



Evaluating Knowledge, Preventive Measures, and Treatment Awareness Regarding Gonorrhoea Among Adolescents and Adults in Sagbama, Bayelsa State

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Abstract

Background of study: Gonorrhoea is a sexually transmitted infection caused by the bacterium *Neisseria gonorrhoeae*. This study aimed to assess the level of knowledge, prevention, and treatment of gonorrhoea among those aged 15 – 25 in Sagbama, Bayelsa State.

Method: A descriptive study design was used. The population of the study comprises all the aged 15 – 25 years in Sagbama town. The questionnaire was used to select one hundred (100) respondents for the study. Data was analyzed using Statistical Package for Social Sciences (SPSS), version 25, and expressed using frequency distribution tables and percentages.

Results: The result revealed that 55% of the respondents have a fair knowledge of gonorrhoea while 45% of the respondents had a low knowledge about gonorrhoea. 62% of the respondents have good knowledge of the prevention of gonorrhoea while 38% of the respondents have low knowledge of the prevention of gonorrhoea. Also, the results revealed that 56(56%) of the respondents affirmed that ceftriaxone 500mg IM in a single dose be administered for persons weighing <150kg as a means of gonorrhoea treatment, 28(28%) said no while 15(15%) of the respondents have no idea. 49(49%) agree that for persons weighing >150kg, should 1g ceftriaxone.

Conclusion: This study clearly identifies adequate knowledge, prevention, and treatment of gonorrhoea. This reported knowledge of adequate knowledge, prevention, and treatment of gonorrhoea might be due to the participant's information sheet containing detailed information about the study provided for them to read before undertaking this study. However, we suggest further study in the local council areas.

Keywords: Knowledge, Prevention, Treatment, Gonorrhoea, Sagbama town

Background of Study

According to Umemo (2013), gonorrhoea is the second most

prevalent sexually transmitted illness (STI) that may be prevented and treated and has an impact on people's health and lives worldwide. It is caused by the bacteria *Neisseria gonorrhoeae*. The World Health Organization (WHO) estimates that among those in the 15–49 age range, 86.9 million new infection cases were recorded in 2016 [1].

Among the issues that African nations are currently experiencing include a large proportion of people from lower-middle-class to low-income backgrounds, and about 60% of the population is under 25 years old, making them susceptible to STIs. Direct contact with mucous membrane exudates from infected individuals is the means of transmission, which nearly invariably results from sexual activity. There's also a chance of perinatal transmission [1]. In prepubertal youngsters, transmission through home exposure happens seldom with house help. When a prepubertal kid is diagnosed with genital, rectal, or pharyngeal colonization or infection after the neonatal stage, sexual abuse should be seriously investigated [2,3].

As long as the host harbors the organism, the individual remains communicable [4]. If left untreated, communicability can last for several months. Within hours, communicability is eliminated with effective therapy.

According to Apiella (2019), local extension from the vaginal tract can cause Bartholinitis, perihepatitis, pelvic inflammatory disease (PID), ectopic pregnancy, infertility in women, epididymitis, and chronic prostatitis in males.

Controlling the acute infection and avoiding long-term consequences including infertility, ectopic pregnancy, and persistent pelvic discomfort are the main objectives of therapy. If the minimal requirements are met and there are no other apparent reasons for the illness, women who are at risk for STIs should begin empiric therapy for PID. If the sexual partners of women with PID are not also clinically assessed, the care of these women is deemed insufficient. Streptococci, *N. gonorrhoeae*, *C. trachomatis*, and Gram-negative facultative bacteria should all be covered by treatment plans [2].

Even with awareness campaigns, gonorrhoea is still a sexually transmitted disease that affects people all over the world and is most common in those between the ages of 15 and 25. Every year, millions of new cases of gonorrhoea in individuals between the ages of 15 and 49 are recorded. Teenagers in particular are at risk because of their strong sexual desires and risky sexual behaviors. The purpose of this study is to evaluate the knowledge, prevention, and treatment of gonorrhoea among adults aged 15 to 25 [1].

Aim of the Study

The study aims to assess the level of knowledge, prevention, and treatment of gonorrhoea among adults youths aged 15 – 25 in Sagbama, Bayelsa State.

