

Knowledge Attitude and Practice of Testicular Self Examination among Male Undergraduate Students in Ekiti State University

Modupe Aduke Aina (Ph.D.)

Department of Public Health,
Babcock University, Ilishan-Remo, Ogun State, Nigeria

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ABSTRACT: *About half of men never or seldom check their testicles which has led many to late detection of testicular cancer, howbeit the dramatic increase in cancer-related mortality and morbidity is avoidable and curable if detected in its earliest stages. This study assessed the knowledge attitude and practice of testicular self-examination among male undergraduate students in Ekiti State University. A descriptive cross-sectional survey research design was used for the study. The study population consists of Male Undergraduate Students in department of Computer Science, Ekiti State University, Ado-Ekiti, Ekiti state. The sample size was determined with the use of Taro Yamane's method which yielded sample size of 290. Proportionate stratified random sampling technique was used to select the sample size. A semi-structured questionnaire administered via online goggle form was used to collect data. The collected data was coded and analyzed using SPSS version 25. The two – null hypothesis in the study was tested using Chi-square, at 0.05 level of significance. The research found out that 59.0 percent of respondents had an unfavourable view of TSE, whereas 41.0 percent had a favourable view. Even though the respondents had a high level of information, that didn't seem to have any effect on their attitudes, which suggests that people aren't willing to adopt the desirable steps that may lead to the early identification of testicular cancer. The findings revealed that there is no significant ($p = 0.67$) association between level of knowledge of TSE and the practice, also no significant ($p < 0.001$) association between attitude of TSE and the practice. It was recommended among others that TSE has to be a standard part of medical checkups. Health education on TSE should be provided to all young men for any reason when they visit a healthcare facility, along with a patient pamphlet that details the suggested process, instruments, and frequency of practise.*

KEYWORDS: knowledge, attitude, practice, testicular self-examination, student

INTRODUCTION

Testicular Self Examination is regarded as a crucial method for the early diagnosis of testicular cancer. About half of men never or seldom check themselves for Testicular Cancer, according to a recent poll by the testicular cancer awareness group CACTI (Centre for awareness for Cancer of the Testes International). Almost as many men as women were unaware of the value

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of introspection. Considering how important it is to examine one's testicles on a regular basis in order to detect a lump or other suspicious changes, which might lead to better treatment results if caught early (CTCA, 2018), the data is extremely concerning.

The dramatic increase in cancer-related mortality and morbidity is avoidable and curable if detected in its earliest stages. The term "torrent" refers to a condition when a person's health is compromised by an illness. Testicular cancer is most frequent in men between the ages of 15 and 35, making this demographic the primary high-risk group for this disease (Rovito et al, 2015).

Multiple studies in affluent nations have found that young men have a very low understanding about and low opinion of the significance of this screening tool (TSE). For example, only 10.3% and 3.0% of men, respectively, in two trials conducted in the United States and Europe, completed TSE at levels commensurate with current standards. There would be almost no compliance with the guideline in Nigeria and other developing countries if those in the at-risk age group who have completed high levels of education do not follow it (Wardhe et al, 2014).

Testicular Cancer (TC) has risen in incidence over the past 40 years and is responsible for around 1% of all male malignancies worldwide. The United States, Australia, and the United Kingdom have a moderate frequency, whereas Asia and Africa have the lowest incidence in the world (Ozturk et al, 2014). Although TC is less common than other forms of cancer, its rising incidence in developing countries has made it a major health concern. It is now one of the leading malignant diseases among men aged 18–50 and the second leading cause of death in Africa. Surgery, radiation treatment, and chemotherapy, alone or in combination, cure more than 90% of patients with TC. However, early identification and accurate illness diagnosis are crucial for treatment effectiveness (Ozturk et al., 2014). Accurate knowledge, a good outlook, and consistent practise of Testicular Self-Examination (TSE) are all important factors in TC early identification and prevention.

Testicular cancer is a growing threat to males. Incidence rates of TC are increasing worldwide in men aged 15 to 54, with the bulk of new cases occurring in younger men (Kenneth et al, 2016). Approximately 2,000 new instances of TC are detected annually in the UK making up between 1% and 2% of all male malignancies. Testicular cancer affects over 8,000 American males year (Farhad et al, 2019), and it claims the lives of about 390.

