

ANALYSIS OF ADOLESCENTS' REPRODUCTIVE HEALTH PROBLEMS IN OSUN STATE, NIGERIA

By

Obidiya, M.O.^{1*} and Oyeleye, O.I.²

¹Department of Geography, Osun State University, Osogbo

²Department of Tourism, Osun State University, Osogbo

Corresponding Author's Email: mobilaji.obidiya@uniosun.edu.ng

ABSTRACT

This research analyzed the types of adolescents' reproductive health problems, the prevalent rates in the population as well as inter and intra-urban variations. The types of reproductive health problems discussed here are essentially Sexually Transmitted Infections (STIs). The research made use of secondary data sourced from the hospital records of relevant cases which were collected from the STIs clinic of the two teaching Hospitals in Osun State (Ladoke Akintola University Teaching Hospital (LAUTECH), Osogbo and Obafemi Awolowo University Teaching Hospital (OAUTH), Ile-Ife. The data were processed using Statistical Package for Social Sciences 20.0 (SPSS). The result shows that gonorrhoea (27%), syphilis (21%) and candidiasis of the genitals (17%), top the list of STIs among adolescents in the State. The highest proportion of STIs was found in the major cities of Osogbo and Ile-Ife, while the high and medium residential densities host the larger percentage of reproductive health problems. The Spearman's rank correlation between the number of cases and years is 0.30 and it is not significant. This could be a signal that the variation in the trend is not dependent on years but on some other factors such as poor record-keeping attitudes and societal disapproval of contraceptive use among adolescents among others. This implies that the high density areas, particularly the core areas of our urban centres need greater attention with respect to awareness campaigns and promotion of safe sex practices as well as education on reproductive health.

Key words: Adolescent, Reproductive health, Residential density, Sexually transmitted infections

INTRODUCTION

Adolescents are those people between the ages of 10-19 years (WHO, 2019). In this case, the people in the immediate post-adolescent age will be coopted to make the work robust, therefore for this research, the age range of young population considered is between ages 13-24 years. Adolescents' reproductive health is one of the paramount headaches of the world health challenge today. The uncontrollable quest for fun and excitement of the so called youthful exuberance coupled with unrestricted exposure to internet negative programs such as pornography among others have taken the adolescent sexual problem to a serious level (Adeboyejo and Obidiya, 2016).

The first step towards better sexual health for all lies in understanding the risks, repercussions and reality of STIs and STDs. Dated back to the 1960s, human immunodeficiency virus (HIV) was already being reported. But its first medical observation of late stage symptoms, acquired immunodeficiency syndrome (AIDS) in 1981 propelled sexual health on to the public radar, mixing messages of stigma and safety, treatment and taboo. When STIs are left untreated, its side effects could be severe, such as pain, infertility, and worsening infection, increased risk for some types of cancer, brain damage, heart disease, birth defects and death (Ajide and Balogun, 2018).

The most effective way of preventing STIs is by not having sex. Some vaccinations could decrease the risk of infections which include HPV, Hepatitis B. Safer sex practices such as use of condoms, having a reduced sexual partner, and being in a relationship where each person only has sex with the other also decrease the risk. Male circumcision could prevent some infections. Most STIs are curable. The most popular infections such as gonorrhoea, syphilis, trichomoniasis and chlamydia are curable, while hepatitis B, herpes, HPV and HIV/AIDS are treatable but not curable (James et al., 2016; WHO, 2016). Many STIs may not show any symptoms, symptoms vary for each STI, but include blisters or sores around the genital area, unusual discharge from the vagina or penis, pain during urination, swelling, itching, pain in the pelvic area or abdomen, pain in or around the vagina or penis or bleeding other than the menstrual period (Envuladu et al., 2021).

STIs are transferred through contact with infected body fluids such as semen, vaginal fluids, and blood. It could also be spread through contact with infected skin with sores in the mouth. One may be unprotected against infected body fluids and skin through anal, vaginal or oral sex. Anal sex could be very dangerous because it causes bleeding. Sharing syringes or needles for ear piercing, drug use, tattooing, can also expose one to infected fluids. Most STIs are only transferred through sexual contact with an infected person. However, pubic lice and scabies can be spread through close personal contact with an infected person, or with infested clothes, sheets, or towels (WHO, 2018).

