

**AWARENESS OF TESTICULAR SELF EXAMINATION (TSE) AMONGST MALES
AGED 18-45 YEARS IN OWERRI NORTH LGA, IMO STATE, NIGERIA**Ngozi Scholastica Naze*¹, Anthonia Emesowum¹, Maria Cherechi Asodoke¹, Gloria Eberechukwu Echendu¹,
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ABSTRACT

The study investigated the level of knowledge, awareness and practice of testicular self-examination (TSE) amongst males aged 18-45 years in Owerri North LGA, in Imo State, Nigeria. The study adopted four research questions, five hypotheses, and the design of the study is a descriptive research design. The target population for the study comprises of 400 persons living in Owerri North LGA of which 380 were selected using Kennan's sampling technique to serve as the study's sample size. The supervisor Evaluated and validated the instrument for data collection. Data obtained was collected through the administration of questionnaire and percentage table and Chi-square was used to answer and analyze the research questions and hypothesis respectively. The findings revealed among others that the Mean \pm (Standard deviation) age of the study was at $29.27 \pm (7.46)$ years and testicular self-examination awareness among young male adults in the study area were low and inadequate. The study also revealed that majority (83.68%) of the respondents lack the ability of self-examination of the testicle. Based on the findings, monthly testicular self-examination was recommended for early detect of testis cancer and also greater emphasis should be given to testicular cancer in the curriculum of medical school and other training institutions for health care providers.

KEYWORDS: awareness, testicular self-examination, males, age.**INTRODUCTION**

Testicular cancer (TC) is the most common malignancy found in young male adults aged 25-40 (Saab *et al.*, 2018; Alum *et al.*, 2023; Obeagu and Babar, 2021). Testicular cancer is a rare abnormality that constitutes 0.5% of all new cancer and 0.1% of all cancer deaths in the United States (Saab *et al.*, 2016).

The incidence of testicular cancer is on the rise (Saab *et al.*, 2018). Although TC is relatively uncommon compared to other forms of cancer, the incidence has been on the increase in recent years in developing countries and has become one of the leading malignant diseases Among males aged 18-50 years and the second highest cause of death in Africa, thereby constituting a serious health concern (Ingwu *et al.*, 2016). The incidence of testicle cancer varies considerably in different geographical areas, being highest in Scandinavia and Switzerland, intermediate in United States, Australia and United Kingdom and lowest in Asia and Africa (Ozturk *et al.* 2015).

Testicular cancer is easily detected at an early stage by periodic testicular self-examination (TSE); however healthcare providers seldom teach TSE, thus opportunities for early detection are missed. Well established risk factors for testicular cancer include history of an undescended testis (cryptorchidism), personal or family history of testicular cancer, age, and ethnicity (Baird, Meyers, Farmall and Hu, 2018).

However, success in treatment depends on early detection and accuracy of disease diagnosis (Ozturk *et al.*, 2015). One major way to early detection and prevention of TC is the acquisition of accurate knowledge, positive attitude, accurate and regular practice of Testicular Self Examination (TSE).

However, greater percentage of men die due to late detection and that awareness on TSE increases the possibility of early presentation and consequently reduces mortality, this study is designed to determine the

testicular cancer awareness and practice of TSE among young male adults in Owerri North LGA of Imo State.

MATERIALS AND METHODS

Research Design

Descriptive survey design was used for the study.

Study Area

The study was done in Owerri North is a Local Government Area in Imo state, Nigeria.

Target Population

The target population for the study is young male adults within the age range of 18 - 45 in Owerri North LGA, Imo State. According to the records units of the local government area, men between the ages of 18-45 within the twelve (12) wards are Eight thousand three hundred and forty-eight young male adults (8,348).

Sample Size

The sample size for the study was determined using Kennan's formulae for definite population.

$$n = NX \sqrt{(N-1) E^2 + X}$$

Where

n= sample size

N = Total Population

E= Absolute precision or error (0.05)

X= Level of confidence (0.95)

Therefore

$$8348 * 0.95 / (8348 - 1) (0.05 * 0.05) + 0.95 = 363$$

$$\text{Adding attrition rate of } 5\% = 363 * 5 / 100 + 363 = 381.15$$

Final sample size = 381

Sampling technique

Multistage sampling technique was used for the study. In the first stage, purposive sampling method was used to select Owerri North LGA. This was based on the researcher's existing knowledge/judgment about the study area. In the second stage, simple random sampling technique was used in selecting five towns out of the eleven towns in Owerri North LGA. This was done to give each of the communities equal chances of being selected. The communities chosen are Egbu, Naze, Orji, Emekuku and Awaka. In the third stage, convenience sampling technique was used in accessing subjects (young male adults of 18-45 years) for the study. This was done by allowing those available and willing to participate in the study the opportunity of participating.

