

PROPER NUTRITION AND SPORTS PERFORMANCE OF ATHLETES IN ONDO STATE, NIGERIA.

ARIYO AYODELE OLUWAKAYODE (Ph.D)

Department of Physical and Health Education, School of Science, Adeyemi College of Education, Ondo, Nigeria.

ABSTRACT

Nutrition plays an important role in sports performance and health status of athletes. Hence, the ensuing paper investigated proper nutrition and sport performance of athletes in Ondo state Nigeria. Three hundred (300) respondents were selected who took part in the study. A self-developed questionnaire of 4-points likert type rating scale with reliability coefficient of 0.84 was used to collect data from 300 athletes selected through a multi-stage sampling technique. The data for the study were collected using inferential statistic of frequency count and simple percentage to analyze the data collected on the demographic characteristics of the respondents while descriptive statistics of Analysis of Variance (ANOVA) test was conducted to test the hypothesis formulated in the study at 0.05 alpha level of significance. Six hypotheses were formulated in which two of the hypothesis tested showed that there is no

Introduction:

The saying that you are what you eat cannot be overemphasised. Proper nutrition seems to be crucial to a healthy lifestyle. From the submission of Shyreff & Shawks (2019), nutrition is about eating a healthy and balanced diet, food and drink provide the energy and nutrients one need to be healthy, nutrition also focuses on how people can use dietary choices to reduce the risk of disease, proper nutrition combined with physical activity help individuals to maintain a healthy life and reduce the risk of chronic diseases and thus promote overall health, good nutrition is important for

significant relationship between proper nutrition and sports performance of athletes. Recommendations were stated in the study and in conclusion, the study revealed that proper nutrition is pivotal to good health status of athletes and sports performance.

Keywords: *nutrition, performance, balanced diet, nutritional intake, healthy diet*

athletes because it provides energy that enhances performance. Nutrients such as proteins, carbohydrates, fat, vitamins, minerals, fiber, and water are all nutrients that provide nourishment. If the right balance of nutrients in individuals' diet is lacking, the risk of developing certain health conditions increases.

Nutrients obtained through food have vital effects on physical growth and development, maintenance of normal body function, physical activity and health. Nutritious food is, thus needed to sustain life and activity. Human diet must provide all essential nutrients in the required amounts. Requirements of essential nutrients vary with age, gender, physiological status and physical activity. Dietary intakes lower or higher than the body requirements can lead to under nutrition such as deficiency diseases or over nutrition like diseases of affluence respectively. Eating too little food during certain significant periods of life such as infancy, childhood, adolescence, pregnancy and lactation and eating too much at any age can lead to harmful consequences. An adequate diet, providing all nutrients, is needed throughout our lives. The nutrients must be obtained through a judicious choice and combination of a variety of foodstuffs from different food groups. Carbohydrates, fats and proteins are macronutrients, which are needed in large amounts. Vitamins and minerals constitute the micronutrients and are required in small amounts. These nutrients are necessary for physiological and biochemical processes by which the human body acquires, assimilates and utilizes food to maintain health and activity (Gibs and Gibs, 2017).

According to Oladele (2014), a balanced diet is a diet that contains the right amount of the entire food group. A balanced diet is a diet that helps to maintain or improve overall health. It provides the body with essential nutrition; fluid, macronutrients, micronutrients and adequate calories. Similarly, Martins and Brooks (2019) explained that the term diet refers to the total amount of food consumed by an individual and it typically implies the utilization of specific intake of nutrition for health or weight management reasons, it is the collection of such type of food which helps to improve the physical condition, controls weight and helps to cure diseases by making the immune system strong. Similarly, Khan (2016) opined that sports diet is one which is needed by athletes before, during and after any activity. Every athlete need to use balanced and proper diet before, during and after the activity. Deficiency in balanced diet will not only have adversely effects on the immediate performance of the athlete, it will significantly affect the overall functional capacity of the body of athlete. In the opinion of Mbaniju (2020), dieting refers to short term attempts to lose weight by restricting the amount or types of foods consumed by an individual. Majority of women and a growing portion of men engage in dieting behaviours, pursuing different dieting strategies with several attempts at weight loss. Martins and Brooks (2019) also revealed that dieting is the practice of eating food in a regulated way to decrease, maintain, or increase body weight, or to prevent and treat diseases such as diabetes and obesity capable of reducing capacity for performance.