Objectives of the Study

1. To assess the level of knowledge of gonorrhoea infection among ages 15 – 25 in Sagbama town, Bayelsa State.
2. To determine the prevention pattern adopted by adults aged 15-25 in Sagbama, town Bayelsa State.
3. To determine their choice of the treatment pattern of gonorrhoea among ages 15-25 in Sagbama town, Bayelsa State.

Method

Area of the Study

The study was carried out in Sagbama Local Government Area (LGA) which is located in the southern part of Nigeria, Bayelsa State Capital. These people speak the Ijaw language, their occupations are mainly business civil servants, fishing, and farming. At the 2006 census, they had a population of 187,146. It has a Latitude of 5.152239 and a Longitude of 6.192479.

Population of the Study

Both males and females within the age range of 15 – 25 years in Sagbama LGA. The study target was the Youths who are more vulnerable.

Research Design

A descriptive survey design was adopted in this study.

Sampling Size and Sampling Technique

A stratified sampling simple random technique was used to select a sample of 100 respondents which are the youths that are most vulnerable. The above was done after calculating the sample size using an online power calculation tool and a pilot study. Also, before the commencement of the study participants' information sheet was provided to all potential participants to abreast them on the details

of the study, and a consent form was given to them to sign off as an agreement to participate in the study.

Instrument for Data Collection

A structured self-report questionnaire was used for data collection which comprised four (a) sections (A demographic data of respondents, section B contains the level of knowledge, section C contains the prevention, and section D contains the treatment.

Validity of the Instrument

The study instrument was made valid by the study supervisor for face and content validity.

Reliability of the Instrument

A Cronbach's alpha was used to determine 10% of the population with a core of above 0.7 aimed at determining reliability.

Method of Data Collection

Data was collected using the distribution of the questionnaires to the respondents face to face and retrieved immediately after completion of the questionnaire. Participants filled out the questionnaires and asked questions on areas that were complex to them.

Method of Data Analysis

Data was analyzed using Statistical Package for Social Science (SPSS) version 25 and was presented and expressed using frequency distribution tables.

Ethical Consideration

Ethical approval was obtained from the Research Ethics Committee of Bayelsa State College of Health Technology. Permission was sought from the relevant authorities and verbal written consent was sought after reading the participant information sheet. All participants were assured of the confidentiality of the information they provided.

Results and Analysis

Demographic Data

Altogether, 100 respondents took part in this study. Regarding their demographics, it was found that the majority 70 (70%) of the respondents were aged between 15 - 20 years while 30(30%) were aged 25. Most respondents were also female 54 (54%) while 46(46%) were male. The majority of the respondents were unmarried 63 (63%), 31(31%) were married women and 6(6%) of the respondents were married men Greater numbers of the studied participants were Secondary certificate holders with 66 (66%), 30 (30%) being Tertiary while only 4 (4%) of the respondents were Primary certificate holders. The demographic data of the respondents is shown in Table 4.1.

Variable	Frequency (n=10)	Percentage (%)
Age (years)		
a. 15-20	70	70
b. 25 and above	30	30
Sex		
a. Male	46	46
b. Female	54	54
Marital status		
a. Single	63	63
b. Married	31	31
c. Others	6	6
Education		
a. Primary	4	4
b. Secondary	66	66
c. Tertiary	30	30

Table 1: Demographic data of respondents

Source: Fieldwork (2023)

The Level of Knowledge of Gonorrhoea among Aged 15 to 25

Table 4.2 below shows the level of knowledge of gonorrhoea among aged 15 to 25 years, it shows that 49(49%) of the respondents agreed for painful urination while 41(41%) and 10(10%) disagreed and have no idea, 39(39%) of the respondents agreed for pus-like discharge from the tip of the penis while 46(46%) and 15(15%) disagreed and have no idea, 39(39%) of the respondents agreed for pain or swollen in one testicle while 42(42%) and 19(19%) disagreed and have no idea, 40(40%) for increased vaginal discharge while 40(40%) and 20(20%) disagreed and have no idea, 40(40%) were for vaginal bleeding between period such as after vaginal intercourse while 45(45%) and 15(15%) disagreed and have no idea, 49(49%) for abdominal or pelvic pain while 36(36%) and 15(15%) disagreed and have no idea, 42(42%) for Anal itching, pus-like discharge from the rectum, spots of bright red blood on toilet tissue and having to strain during bowel movement while 39(39%) and 19(19%) disagreed and no idea, 46(46%) for eye pain, sensitivity to light, and pus-like discharge from one or both eyes whereas 41(41%) and 13(13%) disagreed and no idea, 44(44%) for sore throat and swollen lymph nodes in the neck whereas 42(42%) and 14(14%) disagreed and have no idea, 45(45%) for Joint being warm, red, swollen and extremely painful, especially during movement while 39(39%) and 16(16%) disagreed and have no idea, 65(65%) for gonorrhoea caused by the bacterium neisseria gonorrhoea while 20(20%) and 15(15%) disagreed

