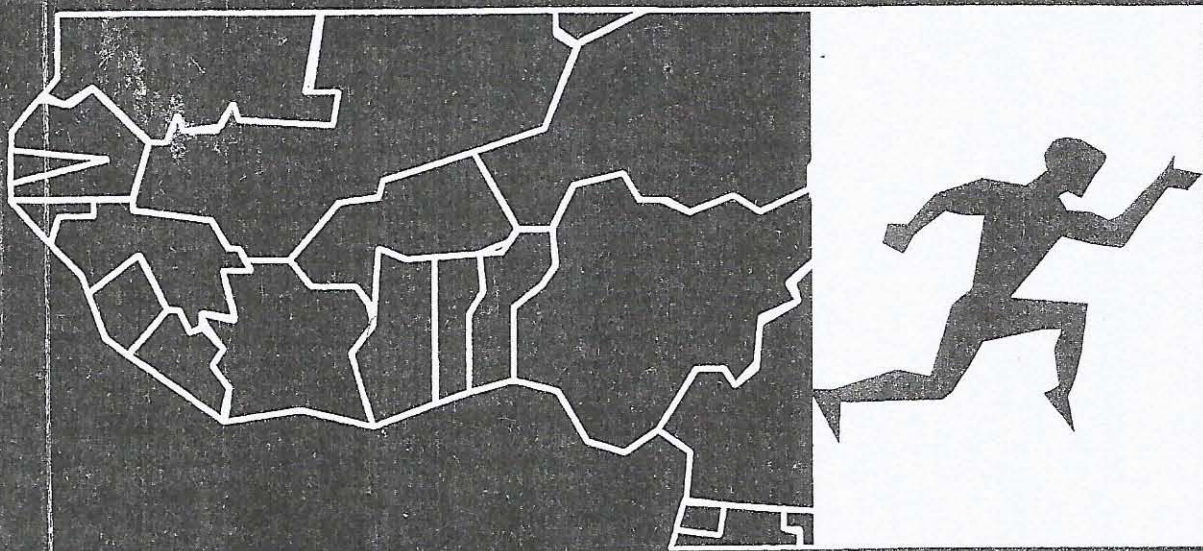


16

West African Journal of Physical & Health Education

Volume 7

July 2003



**WEST AFRICAN
JOURNAL
of
PHYSICAL AND
HEALTH EDUCATION**

Volume 7

2003

Editorial Board

Editor-in-Chief

Professor Elizabeth I. Nwankwo,
University of Ibadan, Ibadan

Managing Editor

B.O. Ogundele, Ph.D
*Department of Human Kinetics and
Health Education, University of Ibadan, Ibadan*

Member

A.O. Adegbesan, Ph.D
*Department of Human Kinetics and
Health Education, University of Ibadan, Ibadan*

ISSN 0189 904X

Editorial

WAJOPHE (*West African Journal of Physical and Health Education*) is an interdisciplinary journal that publishes articles, research findings, and position papers in physical and health education, recreation, sport and dance. The journal came into existence as a result of the indefatigable efforts and foresight of the members of the Department of Physical and Health Education (now Department of Human Kinetics and Health Education), University of Ibadan, Ibadan.

The publication of the current edition of this journal has been made possible due to the untiring efforts and commitment of the present Head of Department and the Editor-in-Chief of this volume, Professor Elizabeth I. Nwankwo. The financial support of the Department in making the publication possible is hereby acknowledged.

We hope our readers will find the articles in this volume illuminating and educative. Some are research-based and others are reviews in various areas of physical, health education, recreation, sport and allied disciplines.

© West African Journal of Physical and Health Education, WAJOPHE, 2003

ISSN 0189 904X

All rights reserved.

All correspondence to
The Department of Human Kinetics and Health Education,
University of Ibadan, Ibadan.

Published for WAJOPHE by
SIBON BOOKS LIMITED
0803 3353 220

Printed by: Kenson Prints, Ibadan.