A healthy diet is a diet that maintains or improves overall health. it provides the body with essential nutrition such as fluid, macronutrients, micronutrients, and adequate food energy. A healthy diet may contain fruits, vegetables, and whole grains, and may include little to no processed food or sweetened beverages. The requirements for a healthy diet can be met from a variety of plant-based and animal-based foods. The following tips may be helpful in achieving a healthy eating habit base meals on high fibres starchy carbohydrate, eat lots of fruits and vegetables, eat more fish, including a portion of oily fish, cut down on saturated fat and sugar, eat less alt, not more than 6g a day for adults, get active and be a healthy weight, do

not get thirsty and do not skip breakfast (Terdoo, Andoogah and kwasee 2018).

Ondo State is a state in south west Nigeria created in February 1976 from the former western State, Ondo state borders Ekiti state which was formally part of the state to the north, Kogi State to the north east, Edo state to the east, Delta state to the south east, Ogun state to the south west, Osun state to the north west, and the Atlantic ocean to the south. The state capital is Akure, the former capital of the ancient Akure kingdom, nicknamed the Sunshine state. Ondo state is the 18th largest state in the country. The state is predominantly Yoruba with the people speaking Yoruba language. The state is also noted for her active participation in sports like the national sports festival, and so on. The state has both male and female soccer team registered at the national professional league called sunshine stars of Akure and sunshine queens of Akure respectively among other notable sports.

Research Objectives

The specific objective is to:

1. Investigate the relationship between proper nutrition and sport performance of athletes in Ondo state, Nigeria.

Research questions

1. Will there be any significant relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state, Nigeria?
2. Will there be any significant relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria?
3. Will there be any significant relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria?
4. Will there be any significant relationship between dieting and sports performance of athletes in Ondo state, Nigeria?

5. Will there be any significant relationship between healthy eating and sports performance of athletes in Ondo state, Nigeria?
6. Will there be any significant relationship between awareness, knowledge and attitude of athletes on proper nutrition and sports performance in Ondo state, Nigeria?

Research hypothesis

1. There is no significant relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state, Nigeria.
2. There is no significant relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria.
3. There is no significant relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria.
4. There is no significant relationship between dieting and sports performance of athletes in Ondo state, Nigeria.
5. There will be no significant relationship between healthy eating and sports performance of athletes in Ondo state, Nigeria.
6. There will be no significant relationship between awareness, knowledge and attitude of athletes on proper nutrition and sports performance in Ondo state, Nigeria.

Methodology

The study adopted a descriptive survey research design because it was an investigation in which self-reported data were collected from sampled participants in describing the population on the relevant variables of interest. In getting respondents for this study, coaches of each sport helped in reaching the athletes. Purposive sampling technique was used in selecting the three senatorial districts in Ondo state which are Ondo north, Ondo south and Ondo central. Simple random sampling technique with replacement was used in selecting two Local Governments Areas from each district. From Ondo North are Owo with headquarters at Owo town, and Akoko North-east with headquarters at Ikare. From Ondo Central are

Akure-south with headquarters at Akure and Ondo Central with headquarters at Ondo town. From Ondo-south are Okitipupa with headquarters at Ikalé and Ese odo with headquarters at Igbekebo. The athletes were stratified into male and female using stratified random sampling technique. Simple random sampling technique with replacement was used to select five contact sports. Simple random sampling technique was used to select ten (10) athletes from hockey, soccer, volleyball, handball, and basketball making a total of sixty (60) athletes from each Local Government Area. Hence three hundred (300) athletes participated in the study. The entire questionnaire was adequately completed and free from inconsistency.

Research Instrument

A self-designed questionnaire tagged proper nutrition and sports performance of athletes in Ondo state, Nigeria. (PNSPA) was used to elicit information from the respondents. The instrument consisted of two sections identified as sections A and B. Section A: contained information on demographic characteristics of the respondents such as sex, age, academic qualification, type of sports, marital status and religion. The respondents are expected to tick from the options as applicable to them.