and have no idea, 57(57%) for gonorrhoea can be gotten from sexual contact with an infected person while 34(34%) and 9(9%) disagreed and have no idea, 59(59%) for gonorrhoea can be transmitted from mother to baby during child birth while 26(26%) and 15(15%) disagreed and have no idea, 56(56%) for gonorrhoea easily affect people below 25years old and men who have sex with men while 31(31%) and 13(13%) disagreed and have no idea, 58(58%) for gonorrhoea affect people more that are thing a new sex partner while 32(32%) and 10(10%) disagreed and have no idea, 65(65%) for Gonorrhoea affect people who had a sex partner who has other partners while 25(25%) and 10(10%) disagreed and have no idea, 61(61%) for Gonorrhoea affect people who usually have more than one sex partner while 28(28%) and 11(11%) disagreed and have no idea, 60(60%) for gonorrhoea is more likely in people who had it or another sexually transmitted infection while 29(29%) and 11(11%) disagreed and have no idea, 62(62%) for gonorrhoea can result in infertility while 24(24%) and 14(14%) disagreed and have no idea, 61(61%) for gonorrhoea can cause fever, rash, skin sores, joint pain, swelling and stiffness while 25(25%) and 14(14%) disagreed and have no idea, 59(59%) for gonorrhoea can increase risk of HIV/AIDs while 26(26%) and 15(15%) disagreed and have no idea, finally, 57(57%) for gonorrhoea can result to babies born with blindness, sores on the scalp and infection whereas 27(27%) and 16(16%) disagreed and have no idea.