An important factor in decreasing treatment delay, according to the research is educating and instructing males on the typical shape and texture of the testicles, as well as information on signs and symptoms linked with TC. Regular screening for testicular cancer is either not done at all, or just partially done, and little or no documentation is kept. It is hypothesised that diagnostic lags result from healthcare providers' failure to adequately educate patients in this area. Professional healthcare providers in this region are to blame for patients' lack of knowledge with TSE because they pay insufficient attention to and take insufficient action to educate them about the practise (Brenner et al, 2013).

According to the American Cancer Society's recommendations (Siegel et al., 2016), a boy who is 15 years old should have the information necessary to make an educated decision about

Testicular Self-Examination by a doctor or nurse. According to a research conducted in the United States, 46% of respondents reported doing TSE and 51% reported not participating, even though TSE is suggested beginning at an early age. Young adult men across nations have varying degrees of awareness of TC, while being the demographic most at risk. For instance, in Port Harcourt, Nigeria, 750 people aged 18 to 50 from three different universities participated in a cross-sectional poll. The poll results revealed that there is a lack of familiarity with TC. Because so few people remembered learning about TSE, this is the case (Ugboma & Aburoma, 2017). According to the results of a multi-center research done in Turkey to assess public understanding of TC and TSE, only 11.1% of participants were knowledgeable of TC, and only 1% were performing TSE at least once a month on a consistent basis. (Kuzgunbay et al, 2018).

It's well-known across the world that males are more hesitant to seek medical care than women are (Rachel & Karen, 2016; Cronholm, et al., 2018). Reasons for this could include a lack of knowledge about the risks and warning signs of male-specific diseases like testicular cancer, traditional masculine gender socialisation and social norms that encourage men to put their health at risk and the stigma of weakness attributed to men who seek help (Hammer, & Hubbard, 2017). Males, according to a research evaluating the efficacy of TSE training, underestimate the seriousness of TC, do not trust that TSE works (Muliira, 2016), lack the time to practise TSE, and experience feelings of shame or sin when doing so. These mentalities and emotions have a role in why TSE is not carried out.

Two hundred and seventy men (27%) said they were afraid of finding a lump and therefore didn't want to do TSE, and one hundred and five men (14%) said they didn't want to do TSE because they saw it as masturbation and immoral, which goes against their cultural, religious, and moral norms and beliefs (Henry et al, 2017). Of the 267 respondents, Mezie-Okoye et al., (2016) found that 30 (11.2%) had been taught TSE, with 19 (63.3%) having been taught by physicians, 5 (16.7%) having been taught by parents, 3 (10%) having been taught by teachers, and 3 (10%) having been taught by friends. Only 23 (or 9.0%) of the 256 respondents (2.7% of the total population) reported ever having undergone TSE. Only 8 of 22 (36.4%). felt normal, 6 (27.3%) felt ashamed, 3 (13.6%) were aroused, and 2 (9.1%) felt guilty following monthly TSE. Nonetheless, 166 out of 256 (64.8%) respondents said they would do TSE if taught how.

Lechner et al. (2018) found that worldwide research consistently found low TSE knowledge, attitude, and practise among young males, who are at greatest risk of TC. Because TC is so uncommon among black people, very little is known about its prevalence in sub-Saharan Africa. Very few studies have been conducted to evaluate the level of understanding and practise of TSE in Nigeria; those that have found very low levels of knowledge, attitude, and practise (Salako et al., 2016). The results of this include higher treatment costs, mental discomfort, morbidity, and death (Moul, 2017).

Breast cancer in women and testicular cancer in males are the most frequent forms of cancer that may be discovered by self-examination. Women in the sub-Saharan area are increasingly learning about the importance of breast self-examination (BSE), while men in the same region know very little about testicular self-examination (TSE). Despite the fact that TC is far less

common than breast cancer, it is the most common cancer in males between the ages of 18 and 50 (Mansbach et al., 2017).