Universally, Sexually Transmitted Infections (STIs) have been a tenacious and repeated public health concern. More than one million new STI cases occurred per day, the effects of sexual and reproductive health are far-reaching and pervasive (WHO, 2019). The intricacy of these diseases transects boundaries, age groups and sexes. It is important to recognize that STIs are perhaps one of the largest 'concealed' epidemics with serious long-term effects. They are capable of causing neonatal mortality, increase infertility rates and lead to illnesses, such as Human Immunodeficiency Virus (HIV), hepatitis and cervical cancer (WHO, 2016).

Furthermore, STIs are rooted in a background of social, religious, cultural and economic beliefs and practices that at times lead to humiliation and discrimination. Globally, evidence suggests that adolescents and young adults, are highly vulnerable and at increased risk of contracting STIs (Auli et al., 2015; Amare et al., 2019). The fact that youths and young adults are extremely affected, prompted WHO to emphasize STI prevention in this age group over the past six years and set out global targets for ending the STI epidemic (WHO, 2016; WHO, 2017; WHO; 2018)

Three-quarters of new HIV infections among 15-19 year-olds are in sub-Saharan Africa. Pregnancy-related complications and AIDS are the leading causes of death among adolescents in the region (WHO, 2021). The high burden of poor sexual and reproductive health is a threat to the immediate and future health and socioeconomic well-being of the region's young people. Improving the health outcomes of sub-Saharan African adolescents is a priority of many

governments, researchers and development partners which cannot be achieved without proper investigation of the incidence of reproductive health problems (Amare et al., 2019; Anthony and Emmanuel, 2021).

Sexually transmitted infections are severe yet avoidable infectious diseases (WHO, 2018), which ranges from curable to chronic and even fatal outcomes (Public Health Agency of Canada (PHAC), 2012). A significant number of youth and young adults are at risk due to engagement in unsafe sexual behaviours, including multiple and risky sexual partner(s), and low condom use (Bedassa, 2015; Amare et al., 2019), and increased use of alcohol and drugs (Amare et al., 2019; Thongmixay et al., 2019). Furthermore, there is evidence of limited health literacy/knowledge amongst youth and young adult regarding STIs, despite trends of earlier engagement in sexual activity (PHAC, 2012; Zoboli et al., 2017). It was also reported that families are more concerned about preventing pregnancy than sexually transmitted infections (Zoboli et al., 2017).

A study on the knowledge of STIs among adolescents in Nigeria shows that the prevalence of STIs among female adolescents was as high as 17% in the country's rural southeast. Another study conducted in urban Port-Harcourt confirmed the high rate of STIs among adolescents and reported an overall adolescent STI prevalence rate of 14%. Adolescents are liable to STIs because they are more likely to participate in unhealthy sexual lifestyles. However, these adolescents have inadequate knowledge of the use and barriers to sexual and reproductive health information and care services (Shayo and Kalomo, 2015; Uzoma, 2017). Adolescent sexual and reproductive health refers to the physical and emotional wellbeing of adolescents and includes their ability to remain free from unwanted pregnancy, unsafe abortion, STIs and all forms of sexual violence and coercion (WHO, 2018). Adolescent sexual and reproductive health has been ignored over the years in spite of the high dangers that countries face for its inattention. Some of the challenges faced by adolescents around the world include early pregnancy and parenthood, hitches in accessing contraception and safe abortion, and high rates of HIV and other sexually transmitted infections (Amelia et al., 2018; Jessica and Hamid, 2019).

The home environment is the typical features of residences, as well as within-house and immediate neighbourhood situations in which adolescents live, which is both a projection of family identity and an expression or physical translation of cultural belief, practices and behaviour (Adeboyejo et al, 2016). The identification and classification of dwelling units in the urban setting permit diversity of home environment into residential densities or neighbourhoods. The level of poverty in high density residential areas, featuring among others, distressful living conditions and absence of basic infrastructure and social services has serious health consequences for the adolescents' population and sexual behaviour. On the other hand, in well laid-out low-density home environment, where adolescents live in separate rooms, often without parental supervision, coupled with access to products of modern technology, there is ample opportunity for various sexual experimentations among adolescents in this environment (Adeboyejo and Onyeonoru, 2013). The behavioural pattern in the medium home environment may approximate either the inner city or low-density environmental situation, depending on the strength of the prevailing micro-environmental processes (Adeboyejo and Onyeonoru, 2013; Bedassa, 2015).