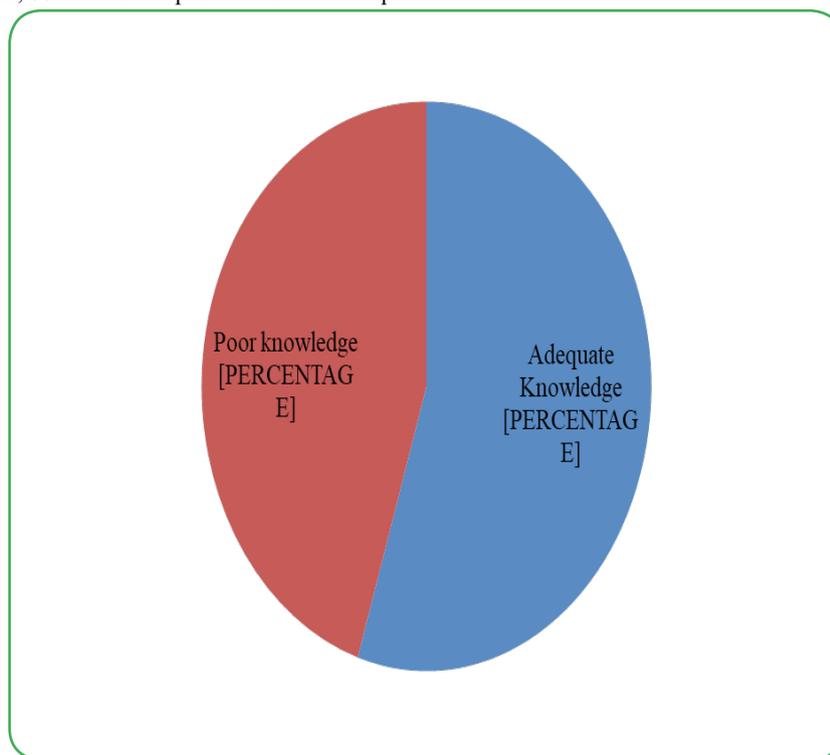
N/S	Items	Responses		
		Yes n(%)	No n(%)	No idea n(%)
1.	unpleasant urination	49(49%)	41(41%)	10(10%)
2.	discharge from the tip of the penis that resembles pus	39(39%)	46(46%)	15(15%)
3.	One testicle is in pain or swollen.	39(39%)	42(42%)	19(19%)
4.	Enhanced vulvar discharge	40(40%)	40(40%)	20(20%)
5.	vaginal bleeding in between periods, such as following a vaginal sex	40(40%)	45(45%)	15(15%)
6.	Pain in the abdomen or pelvis	49(49%)	36(36%)	15(15%)
7.	Anal irritation, a rectum discharge that resembles pus, bright red blood streaks on toilet paper, and straining during a bowel movement	42(42%)	39(39%)	19(19%)
8.	Pain in one or both eyes, sensitivity to light, and pus-like discharge	46(46%)	41(41%)	13(13%)
9.	sore throat and enlarged neck lymph nodes	44(44%)	42(42%)	14(14%)
10.	The joint is quite painful, swollen, red, and heated, especially while moving.	45(45%)	39(39%)	16(16%)
11.	Neisseria gonorrhoea is the bacteria that causes gonorrhoea.	65(65%)	20(20%)	15(15%)
12.	It is possible to get gonorrhoea through intercourse with an infected person.	57(57%)	34(34%)	9(9%)
13.	During delivery, gonorrhoea can spread from mother to kid.	59(59%)	26(26%)	15(15%)
14.	Gonorrhoea is most common in those under 25 and in guys who have intercourse with other men.	56(56%)	31(31%)	13(13%)
15.	Those who are considering a new sexual relationship are more affected by gonorrhoea.	58(58%)	32(32%)	10(10%)
16.	Those who had a sexual relationship but now have other partners are affected by gonorrhoea.	65(65%)	25(25%)	10(10%)
17.	Those with gonorrhoea typically have several sexual partners.	61(61%)	28(28%)	11(11%)
18.	Those who have experienced gonorrhoea or another STD are more susceptible to it.	60(60%)	29(29%)	11(11%)
19.	Infertility can be caused by gonorrhoea.	62(62%)	24(24%)	14(14%)
20.	Fever, rash, skin sores, joint discomfort, edema, and stiffness can all be symptoms of gonorrhoea.	61(61%)	25(25%)	14(14%)
21.	Gonorrhoea may make HIV/AIDS more likely.	59(59%)	26(26%)	15(15%)
22.	Babies born with gonorrhoea may have infections, scalp sores, and blindness.	57(57%)	27(27%)	16(16%)

Table 4.2: The Level of Knowledge of Gonorrhoea among Aged 15 to 25

Level of Knowledge

Figure 1: showing the overall knowledge of gonorrhoea among those aged 15 to 25 years, 55% of the respondents have a adequate

knowledge of gonorrhoea while 45% of the respondents had a poor knowledge about gonorrhoea.



The Prevention of Gonorrhoea among Aged 15 to 25

Table 4.3 below shows the knowledge prevention of gonorrhoea among those aged 15 to 25 years, it revealed that 74(74%) of the respondents agreed that gonorrhoea could be prevented with the use of a condom during sex, 16(16%) and 10(10%) of the respondents disagreed and have no idea. 59(59%) of the respondents agreed that gonorrhoea can be prevented by abstaining from sex, 26(26%) and 22(15%) of the respondents disagreed and had no idea. 59(59%) of the respondents agreed that gonorrhoea can be prevented by limiting the number of sex partners, 27(27%) and 14(14%) of the respondents

disagreed and had no idea. 64(64%) of the respondents agreed that gonorrhoea can be prevented if you and your partner are tested for sexually transmitted infections before intimacy, 22(22%) and 14(14%) of the respondents disagreed and have no idea. 64(64%) of the respondents agreed that gonorrhoea can be prevented if you do not have sex with someone who appears to have a sexually transmitted infection, 27(27%) and 9(9%) of the respondents disagree and have no idea. Finally, 52(52%) of the respondent's gonorrhoea can be prevented if you do regular gonorrhoea screening every year, 30(30%) and 17(17%) of the respondents disagree and have no idea.