Contents

PART ONE: HUMAN KINETICS

- 1: Integrating Handicapped People Into the Larger Society
Through Sport 3
Ademuyiwa, Olusegun A.
- 2: Effects of Aerobic Exercise Programme on Anaemic
Parameters of Renal Disease Patients 10
Y.B. Ajibike
- 3: Performance Fitness Level of Football Referees in Nigeria 18
Elizabeth I. Nwankwo and Dele Oladipo
- 4: Physical Education: Its Physical, Physique and Fallacies 26
Akin-Taylor, Mopelola A.
- 5: Influence of Sport Participation on the Reproductive
Functions of Female Athletes..... 35
Amina Kaidal and Ademola Abass
- 6: Physical Education Programme and Academic Performance
of Students in Obowo LGA of Imo State..... 43
Francisca C. Anyanwu
- 7: Personal Attributes as Determinants of Sport Participation
Among Undergraduates in Selected Nigerian Universities 51
Yomi Awosika and S.O. Babatunde
- 8: Curbing Sport Hooliganism During Collegiate Sport in Nigeria .. 58
J.F. Babalola and P.O. Oyeniya
- 9: Effects of Interval and Interval-Circuit Training Programmes
on the Lean Body Weight and Percent Body Fat of Mobile
Police Servicemen..... 60
L.O. Eboh and B.C. Osakunih

10:	Dynamogenic Factors in the Execution of the Lay Up Shot in Basketball by Selected School Boys in Ibadan North LGA of Oyo State	71
	<i>Fadoju, Andrew O. and Ohuruogu, Ben</i>	
11:	Assessment of Health Counselling Practices of Physical and Health Education Teachers in Adamawa State	79
	<i>Hamfyelto, S. Stephen, Zakaria, Nayawo and Shetima, Lyatu</i>	
12:	Implications of Legal Liability for Secondary School Physical Education Teachers.....	88
	<i>E.O. Marakinyo</i>	
13:	Ensuring Hitch-Free Intercollegiate Sport in Nigeria: A Critical Analysis.....	95
	<i>O.A. Olajide</i>	
14:	Relationship Between Instructional Strategies and Students' Academic Performances in Physical and Health Education Programmes	104
	<i>Isaac Ola. Oloruntoba</i>	
15:	Effects of Gravity on Athletes' Output in Selected Athletic Events: Sydney 2000 Olympics	111
	<i>A.I. Lawal and F.O. Ibikunle</i>	
16:	Tapping Abilities from Disabilities, Contribution of Sport to Life of the Disabled	119
	<i>Salami, Isiaka Abiodun</i>	
17:	Fiscal Management, Source Funding and Utilization as Bases for Effective Administration of Physical Education and Sport Programme.....	125
	<i>K.O. Omolawon</i>	
18:	Comparative Study of Influence of Acquisition of Skill and Achievement Motivation on Socialization into Sport of Republic of Benin and Nigerian Adolescent Athletes.....	131
	<i>Adegbesan, Olufemi Adegbola</i>	
19:	Influence of Age on Rating Selected Reinforcers as Incentives Among Nigeria Elite Soccer Players.....	139
	<i>Michael Adeniyi Ajayi and Fidelis Okopi</i>	

20:	Self-Distinction and Group Consciousness as Motive for Adoption of Facial Appearance among Elite Male Soccer Players.....	149
	<i>O.S.A. Okhioya</i>	
21:	Save Our School Sport, Enforce Eligibility Rules.....	160
	<i>Babatunde Olu Asagba</i>	

PART TWO: HEALTH EDUCATION

22:	Male Involvement in Family Planning Practices in Shomolu LGA of Lagos State	169
	<i>Idowu, Bidemi</i>	
23:	Urban Space Hawking: Perils of Female Child Abuse and Social Implications in a Developing City	176
	<i>Ignatius Eno. Uduk and Rosemary D. Ebong</i>	
24:	Alcohol Intake, Cigarette Smoking, Exercise and Total Cholesterol Levels in Sedentary Male Workers.....	185
	<i>Veronica C. Igbanugo and O.A. Akeredolu</i>	
25:	Integration of Child Survival Strategies in Primary Healthcare Practice in Akwa Ibom State.....	192
	<i>Maria Michael Ikorok</i>	
26:	Pattern of Alcohol Use Among Secondary School Students in Oredo LGA of Edo State	204
	<i>Chinwe Lucy Marchiè and H.S. Nnamdi</i>	
27:	Gender Differences in Knowledge and Attitude Towards Tobacco Smoking Among University of Ibadan Students	212
	<i>O.A. Moronkola and T.O. Akinterinwa</i>	
28:	Nutrition as Correlate of Productivity and Nation-Building	219
	<i>R.A. Ojo</i>	
29:	Awareness of Health Risks and Attitude of Women in Ilorin Towards Female Genital Mutilation.....	228
	<i>A.B. Okesina, Obiyemi Wole and S.H. Umoh</i>	
30:	Evaluation of Knowledge of Drug Abuse Among Selected Colleges of Education Students	234
	<i>Olubayo-Fatiregun, M.A.</i>	

