research design was used. The sample size of 400 athletes was randomly selected from the population of 14,000 athletes. The instrument for data collection is a structured questionnaire developed by the researcher. The instrument was validated by experts from Ahmadu Bello University's Department of Human Kinetics and Health Education in Zaria and pilot-tested with athletes in schools in Zaria, Nigeria. The instrument has a Cronbach Alpha reliability rating of 0.889, which is considered reliable for the study. The research questions were answered using mean and standard deviation. The null hypotheses were analyzed using inferential statistics of chi-square at 0.05 level of significance using Statistical Package for Social Sciences (SPSS). The result revealed that: training significantly determines the sports performance of athletes in Nigeria National Sports Festival ($\chi^2 = 127.34$, $p = 0.000$), and facilities significantly determine the sports performance of athletes in Nigeria National Sports Festival ($\chi^2 = 108.10$, $p = 0.000$). Based on the findings, the study concluded that training and facilities are determinants of sports performance by athletes in the Nigeria National Sports Festival. Based on the conclusion, the study recommended the need for qualitative training programs for the athletes to update them on the current developments in sports and the need for the government and school administrators to ensure that sports facilities are provided in adequate quantity and continuously maintained to enhance athlete's performance in the Nigeria National School Sports Festival.

Keywords: *training, facilities, determinants, sports performance, athletes*

Introduction

Sports play a crucial role in developing a nation, particularly for its youth, who are powerful agents of change in various national issues. Athletic ability is a critical factor in youth development (Adedoyin & Amao, 2021). Adebayo & Olatunde (2022) further highlights the pervasive nature of sports, asserting that knowledge of sports has significantly contributed to advancements in both art and science. In addition, Adedoyin and Amao (2021) underscore the positive impact of sports participation on personality development,

suggesting that it can enhance an individual's social standing. Sports, as defined by Udomiaye (2013), are structured competitive activities where outcomes are determined by strategies, physical prowess, and skills, all governed by a set of established rules. They hold significant importance in a nation's culture as they permeate societal structures, influencing institutions and individuals in numerous ways, and serving as symbols of national unity and cohesion. Omoruan and Eboh (2015) highlighted the National Sports Festival, initiated in 1973, which had three primary objectives. Firstly, it aimed to foster widespread

participation in amateur sports from the grassroots to the national level across all states in Nigeria, with the goal of talent discovery. Secondly, it sought to encourage the organization of amateur sports competitions nationwide to elevate the performance standards of Nigerian athletes. Lastly, it aimed to foster and strengthen camaraderie among athletes across the federation. In essence, the National Sports Festival is geared towards boosting national sports development and making substantial contributions to the national economy.

School sports, as defined by Orunaboka and Ihekwe (2011), are structured competitive activities that require intense physical effort or the application of complex physical skills. The individuals who participate in these activities are driven by a mix of intrinsic pleasure derived from the activity itself and the potential for earning external rewards through athletic performance. Orunaboka and Nathan (2017) noted that sports have a significant impact on a nation's life, both economically and politically. The successful planning and management of a school sports program is a reflection of a nation's human potential and the effective utilization of this potential in organizing competitions to identify talent among school children. In a populous country like Nigeria, with over 150 million people, it is undeniable that there are talented young individuals in sports compared to other countries worldwide. However, Jain (2015) emphasized that the process of discovering and developing young athletes through school sports programs in Nigeria has not yet reached its full potential. This is due to various challenges the nation faces, including socio-economic, psychological, and gender-related issues. The school sports program is structured to provide opportunities for secondary school athletes to participate in a variety of sports activities, enabling a broad spectrum of abilities to excel.

Adesoye (2012) asserted that an effective sports program can be successfully implemented in schools and other institutions if the funds allocated

for sports activities are properly managed by sports administrators. Ajadi, Babadare, Ibraheem, and Adesoye (2014) noted that performance is typically viewed as a cumulative measure of individual results, such as performance over a competition season, rather than a single or isolated activity. The performance of an athlete is largely dependent on the motivational strategies implemented by sports managers and the availability of sports facilities for training within a given period. An athlete's sports performance can be evaluated based on the results achieved in a competition or the number of medals won in a tournament, either by a team or an individual athlete. Performance in sports refers to the highest level of peak reached by an athlete as a result of their training regimen. Furthermore, winning is a crucial aspect of sports and can be appreciated when athletes understand that the pursuit of victory can enhance their performance, commitment, and moral development, all of which are facilitated by effective sports management functions (Joy & Okou, 2018).