In section B, the items were designed to ask specific questions from the respondents on proper nutrition and sports performance of athletes in Ondo state, Nigeria. The twenty-item questionnaire in this section were assessed on a four-point rating scale ranging from 4 strongly agreed, 3 agreed, 2 disagree and 1 strongly disagree. The validity of the instrument was ascertained by relevant experts in the field of Health Education and Nutrition. A reliable coefficient of 0.84 was obtained through the use of Pearson Product Moment Correlation (PPMC) analysis. Therefore, the instrument is considered adequate and appropriate enough to be used for data collection for the study.

Administration of Research Instrument:

Copies of the questionnaire were administered to the athletes respectively. The respondents independently spent not more than five minutes on the

average to carefully and accurately complete the questionnaire as it decreases the possibilities of sharing opinion and discussing the questionnaire items before submission.

Data Analysis:

Descriptive and inferential statistics were used to process the data collected. Descriptive statistics of frequency count and percentages were used to analyse the demographic variables, while inferential statistics of Analysis of Variance (ANOVA) was used to test the hypothesis formulated at 0.05 level of significance.

Results:

Demographic Information

A total of three hundred (300) respondents were used as sample for this study.

Descriptive Analysis

The analysis of the demographic variables is presented in table 1

Table 1: Descriptive statistics showing the demographic characteristics of athletes in Ondo state, Nigeria.

VARIABLES	DESCRIPTION	FREQUENCY (F)	PERCENTAGE (%)
Gender	Male	210	70%
	Female	90	30%
	Total	300	100%
Age	18-25years	60	20%
	26-32years	85	28.3
	33-39years	60	20%
	40-46years	65	21.7%
	47-53years	20	6.7%
	54-60years	10	3.3%
	61years and above	0	0%
	Total	300	100%

	Total		
Educational Qualifications	Pry School Certificate	40	13.3%
	JSSCE	80	26.7%
	SSCE	95	31.7%
	B.Sc/BE.d/B.A	70	23.3%
	MSC	10	3.3%
	Others	5	1.7%
	Total	300	100%
Marital Status	Single	120	40%
	Married	170	56.7%
	Divorced	10	3.3%
	Total	300	100%
Type of Sports	Hockey	60	20%
	Soccer	60	20%
	Volleyball	60	20%
	Handball	60	20%
	Basketball	60	20%
	Total	300	100%

Source: Field survey (2021)

The results in table 1 described gender as 210 (70) % and 90 (30%) of the respondents were male and female respectively. The results for age showed that 20% of the respondents were between the ages of 18-25years, (28.3%) of the respondents were between the ages of 26-32years, (20%) of the respondents were between the ages of 33-39 years, (21.7%) of the respondents are between the age range of while 40-46 while 47-53 years, 54-60 years and 61 years band above are (6.7%), (3.3%), and (0%) respectively. Furthermore, the result revealed that 40 (13.3%) of the respondents had only Primary School Leaving Certificate, 80 (26.7%) had only Junior Secondary Certificate Examination, 95 (31.7%) of the respondents had only Senior Secondary Certificate Examination, 70 (23.3%) had either of B.Sc/B.Ed/B.A, 10 (3.3%) of the respondents were

Masters degree holder while 5 (1.7%) of the respondents claimed to have other educational qualifications. On the variable of marital status, 120 (40%), 170 (56.7%) and 10 (3.3%) were single, married and divorced respectively. The result also showed even distribution 60 (20%) of the respondents into type of sports.

Hypotheses Testing

Hypothesis 1

There is no significant relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state, Nigeria.

Table 2: Summary of ANOVA on relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state, Nigeria.

Source	Sum of Squares	Df	Mean Square (MS)	F	Sig.
Between Groups	1.011	1	1.011	4.761	0.030
Within Groups	73.870	348	0.212		
Total	74.881	349			

$P < 0.05$

The result in table 2 explained that the computed F-value (4.761) obtained for the groups with a p-value < 0.05 was statistically significant at 0.05 level. The null hypothesis was rejected. This implied that there is significant relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state, Nigeria.