31:	Gender Differences in the Perception of Culture and Poverty as Causes of Violence Against Women Among Osun State Workers	240
	<i>B.O. Ogundele and C.O. Odejide</i>	
32:	Family Planning: A Veritable Tool for Safe Motherhood	247
	<i>Taiwo A. Adelokun</i>	
33:	An Appraisal of Organizational Theory in Its Total Ramifications.....	253
	<i>D.A. Olaniyan and O.E. Obadara</i>	

Performance Fitness Level of Football Referees in Nigeria

ELIZABETH I. NWANKWO,* Ph.D and DELE OLADIPO**

Abstract

A sample of 200 top male football referees participate in the study to determine the performance fitness level of football referees in Nigeria. The design for the study is ex-post facto research design. The participants are tested on speed, leg power and agility. The means, range, standard deviation, percentile rank of the scores of the tests are used to describe the data while the inferential statistics used is the students' t-test analysis to establish the significant differences between the subjects' determined values in the tested parameters and that of FIFA standards and Margaret, Safrit and Wood (1995) age and gender based average norm.

The results show that the participants possess significantly superior speed, lower leg power and similar agility levels when compared with the stated norms. It is recommended that NFA/NRA should ensure that the referee's training include conditioning programmes that will develop their performance fitness levels.

Introduction

Physical fitness plays a major role in modern football and any referee who is not physically fit is surely negating all efforts towards the development of the game. A football referee who is physically fit and who prepares himself mentally for his match more often than not is likely to commit less errors of judgement in the course of the match.

Every sporting activity has its own characteristics. Encinar (1996) points out that for a football referee these can be defined as follows: in terms of physical requirements he is practising an individual sport; in terms of his tactical activity he is part of a team with his two assistants; in terms of

* Professor, Head, Department of Human Kinetics and Health Education, University of Ibadan, Ibadan.

** Department of Human Kinetics and Health Education, University of Ibadan, Ibadan.

movement he is like a football player in an open space with no opponents. These complex requirements determine what he must be prepared for during a match.

A good referee must maintain physical and mental fitness to ensure good positioning and judgement at all times in the field of play. A sum total of these qualities will undoubtedly give a referee good reaction time, stamina, speed, power, agility and accuracy of his officiating. The above stated skill-related or performance-related variables are needed by the referee for good performance during the 90 or perhaps 120 minutes of play (Oladipo, 2000).

He needs to be quick in his movements and in his reactions so that he can adjust according to the location of the players and the ball, and take decisions rapidly and decisively. External conditions such as the weather or poor state of the pitch can also increase the demands made of a referee. Encinar (1996) submits that a good standard of fitness also brings with it the mental assurance that is necessary for taking correct decision.

These are all indications that modern football is a fast moving game that requires speed from the players and the officials. Speed can be defined as the velocity of body, body parts or objects, i.e. it is rate of motion. It is concerned with the time required to move or swim a given distance (Verducci, 1980). Speed is basically a result of applying force to mass. In the case of human movements, the body or segments of it, represents the mass, and the muscle contraction represents the force. Speed is an important factor in almost all court and field games and which can make the difference in whether a performer is able to gain an advantage over his opponent or not (Jensen & Fisher, 1979).

A lot of studies in sports and games (Tropp, Ekstand & Gillquist, 1984; Igbanugo, 1987) have been conducted to investigate the various facets of speed as a performance factor in sport. Speed is an essential physical fitness component for excellent sport performance, football refereeing inclusive. FIFA is currently thinking of introducing time out in the game. This had been experimented twice, first during World Youth Soccer Championship, 1997 and during the XVI world school football tournament in 1999. These point to the fact that football is now a fast game that requires intermittent resting intervals.