The Nigeria National School Sports Festival is a premier event aimed at promoting sports among school-aged children across the country. It serves as a platform for discovering and nurturing young athletic talent, fostering a spirit of healthy competition, and encouraging physical fitness among students. The festival encompasses a wide range of sports disciplines, including track and field, football, basketball, volleyball, and swimming, among others, providing a comprehensive arena for students to showcase their skills (Akpodonor, 2022). It has since evolved into a platform for young athletes from the 36 states of Nigeria to showcase their talent and potential (Akpodonor, 2022).

The festival is organized by the National School Sports Federation (NSSF) in collaboration with various educational and sports authorities in Nigeria (Ibrahim, 2013). It typically features regional qualifiers leading up to the national event, ensuring broad participation and

representation from schools in different parts of the country. This structure helps in identifying and grooming potential sports stars from the grassroots level. Ibrahim (2013) noted that from 1998 to 2008, the N.S.S.F organized national competitions for secondary and primary schools as separate events. However, in 2008, these separate games were combined to form the inaugural National School Sports Festival, known as “Lagos 2008”. The festival includes events for three age groups: primary (under 12), junior secondary (under 15), and senior secondary (under 17). This annual festival has since become a platform for young athletes to demonstrate their skills and develop their potential. With the backing and sponsorship of the state government hosting the event, the National School Sports Festival took place annually from 2008 to 2012.

Training, encompassing both physical preparation and mental conditioning, plays a crucial role in shaping an athlete’s performance (Haugen, Seiler, Sandbakk & Tønnessen, 2019). Extensive sport-specific practice, including optimal progression of training volume, frequency, and intensity distribution, is required to stimulate sport-specific adaptive responses (Xiang, Dong, Kamalden, Ismail & Luo, 2024). Moreover, the commitment to training is a significant determinant of improvement in performance (Lopwus, 2014).

Facilities, on the other hand, refer to the infrastructure available for training and competition. The quality and availability of these facilities can significantly impact an athlete’s preparation and performance (Anyanwu & Asogun, 2015). However, many sports facilities, especially at the community and social levels, were not originally designed for specific sports (Dauda-Olajide, 2015). This makes it crucial for facility managers to ensure that these facilities do not pose any risk to players or spectators.

The researchers have identified a critical issue regarding the performance of athletes at the

Nigeria National School Sports Festival, attributing significant influence to the quality of training and available facilities. Despite the rich potential and talent among young athletes, there is a notable discrepancy in their performance levels, which the researchers believe is largely due to inadequate training programs and substandard sports facilities. The study aims to delve into these determinants to understand their impact on sports performance and to propose actionable solutions to enhance the training environment and facilities for young athletes in Nigeria.

Purpose

The study was to assess the determinants of sports performance of athletes in the National School Sports Festival in Nigeria. Specifically, the study intends:

1. to ascertain if training is a determinant of sports performance of athletes in the National School Sports Festival in Nigeria
2. to determine if facilities are a determinant of the sports performance of athletes in the National School Sports Festival in Nigeria.

Research Questions

The following questions were raised to guide the study:

1. to what extent is training a determinant of the sports performance of athletes in the Nigeria National School Sports Festival?
2. to what extent are facilities a determinant of the sports performance of athletes in the Nigeria National School Sports Festival?

Hypotheses

The following hypotheses were formulated for the research:

1. training is not a significant determinant of the sports performance of athletes in

- the Nigeria National School Sports Festival
- facilities are not a significant determinant of the sports performance of athletes in the Nigeria National School Sports Festival

Methodology

An ex-post facto research design was used. Ex-post facto refers to the design done after the event. Ex-post facto research design, according to Sekaran and Bougie (2016), investigates the link between two or more factors that have already occurred. A sample size of 400 athletes was chosen from the population of 14,000 athletes using a simple random selection procedure. The researcher's self-developed questionnaire served as the data-collecting tool in this study. The following response categories

were scored using a five (5) point Likert scale: Strongly Agree SA= 5 points; Agree A= 4 points; Undecided UD= 3 points; Disagree D= 2 points; and Strongly Disagree SD=1 point.

Experts from Ahmadu Bello University's Department of Human Kinetics and Health Education in Zaria validated the instrument. The instrument was pre-tested with athletes in schools in Zaria, Nigeria, to guarantee its validity. The instrument has a Cronbach Alpha reliability rating of 0.889, which is considered reliable for the study. The acquired data was analyzed using the SPSS software version 23. The study's research questions were addressed by calculating the mean and standard deviation (SD). Additionally, all hypotheses were tested using the chi-square statistic, with a significance level set at 0.05.