Onyiriuka et al. (2013) examined 540 Nigerian secondary school boys' knowledge, attitudes, and practises surrounding testicular self-examination (TSE). We looked for studies on teenage boys in Nigerian schools, but were unable to find any. However, a research among adults (aged 18 to 50) at three higher institutions in Port Harcourt found a comparable lack of awareness and negative outlook on the topic.

Since a comparable low level of awareness has been separately documented in other research in industrialised nations with highly literate populations, the result of poor knowledge with regard to TSE is not surprising. For example, the prevalence rates of regular TSE were 3.0%, 2.0%, and 2.0% among young German, Icelandic, and Dutch males, respectively (Lechner et al., 2018). In the United States, only 29.0% of male Paediatric Resident Doctors routinely conducted TSE (Brenner et al., 2017), highlighting the widespread lack of TSE use.

Undergraduates in both the United Kingdom and Zimbabwe were found to have a somewhat limited understanding of TSE. Another Turkish research found that male college students had a very limited understanding of TSE. Study after study has shown that male high school students have a dismal grasp of TSE (Moore, 2016). Another study found that 60.9% of health school students (n=110) were aware of TC, but only 40% were aware of TSE (Warde et al., 2014).

The prevalence of testicular self-examination among undergraduates at Bahir Dar University was also studied by Hordofa et al. (2018), who came to the same conclusion: the practise is not widely practised. Therefore, it is important to develop and implement a behaviour change communication plan that targets these behavioural elements in order to increase students' frequency of performing testicular self-examinations.

Due to a lack of reliable data, researchers have been unable to accurately assess mortality and morbidity rates in the sub-Saharan area. It is hypothesised that diagnostic lags result from healthcare providers' failure to adequately educate patients in this area. Professional healthcare practitioners' inattention and inactivity under TSE education for patients contributes to widespread unfamiliarity with the practise in this region (Huyghe et al., 2016). There is still a lacuna regarding the statistics on TSE among male in Nigeria, as scanty and few statistics were found on the knowledge, attitude and practise of this procedure. Similarly, in Ekiti state after thorough literature search. Hence, this study is poised to assess the Knowledge, Attitude and Practice of Testicular Self-Examination among male undergraduate students in Ekiti State University, Ado-Ekiti, Ekiti State.

Specifically, the study sought to:

1. assess the level of knowledge towards testicular self-examination among the respondents;
2. evaluate the attitude of the respondents towards testicular self-examination; and
3. assess the practice of testicular self-examination.

Research Hypotheses

H₀₁: There is no significant relationship between knowledge and practice of TSE.

H₀₂: There is no significant relationship between attitude and practice of TSE.

Methodology

Descriptive cross-sectional survey research design was used for the study. The study population consists of Male Undergraduate Students in department of Computer Science, Ekiti State University, Ado-Ekiti, Ekiti state. The sample size was determined with the use of Taro Yamane's method which yielded sample size of 290. Proportionate stratified random sampling technique was used to select the sample size.

Quantitative data was collected using a semi-structured questionnaire comprising of 23 questions with 4 sections (A, B, C and D). The questionnaire was administered through the use of an Online Google form questionnaire. Data was collected, coded and analyzed using SPSS version 25. The two – null hypothesis in the study was tested using Chi-square, at 0.05 level of significance.

Results**Table 1: Demographic characteristics of the respondents (n= 290)**

Variable	Frequency (n)	Percentage (%)
Age group		
15 – 20	256	88.3
21 – 25	31	10.7
26 – 30	3	1.0
Religion:		
Christianity	258	89.0
Islam	19	6.6
Traditionalist	2	0.7
Others	11	3.8
Tribe:		
Hausa	1	0.32
Igbo	86	29.7
Others	85	29.3
Yoruba	118	40.7
Educational Level:		
100	102	35.2
200	101	34.8
300	45	15.5
400	42	14.5

Table 1 reveals that 88.3% of the respondents aged 15 to 20 years while the least 1.0% aged between 26 and 30 years, 89.0% were Christians while least 0.7% were traditionalist, 40.7% are Yoruba while least are Hausa.