As football referees need to cope with this situation, there is need to possess sufficient level of speed to be able to move fast and keep close to the ball (at least 9.15m). At times a high lob from a player to his teammate about 50 metres away will require the referee to sprint down to the new area of activity. Thus it is essential for the referee to react and move very fast as the pace of the game dictates.

Power is one of the key fitness components which contribute immensely

to successful sport performance. Hockey (1993) defines power as the ability to exert a maximal contraction in one explosive act. It is sometimes referred to as explosive strength. Wilmore (1977) asserts that power is the application of strength through the dimension of time. He adds that one's ability to get one's body mass moving in the shortest possible period of time is a measure of power.

Leg power is characterized by the explosive movement of the entire body. It is the power generated by the legs when moving the body (Baumgartner & Jackson, 1995). It would be assumed that a high degree of leg power would be an advantage in football officiating. The referee needs leg power to carry his body weight, to speed and to pursue the ball about on the field of play. Likewise he may need to jump up for ball to pass under him to an intending player when need be.

Agility is an important physical fitness component in many sport activities. Agile individuals can change body positions in space efficiently and easily. According to Hockey (1993), agility is generally considered as one's ability to change direction with minimum loss of speed. It is the maneuverability of the body and its parts with accuracy. Agility is therefore, a combination of several athletic traits, including reaction time, speed of movement, coordination, power and strength. It is demonstrated in such movements as dodging, zig-zag running, stopping to restart a race and changing body positions quickly.

In the course of football officiating a lot of turning, dodging and zig-zag movements are made. Stopping to watch an action vividly may be immediately followed by a race due to a fast attacking movement by a player.

The above factors point to the fact that football referees should have a high degree of agility.

Method and Procedures

Subjects

Two hundred top male Nigeria football referees are selected using purposive random sampling technique. Eighteen are international referees and assistant referees, 82 are star referees while 100 are other professional referees.

The design used for this study is ex-post facto research design. The main variables tested are speed, leg power and agility.

Instrument

A standard 400m track with 8 lanes is used for all speed tests and a force platform for leg power test. The tests are conducted in the following order:

1. Agility test (shuttle run).
2. Leg power test (sergeant jump and reach 3 attempts).
3. Speed tests.
 - i. 50 metre-dash (first attempt)
 - ii. 200 metre-dash (first attempt)
 - iii. 50 metre-dash (second attempt)
 - iv. 200 metre-dash (second attempt).

Data Analysis

The mean, range and standard deviation of the scores of the test are used to describe the data while inferential statistics used is the one-sample student t-test analysis to test for significant differences between the subjects determined values in the tested parameters and that of FIFA standards.

Results

Many of the subjects fall within the age range of 27 to 44 years with a mean of 36.4 years and standard deviation of 3.89 years. The mean height is 1.71 ± 0.056 metres (range 1.58–1.91); the mean weight is 67.8 ± 6.10 kilogrammes (range 58–81).

The three performance variables evaluated are indicated in the table below:

Table 1: Descriptive statistics for performance characteristics of the participants ($n = 200$)

Variables	Means	SD	Range
Speed (secs)			
50m 1st run	7.173	.355	64. – 8.2
50m 2nd run	7.164	.476	6.09 – 9.2
Average	7.168	.593	6.245 – 8.9
200m 1st run	27.63	1.95	22 – 34.2
200m 2nd run	28.686	2.260	24.52 – 40.11
Average	28.158	2.105	23.26 – 37.16
Leg power (cm)	39.84	5.98	27 + 52
Agility (sec)	11.374	.667	10.03 – 14.3

KEY

SD = Standard Deviation

CM = Centimetre

Secs = Seconds

As shown in Table 1, two tests are conducted (50 metre-dash and 200 metre-run) in accordance with FIFA fitness test battery to assess the speed of the participants. The duration for the 50 metre-dash has a mean value of 7.173 seconds \pm .355 with a range of 6.40 to 8.2 seconds for the first run and 7.164 seconds \pm .476 with a range of 6.09 to 9.2 for the second run.