Result

Research Question One: to what extent is training a determinant of the sports performance of athletes in the Nigeria National School Sports Festival?

Table 1: Training as a determinant of sports performance of athletes in the Nigeria National School Sports Festival

S/N	Items	Mean	Std. Dev.
1	The quality of my training significantly affects my sports performance at the National School Sports Festival	3.93	0.98
2	I receive adequate support and resources for training at the National School Sports Festival	3.77	0.94
3	My training program is tailored to meet the specific needs of my sport(s) at the National School Sports Festival	3.66	0.91
4	The coaching staff effectively communicates training objectives and strategies to me	3.59	0.81
5	I have access to the necessary equipment and facilities for training at the National School Sports Festival	3.58	0.69
6	I believe that improvements in my training regimen could lead to better sports performance at the National School Sports Festival	3.62	0.93
7	My training schedule allows for adequate rest and recovery between sessions	3.72	0.97
8	The level of competition in the National School Sports Festival motivates me to train harder	3.64	0.96
9	My coaches provide constructive feedback to help me improve my performance during training	3.82	0.89
	Average	3.70	0.90

Table 1 displays the mean scores of the replies on training as a determinant of the sports performance of athletes in the Nigeria National School Sports Festival. The replies for each question were calculated, and item 1 got the highest mean score of 3.93, implying that the majority of respondents agreed that training quality has a substantial impact on sports

Research Question Two: to what extent are facilities a determinant of the sports performance of athletes in the Nigeria National School Sports Festival?

performance during the National School Sports Festival. However, the aggregate mean score of 3.70 was obtained which is greater than the decision mean of 3.5. This implies that training is a determinant of the sports performance of athletes in the Nigeria National School Sports Festival.

Table 2: Facilities as a determinant of sports performance of athletes in National School Sports Festival in Nigeria

S/N	Items	Mean	Std. Dev.
1	The quality and availability of sports facilities significantly impacted my sports performance at the National School Sports Festival	3.92	0.69
2	The sports facilities at the National School Sports Festival meet the specific needs of my sport(s)	3.87	0.68
3	I have access to well-maintained and safe sports facilities during training and competitions	3.75	0.72
4	The availability of sports facilities at the National School Sports Festival has had a positive impact on my motivation to participate and perform well	3.93	0.87
5	I believe that improvements in the quality and accessibility of sports facilities would lead to better sports performance at the National School Sports Festival	3.75	0.92
6	Adequate and modern sports facilities contribute to reducing the risk of injuries during training and competitions	3.59	0.86
7	The sports facilities are well-equipped with the necessary equipment and resources for training and competitions	3.87	0.97
8	The availability of facilities is a determining factor in the success of the National School Sports Festival	3.98	0.99
9	Facilities play a crucial role in my ability to practice and train effectively	3.68	0.88
	Average	3.82	0.84

Table 2 displayed the mean scores of the replies on facilities as a determinant of the sports performance of athletes in the Nigeria National School Sports Festival. The replies for each question were calculated, and item 8 got the highest mean score of 3.98, implying that the majority of respondents agreed that the availability of facilities is a determining factor in

the success of the National School Sports Festival. However, the aggregate mean score of 3.82 was obtained which is greater than the decision mean of 3.5. This implies that facilities are determinants of the sports performance of athletes in the Nigeria National School Sports Festival.

Test of Hypotheses

Hypothesis One: training is not a significant determinant of the sports performance of athletes in Nigeria National School Sports Festival

Table 3: Chi-square analysis on Training as a determinant of sports performance by athletes in Nigeria National School Sports Festival

Variable	N	df	Cal. χ^2 value	χ^2 Crit. value	p-value	Decision
Training	400	32	127.34	46.19	0.000	Ho ₂ Rejected

$P < 0.05$

Table 3 indicates a calculated chi-square value of 127.34, surpassing the critical value of 46.19 at a 0.05 significance level with 32 degrees of freedom. Because the calculated value of 127.34 exceeds the critical threshold of 46.19 for 32 degrees of freedom, the null hypothesis which asserted that training is not a significant

determinant of sports performance among athletes at the Nigeria National School Sports Festival is rejected. This implies that training significantly determines the sports performance of athletes in the Nigeria National School Sports Festival.

