

Assessment of Difference in the Knowledge of Syphilis between Rural and Urban Secondary School Students of the North-Eastern Nigeria

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Abstract: *This study investigated the Difference in the knowledge of syphilis between rural and urban secondary school students in North-Eastern Geo-Political Zone of Nigeria. One research question and one hypothesis were postulated. Descriptive survey was adopted and multi-stage sampling procedure was used to select 384 respondents from twelve secondary schools in three states of the study area. A researcher-developed questionnaire on modified Likert scale was used to obtain the information from the respondents. The demographic information of the respondents was described using frequency counts and percentage while t-test statistical technique of inferential statistics was used for testing the stated hypothesis. Only data from 369 questionnaires were analysed using SPSS version 16. The result revealed that there was no significant difference between rural and urban secondary school students in the knowledge of syphilis in North-Eastern geo-political zone. It was recommended among others that Intensive health education campaigns targeting both rural and urban secondary school students should be maintained on the knowledge of sexually transmitted infections in general and syphilis in particular to avoid the transmission of the diseases*

I. Introduction

Syphilis is one the sexually transmitted infections that can passed through sexual intercourse such as Gonorrhoea; caused by bacteria called *Treponemapalidium* (Asfaw, 1988). Study of Shoquist and Diane (2003) revealed that syphilis is a bacterial infection that is usually passed on through having sex with someone who is infected. It can also pass from an infected mother to her unborn child and, in rare cases, can be contracted through injecting drugs. Studies have shown that it is extremely rare to have syphilis through a blood transfusion, as blood donors should be carefully screened. As the signs and symptoms of the disease vary from stages; the symptoms develop in three stages primary, secondary and tertiary phases (Burapangkul, Tangsupachi & Yasoongnoen, 1985).

Primary syphilis

In primary syphilis Zheng, Wu, Poundstone, Pang and Rou (2012) reported that symptoms of syphilis begin with a painless but highly infectious sore on the genitals or sometimes around the mouth. Coming in contact with the sore, typically during sexual contact, one can become infected. The sore lasts two to six weeks before disappearing. Asfaw, (1988) stated that the initial symptoms of syphilis can appear any time from 10 days to 3 months after one has been exposed to the condition. The most common symptom is the appearance of a small, painless sore or ulcer (called a chancre). The sore will appear on the part of the ones body where the infection was transmitted, typically the penis, vagina, anus, rectum, tongue or lips. Most people only have one sore, but some people have more. One may also experience swelling in his lymph glands (small organs found throughout the body, such as in the neck, groin or armpit). The sore is painless and may be overlooked, so the condition can be spread without realizing the infection. The sore will then disappear within two to six weeks and, if the condition is not treated, syphilis will move into its second stage.

Secondary Syphilis

The symptoms of secondary syphilis will begin a few weeks after the disappearance of the sore. Common symptoms include: a non-itchy skin rash appearing anywhere on the body, but commonly on the palms of the hands or soles of the feet; tiredness; headaches; swollen lymph glands. Less common symptoms include fever; weight loss; patchy hair loss and joint pains. These symptoms may disappear within a few weeks, or come and go over a period of months (Asfaw, 1988). Secondary symptoms, such as a skin rash and sore throat, then develop. These symptoms may disappear within a few weeks, after which you experience a latent (hidden) phase with no symptoms, which can last for years.

Latent phase

Syphilis will then move into its latent (hidden) phase, where one will experience no symptoms, even though one remains infected. Latent syphilis can still be passed on during the first year of this stage of the condition, usually through sexual or close physical contact. However, after a couple of years, the infection cannot pass to others, even though one remains infected. The latent stage can continue for many years (even decades) after becoming infected. Without treatment, there is a risk that latent syphilis will move on to the most dangerous stage, tertiary syphilis (Shoquist & Diane 2003).

Tertiary Syphilis

Asfaw, (1988) documented that at this stage; the disease can cause serious damage to the body. The primary and secondary stages are most infectious stages to other people. In the latent phase (and usually around two years after becoming infected), syphilis cannot be transmitted onto others but can still cause symptoms. The symptoms of tertiary syphilis can begin years or even decades after initial infection. However, some studies added that the symptoms of tertiary syphilis will depend on what part of the body the infection spreads to. For example, it may affect the brain, nerves, eyes, heart, bones, skin or blood vessels, potentially causing any of the following symptoms: stroke; dementia; loss of coordination; numbness; paralysis; blindness; deafness; heart disease and skin rashes. At this stage, syphilis can be dangerous enough to cause death (Feleke, Abdulkadir, Melamed & Gebre, 1982).