In the case of 200 metre run, the subjects has a mean of 27.63 seconds \pm 1.95 with a range of 22.0 to 34.2 seconds for the first run while 28.69 \pm 2.26 and range between 24.52 to 40.11 are recorded for the second run.

The leg power is tested with the use of standing vertical jump (sergeant lump). The mean value obtained is 39.84 \pm 5.98 units with a range of 27-52 centimetre.

The ability of the football referees to change directions is evaluated using 40 metre (10m x 4) shuttle run. The means of the time returned is 11.37 seconds \pm .667 with a range of 10.03 to 14.3 seconds.

Table 2: Analysis of t-test for selected performance variables

Variables	t-test value	Significance of t	Probability
Speed (secs)			
50m 1st run	10.04	.000	< 0.05
50m 2nd run	7.53	.000	< 0.05
200m 1st run	15.58	.000	< 0.05
200m 2nd run	14.14	.000	< 0.05
Leg power	14.57	.000	< 0.05
Agility	0.02	0.10	> 0.053

DF = 199

Discussion

For evaluation of speed, FIFA fitness test battery expects the participants to run 50 metre-dash within 7.5 secs twice and 200 metre-race within 32 secs twice. The mean values for the two 50 metre dash of 7.17 and 7.16 secs are higher than the mean of 5.8 seconds for pre-test and 6.0 seconds for post-test reported by Amusa and Igbanugo (1990) on Nigeria track and field athletes. Likewise the mean of 6.9 seconds recorded for top university soccer players in the study conducted by Owolabi and Adesipo (1990) is better but the mean value of this study is better than the mean of 7.35 seconds reported for reference males (non-athletes) in that (1990) study.

The European referees with a return of 7.12 and 7.07 seconds for their first and second runs, respectively, as reported by Casarin (1996) perform better in this test than the participants of this study. On the other hand, the best time record for the European referee are 6.70 for first run and 6.62 for second run while Nigerian referees have 6.4 and 6.09 seconds.

In the case of 200 metre-run, the results show better performance when compared with the mean of 29.08 and 29.26 seconds first and second runs, respectively, reported by Casarin (1996) for top European referees. Likewise, the best performance time of 27.21 and 27.18 seconds for UEFA referees fall below that of 22.01 and 24.52 seconds recorded for the subjects of this study.

The percentile rank on FIFA norm for the 50 metre dash are 79.5 and 85.5 first and second runs, respectively. The two runs of 200 metres have the same percentile rank of 95.

In addition, at df 199 the calculated t -values when the results are compared with FIFA norm of 7.5 seconds are 10.04 and 7.53 for the first and second run 50 metre-dash, respectively. The two 200 metre runs have $t(199) = 15.58$ and 14.14 when compared with FIFA norm of 32 seconds. The same probability value .000 is obtained for the two runs.

All the obtained t -values are higher than the critical value of 1.960. Thus there are statistically significant differences (at 0.05 alpha levels) between the performance of the Nigerian referees and FIFA norm. Thus the obtained values show that Nigeria football referees possess adequate speed as required by FIFA. In fact their performance is superior.

Leg Power

The vertical jump is used in the evaluation of leg power of the subjects. The mean value of 39.84cm reported under result is noted to be lower than the value of 58.4 pre- and 55.0 centimetres post-tests reported by Amusa and Igbanugo (1990) for 1989 Seoul Olympic Games athletes.

The value is also below the performance mean of 63cm \pm 0.03 with a range of 57 to 69 reported for volleyball players; 52cm \pm 0.06 with range of 43 to 62cm for handball players and 55cm \pm 0.07 with range of 45 to 64cm for soccer players as reported by Abass (1992) on University of Ibadan three sport teams.

In a similar study by Ogunlolu (198) for volleyball and hockey players, volleyball players have a mean performance of 55cm \pm 0.39 with a range of 50 to 61cm while hockey players have a mean performance of 51cm \pm 0.70 with range of 36 to 54cm. This further shows that the mean value of the subjects of this study in the tested variables is not up to other *performing athletes*.