Criteria for inclusion

Men included for the study were those:

- Willing to participate in the study
- Aged 18 to 45 years
- Resident in Owerri North LGA for a minimum of one year
- Physically fit i.e., those with no amputation of the upper limbs
- Emotionally stable at the time of the study

Criteria for Exclusion

- Not willing to participate in the study
- Not aged 18 to 45 years
- Those not residing in Owerri North LGA for a minimum of one year.
- Those not physically fit i.e., those with amputation of the upper limbs
- Those not emotionally stable at the time of the study

Instrument for Data Collection

Instrument for data collection was a questionnaire which served as an interview schedule developed by the researcher. It was constructed from literature based on the objectives of the study. The interview guide consisted of two sections that is, section A and section B. Section A consisted of six questions which dealt with the demographic characteristics of the respondents. In section B, questions 7 to 12 dealt with testicular cancer awareness, questions 13 to 19 dealt with testicular self-examination, question 20 dealt with sources of information on testicular self-examination while questions 21 to 24 dealt with practice of TSE. There was a total of 22 closed ended questions and 2 open ended questions. The closed ended questions enabled the respondents to choose the options that best described their disposition about the matter while the open-ended questions allowed the respondents to give responses that best described their disposition about the matter. The responses to the questions on testicular cancer awareness was scored and graded.

Method of Data Collection

A letter of identification from the head of department of nursing science was presented to Owerri North LGA headquarters in Uratta, Imo State for permission to carrying out the study. Permission to carry out the study in the towns selected was also obtained by presenting an introductory letter from The Head of Department to District Head of each town as well as the community leaders and youth leaders of each village. Three research assistants (nurses) were trained on the purpose of the study, selection of subjects, the interpretation of the questionnaire and its administration as well as the retrieval of the questionnaire, following self-introduction of the researcher and the assistants and be establishment of rapport, permission to in the study was sought from the respondents. The respondents were briefed on the purpose of the study. The items were explained to each of the respondents who met the inclusion criteria and are willing to participate in the study. Data was collected at each visit to the youth meeting of the selected communities until the expected sample size was reached. In each town, seventy-six males were given the instrument to fill on the spot and the questionnaire was retrieved immediately after filling. Assurance of the anonymity of information was given to them before administration of the instrument. Each respondent spent 10-15 minutes to fill the questionnaire. Respondents were appreciated for participating. A total of three

hundred and eighty respondents were given the questionnaire to fill. The return rate was 100%.

Method of Data Analysis

Data collected during the survey was collated, and analyzed using the statistical package for social science (SPSS) 21.0. Item-by-item descriptive statistics using frequency distribution, percentages and Mean was used to analyze the demographic data and self-care Practices of the respondents. Chi-Square was used to test the hypothesis at a significance level of 5% (0.05)

Ethical Consideration

In obtaining ethical clearance, a letter was written through the Head of Department of Nursing Sciences Imo State University Orlu Campus and was presented to the Health Research Ethics Committee of Imo State University Teaching Hospital Orlu. Attached to the letters was copies of chapter one, two and three of the

research work and a copy of the structured interview guide. Permission to carry out the study in the towns randomly selected in Owerri North LGA was obtained by presenting an introductory letter from the Head, Department of Nursing sciences Imo State University Orlu Campus to the district heads of the towns and their community leaders and chiefs of villages selected. The purpose of the study was explained to the respondents and an informed consent was obtained from the respondents themselves before the questionnaire was administered.

Thus, the researcher took into consideration all the ethics of research during the study such as anonymity of the respondents' identity, giving respondents adequate information of research, giving informed consent for respondent before including them in the study and gaining permission from the district heads of the towns through letters.

RESULTS

Table 1: the table below highlights the demographic characteristics of the respondents.

