SOURCES OF NUTRITION INFORMATION AND NUTRITION KNOWLEDGE OF ADULTS IN ODOGBOLU LOCAL GOVERNMENT AREA, OGUN STATE, NIGERIA

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ABSTRACT

Good nutrition information sources are crucial as they positively impact dietary decisions and support a healthy nutritional status. This study therefore assessed the sources of nutrition information and level of nutrition knowledge of adults in, Osoosa town, Odogbolu Local Government area, Ogun State. Study design was cross-sectional and a pre-test validated questionnaire was used in gathering information. Knowledge scale of 0-9points was developed and classified as: 0-3points -poor knowledge, 4-6points-fair knowledge and 7-9points good knowledge. Data were analysed using descriptive statistics of frequency, percentage, mean and standard deviation. Pearson Correlation Coefficient were then used to determine the relationship between the variables. A total of 200 adults participated in the study with a mean age of 49.84 ± 11.40 years. More than half (60.5%) were female and most of the respondent's (44%) highest education qualification was secondary school certificate. More than half of the respondent's (75.5%) were self-employed and could read and write (68%). Nutrition information were mostly sourced from friends and peers (59%), radio (57%) and doctors and nurses (57%) while the least source of nutrition information was from sports club (12.5%). Participants possessed 7.5%, 48% and 44.5%, poor, fair and good nutrition knowledge, respectively. A significant relationship between the respondent's source of nutrition information and nutrition knowledge was established; p=0.00. Based on the findings of this study, most of respondents have fair knowledge of nutrition and sourced their nutrition information mostly from friends. More nutrition information sources were recommended while preserving the current preferred means.

Key words: Nutrition information, Nutrition Knowledge, Adults

INTRODUCTION

Acquiring accurate and adequate nutrition information is important as it could influence nutritional choices positively and promote the maintenance of healthy nutritional status (Quaidoo, Ohemeng, & Amankwah-Poku, 2018). Nutrition knowledge on the other hand plays a significant role in advancing healthy eating habits by ensuring that essential nutrient requirements are met to prevent malnutrition. Nutrition knowledge is associated with dietary intake which affects nutritional status (Olatona *et al*., 2023). Assessing nutrition knowledge provides useful information especially if coupled with the self-perception of nutrition knowledge that could lead to bias and personal conviction (Akinmoladun *et al*., 2021). Nutrition knowledge is a modifiable factor associated with improved dietary behavior, yet it is unclear whether individuals with nutrition-related chronic diseases possess greater

knowledge (Glick et al., 2025). The knowledge that certain foods are high in particular nutrients can be tested. Yet many nutrition 'knowledge' questions fail to ask if respondents know the connections between those components and the potential for chronic disease (Winham and Jones, 2011). Nutrition knowledge does not always translate into healthy behavior due to resource limitations, family priorities, and other social or environmental restrictions (Palmer et al., 2020).

There are different sources of nutrition information and society in general wants to be well informed about nutrition and food information. This demand has prompted social media (written press, television, radio and internet) to include more content about health and nutrition in their articles or programs. News media plays a valuable role in the delivery of nutrition information and are very influential in the community, although, this does not mean the information is reliable, an evidence showed that 75.5% of well-known newspapers in Lima have inaccurate nutritional information, which generates confusion to the reader and probably deleterious effects on individual health (Del Carpio *et al.*, 2022). Online health interventions have the capacity to influence voluntary behavioral change and have the advantage of lower costs and increased reach when compared with more traditional channels, such as print media, with similar impact (Cugelman, Thelwall and Dawes, 2021). Understanding the nutrition facts label on food items can also help make healthier choices. Television on the other hand has been reported to be the primary source of entertainment of some people. It has been found that being exposed to audiovisual, its content proves to be undisputed element of everyday activity and it is almost certain that the viewer may encounter health information in a television broadcast (Byrd-Bredbenner, 2020).

A national sample of 930 adults from an online panel answered demographic, nutrition-disease knowledge, desired benefits from foods, chronic disease status questions. The mean age of the respondents was 45years, nutrition-disease knowledge was higher for those who were older, women, and highly educated, nutrient-disease knowledge had the most significant influence on nutrient source scores (Glick et al., 2025). A study was carried out among undergraduate students of Stellenbosch University, South Africa in 2021 to assess the use of social media as a source of nutrition information. Result shows that out of the 2318 students that participated in the study, 1615 received their nutrition information from social media with YouTube being the most used platform for this purpose. Females were found to use this medium (social media) more than male. Meanwhile, most of the participants in this study felt comfortable following a registered dietitian (64%) for accurate nutrition information (Megan et al., 2023). Study carried in Accra metropolis, Ghana, among young adults gathered that online resources were the most popular sources of nutrition information. Health care professionals on the other hand were perceived as the most reliable sources of nutrition information among these young adults (Quaidoo, Ohemeng, & Amankwah-Poku, 2018). Ekramzadeh, 2022 investigated the sources of nutritional information among adults in Iran and the result showed that social media were mostly used for pursuing nutritional information by the study participants (87%). Television was the second source, with 70% of participants continuously looking for nutritional information. Food factories were the least frequently used source of nutritional information (40%). The most effective source of nutritional information among the participants was Instagram (41%), and the least frequently used source was sales intermediaries (15%).

