

## Profile of Sexually transmitted infections (STIs) among students of tertiary educational institution in Abuja, Nigeria.

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### Abstract

**Background:** Sexually transmittable infections (STIs) are a major health problem for century and occur all over the regions of the world. It is a big challenge to Nigeria and Africa at large where sexual expression is restricted.

**Objective:** To determine the profile of STIs among students of tertiary educational institution in Abuja, Nigeria.

**Methods:** A cross-sectional study involving 202 students from tertiary educational institution, screened randomly to determine the prevalence of common STDs among them, using standard clinical and laboratory methods. The principle of confidentiality was adhered to and the students received both pre and post-counseling.

**Results:** A total of one hundred and sixty-seven did participate in the study while thirty five withdrew at various stages of the study. Their ages ranged between 15 and 35 years. The prevalence rates of STIs harbour by students were Candidiasis, 40.70%; Trichomoniasis, 4.70%; post-pubertal gonorrhoea 2.99%; chlamydia infection, 10.79%; syphilis 2.40%; chancroid, 2.40% and Herpes, 3.50%. All the students with candidiasis and trichomoniasis were females; four students with gonorrhoea were males representing 80.00% of the students. This distribution was not statistically significant ( $P > 0.05$ )

**Conclusion:** Sexually Transmitted Disease (STDs) is common phenomena among the youth who are sexually active. Candidiasis was the commonest presentation among females while more male students harbour gonorrhoea than female students.

**Key Words:** Profile, STIs, Students of tertiary institution, Gwagwalada.

### I. Introduction

Sexually transmitted infections (STIs) are common communicable disease among the young and literate in the world, it is also common among pregnant women<sup>1</sup>. Available data show that sexually transmitted diseases constitute great medical, social and economic problems in Nigeria. Apart from the heavy affliction of urban dwellers, there is rapid excursion of these diseases to the rural areas as well. is advocated worldwide<sup>2</sup>. In 1996 alone, about 333 million new cases of curable and preventable STIs occurred in both developed and developing countries and were particularly predominant in men and women aged 15 – 49 years<sup>3</sup>.

The University Community is constituted by mainly youths. The practices of having sex with older partners, having sex with non-steady partners and unprotected sex are common practices among university students who are very much interested in experimentation and fun. While some students engage in casual sex without the use of condoms because of the desire for material possession other students engage in the act due to peer-pressure. This behaviour has led to the spread of STIs in tertiary institutions in Nigeria and some of the complications and sequelae that may arise include pelvic inflammatory disease (PID), infertility, neonatal and fetal wastage, anogenital injuries and cervical cancer<sup>3,4</sup>.

National average prevalence rates of STIs stood at 11.50% and for the various STIs such as Non-gonococcal Urethritis (NGU) as 26.3%; post-pubertal gonorrhoea, 18.03%; trichomoniasis, 9.8%; candidiasis 9.62%; chancroid, 4.28% and primary syphilis, 2.2%<sup>5</sup>.

Youths are either sexually active or are planning to be so<sup>6</sup>. The social media is an invariable tool for partying, clubbing and socialization. Although there is paucity of data and information in Nigeria due to scarce specialist centre and diagnostic apparatus and by far the most important reason being the stigma of having or visiting a treatment centre<sup>2,5,6,7,8,9</sup>.

### Aim

The aim of the study was to profile the sexually transmitted infections (STIs) among students from tertiary educational institution in Abuja, Nigeria.

## **II. Methodology**

### **Study background**

The study was conducted at the Venereology clinic, department of Medical Microbiology and Parasitology, in collaboration with Family Medicine and Community Medicine Departments, University of Abuja Teaching Hospital, Gwagwalada, Abuja, Federal Capital Territory (F.C.T).

### **Study population**

The study was conducted on consecutive students from tertiary institutions in the clinic who were mainly referrals from General Outpatient Department (GOPD). The population was a mixture of University (public and private), Polytechnic and College of Education (FCE). Those who consented to participate in the study were enrolled using the study tools (questionnaire and consent form) and were assured of adequate privacy.

### **Inclusion Criteria:**

- i. All undergraduate students with symptom who gave consent
- ii. Those with no form of medication

### **Exclusion Criteria**

- i. Postgraduate students and those who did not consent to the study.
- ii. History of diabetes mellitus, renal disease or other chronic diseases

### **Study design**

This was a cross sectional study involving Two hundred and two students (202 students).

## **III. Specimen Collection, Transportation And Processing**

The type of specimen collected was based on the clinical diagnosis at presentation. All patients with discharge had specimens collected from the endocervix in females and urethra in males using soft brush to gentle scrub 3cm to the posterior outer meatus. Samples collected were immediately cultured on appropriate agar plate (Modified Thayer Martins for gonorrhoea) and smear made on glassslide for immediate observation under high power field (Trichomoniasis) or stained. Standard guidelines were observed in processing the specimens in order to arrive at appropriate laboratory diagnosis.

### **Data Analysis**

Data were analyzed using SPSS 20.0 software. The chi square-test and Fischer exact test was used to perform and establish any statistical difference. Probability values of <0.05 was considered as statistically significant.

## **IV. Results**

A total of one hundred and sixty-seven did participate in the study while thirty five withdrew at various stages of the study. Their ages ranged between 15 and 35 years. There were 68 males (40.72%) and 99 females (59.28%) and the male to female ratio (M:F) was 1:1.2. The mean age of students studied was 22 years $\pm$ 18.4, with the highest proportion within the age range of 21-25 years accounting for 34.73% of the students and the lowest proportion being 10-15 years accounting for 6.59% of the students studied. The overall prevalence of sexually transmitted infections among students from tertiary educational institutions in Abuja was 70.60% (118 vs 167) while forty-six students (29.34%) did not harbour STI, this distribution was statistically significant (P <0.05, Table 1).