Table 2: Knowledge of Testicular Self-Examination (n = 290)

Items	Frequency (n)	Percentage (%)
Awareness of Testicular Self-Examination:		
Yes	84	29.0
No	206	71.0
Tools needed to perform TSE:		
None	47	16.2
Mirror	48	16.6
I don't know	195	67.2
Age range is most at risk of Testicular Cancer:		
15 – 35	114	39.3
35 and above	176	60.7
Have you ever been taught TSE?		
Yes	24	8.3
No	266	91.7
The conduct of TSE prevents prostate cancer?		
Yes	162	55.9
No	128	44.1
During TSE the discovery of lumps indicate early signs of infection.		
Yes	229	79.0
No	61	21.0
On noticing testicular inconsistency or abnormal growth		
Go to the nearest hospital for check-up	263	90.7
Visit a chemist for medication	12	4.1
Wait for a month and repeat TSE	15	5.2
TSE is the cure for Testicular Cancer		
Yes	75	25.9
No	215	74.1

Table 2 shows that 29.0% of respondents were aware of Testicular Self-Examination (TSE), 16.6% correctly selected mirror as a tool needed to perform TSE, 39.3% correctly answered age range that mostly at risk of testicular cancer as 15-35years, 8.3% of respondents have been taught TSE, 44.1% correctly disagreed that the conduct of TSE prevents prostate cancer, and 21.0% correctly disagreed that the discovery of lumps during TSE indicate early sigmoid colon cancer 54.1% of respondents had strong understanding of Testicular Self-Examination, with a mean score of 1.6 ± 0.9 .

Table 3: Attitude towards Testicular Self-Examination (n = 290)

	Frequency (%)				
	SA	A	U	D	SD
Testicular Self-Examination sounds funny	21 (7.2)	107 (36.9)	72 (24.8)	65 (22.4)	25 (8.6)
Testicular Self-Examination is difficult to perform	11 (3.8)	31 (10.7)	152 (52.4)	72 (24.8)	24 (8.3)
Performing TSE will take too much time	5 (1.7)	37 (12.8)	142 (49.0)	80 (27.6)	26 (9.0)
Performing TSE seems embarrassing/unpleasant	22 (7.6)	59 (20.3)	116 (40.0)	69 (23.8)	24 (8.3)
Testicular Self-Examination is immoral/masturbation	11 (3.8)	19 (6.6)	117 (40.3)	64 (22.1)	79 (27.2)
I believe I'm too young to have testicular cancer	20 (6.9)	70 (24.1)	99 (34.1)	74 (25.5)	27 (9.3)

Table 3 shows that while 44.1% of respondents agree that the idea of performing a TSE is humorous, only 33.1% disagree that doing so is difficult, 36.6% disagree that doing so will take too much time, 32.1% disagree that performing a TSE seems embarrassing or unpleasant, 49.3% disagree that performing a TSE is immoral or constitutes masturbation, and 34.8% disagree that they are too young to have testicular cancer. The Testicular Self-Examination was viewed negatively by about 59.0% of respondents.

Table 4: Practice of Testicular Self-Examination (n = 290)

Items	Frequency (n)	Percentage (%)
Have you ever performed Testicular Self-Examination:?		
Yes	43	14.8
No	247	85.2
Having ever had your Testicles examined by a medical practitioner:		
Yes	33	11.4
No	257	88.6
How often do you perform TSE		
Once every year	18	6.2
Once every 6 months	24	8.3
Once every 3 months	11	3.8
Once every month	6	2.1
Never perform TSE	231	79.7
The two steps involved in TSE are inspection and feeling only:		
Yes	156	53.8
No	134	46.2

What tool(s) do you use to perform TSE		
None	68	23.4
Mirror	48	16.6
I don't know	174	60.0
Reasons for not performing TSE		
I have never been informed about TSE	168	77.1
I'm not competent to perform TSE	25	11.5
I'm too young to have cancer	25	11.5
Preferred place to learn about TSE		
As regular check-up for males in clinics	112	51.4
In the school as part of a health educational program	106	48.6

The public may be educated about TSE through various programmes, campaigns, and seminars. TSE has to be a standard part of medical checkups. Health education on TSE should be provided to young men for any reason when they visit a healthcare facility, along with a patient pamphlet that details the suggested process, instruments, and frequency of practise. TSE and its significance in detecting Testicular Cancer early should be taught to nurses.