Dietary Knowledge and Practices among Non-Medical Staff at Babcock University in Ogun State revealed that more than half (53.87%) of the respondents had poor knowledge of nutrition while 46.13% had good knowledge of nutrition and 67.2% of the respondents read

food labels before buying (Okondu *et al*, 2021). Akinmoladun *et al*., 2021 investigated the association between nutrition knowledge, lifestyle, dietary practices and nutritional status among civil servants in western Nigeria. It was discovered that the nutritional knowledge of the respondents ranged from poor (13.25%), fair (41.25%) to good (45.5%). A study was carried out in Poland in 2022 on the nutrition knowledge, dietary habits, and food labels use, and most of the respondents (52.6%) declared a moderate level of nutrition knowledge and over one quarter (28.1%) of respondents declared a rather good /very good level of nutrition knowledge. Among The most common sources of nutrition knowledge were news websites (41.8%) or family/friends (32.4%). About 22.7% indicated a physician, nutritionist, or qualified personal trainer as a source of nutrition knowledge. Some of the respondents indicate social media as a source of nutrition knowledge (21.6%), and 27.5% of respondents followed healthy eating channels on YouTube (Żarnowski, Jankowski, & Gujski, 2022). Urban populations in Lagos State have a high rate of overweight and obesity (24.8%) as well as nutritional deficiencies in fibre, energy, and the majority of micronutrients due to adults' inadequate nutrition awareness and unhealthy eating habits. In lieu of this report, Olatona *et al*., 2023 carried-out research on nutritional knowledge, dietary habits and nutritional status of adults living in urban communities of Lagos State and it was revealed that only 15.9% of respondents had good nutritional knowledge and a significant majority of the adults have poor nutrition knowledge. Result also revealed that their diets are frequently deficient in key nutrients like fiber and energy. There was also a low intake of fruits and vegetables, with only a small percentage of people consuming them daily (around 10%).

Statement of the problem

The relative rise in the prevalence of diet-related non-communicable diseases (NCDs) has raised concerns about malnutrition and this is most likely due to the lack of reliable nutrition information sources and low level of nutrition education (Olatona et al., 2023)**.** Nutrition education programmes are designed to improve nutrition knowledge, with the aim of supporting sound dietary intake within the community or a specific target population (Power et al., 2005). Nutrition Knowledge may be referred to as the individual cognitive process in relation to information on food and nutrition that has something to do with food choices and its success in preventing non-communicable diseases (Spronk et al., 2014). The sources of nutrition information used in various communities, among different demographics is important to know since highly patronized sources of information in a society can be used as an effective tool to disseminate accurate nutrition information to the masses (Papadaki et al., 2007). In Nigeria, like many other countries, adults face significant challenges related to nutrition knowledge.(Maria et al 2021). Meanwhile, adults with higher nutrition knowledge have been reported to likely have eating habits that aligned with dietary recommendations, such as a greater intake of vegetables and fruits and a lower intake of fat (Spronk et al., 2014). It is therefore important to assess the sources of nutrition information of adults in order improve their knowledge of nutrition,thus, reason for this present study.

Objectives of the study

The objectives of the study are to assess the:

1. sources of nutrition information of adults
2. nutrition knowledge

Hypotheses

H01: There is no significant difference between the sources of nutrition information and nutrition knowledge of adult.

METHODOLOGY

The study employed a descriptive cross-sectional design, and all adults in Osoosa town, Ijebu-Ode, Ogun State made up the population.

Study criteria

i. Healthy adults that gave their consent to participate in the study
ii. Adults 45years old and above

Sample size determination

Using Fischers formular for calculating sample size of an unknown population

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Z=1.96 (constant)
d= error, 5%
p= 15.9%, good nutrition knowledge of adults in Lagos (Olatona *et al*., 2023)
$n=1.96^2 \times 0.159\ (1-0.159) \div 0.05^2$
n=3.84 x 0.159(1-0.159) ÷ 0.0025
n=0.513 ÷ 0.0025
n=205.2

The minimum sample size calculated was 205.
Out of the 205 respondents sampled, 200 gave complete information.