The norm by Margaret, Safrit and Wood (1995) developed for men with age range 18 to 34 is however used. The value on the 50th percentile (46.0cm) is picked as the average standard is compared with the mean (39.84cm) of the study. The obtained t-value of 14.57 is higher than the critical value of 1.960 at df 199. The calculated probability of .000 is less than 0.05. Thus the difference is statistically lower than the average norm. The values thus show that Nigerian football referees possess inadequate amount of leg power required for sport performance.

Agility

The mean value of 11.37 seconds obtained from agility run is slightly lower than the FIFA norm of 11.50 seconds. The percentile indicates that 70.5 percent of the subjects are able to finish the race within the expected time.

The obtained t-value of .02 is less than the critical value of 1.960. The obtained significance of 0.10 is greater than 0.05. There is no significant difference in agility though the value obtained for this parameter in this study is slightly better than the FIFA norm. Thus it is concluded that the Nigerian football referees possess similar, hence adequate, amount of agility as required by FIFA.

Conclusion

Based on the findings of this study, it is observed that Nigerian football referees possess significantly high level of speed as required for football refereeing as the mean values compared favourably with FIFA norm. The participants also possess higher agility than the non-athletes though less than majority of the elite athletes while there is no significant difference when compared with FIFA norm. In addition, the leg power is noted to be significantly inadequate. The interpretation of this is that Nigerian football referees possess some skill variables that should make them to perform fairly well and near maximally in that chosen hobby. The performance of football referees in Nigeria shows that they are below European football referees and they are yet to be up to the level of elite athletes while their standard still falls between average and good on FIFA norm.

It is suggested therefore that the Nigeria Football Association and Nigeria Referee Association should endeavour to have a programme that will make the referees to develop and keep their performance characteristics to the level expected of sport performance and FIFA requirements.

References

- Abass, A.O. (1992). Relationship among leg power, agility, speed and flexibility in three University of Ibadan sports' teams. Unpublished Masters Thesis University of Ibadan.
- Adesipo, T.A. (1988). Comparison of selected physical, physiological and motor performance characteristics of University of Ibadan male basket ball and soccer players. Unpublished M.Ed. Project University of Ibadan.
- Amusa, L.O. & Igbanugo, V.O. (1990). Aerobic and anaerobic fitness factors of soccer performance. *Journal of Nigeria Association of Sports Science and Medicine*, 103-111.
- Baumgartner, T.A. & Jackson, A.S. (1995). *Measurement for evaluation in physical education*. Boston: Mifflin Company.
- Casarin, P. (1996). Test results during UEFA course for "new" FIFA referees. In *FIFA sports medical advice for football referees*. Leipzig Gersone-Druck.
- Hockey, C.V. (1993) *Physical fitness: The pathway to healthful living* (5th ed.) St. Louis: The C.V. Mosby Company.
- Igbanugo, V.C. (1987). Physiological determinants of athletic performance. In L.O. Amusa (ed.) *The role of sports science and medicine in developing nation*. *Journal of Nigeria Association of Sports Science and Medicine*, 67-68.
- Jensen, C.R. & Fisher, A.C. (1979). *Scientific basic of athletics conditioning*. Philadelphia: Lea and Fabiger.
- Margaret, W.D., Safrit, M.J. & Wood, T.M. (1995). *Introduction to measurement in physical education and exercise science*. St. Louis Mosby Company.
- Ogunlolu, B.O. (1988). Comparative study of physical and motor performance characteristics of University of Ibadan male Hockey and Volley ball players. Unpublished M.Ed. project, University of Ibadan.
- Oladipo, I.O. (2000). An evaluation of selected physical physiological and performance parameters and their relationship to match performance of football referees in Nigeria. Unpublished Doctoral Thesis University of Ibadan.
- Owolabi, E.O. & Adesipo, T.A. (1990). Physical physiological and performance characteristics of to university soccer players. *JONASSM*, 119-130.
- Tropp, H., Ekstand, J., & Gillquist, J. (1984). Stabilometry in functional instability of the ankle and its value in predicting injury. *Med. Science Sports Exercise*, 16:64-66.
- Verducci, F.M. (1980) *Measurement concepts in physical education*. London: C.V. Mosby Company.
- Wilmore, J.H. (1977). Athletic training and physical fitness. In *Physiological principles and practice of the conditioning process*. Boston: Allyn and Bacon Inc.