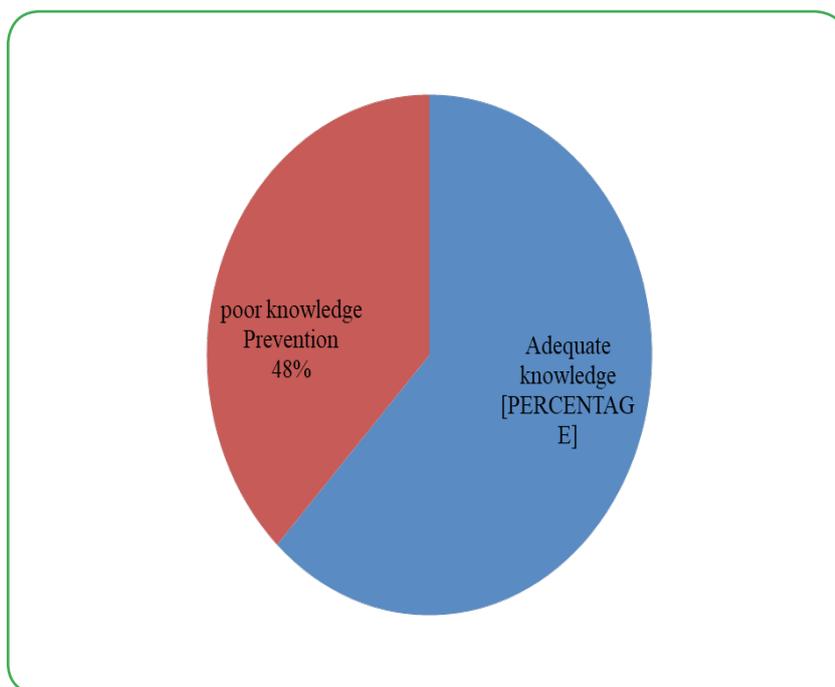
Responses				
N/S	Items	Yes n(%)	No n(%)	No idea n(%)
1.	Gonorrhoea can be prevented with the use of a condom during sex	74(74%)	16(16%)	10(10%)
2.	Gonorrhoea can be prevented by abstaining from sex	59(59%)	26(26%)	15(15%)
3.	Gonorrhoea can be prevented by limiting the number of sex partners	59(59%)	27(27%)	14(14%)
4.	If you and your partner are tested for STDs before having sexual activity, you can avoid gonorrhoea.	64(64%)	22(22%)	14(14%)
5.	Avoiding sexual contact with someone who seems to be infected with an STD can help avoid gonorrhoea.	64(64%)	27(27%)	9(9%)
6.	If you undergo yearly screening for gonorrhoea, you can avoid contracting the disease.	52(52%)	30(30%)	17(17%)

Table 4.3: The Prevention of Gonorrhoea among those Aged 15 to 25

Prevention of Gonorrhea

Figure 2: showing the overall prevention of gonorrhea among those aged 15 to 25 years, 62% of the respondents have adequate

knowledge of the prevention of gonorrhea while 38% of the respondents have poor knowledge of the prevention of gonorrhea.



Treatment of Gonorrhea among Aged 15 to 25

Table 4.4 below shows the treatment of gonorrhea among those aged 15 to 25, it revealed that 56(56%) of the respondents affirmed that ceftriaxone 500mg IM in a single dose be administered for persons weighing <150kg is a means of gonorrhea treatment, 28(28%) said no while 15(15%) of the respondents have no idea. 49(49%) agree that for persons weighing >150kg, should 1g ceftriaxone be administered as a treatment for gonorrhea, 32(32%) said no while 18(18%) of the

respondents have no idea. 44(44%) agreed that Azithromycin 2g orally in a single dose is a means of gonorrhea treatment, 35(35%) said no while 20(20%) of the respondents have no idea. Finally, another greater number 46(46%) of the respondents agreed that if ceftriaxone is not available gentamycin 240mg IM in a single dose plus cefixime 800mg orally in a single dose, 23(23%) said No while 29(29%) of the respondents have no idea.