Sampling technique and sample size

Purposive sampling of Ososa town of Odogbolu Local Government Area, Ogun State. Osooa town was chosen being the host community to Tai Solarin University of Education, where the researchers resides. There are seven (7) quarters in Osoosa (Ijoku, Oke ala, Osa Lakoye, Ido mowo, Oke Esin, Odo Owa and Odo-alare) and the sample size was divided by the number of these quarters, that is 205/7 ≈ 29. Referral method was used in selecting 29 adults from each of these quarters.

Research instrument for data collection

A semi-structured, pre-tested questionnaire consisting of three sections was used as instrument for data collection. This consist of three sections (A-C). Section A sought for information on demographic characteristics, Section B solicited sources of nutrition information, while section C was designed for information on nutrition knowledge.

Validation and reliability of instrument

The instrument was validated by experts Nutritionists and Lecturers from the Department Home Economics, Tai Solarin University of Education, Ijagun, Ijebu-Ode, Ogun State. Test re-test reliability was also performed on the instrument by administering questionnaires to twenty (20) respondents who were not part of the population. The data was collected and analyzed using Cronbach's Alpha and a reliability co-efficient of 0.85 was obtained, making the questionnaire reliable for use

Data collection procedure/ Method of data analysis

Data was collected using kobo collect software and five research assistances. Questionnaire was translated to the local Language (Yoruba) for easy communication. Letter from the Department of Home Economics and Hotel Management, Tai Solarin University of Education was presented to the community leader and the respondents prior to data collection. The content of the letter and the research purpose were well communicated to the respondents. Respondents were selected using referral method until the required number was achieved at each quarters. Using this approach, data was collected from 205 respondents in the study area and 200 of them provided complete information. Knowledge scale of 0-9points was developed and classified as: 0-3points -poor knowledge, 4-6points-fair knowledge and 7-9points good knowledge. Data collected during the study was extracted from the kobo collect database into the IBM statistical package for social sciences (SPSS) version 25 and analyzed using descriptive statistics of frequency, percentage mean and standard deviation. Pearson Correlation Coefficient were then used to determine the relationship between the variables.

RESULTS

Socio-demographic characteristics of the respondents

Result in Table 1 revealed that a total of 200 adults in Osoosa town participated in the study and the mean age of the respondents was 49.84± 11.40years. This shows that adults in their mid-ages participated in the study. This is similar with the findings of Glick et al., 2025 who reported the main age of the respondents to be 45years in a study carried out among 930 adults living in United State mainland in November, 2023. The result of this study also showed that more than half of the respondents (60.5%) were female and practice Christianity (51.5%) and 92.5% of them are Yoruba. This further confirmed the large number of women in the study area as well as their ethnicity (Yoruba). Majority (89.5%) of the respondents in this study were married and respondent's (44%) highest education qualification was secondary school. More than half of the respondents (75.5%) were self-employed and about 68% of them could read and write. This is against the findings of Ogbolu et al., 2024 who revealed that the proportion of respondents with a secondary education was 66.6% and farming (36.1%) and pretty trading(32.2%) as the most common occupation among the respondents

Table 1 Socio-demographic characteristics of respondents

Variable	Frequency	Percentages (%)
Mean Age		
49.84 ± 11.40		
Sex		
Male	79	39.5
Female	121	60.5
Marital status		
Divorced	3	1.5
Married	179	89.5
Separated	3	1.5
Single	3	1.5
Widow	12	6.0
Religion		
Christianity	103	51.5
Islam	94	47.0
Traditional	3	1.5
Ethnicity		
Yoruba	185	92.5
Hausa	0	0
Igbo	15	7.5
Others	0	0
Ability to read and write		
Yes	136	68
No	64	32
Level of education		
No formal schooling	11	5.5
Primary education	54	27
Secondary school education	88	44
College and above	47	23
Main occupation		
Civil servant	18	9.0
Self employed	151	75.5
Unemployed	25	12.5
Artisan	6	3.0

Sources of nutrition information

Result in Table 2 shows the sources of nutrition information of the respondents, which were mostly through friends and peers (59%), radio (57%), doctors and nurses (57%). The others were through television/ wellness programs (44%), social media (38%), grocery stores (28%),

magazines and newspapers (22%), nutritionists and food experts (20%), nutritional books (17.5%), universities and schools (17.5%), food and supplement (14%), sports club (12.5%). This shows that respondents mostly got their nutrition information through friends and peers (59%) while sport clubs (12.5%) were their least sources of their nutrition information. The result is in contrast with a study on nutrition knowledge among adults in Poland in 2022 which showed that the most common sources of nutrition knowledge among adults were news websites (41.8%) (Żarnowski, Jankowski, & Gujski,, 2022). Quaidoo, Ohemeng, and Amankwah-Poku (2018) gathered that online resources were the most popular sources of nutrition information among young adults in Accra metropolis of Ghana as against the report of this study. Ekramzadeh, 2022 reported that social media was mostly used as a source of nutrition information among adults in as against the result of this study.