Mode of Prevention

Bishaw, Tafari, Zewdie, Hail, Mascola and Brown (1983) reported that syphilis can be prevented through the following ways:

- ❖ Have sex with a healthy faithful partner who has been tested and is clear from the infection.
- ❖ Condoms can reduce your risk of contracting the disease,
- ❖ Using a dental dam (square of plastic) when ones mouth makes contact with partner's vagina or anus.
- ❖ Avoid sharing sex toys.
- ❖ Avoid multiple injection use; do not use other people's needles.

Shoquist and Diane (2003) postulated that youths engage in unprotected sex which exposes them to certain number of risks such as sexually transmitted infections (STIs) early pregnancy or unwanted pregnancy which can lead to unsafe abortions, resulting into life threatened damages such as ruptured uterus, septicemias, hemorrhage and even death. It is important that both rural and urban secondary school students should have the basic knowledge of this disease. Therefore knowledge in this context is viewed as a general awareness or information, facts, ideas, truths, or principles of a particular thing that the urban and rural secondary school students have regarding syphilis. It was observed that most parents feel that teaching sex education to children will lead to experimentation and promiscuity. However, Obinna (1995) disputed that young people cannot be kept ignorant of secrets of sex life given the circumstances of modern life, it is imperative for parents to explain to today's young people the need for sex education.

Similarly, according to UNICEF (2001) reports in Nigeria young people obtain information on sex from peers; most of the information is inadequate and erroneous.

Gupta (2002) also observed that the increasing reliance on television, alcohol and gambling as an outlet for stress and tension reduction and a firm that entertainment is a devastating behaviour since its consequence are risky sexual behavior. Moreover, Theerapon, Suankratay and Jitapunkul, (2000) revealed that students in rural settings are vulnerable and likely to lack the knowledge for many reasons but especially because of language issues, differences in cultural beliefs and socio-economic barriers. Similarly, it was reported that the rate of syphilis was high among subjects living in rural areas which might be explained by their sexual behavior or inadequate knowledge about sexually transmitted diseases (Woolley & Anderson, 2008). Moreover, Cherutich, Kaiser, Galbraith, Williamson, Shiraiishi, Ngare, Mermin, Marum and Bunnell (2012) reported that the vast majority of rural Kenya don't have knowledge of syphilis, posing a major barrier to prevention, care and treatment efforts. Some studies revealed that the most prevalent STIs among adolescent as observed by the International Association for Adolescent Health (2009) in Federal Ministry of Education (2010) includes syphilis, Gonorrhoea, candidacies, Herpes and HIV in which North-Eastern Geo-Political Zone is inclusive. It is against this background that this research was designed to assess the Difference in the knowledge of syphilis between rural and urban secondary school students in North-Eastern Geo-political zone of Nigeria.

Research Question

What is the status of knowledge of syphilis among secondary school students in North-Eastern Nigeria?

Hypothesis

There is no significant difference in knowledge of syphilis between rural and urban secondary school Students in North-Eastern Geo-Political zone of Nigeria..

II. Methodology

This study was designed to assess the Difference in the knowledge of syphilis between rural and urban secondary school students in North-Eastern Geo-political zone of Nigeria. The study adopted descriptive survey design. The population of the study is made up of all secondary school students in North-Eastern Nigeria. The population is four hundred and twenty nine thousand; four hundred and thirty students (429,430) as at 2010 statistics of all the states ministries of education in North-Eastern Nigeria. The sample for the study was 384 respondents drawn from the 12 selected secondary schools in the area of study and multi-stage sampling procedure was used to arrive at the sample for the study using simple random sampling in all the three stages. Six schools were drawn from urban areas (three male & three female schools) and the remaining six schools were also selected from rural area (three male & three female). Four from each of the three selected states in the study area; that is; Gombe, Borno, and Taraba. In each school selected schools, a sample of thirty two (32) students were selected using simple random sampling technique.