VARIABLE	n=380	PERCENTAGE (%)
AGE		
18-23 years	118	31.05%
24-29 years	100	26.33%
30-35 years	90	23.68%
36-40 years	45	11.84%
41-45 years	27	7.10%
Mean ± (STD)	29.27± (7.46)	
OCCUPATION		
Student	150	39.47%
Civil Servant	94	24.73%
Trader	77	20.26%
Artisan	44	11.57%
Unemployed	11	2.89%
Others	4	1.08%
MARITAL STATUS		
Single	200	52.63%
Married	154	40.52%
Widowed	20	5.28%
Divorced	6	1.57%
EDUCATIONAL LEVEL		
None	3	0.78%
Primary Education	28	7.36%
Secondary Education	78	20.55%
Tertiary Education	271	71.31%

The table above displays the demographic and socio-economic characteristics of respondents in this study. The age group of respondents ranges from 18 years to 23 years, 24 years to 29 years, 30 years to 35 years, 36 years to 40 years and people 41 years and above inclusive. Respondents within the age group of 18-23 years are 118 in number, which consist 31.05% of the respondents, 24-29 years are 100, 30-35 years are 90, 36-40 years are 45 in number while those 41-45 years are 27 in number. These age groups made up the remaining 26.33%,

23.68%, 11.84%, and 7.10% respectively. The entire study participants Age± (STD) were at 29.27± (7.46) years.

Respondents' who are students are 150 in number, which consist 39.47% of the respondents. Other category includes Civil servants (94), traders (77), artisan (44), unemployed (11) and others whose category were not listed are just four (4) in number. The percentage representation of these categories are; students 39.47%,

civil servants 24.73%, traders 20.26%, artisan 11.57%, unemployed 2.89% and others 1.08%.

Single persons among the respondents are 200 (52.63%), married ones are 154 (40.52%), widowed ones among them are 20 (5.28%) while those who were divorced are 6 (1.57%).

Among these respondents', 3 (0.78%) had no formal education, 28 (7.36%) attained primary level education qualification, 78 (20.55%) gained secondary education and 271 (71.31%) of the respondents are tertiary education graduates.

Table 2: Awareness Of Testicular Cancer.

Have you heard of testicular cancer?	Yes (n=380)		No (n=380)	
	n	(%)	n	(%)
	200	52.64%	180	47.36%
Have/heard you seen/of a testicular cancer patient?	Yes (n=380)		No (n=380)	
	n	(%)	n	(%)
	129	33.95%	251	66.05%

SOURCE	n=200,		PERCENTAGE (%)			
Poster/ hand bill/ flyer	7		3.5%			
Newspaper/ Magazines	19		9.5%			
Library	28		14%			
Friends/ relatives	10		5%			
Journals/ books/ Encyclopedias	36		18%			
Health education by healthcare providers	34		17%			
Internet	66		33%			
CONCEPT OF TESTICULAR CANCER	n= 380		PERCENTAGE (%)			
Abnormal growth of tissue in the testes that may cause enlargement, thickening or soreness of the testes etc.	163		42.89%			
An illness that is caused by ancestral curses	10		2.63%			
A disease that runs in one's family	18		4.73%			
A lump in the testes	101		26.57%			
A discharge in the testes	88		23.18%			
Responses (n=380)						
TESTICULAR CANCER IS DETECTED BY:	Yes		Not sure		No	
	n,	(%)	n,	(%)	n,	(%)
Testicular self examination	21	5.54	300	78.94	59	15.52
Examination of the testes by a healthcare	82	21.59	258	67.89	40	10.52
Biopsy	201	52.89	159	41.84	20	5.27
Ultrasound	42	11.05	100	26.31	238	62.64
Magnetic resonance imagery (MRI)	150	39.48	204	53.68	26	6.84
TESTICULAR CANCER SYMPTOMS/MANIFESTATIONS	Yes		Not sure		No	
	n,	(%)	n,	(%)	n,	(%)
Lump	289	76.06	84	22.10	7	1.84
Swelling	301	79.42	70	18.42	9	2.36
Redness	344	90.52	24	6.33	12	3.15
Discharge (bleeding, pus, etc)	326	85.78	51	13.42	3	0.8
Unusual pain	291	76.59	62	16.31	27	7.10
Testicular aversion/dimpling	300	78.94	48	12.63	32	8.43
Testicular thickening, scaling	321	84.48	50	13.16	9	2.36
Changes in the shape of these testes	344	90.52	31	8.16	5	1.32