Hypothesis 2

There is no significant relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria.

Table 3: Summary of ANOVA on relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria.

Source	Sum of Squares	df	Mean Square (MS)	F	Sig.
Between Groups	0.730	1	0.730	3.275	0.071
Within Groups	77.609	348	0.223		
Total	78.340	349			

$p > 0.05$

The result in table 3 revealed that the computed F-value (3.275) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. Hence, the null hypothesis was accepted. This implied that there is no significant relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria.

Hypothesis 3

There is no significant relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria.

Table 4: Summary of ANOVA on relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria.

Source	Sum of Squares	Df	Mean Square (MS)	F	Sig.
Between Groups	0.486	1	0.486	1.906	0.168
Within Groups	88.771	348	0.255		
Total	89.257	349			

p>0.05

The result in table 4 revealed that the computed F-value (1.906) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. The null hypothesis was accepted. This implied that there is no significant relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria.

Hypothesis 4

There is no significant relationship between dieting and sports performance of athletes in Ondo state Nigeria.

Table 5: Summary of ANOVA on relationship dieting and sports performance of athletes in Ondo state, Nigeria.

Source	Sum of Squares	Df	Mean Square (MS)	F	Sig.
Between Groups	1.011	1	1.011	3.761	0.040
Within Groups	72.860	348	0.211		
Total	73.871	349			

P<0.05

The result in table 5 explained that the computed F-value (3.761) obtained for the groups with a p-value $< +0.05$ was statistically significant at 0.05 level. The null hypothesis was rejected. This implied that there is significant relationship between dieting sports performance of athletes in Ondo state, Nigeria.

Hypothesis 5

There will be no significant relationship between healthy eating and sports performance of athletes in Ondo state, Nigeria.

Table 6: Summary of ANOVA on relationship healthy eating and sports performance of athletes in Ondo state, Nigeria.

Source	Sum of Squares	df	Mean Square (MS)	F	Sig.
Between Groups	0.730	1	0.730	3.275	0.071
Within Groups	75.619	348	0.223		
Total	76.349	349			

$p > 0.05$

The result in table 6 revealed that the computed F-value (3.275) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. Hence, the null hypothesis was accepted. This implied that there is no significant relationship between healthy eating and sports performance of athletes in Ondo state, Nigeria.

Hypothesis 6

There will be no significant relationship between awareness, knowledge and attitude of athletes on proper nutrition and sports performance in Ondo state.

Table 7: Summary of ANOVA on relationship between awareness, knowledge and attitude of athletes on proper nutrition and sports performance in Ondo state, Nigeria.

Variables	Source	Sum of Squares	Df	Mean Square (MS)	F	Sig.
Attitude	Between Groups	1.714	3	0.571	2.258	0.081
	Within Groups	87.543	346	0.253		
	Total	89.257	349			
Awareness	Between Groups	1.710	3	0.570	2.695	0.046

	Within Groups	73.171	346	0.211		
	Total	74.881	349			
Knowledge	Between Groups	1.718	3	0.573	2.586	0.053
	Within Groups	76.621	346	0.221		
	Total	78.340	349			

$p > 0.05$

The data contained in table 7 revealed the analysis of variance of attitude, awareness and knowledge of of athletes on nutrition and sports performance in Ondo state, Nigeria. The result indicated that at 0.05 level of significance, there was a statistically significant relationship of attitude of athletes on proper nutrition and sports performance ($F = 2.358$, $p = .081$); awareness of athletes on proper nutrition and sports performance ($F = 2.695$, $p = .046$) and knowledge of athletes on proper nutrition and sports performance ($F = 2.586$, $p = .0531$).

Discussion

The study focused on proper nutrition and sport performance of athletes in Ondo state, Nigeria.

Hypothesis one revealed a strong significant relationship between lack of money for proper nutrition and sports performance of athletes in Ondo state Nigeria. The test revealed that the computed F-value (4.761) obtained for the groups with a p-value < 0.05 was statistically significant at 0.05 level. To corroborate the findings of this result, Onyeabuchi (2015), opined that poverty of the third world countries play a major role in preventing the people from having proper nutrition and hence, students from the third world countries lag behind in science and technology compared to students of the advanced nation.