Hypothesis Two: facilities are not a significant determinant of the sports performance of athletes in Nigeria National School Sports Festival

Table 4: Chi-square analysis on Facilities as a determinant of sports performance by athletes in Nigeria National School Sports Festival

Variable	N	df	Cal. χ^2 value	χ^2 Crit. value	p-value	Decision
Facilities	400	32	108.10	46.19	0.000	Ho ₂ Rejected

$P < 0.05$

Table 4 shows that the calculated chi-square value is 108.10 and the critical value is 46.19 with a degree of freedom of 32 at a 0.05 level of significance. Since the calculated value of 108.10 is greater than the critical value of 46.19 at 32 degrees of freedom, the null hypothesis which stated that facilities are not a significant determinant of sports performance of athletes in Nigeria National School Sports Festival is rejected. This implies that facilities significantly determine the sports performance of athletes in the Nigeria National School Sports Festival.

athlete selection, inadequate training planning, insufficient athlete motivation, and a lack of dedication to coaching practices. As highlighted by Serrano et al. (2013), providing athletes with comprehensive training through long-term plans is crucial for developing elite-level athletes.

This finding further aligns with the study by Stanton, Reaburn, and Humphries (2014), who examined the impact of six weeks of stability ball training on running economy in high school athletes. While their study demonstrated an improvement in core stability, the lack of a measurable effect on running economy suggests that a combination of factors, such as participants' training background, loading parameters, or exercise selection, may have influenced the outcome. Similarly, Sato and Mokha (2019) investigated the relationship between core training and running performance, concluding that training does indeed predict sports performance.

Discussion of the Findings

Hypothesis one revealed that training significantly determines the sports performance of athletes in the Nigeria National School Sports Festival. The findings of this study echo the observations of Lopwus (2014), who identified several factors contributing to poor performance in sports competitions, including inappropriate

Hypothesis two revealed that facilities significantly determine the sports performance of athletes in the Nigeria National School Sports Festival. This shows that facilities determine the sports performance of athletes in the Nigeria National School Sports Festival. Ensuring adequate and accessible sports facilities for all sports disciplines is a crucial priority for fostering the growth and development of sports. The responsibility for providing these facilities should be shared among the government, private organizations, and individual contributions (Bakari, 2017).

Achieving satisfactory results for athletes is severely hampered when training facilities and equipment fall short of adequate standards, as emphasized by Awosika (2019). The subpar condition of sports facilities in universities poses a significant obstacle to the effective administration, organization, and management of sports programs. As Bucher and Knotee (2012) aptly pointed out, sports facilities should be meticulously planned and constructed with a forward-looking vision. Consequently, facility maintenance must be prioritized to ensure the longevity of these infrastructures. Effective sports participation hinges on the implementation of sound facilities maintenance management practices.

Danjuma (2017) aptly highlighted the critical role of sports facilities in fostering a thriving sports environment within educational institutions. Studies have consistently demonstrated the positive impact of facility availability on sports participation among students, as evident in the findings of a survey conducted among secondary school students in Kwara State, Nigeria. This aligns with the observations of Anyanwu and Asogun (2015), who emphasized the paramount importance of adequate facilities in the successful implementation of physical education programs. It is crucial to recognize that well-maintained and functional facilities catalyze attracting and engaging students and instructors alike.

Seidina, Afolabi, Joel, Okunloye, and Ameen (2019) demonstrated that inadequate sports facilities and equipment significantly hinder students' participation in sports. Corroborating this finding, the present study revealed that a majority of respondents acknowledged the availability of facilities provided for athletes' performance in the Nigeria National School Sports Festival. This is particularly evident when new sports facilities are constructed in schools.

This study's findings align with Dauda-Olajide (2015), who concluded that the condition of sports facilities in Nigeria significantly impacts athletes' participation, interest, and performance. However, this finding contradicts Awoma, Okakah, and Arainwu's (2015) study, which evaluated sports facilities as a predictor of sports development in Delta State, Nigeria, and found no significant relationship between the two.

Conclusion and Recommendations

The study's findings indicate that training and facilities significantly impact the sports performance of athletes in the Nigeria National School Sports Festival. Consequently, the study recommends the implementation of high-quality training programs to keep athletes informed about the latest developments in sports. Additionally, the government and school administrators should prioritize the provision of adequate and well-maintained sports facilities to foster athlete performance excellence in the Nigeria National School Sports Festival.