Table 2: Sources of nutrition information of the respondents

Source of nutrition information	Yes	Percentage (%)
Social media	76	38
Television/ wellness program	88	44
Friends and peers	118	59
Nutritionists and food experts	40	20
Doctors and nurses (specialists and physicians)	114	57
Magazines and newspapers (food magazines, other magazines)	44	22
Universities and schools (professors and teachers)	35	17.5
Sports club (physical education instructors)	25	12.5
Grocery stores (food labels, other stores)	56	28
Radio (cited health interviews)	114	57
Food, supplement (exhibition and conferences)	28	14
Books (nutritional books	35	17.5

Nutrition knowledge of the respondents

Table 3 below explains the findings of the nutrition knowledge of the respondents. More than half of the respondents (53%) know what nutrition does to the body and important of food to the body. About 65% of the respondents know the meaning of adequate diet. Most of them (86.5%) are aware that inadequate feeding can lead to malnutrition, 63% of them could mention example of energy rich food, and protective food (72%), meanwhile, 52% of them could not identify body building foods. About 54% of them know that healthy snacking can be beneficial to man while majority of them (93.5%) are aware of importance of exercise to man

Table 3: Nutrition knowledge of the respondents

Nutrition knowledge	Incorrect Response. Frequency (%)	Correct Response. Frequency Percentage %
Nutrition helps to know what?	I don't know 94 (47)	The importance of food to the body 106 (53)
Why is food important to the body?	To satisfy hunger alone 78 (39)	To satisfy hunger and for growth and development 122 (61)
Adequate diet involves eating	A meal 70 (35)	Food with appropriate amount of each nutrient 130 (65)
Can inadequate feeding lead to malnutrition?	No 27 (13.5)	Yes 173 (86.5)
Mention some energy rich foods	Fruits and vegetables 74 (37)	Starchy roots 126 (63)
Body building foods include	Fruits, fats and oils 104 (52)	Animal food and legumes 96 (48)
Protective foods include	Starchy roots, plantains and oils 56 (28)	Fruits and vegetables 144 (72)
Snacking on healthy diet can be beneficial to man.	No 92 (46)	Yes 108 (54)
Is exercise important to man?	No 13 (6.5)	Yes 187 (93.5)

Categorised Nutrition knowledge of the respondents

Table 4 below shows the nutrition knowledge score of respondents in accordance with their sex. Findings revealed that 44.5% of them possessed good nutrition knowledge, 48% had fair nutrition knowledge while 7.5% had poor nutrition knowledge. Olatona *et al*, 2023 reported that just 15.9% of adults in Lagos State possessed good nutrition knowledge against the report of this present study. Report of Akinmoladun *et al*., 2021 supported the report of this study as 41.3% had fair nutrition knowledge, 45.5% had good knowledge while 13.25%had poor knowledge. Report of Okondu *et al*, 2021 also supported this study where 46.13% had good nutrition knowledge while 53.8% possessed poor knowledge of nutrition.

Table 4: Categorised Nutrition knowledge of the male and female respondents

N=200	Good nutrition knowledge	Fair nutrition knowledge	Poor nutrition knowledge
Total n=200	89 (44.5%)	96 (48%)	15 (7.5%)
Male n=79	42 (53.2%)	32 (40.5%)	5 (6.3%)
Female n=121	47 (38.8%)	64 (52.9%)	10 (8.3%)

p-value=0.000

Correct responses were scored as '1 point' and wrong responses were scored as '0 point' A maximum score of 9 is attainable, A point of 7-9 was considered to be good, between 4-6 points was reported as fair and 0-3 points was Poor.

Hypothesis

Hypothesis one: There is no significant relationship between sources of nutrition information and nutrition knowledge of the respondents. A negative correlation and a coefficient of -0.172 at p=0.015 was established. Therefore the null hypothesis was rejected and hence, there is significant relationship between the sources of nutrition information and nutrition knowledge of the respondents (table 5)

Table 5: Test of Hypothesis

Variables	Coefficient of correlation (r)	P-value
Sources of nutrition information and nutrition knowledge	-0.172	**0.015***
Nutritional knowledge of male and female adults	-0.184	**0.000***

***Figures in bold shows correlation is significant at the 0.05 level.*

CONCLUSIONS

Sources of nutrition information of most adults in Osoosa town were through friends and pairs (59%), radio (57%), doctors and nurses (57%), respectively. Almost half of them demonstrated fair nutrition knowledge (48%), significant differences in the nutrition knowledge of male and female adults was established (p=0.000) at 0.05 level of significant, as well as sources of nutrition information and nutrition knowledge of the respondents (p=0.015)

RECOMMENDATIONS

Nutrition awareness program at the community level should be introduced in order to increase the nutrition knowledge of the respondents. Also, others sources of nutrition information should be improved for optimum good nutrition

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