

## Awareness and Practice of Testicular Self Examination among Male Medical Students of University Of Nigeria Enugu Campus South-East Nigeria

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**Abstract:** The rising increase of testicular cancer (TC) which tends to take aggressive course in developing countries can be detected by testicular self-examination (TSE). Testicular self-examination is a screening technique that involves inspection and palpation of the testes for early detection of TC. There are concerns that medical students are not acquiring the necessary TSE skills. This study examines the awareness and practice of TSE among male medical students of University of Nigeria, Enugu Campus. A descriptive research design with a sample of 172 students was used for the study. The respondents were stratified based on their level of study and convenience sampling was used to select the respondents. The questionnaire was used for data collection. The data were analyzed using descriptive statistics and results presented in tables and frequency. Results show that the majority, 110(64.0%) have good knowledge of TSE, 93(54.1%) have not performed TSE and the major reason for not performing TSE was that students do not feel competent and TSE is embarrassing. It was recommended that teachers need to organize workshops, seminar and conference to enlighten them on the practice of TSE. There should be encouragement and proper supervision by doctors who are familiar with the proper technique.

**Keywords:** Awareness, Testicular cancer, Testicular Self Examination, Male Medical Students, University of Nigeria Enugu Campus

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### I. Introduction

The rising global incidence of malignant diseases constitutes a serious of health concern, particularly in developing countries where the increase is occurring at a faster rate [ 1,2] Cancer is one of the leading malignant diseases and is the second highest cause of death in Africa. Globally, Testicular Cancer (TC) accounts for approximately one percent of all cancers in men and it doubled in the last 40 years [3]. Incidence varies considerably in different geographical areas, being highest in Scandinavia and Switzerland. Testicular cancer is intermediate in United States, Australia, and United Kingdom and lowest in Asia and Africa. While cancer is a global health issue, the cancer burden is felt more acutely in developing countries where there are limited resources for prevention, diagnosis, and treatment of cancer. Despite this growing burden, cancer continues to receive low public health priority in Nigeria, largely because of limited resources and low priority for cancer care and interventions.

Although TC is still relatively uncommon compared with other cancer, it occurs commonly among males between the ages 18-50 years, so there is clearly a need for a change in the attitude to the role of men in society. In white men, testicular cancer is the most common cancer from ages 20 to 34years and second most common from ages 35 to 39 years. Approximately 68% of testicular cancers are localized, 18% are regional, and 12% are distant stage at diagnosis [4]. In life time, TC risk in general population is relatively low (1 in 250), but men with a family history of TC are at 4 to 9 times greater at risk than those without.

Testicular self-examination is the inspection of the appearance and feel of testicles to observe the condition of the testicles and help to detect when changes occur. Evidence suggests that early detection of TC improve in the reduction of morbidity and mortality. Testicular self-examination is carried out to examine testicles to notice any changes such as lumps or abnormalities in the testicles [5]. Most testicular cancer can be found in an early stage when TSE is practiced, resulting in good prognosis of the disease condition. In some men, early testicular cancer causes no symptoms that will make them to seek medical attention. Most of the time a lump on the testicles is the first symptom. Sometimes the testicles are swollen or larger than normal without a lump. Most men do not realize that something is wrong until cancer has grown quite larger and even spread. [3]

It seems that men have poor health seeking behavior such as undergoing testicular self- examination and are unwilling to seek neither cancer screening tests nor other routine medical checks. According to [6] the awareness of TC is poor among Nigerian men and is the main factor to lack of testicular self-examination as they were never taught or ever heard about it. [7] report a deficit in men's awareness towards TSE practice. They reported that less than one in five men regularly examine their testicles. This presents a major concern for the timely detection and treatment of testicular cancer. To alleviate this problem, cancer scholars advocate proper information about the disease and mass screening programme organized among men. For early diagnosis and treatment programme of any malignancy to be effective, the general public must be aware of the disease and its impact, presentation, and potential treatments [8]. Several studies have shown that health education campaigns in developed and developing countries have dramatically increased awareness of breast and cervical cancers in women at risk, and have led to increased rates of early diagnosis and treatment [8,9]

Many attempts have been made to increase public knowledge and awareness of TC and TSE amongst male populations [10]. These efforts have included the publication of health education awareness leaflets and guidelines. More recently, the work of researchers [11,12] has added further weight to the notion that young males are misinformed about their risk for TC and do not understand the importance of periodic TSE. Examining one's testicles through physical examination as well as regular screening is recommended for all men over the age of 15 to 50 years. TSE is vital for the younger age and older age group men. Examination of the testicles on a regular basis by health care provider or by self is the safest and most effective route of prevention.

The researchers observe that few patients have presented with testicular cancer of recent at the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu with recorded deaths following the condition while others were in severe pain and distress. It is therefore necessary for medical students and doctors to have the necessary skills and attitude towards TSE to be able to carry out the procedure on male patients and encourage the patients to examine their testes. These prompted the researchers to embark on assessing awareness and practice of TSE among male medical students of University of Nigeria, Enugu Campus.