However, qualitative data research with mixed method approach by in Enugu State, Nigeria revealed that available services were not specifically provided for adolescents but for general use. Age, education and income were found to be significantly associated with access to Sexual and

Reproductive Health Services (SRHS). SRHS were generally physically available but not financially accessible to adolescents. Adolescents' clinics were not available and this could affect the access of SRHS by adolescents (Amelia et al., 2018). These are evidences of the deteriorating state of adolescents' sexual health in Nigeria, the young adult in my study area are not excluded. Therefore, the focus of this research is to analyse the components or types of adolescents' reproductive health problems, the incidence, prevalent rates in the population as well as their inter and intra urban variations in Osun State.

THE STUDY AREA

Osun State is located in the South Western part of Nigeria, made up of 30 LGAs and covers an area of approximately 14,875 square kilometers. It lies between Latitudes 7°00'N - 8°10'N and Longitudes 4°03'E - 5°05'E. It is bounded by Ogun, Kwara, Oyo, Ondo and Ekiti States in the north, south, west and east respectively (Fig. 1). The projected population of Osun State based on 2006 National Population Census (NPC) by 2020 was 5,521,901. 16.8% of this population are adolescent according to UNFPA which is 927,679 (UNFPA, 2022).

The indigenes of the State are Yorubas which comprises of Ifes, Ijesas, Igbominas and Oyos. There are 246 registered private secondary schools, 690 public secondary schools, two Federal Institutions, five State-owned Institutions of higher learning and other privately owned Institutions in the State. Osun State is one of the Western States in Nigeria where priority is given to Western Education. This, therefore, leads to the elongation of adolescence period that also has effects on the reproductive behaviour of their adolescents. The State has two Teaching Hospitals, fourteen general hospitals and forty-two primary health care facilities (Osun State Wikipedia, 2018).