Instrument For Data Collection

The instrument for data collection of this study was a researcher-developed questionnaire on modified Likert scale. The questionnaire is divided into two section A and B. section A, focuses on demographic information of the respondents while section B, requires information on knowledge of syphilis. The instrument was subjected to a pilot study using two schools in one of North-Eastern state. A test re–test reliability method was used to estimate the reliability. The results of the two tests were subjected into analysis using Pearson product moment correlation statistical technique. A reliability of 0.79 was obtained which makes the instrument reliable for the study. Data was collected with the help of six trained research assistants two from each state. The research assistants were trained on the modalities on data collection. Both the researcher and the research assistants were involved in data collection. The administering and collection of the instrument was done in two weeks time. Frequency counts and percentage were used to organize and describe the demographic information of the respondents while t-test was used to analyse the hypothesis advanced at alpha level of 0.05.

III. Results

The results of this study are presented here:

Table 1: Distribution of respondent according to location

Location	Frequency	Percent
Rural	155	42.0
Urban	214	58.0
Total	369	100.0

From the table 1 shows the distribution of respondents based on the school location. It would be observed that rural students were 155 amounting to (42.0%), while urban were 214 (58.0%). This implies that there were more males students than females’ students.

Hypothesis

There is no significant difference between rural and urban secondary school students in the knowledge of syphilis in North-Eastern Geo Political Zone of Nigerian.

Table 2 T-test summary on knowledge of syphilis between rural and urban secondary school students

Location	N	Mean	S.D	S.E	DF	T	Prob
Rural	155	18.43	7.90	0.634	367	0.732	0.464
Urban	214	19.02	7.61	0.521			

(t=0.732,df =367; P= 0. 464

Table 2 indicates the t-test analysis of the difference in the knowledge of syphilis between rural and urban secondary school students in the North-Eastern Geo-Political Zone of Nigeria. The result showed that the mean and the standard deviation of the rural secondary school students (18.43 ± 7.90) did not significantly differ with the mean and standard deviation of the urban secondary school students (19.02 ± 7.61) in the knowledge of syphilis in the North-Eastern Nigeria. Similarly, the calculated t-value of (0.732 df 367; P>0.05) obtained is not greater than the tabulated value (1.960). This revealed that significant difference between rural and urban secondary school students in the knowledge of syphilis in the North-Eastern Nigeria did not exist. Therefore, the

null hypothesis of no significant difference in the knowledge of syphilis between rural and urban secondary school students in the North-Eastern Geo-Political Zone of Nigeria is here by upheld.

IV. Discussion

This study assessed the Difference in the knowledge of syphilis between rural and urban secondary school students in North-Eastern Geo-Political Zone of Nigeria. The result revealed that there was no difference in the knowledge of syphilis between rural and urban secondary school students in the North-Eastern Geo political Zone of Nigeria. This outcome is unexpected; it disagrees with the study of Cherutich et al. (2012) finding where they revealed that the vast majority of rural Kenya do not have knowledge of syphilis, posing a major barrier to prevention, care and treatment efforts. The finding also contradicted the study Theerapon, et al. (2000) that students in rural settings are vulnerable and likely to lack the knowledge for many reasons but especially because of language issues, differences in cultural beliefs and socio-economic barriers. Similarly, the finding did not also corroborates with the study Woolley and Anderson (2008) that the rate of syphilis was high among subjects living in rural areas which might be explained by their sexual behaviour or inadequate knowledge about sexually transmitted diseases.

V. Conclusion

It was concluded that there was no significant difference in the knowledge of syphilis between rural and urban secondary school students in the North-Eastern Geo political Zone of Nigeria.

VI. Recommendations

Based on the outcome of the study; the following recommendations were made:

- ✓ Intensive health education campaigns targeting both rural and urban secondary school students should be maintained on the knowledge of sexually transmitted infections in general and syphilis in particular to avoid the transmission of the diseases
- ✓ Federal and State Ministries of Educations should employ only trained health educators to teach Health education in secondary schools to ensure that rural males and urban secondary school students were adequately equipped with a sound knowledge of sexually transmitted diseases, syphilis inclusive.

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