References

- Adebayo, S. O., & Olatunde, O. A. (2022). The impact of sports participation on the social and emotional development of secondary school students in Nigeria. *Journal of Physical Education, Recreation and Dance*, 55(1), 63-70.
- Adedoyin, O. A., & Amao, A. O. (2021). The role of sports in the development of life skills among secondary school students in Nigeria. *International Journal of Physical Education, Recreation and Sport*, 11(2), 101-110

- Adesoye, O. (2012). The role of school sports in national development: The case of Nigeria. *Journal of Physical Education and Sport*, 12(2), 185-191.
- Adeyemi, O. J., & Adesoye, O. (2022). The challenges and prospects of funding school sports programs in Nigeria: A study of secondary schools in Ibadan, Oyo State. *International Journal of Physical Education, Sport and Recreation*, 12(1), 59-68.
- Ajadi, B. A., Babadare, M. O., Ibraheem, M. A., & Adesoye, O. (2014). The relationship between motivation and performance of athletes in secondary schools in the North Central States of Nigeria. *Journal of Human Sport and Exercise*, 9(2), 233-242.
- Akpodonor, G. (2022). *National Sports Festival: from Lagos '73 to Delta 2022*. <https://guardian.ng/sport/national-sports-festivalfrom-lagos-73-to-delta-2022/>
- Awoma, O. O., Okakah, V. I., & Arainwu, S. A. (2015). Sports facilities as a predictor of sports development in Delta State, Nigeria. *Journal of Sports Science and Medicine*, 14(4), 531-536
- Awosika, O. O. (2019). The impact of sports facilities and equipment on athletes' performance in Nigeria's higher education institutions. *Journal of Sports and Science*, 7(1), 33-40.
- Bakari, A. (2017). The impact of sports facilities on sports participation in universities: A case study of Usmanu Danfodiyo University, Sokoto, Nigeria. *Journal of Sports and Science*, 5(2), 83-90.
- Bucher, D., & Knotee, H. (2012). *Facility management in sport and recreation: A guide to best practice*. Abingdon, Oxon: Routledge.
- Danjuma, A. A. (2017). The influence of sports facilities on the participation of students in secondary schools in Kwara State, Nigeria. *Journal of Physical Education, Recreation and Dance*, 40(1), 1-7.
- Dauda-Olajide, A. A. (2015). The state of sports facilities in Nigeria and its impact on sports participation. *Journal of Sports and Science*, 2(1), 33-40.
- Haugen, T., Seiler, S., Sandbakk, Ø., & Tønnessen, E. (2019). The Training and Development of Elite Sprint Performance: An Integration of Scientific and Best Practice Literature. *Sports Medicine - Open*, 5(1), 1-16
- Ibrahim, S. (2013). The role of the Nigeria School Sports Federation in the development of sports in Nigeria. *Journal of Sports and Science*, 1(1), 23-31.
- Jain, B. K. (2015). *Sports development in India: A critical analysis*. Delhi: Sports Publications.
- Joy, M. E., & Okou, E. (2018). The impact of sports management on athletic performance and moral development. *Journal of Sports and Science*, 6(2), 121-128.
- Lopwus, M. (2014). Factors contributing to poor performance in sports competitions among secondary schools in Kenya. *Journal of Physical Education, Recreation and Dance*, 37(2), 13-19.
- Omoruan, M. E., & Eboh, A. O. (2015). The National Sports Festival: A critical evaluation of its impact on sports development in Nigeria. *Journal of Physical Education and Sport*, 15(2), 245-252.
- Orunaboka, A. C., & Ihekwe, O. (2011). Sports and youth development in Nigeria: The challenges and prospects. *Journal of Sports Science and Medicine*, 10(3), 434-439.
- Orunaboka, A. C., & Nathan, A. (2017). Sports and national development: The Nigerian perspective. *Journal of Physical Education and Sport*, 17(1), 105-112.
- Rechenmacher, C.M. K., Keating, M., Nichols, J. D., & Nichols, J. M. (2022). An evidence-based approach to assessing the effectiveness of training regimen on athlete performance: Youth soccer as a case study. *PLoS ONE*, 17(11), e0276762

Sato, K., & Mokha, S. (2019). The effect of core training on running performance in high school athletes. *Journal of Sports Science and Medicine*, 18(2), 223-230.

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach*. 7th Edition, Wiley & Sons, West Sussex.

Serrano, M., García-Hermoso, M., Ibáñez, J., & González-Aguero, J. (2013). Training and competition in elite sports. In *Sports Science Handbook* (pp. 361-386). Cham: Springer.

Stanton, R. E., Reaburn, P., & Humphries, B. J. (2014). The effect of stability ball training on running economy in high school athletes. *Journal of Strength and Conditioning Research*, 28(11), 2969-2976.

Udomiaye, S. (2013). The role of sports in national development. *Journal of Sports and Science*, 1(2), 102-108.

Xiang, C., Dong, W., Kamalden, T. F. T., Ismail, N., & Luo, H. (2024). Structural analysis of environmental factors of sports talent development. *Current Psychology*, 43, 6516–6532.