## **II. Materials And Methods**

### **2.1 Research Design**

The research design used was cross sectional descriptive survey. This design deals with accurate detailed account of the awareness and practice of TSE among male medical students of University of Nigeria, Enugu Campus (UNEC), Enugu State.

### **2.2 Area of Study**

The study was carried out in University of Nigeria Enugu Campus (UNEC). The University is situated in the heart of Enugu, the capital of Enugu State and regional centre of the states in the south-east geopolitical zones in Nigeria. The University is a sub-division of the prestigious and first indigenous university in Nigeria, University of Nigeria, Nsukka that was established in 1960. The University is made up of six faculties with various departments among which is the Faculty of Medicine and Surgery that trains medical students.

### **2.3 Population of Study**

The study population comprised of 400-600 level male medical students at University of Nigeria Enugu Campus. The population is made up of 261 male medical students.

### **2.4 Sample and Sampling technique**

The sample size for the study was determined using the creative research formula as shown below:

$$SS = \frac{Z^2 * (P) * (1-P)}{C^2}$$

Where, SS = Sample size

Z = Z value (e.g. 1.96 for 95% confidence level)

P = Percentage picking a choice, expressed as decimal (.5 used for sample size needed)

C = Confidence interval, expressed as decimal (e.g. 04 = ±4)

The sample size used for the study was 172 male medical students. The students were stratified based on their level of study and a proportionate sample was determined for each stratum and convenience sampling was used to select the respondents for the study while utilizing inclusion criteria of willingness to participate in the study, been in 400 to 600 level of study, physically present at the time, emotionally and physically well at time of study

### **2.5 Instrument for data collection**

The instrument used for data collection was researcher's developed questionnaire which was based on extensive literature review. The questionnaire was made up of the close-ended questions, where the respondents

were expected to tick the most appropriate answer from the list of options. It was made up of four sections A, B, C and D. Section A deals with the personal data of the respondents, section B generates information on knowledge of testicular cancer, section C seeks information on practice of testicular self-examination and section D elicits information on the reasons that affect the practice of testicular self-examination among male medical students.

**2.6 Validity /Reliability of Instruments**

The instrument was examined by a project supervisor and experts in oncology for face and content validity. A pre-test was carried out on the male medical students of Enugu State University of Science and Technology, Enugu to test for the reliability. 17 copies of questionnaire were administered to 400-600 level male medical students of Enugu State University of Science and Technology, Enugu. The responses were subjected to Cronbach’s Alpha test and reliability co-efficient (R) of 0.833 was obtained.

**2.7 Ethical Considerations**

Ethical approval was obtained from the Health Research Ethical Committee (HREC) of University of Nigeria Teaching Hospital, Enugu and approval was granted through a letter with Ref no UNTH/CSA,329/VOL.5. Oral consent was obtained from the respondents before the administration of the questionnaire, anonymity and confidentiality of the respondents were ensured and participation was voluntary.

**2.8 Method of Data Collection**

Four research assistants were recruited and trained for the purpose of the study. They were trained on how to assist in administering the structured questionnaire to the respondents. The copies of the questionnaire were distributed to the respondents before and after their lectures. The questionnaire was retrieved 30 minutes after the administration. The administration of the questionnaire lasted for one week.

**2.9 Method of Data Analysis**

The data obtained were analyzed using descriptive statistics and results presented in tables. Chi-square was used to test hypothesis at significance level of 0.05.

**III. Results**

**Table 1: Demographic Data of Respondents n = 172**

Characteristics	Options	Frequency	Percentage
The mean age of respondents	23.0 ± 2.75		
Level of study	400	50	29.1
	500	60	34.9
	600	62	36
Marital status	Single	170	98.8
	Married	2	1.2
Ethnic Group	Igbo	146	84.9
	Hausa	1	.6
	Yoruba	25	14.5
Religion	Christianity	171	99.4
	Islamic	1	.6

Table 1 shows that 50(29.1%) of the students are in 400 level, 60 (34.9%) of the students are in 500 level and 62(36%) of the students are in 600 level. The majority 170(98.8 %) of the students are singles and 2(1.2%) married; and the majority 146(84.9%) are Igbo by tribe and 99.4% are Christians.

**Table 2: Awareness of Testicular cancer n=172**

Characteristics	Options	Frequency	Percentage
Elderly men from 70 years do not need TSE	Yes	57	33.1
	No	115	66.9
Men who have blood relatives with testicular cancer are more likely to get TC	Yes	116	67.4
	No	56	32.6
A man may have TC without symptoms	Yes	124	72
	No	48	28
Doing TSE is enough to test for testicular cancer	Yes	82	47.7
	No	90	52.3

TC is the most common cancer in men	Yes	45	46.2
	No	127	73.8
One can have TC and does not know about it.	Yes	133	77.3
	No	39	22.7
TC can be cured if detected early	Yes	142	82.5
	No	27	17.5
Blacks have a higher tendency of TC than whites	Yes	87	50.5
	No	85	49.5
Test for TC is needed only when one has symptoms	Yes	156	90.7
	No	16	9.3
There is no cure for TC	Yes	109	63.4
	No	63	36.6

Table 2 revealed majority 116 (67.4%) of the respondents are of the affirmative that men who have blood relatives with testicular cancer are more likely to get TC. Majority 127 (73.8%) disagreed that TC is the most common cancer in men. 124(72%) of the respondents agreed that a man may have TC without symptoms while 142 (82.5%) agreed that TC can be cured if detected early.