Ninety-nine (59.28%) of the students had discharges while 19 students presented with genital ulcers representing (11.38%). The highest proportion of students with ulcers falls within 21-25 and 26-30 age groups while the distribution of discharges are 26 (26.26%) and 36 (36.36%) students within 16-20 and 21-25 age groups respectively. The lowest proportion of discharges falls within 10-15 age group accounting for 10 (10.10%) students. (Table 2).

The prevalence rates of STIs harbour by students were Candidiasis, 40.70%; Trichomoniasis, 4.70%; post-pubertal gonorrhoea 2.99%; chlamydia infection, 10.79%; syphilis 2.40%; chancroid, 2.40% and Herpes, 3.50%. All the students with candidiasis and trichomoniasis were females, four students with gonorrhoea were males representing 80.00% of the students. This distribution was not statistically significant (P >0.05, Table 3).

**Table 1: Age distribution among students and STDs presentation**

Age group (Years)	Frequency	Percent (%)	Discharges (percent)	Ulcers (percent)	Venerophobia (percent)
10 – 15	11	6.59	1 (10.10)	1 (5.26)	0 (0.00)
16 – 20	44	29.34	26 (26.26)	3 (15.79)	20 (40.81)
21 – 25	58	34.73	36 (36.36)	6 (31.58)	16 (32.65)
26 – 30	26	15.57	10 (10.10)	6 (31.58)	10 (20.40)
31 – 35	23	13.77	17 (17.17)	3 (15.79)	3 (6.12)
<b>Total</b>	<b>167</b>	<b>100.00</b>	<b>99(59.28)</b>	<b>19(11.38)</b>	<b>49(29.34)</b>

**Table 2: Gender and STDs presentation among students in Abuja.**

Gender	Frequency (Percent)	Discharges (Percent)	Ulcers (Percent)	Venereophobia (Percent)	Total
Male	68 (40.72)	15 (15.15)	9 (47.37)	44 (89.80)	68
Female	99 (59.28)	84 (84.84)	10 (52.63)	5 (10.20)	99
<b>Total</b>	<b>167 (100.00)</b>	<b>99(59.28)</b>	<b>19 (11.38)</b>	<b>49(29.34)</b>	<b>167</b>

**Table 3: The prevalence of STDs among students from tertiary institutions in Abuja.**

STDs	Frequency	Percent (%)	Male (Percent)	Female (Percent)
Gonorrhoea	5	2.99	4 (80.00)	1 (20.00)
C. trachomatis	18	10.79	11 (61.11)	7 (38.89)
Herpes type2	6	3.59	3 (50.00)	3 (50.00)
Syphilis	4	2.40	2 (50.00)	2 (50.00)
L. venereum	5	2.99	3 (60.00)	2 (40.00)
Chancroid	4	2.40	1 (25.00)	3 (75.00)
Candidiasis	68	40.70	0 (0.00)	68 (100.00)
Trichomoniasis	8	4.79	0 (0.00)	8 (100.00)

## V. Discussion

The prevalence rate of STIs among students of tertiary educational institutions of 70.60% was higher than the prevalence rate presented by the national (Nigeria) survey<sup>5</sup> on STIs, Basuaye in Benin<sup>6</sup> and Aboyeji in Ilorin<sup>1</sup> whose overall prevalence rate was 11.50%, 11.8% and 49.4% respectively. The difference might be due to the methodology employed in the national survey which included all category of the population including students. This high rate might also be due to narrowing the study population to students which make up the largest group of youth who are sexually active and adventurous. The location of the study notably Abuja, the

cosmopolitan capital city of Nigeria, often than not play host to many highly placed dignitaries socializing with students which might contribute to the high prevalence rate.

Candidiasis caused by candida albican account for the highest agents isolated from the students, this was consistent with studies By Aboyeji<sup>1</sup>, Onile<sup>9</sup>, National survey<sup>5</sup>. The findings of 40.70% in this study was higher than other studies<sup>1,5,9</sup>. This finding might be due to the fact that all the students who harbour candidiasis were females and there was prepondence of female students (59.28%) in this study. The prevalence in this study was however lower than studies by Bazuaye<sup>6</sup>. The prevalence rate of post-pubertal gonorrhoea in this study was higher than studies by Aboyeji<sup>1</sup> and Bazuaye<sup>6</sup>, but lower than finding by Onile<sup>9</sup>. The higher isolation rate was due to the fact that Modified Thayer Martins media was used in the laboratory and the samples were immediately inoculated on the culture plate. Males predominantly harbours Post-pubertal gonorrhoea with 80.00% of all the students with gonorrhoea. The lower isolation rate might be due to misuse of antibiotics. The prevalence of syphilis in this study was higher than finding in Ilorin<sup>1</sup> and by Onile<sup>9</sup> but the finding in this study was lower than findings from Benin<sup>6</sup>. The prevalence of chancroid in this study was higher than finding by Onile<sup>9</sup>. Syphilis and chancroid are the most important ulcers presented in the STIs clinic, while syphilitic ulcers are painless, clean and beefy, chancroid ulcers are painful, dirty and multiple.

## **VI. Conclusion**

Sexually Transmitted Disease (STDs) is common phenomena among the youth who are sexually active. Candidiasis was the commonest presentation among females while more male students harbour gonorrhoea than female students.

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