Responses				
N/S	Items	Yes	No	No idea
		F(%)	F(%)	F(%)
1.	Ceftriaxone 500mg* IM in a single dose be administered for persons weighing <150kg	56(56%)	28(28%)	15(15%)
2.	For persons weighing >150kg, should 1g ceftriaxone be administered	49(49%)	32(32%)	18(18%)
3.	Azithromycin 2g orally in a single dose	44(44%)	35(35%)	20(20%)
4.	If ceftriaxone is not available gentamycin 240mg IM in a single dose plus cefixime 800mg orally in a single dose	46(46%)	23(23%)	29(29%)

Table 4.4: Treatment of Gonorrhea among those Aged 15 to 25

Discussion of Findings

We conducted a poll with individuals between the ages of 15 and 25 to gauge their understanding of gonorrhea infection prevention and treatment. In general, we discovered that the respondents' degree of awareness of gonorrhea infection was quite average. In particular, the respondents' understanding of the symptoms, risk factors, and indicators of gonorrhea infection was inadequate. The respondents also held false beliefs about the disease's persistence (treatment) and

prevention. Even though gonorrhea is one of the four major STIs that can be cured, those results suggest that there is less specific information about gonorrhea infection than there is about other STIs [5]. The respondents' overall favorable understanding of gonorrhea infection prevention was good. An increased proportion of participants concurred that gonorrhea can be avoided by using a condom during sexual activity (16%), refraining from sexual activity (59%), restricting the number of sexual partners (59%), getting tested for STDs before intimacy (64%), and not having sex with someone

who seems to have STDs (64%). A related research [6] similarly shows a positive understanding of gonorrhea prevention strategies. The respondents' opinions of the topic's affiliation appeared reasonable, however, a small percentage of them were uninformed about how to prevent gonorrhea issues. Sensitizing kids via school anti-STI groups and youth mini-media is a crucial tactic to modify their unfavorable attitude since the illness is more harmful to adolescents and young people in the community. Additionally, several respondents lacked awareness about how to avoid gonorrhea, according to our findings. Therefore, it is possible that the respondents' unfavorable opinions about gonorrhea stem from their limited understanding of the condition. This result is greater than that of Gondar, Ethiopia [7], however, it is equivalent to the research done in the Eastern Cape, South Africa [8].

The current study also showed that 56% of the respondents agreed that the only oral cephalosporin currently recommended as a primary treatment for gonorrhea is a single dose of 400 mg PO of ceftriaxone (500 mg IM). This is consistent with the findings of Moran & Handsfield [9], who found that cefixime (400 mg PO) should be given as a single dose to individuals weighing less than 150 kg. Of the responders, 15 (15%) had no idea, and 28 (28%) replied no. Of the respondents, 18(18%) had no idea, 32(32%) disagreed, and 49(49%) agreed that 1g ceftriaxone should be given as a therapy for gonorrhea to those who weigh more than 150 kg. Twenty percent of the respondents had no clue, while 35 percent disagreed and 44 percent agreed that treating gonorrhea with an oral dosage of 2 grams of azithromycin is a viable option. Handsfield [9] provides evidence for this, stating that oral 2-g dosage of azithromycin is efficacious against uncomplicated urogenital gonococcal infection (efficacy, 99.2%; 95% CI, 97.2%–99.9%). Ultimately, a higher percentage of respondents—46(46%)—agreed that if ceftriaxone is unavailable, gentamycin 240 mg intramuscularly in one dosage and cefixime 800 mg oral in one dose. However, 23(23%) responded negatively and 29(29%) indicated they had no clue.

Conclusion

In this study, respondents' general understanding of gonorrhea infection was rather fair, as was their knowledge of prevention and therapy. Furthermore, in order to lower the prevalence of gonorrhea and other STIs among high school students, it is highly advised to develop and strengthen respondents' knowledge, prevention, and treatment via gonorrhea health education and prevention. This is because respondents do not currently possess adequate knowledge about gonorrhea.

Recommendations

1. Our study indicates that there is a need for a comprehensive gonorrhea screening, surveillance, and treatment program in the College.
2. A routine enlightenment program should be carried out to enlighten the student community about gonorrhea.

3. The government should at all times make protective devices available and easily accessible for the vulnerable masses.

Limitation

This study does not cover all age groups and more communities in the local council area of Sagbama were not captured in this study due to limitation of time and funds.

Conflict of Interest

No conflict of interest was declared among the authors after reading the manuscript.

Acknowledgment

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