However, the grouped distribution of respondents knowledge level of TC shows that 28(28.9%) of the respondents have poor knowledge of TC, 11(6.4%) have fair knowledge while 110(64%) have good knowledge of TC.

**Table 3: practice of testicular self-examination**

Characteristic	Options	Frequency	Percentage
Ever perform TSE( n = 172)	Yes	79	45.9
	No	93	54.1
Testicular self examination done by n = 79	Self	71	89.9
	Friend	8	10.1
Number of times TSE perform per year (n=79)	Once a month	20	25.3
	Once in three Months	6	7.6
	Once in six months	18	22.8
	Once a year	35	44.3
How TSE is perform (n = 79)	I look and feel my testes	76	96.2
	I only look at my testes	3	3.8
Reasons for not performing TSE (n = 93)	I know I can never have cancer	4	4.3
	Not competent to perform TSE	37	39.8
	Perceived TSE as embarrassing	52	55.9

Results revealed that 79(45.9%) respondents ever performed testicular self examination, majority 71(89.9%) did the TSE by themselves. Reasons for not performing TSE shows that majority of the respondents 52(55.9%) perceived TSE as embarrassing and 37(39.8%) said they are not competent to perform TSE

#### IV. Discussion

The findings in the grouped distribution of knowledge of respondents revealed that the majority 110(64%) of the respondents have good knowledge level of testicular cancer. Knowledge about testicular cancer and testicular self-examination should be increased for younger men and if this can be achieved, young males would be willing to participate in taking preventive measures. The finding of this study is in consonance with the study carried out by [13] on 101 Australian University Students on awareness of TSE which reported that out of the 108 respondents, 59 (58.4%) had heard of testicular self-examination before the survey while only 42 (41.6%) had never heard of TSE. The finding is also in line with the work of [14] in Turkey on 484 Turkish male university students to determine the inadequate knowledge of TSE. The result of the study states

that 242(80%) of the students reported having knowledge of Testicular Self Examination, whereas 177(68%) of the respondents reported that they did not know about Testicular Self Examination. However, the result is in contrast with the study by [6] in University of Port Harcourt, Rivers State on 750 males aged 18-50years. The study revealed that knowledge (awareness) of TSE and TC was poor. Only 69(9.2%) of the respondents were aware that testicular lump could be a sign of TC. The lack of health education on TSE provided by health care workers is thought to contribute to delays in diagnosis and people's knowledge of TSE.

The finding revealed that 33(34.0%) of the students have performed testicular self-examination. Poor practice of TSE observed among the participant is as a result of lack of knowledge of TSE. Examining one's testicles through physical examination as well as regular screening is recommended for all men over the age of 15 to 50years. Testicular self-examination is vital for the younger age and older age group men. Examination of the testicles on a regular basis by health care provider or by self is the safest and most effective route of prevention. The finding above is in line with a study conducted by [15] in Hispanic on 165 Hispanic college students to assess the prevalence of TSE. The study reveals that 36% of the respondents reported that they have performed TSE while 64% reported never performed TSE. The finding is also in consonance with the work of [16] in Europe on Dutch young males aged 15-19years. The result shows that only 2% of the respondents reported performance of TSE, after hearing about TSE (through the questionnaire), 41% of respondents report positive intention to start performing TSE. The study is also in agreement with the study by [17] in USA on 99 males. The result stated that 46% of respondents reported performing TSE and 51% reported not performing. The result indicates that 22(66.7%) of the respondents stated that the reasons affecting the practice of TSE is attributable to lack of skill for performing TSE while 11(33.3%) of the respondents perceived TSE as embarrassing. This can be attributed to poor/lack of health education, workshops, seminar or conferences where people will be taught on the importance and practice of TSE of which absence would impede the awareness and practice of TSE. The finding is in consonance with the study by [18] in Uganda on 323 male students in university of Uganda. Most participants (87%) reported a lack of skill for performing TSE, 80% perceived TSE as embarrassing and 79% perceived TSE as time consuming. Self-reported practice of TSE was found to be associated with different aspects of TC knowledge.

## V. Conclusion

In conclusion, this study has shown that while students have received adequate teaching on TSE and have adequate knowledge, they, however, have not translated this into practice as only 33 (34%) of them have performed TSE. The major reason, as revealed in our study, is that few students do not feel competent to carry out TSE. Competence and confidence will only come with practice, encouragement and proper supervision by consultants and residents who should also be very familiar with proper technique. The teachers need to intensify practical supervision to enable medical students to acquire the necessary experience during clinical training before graduating.

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