Hypothesis two showed no significant relationship between balanced diet and sports performance of athletes in Ondo state, Nigeria. The test revealed that the computed F-value (3.275) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. According to Shaw, Boyd, Burke & Koivisto (2014), opting for a balanced, adequate and varied diet is an important step towards a happy and healthy lifestyle. Vitamins and

minerals in the diet are vital to boost immunity and healthy development; a healthy diet can protect the human body against certain types of diseases, in particular non-communicable diseases such as obesity, diabetes, cardiovascular diseases, some types of cancer and skeletal conditions. Healthy diets can also contribute to an adequate body weight, healthy eating is a good opportunity to enrich life by experimenting with different foods from different cultures, origins and with different ways to prepare food. The benefits of eating a wide variety of foods are also emotional, as variety and colour are important ingredients of a balance diet. For athletes, balanced diet is important if performance is expected at a high level

Hypothesis three revealed a strong significant relationship between adequate nutritional intake and sports performance of athletes in Ondo state, Nigeria. The test revealed that the computed F-value (1.906) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. Adamson (2016) affirmed that nutritional needs of athletes differ from one sport to the other. Nonetheless, the common goal of every athlete is to achieve healthy eating behaviours centred on nutrient dense and varied food choices, adequate hydration, proper nutrition that features balanced meals and snacks to properly fuel training and competition and to enhance recovery and intuitive eating behaviours that connects mind, body and soul and performance for the most successful outcomes.

Hypothesis four revealed a strong significant relationship between dieting sports performance of athletes in Ondo state, Nigeria. The test revealed that the computed F-value (3.761) obtained for the groups with a p-value < 0.05 was statistically significant at 0.05 level. Ariyo (2019) explained that one of the main reasons people eat a healthy diet is to maintain a healthy weight or to lose weight, to have a good heart Health, for strong bones and teeth, for better mood and energy levels, to improve memory and brain health. On the contrary, Sheffield (2013) revealed that dieting can be dangerous, repetitive cycles of gaining, losing, & regaining weight has been shown to have negative health effects, including increased risk of heart disease, long lasting negative impacts on metabolism and so on. Dieting forces the body into starvation mode.

Hypothesis five revealed a strong significant relationship between healthy eating and sports performance of athletes in Ondo state, Nigeria. The test revealed that the computed F-value (3.275) obtained for the groups with a p-value > 0.05 was statistically significant at 0.05 level. Terdoo, Andoogah and kwasee (2018) and Adreinne (2020) agreed that the benefits of healthy eating is in no small measure like having a stable heart health, reduced cancer risk, having consistent better mood, improved gut health, improved memory, weight loss, diabetes management, strong bones and teeth, getting a good night sleep and maintaining health for the next generation. Adding some tips to improve diet such as swapping soft drinks for water and herbal tea, eating no meat for at least 1 day a week, ensuring each meal consists of around 50% fresh produce, swapping cow's milk for plant based milk, consuming whole fruits instead of juices, which contain less fiber and often include added sugar, avoiding processed meats, which are high in salt and may increase the risk of colon cancer and eating more lean protein, which people can be found in eggs, fish, and nuts.

Hypothesis six revealed the analysis of variance of attitude, awareness and knowledge of athletes on nutrition and sports performance in Ondo state, Nigeria. The result indicated that at 0.05 level of significance, there was a 1`11`and sports performance (F= 2.358, p = .081); awareness of athletes on proper nutrition and sports performance (F= 2.695, p = .046) and knowledge of athletes on proper nutrition and sports performance (F= 2.586, p = .0531).

Conclusion and Recommendations

The findings of this study clearly showed that the variables of lack of money for proper nutrition, dieting and healthy eating are significant to sports performance, while balanced diet and adequate nutritional intake are not significant to sports performance of athletes in Ondo state, Nigeria. On the basis of these findings, it is therefore recommended that health education be included in the curriculum at all levels of education and taught effectively and efficiently. Qualified and experienced Health education teachers should be employed to teach the subject matter in schools. Policy

makers should come up with policies that will effectively check mate the prices of food items to enhance proper nutrition for all.

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