Responses (n=380)						
TESTICULAR CANCER RISK FACTORS	Yes		Not sure		No	
	n,	(%)	n,	(%)	n,	(%)
Smoking	281	73.94	87	22.90	12	3.16
Family history of testicular cancer	303	79.74	62	16.32	15	3.94
Advanced age	342	90	8	2.10	30	7.90
Exposure to radiation (eg:X-ray)	312	82.11	42	11.05	26	6.84
High in-take of alcohol	361	95	12	3.16	7	1.84
Men who have never had sexual intercourse	293	77.10	53	13.95	34	8.95

Men who do not stick to one sexual partner	307	80.78	70	18.42	3	0.8
Obesity	367	96	11	2.90	2	0.5
Personal history of another cancer	311	81.85	47	12.37	22	5.78

Results from the table above, shows the level of testicular cancer awareness among the respondents. 200 (52.64%) of the respondents are aware of testicular cancer while 180 (47.36%) of the respondents are not aware.

In addition, a result from the above tables explains the number of respondents and their percentages that have seen and/or had of a testicular cancer patient. The results explains that 129 (33.95%) of the respondents have seen and/or had of a testicular cancer patient while 251 (66.05%) have not. Furthermore, results from the table above shows, the different sources of awareness of testicular cancer among the respondents. Poster/hand bill/flyer was a source of awareness for 7 (3.5%) persons, newspaper was a source of awareness for 19 (9.5%) respondents, the library provided 28 (14%) respondents with testicular cancer information, friends/relatives informed 10 (5%) persons about such cancer, journals/books/encyclopedias also was a source of information to 36 (18%) respondents while, health education through health care providers and the internet provided testicular cancer information (awareness) to 34 (17%) and 66 (33%) persons respectively.

In addition, results from the table above, shows what the respondents understand as testicular cancer. Among the respondents, 163 (42.89%) of them understood the concept of testicular cancer as an abnormal growth of tissue in the testes that may cause enlargement, thickening or soreness of the testes. Another group of respondents 10 (2.63%) understood it as an illness that is caused by ancestral curses. Additionally, 18 (4.73%) respondents' thinks' its' a disease that runs in one's family. 101 (26.57%) respondents recognizes it as a lump in the testes. The remaining 88 (23.18%) respondents understood testicular cancer as a discharge in the testes.

Results show also the suggested ways by which testicular cancer can be detected. From the corresponding results, under the process of self-examination, 21 (5.54%) respondents suggested "yes", 300 (78.94%) of the respondents were "not sure" of this procedure while 59 (15.52%) of the respondents suggested "no".

Under the procedure of examination of the testes by a healthcare giver, 82 (21.59%) respondents suggested "yes", 258 (67.89%) of the respondents were "not sure" of the suggested procedure while on the other hand, 40 (10.52%) respondents suggested "no" to this process of testicular cancer detection.

DISCUSSION

The study revealed that, 200 (52.64 %) had a favourable awareness while 180 (47.36%) had poor awareness about

testicular cancer. This is also too similar to the study of Ramim *et al.* (2014), Muliira *et al.* (2011), and Pelzer and Pengpid (2014) where respondents portrayed poor awareness for TSE. The authors attributed their findings to the fact that respondents did not perceive TSE to be important, even if it was; not for their young age. The differences in the findings of this study and that of Ramin *et al* could be associated with the cultural values and religious beliefs between the two countries (Nigeria and Iran) under the studies.

However, the results of this study showed to be contrary to that of Pietrzyk *et al.*, (2020) who tested for awareness among Polish male high school and medical students. According to the findings of Pietrzyk (2020), there was a high awareness of testicular cancer signs and symptoms and testicular self-examination within the medical students.

Reasons why the both results are not in line could attributed to the fact that this presents study used a heterogeneous population (students, civil servants, traders, artisans etc.) compared to medical the students.

CONCLUSION

The major reason for not performing TSE as revealed in the study was not having knowledge (83.68%) about TSE and lack of ability to examine the testicle (76.58%). Health care providers and stakeholders should create awareness and organize seminars about TSE for the public.

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