Hypothesis Testing

Hypothesis 1: There is no significant association between knowledge and practice of TSE

Table 5: Chi square analysis of knowledge and practice of TSE

		Practice of TSE		Total	X²-value	df	p-value	Remark
		Practice	Never Practice					
Knowledge	Poor	21 (48.8)	112 (45.3)	133	0.18	1	0.67	Insignificant
	Good	22 (51.2)	135 (54.7)	157				

Table 5 reveals that there is no significant ($p = 0.67$) association between level of knowledge of TSE and the practice.

Hypothesis 2: There is no significant association between attitude and practice of TSE

Table 6: Chi square analysis of attitude and practice of TSE

		Practice of TSE		Total	X ² - value	df	p-value	Remark
		Practice	Never Practice					
Attitude	Negative	6 (14.0)	165 (66.8)	171				
	Positive	37 (86.0)	82 (33.2)	119	42.3	1	<0.001	Significant

Table 6 reveals that there is significant ($p < 0.001$) association between attitude of TSE and the practice.

DISCUSSION OF FINDINGS

The majority of the study's participants (almost 80%) are Christians, and they tend to be young adults (between the ages of 20 and 30). About a third of the respondents had a 100L education or above, and more than half belonged to the Yoruba ethnic group.

Among those surveyed, 54.1% had a high degree of understanding regarding TSE, yet this was not proportionate to their attitudes or behaviours around TSE. Knowing how to motivate oneself to perform in a desirable way is the first step, therefore this discovery is positive. In a similar vein, Ingwu et al., (2016) found that among 172 male medical students at the University of Nigeria's Enugu campus, 110 (64.0%) had a solid understanding of TSE, but that this understanding was not correlated with actual practise: 54.1% of the students had never ever conducted TSE. Both results may be explained by the respondents' exposure to and participation in campus life; it might be deduced that respondents learned about the topics at hand via personal experience and interaction with their peers. However, this result contradicted the work of Onyiriuka and Imoibe (2013), who found that nearly all respondents knew little to nothing about TSE. The disparity in education level between the two groups may explain the discrepancy in their understanding.

The research found that 59.0 percent of respondents had an unfavourable view of TSE, whereas 41.0 percent had a favourable view. Even though the respondents had a high level of information, that didn't seem to have any effect on their attitudes, which suggests that people aren't willing to adopt the desirable steps that may lead to the early identification of testicular cancer. Research by Ramim et al., (2014), Muliira et al., (2011), and Pelzer and Pengpid (2014), all of which found that respondents presented a negative attitude towards TSE, lends credence to this conclusion. The study's authors concluded that their subjects didn't give TSE much thought, and that even if they did, it didn't matter much to them as young men

The majority of male undergraduates in the Computing and Engineering Sciences at Ekiti State University did not engage in TSE (85.2%), according to this survey. Only a small percentage of people (2.1%) adhered to the recommendations for TSE and used it consistently; the rest of

the people who used it did so inconsistently. This conclusion may be related to the fact that the vast majority of respondents (85.6%) have never been evaluated by a medical professional and that 77.1 percent have never been told about TSE or the instruments needed to execute the operation. Respondents' negative perceptions of TSE have contributed to its prevalence. Many respondents think that the term "Testicular Stem Cell Exploration" (TSE) sounds silly, and many more believe they are too young to develop Testicular Cancer. Mezie-Okoye, et al. (2016) and Ingwu et al. (2016) corroborate this conclusion by reporting little TSE practise despite considerable understanding.

CONCLUSION

More than half of the male college students surveyed demonstrated above-average understanding of TSE, according to the study's result. Despite their intelligence, however, only approximately a third of the respondents had a positive view about TSE, and even fewer had actually engaged in TSE themselves.

Recommendations

The public may be educated about TSE through various programmes, campaigns, and seminars. TSE has to be a standard part of medical checkups. Health education on TSE should be provided to all young men for any reason when they visit a healthcare facility, along with a patient pamphlet that details the suggested process, instruments, and frequency of practise. TSE and its significance in detecting Testicular Cancer early should be taught to nurses.

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