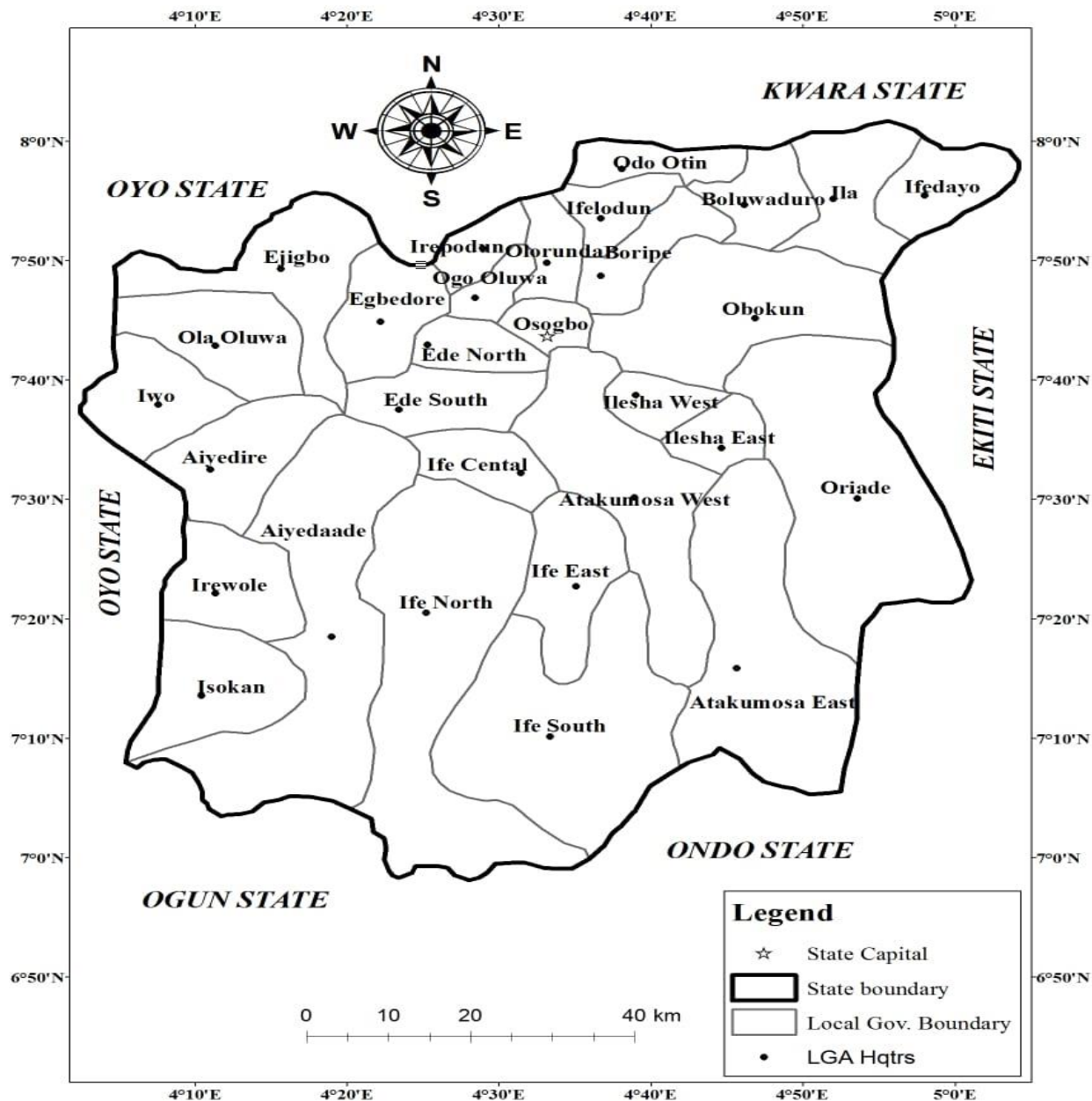


Figure 1: Osun State Showing the Local Government Areas

MATERIALS AND METHODS

Secondary data were sourced and used for the study. Hospital records of relevant cases were collected from the STI clinic of the two Teaching Hospitals in Osun State (Ladoke Akintola University Teaching Hospital (LAUTECH), Osogbo, now known as Osun State Teaching Hospital (UNIOSUNTH) and Obafemi Awolowo University Teaching Hospital (OAUTH), Ile-Ife. The data were processed with Statistical Package for Social Sciences 20.0 (SPSS). The address written on the case file were used as sample frame to identify the adolescents' residential density. Those area where one or two persons live in a room are the low density area, medium

density area has between three to five persons per room and high density has more than five persons in a room as characterized by Adeboyejo and Onyeonoru (2013).

The correlation analysis between the number of cases and years was calculated. The types of adolescents' reproductive health problem, the incidence, prevalent rates in the population as well as inter and intra urban variation were also analysed. Two largest towns in term of population from three senatorial districts of the State were purposively selected and the residential density of the selected cities defined to determine the incidence and prevalent rates in the population as well as inter and intra urban variations.

Table 1: Selected Towns in Each Senatorial District

Senatorial District	Osun East	Osun West	Osun Central
Selected Towns	Ile-Ife	Ede	Osogbo
	Ilesa	Iwo	Ikirun

Source: Field Survey, 2020

RESULTS AND DISCUSSION

The types of reproductive health problems examined here are essentially Sexually Transmitted Infections (STIs). However, other reproductive health problems encountered in the hospital, particularly those of bacterial vaginosis, Genital Ulcer Disease (GUD), Pelvic Inflammatory Disease (PID) and incomplete/criminal abortion are discussed to provide a vivid picture of the scope of adolescents' reproductive health issues.

Components of Adolescents' Sexually Transmitted Infections

The types of adolescents' reproductive health problems encountered during the investigation are shown in Figure 2. It is apparent from the figure that STIs reported among adolescents in the study area range from the traditional venereal diseases of Gonorrhoea and Syphilis to those of bacteria, parasitic and viral syndromes associated with Chlamydia trichomatis, Bacteria vaginosis, Trichomona vaginalis and malignant systemic infections caused by Human Immunodeficiency Virus (HIV).

Gonorrhoea with 27% of the total cases was the commonest STI among the adolescents, followed by Syphilis (21%) and Candidiasis of the genitals (17%) and non-specific urethritis (7%). A disturbing dimension is the proportion of HIV/AIDS cases (6.2%) among adolescents in the study area.

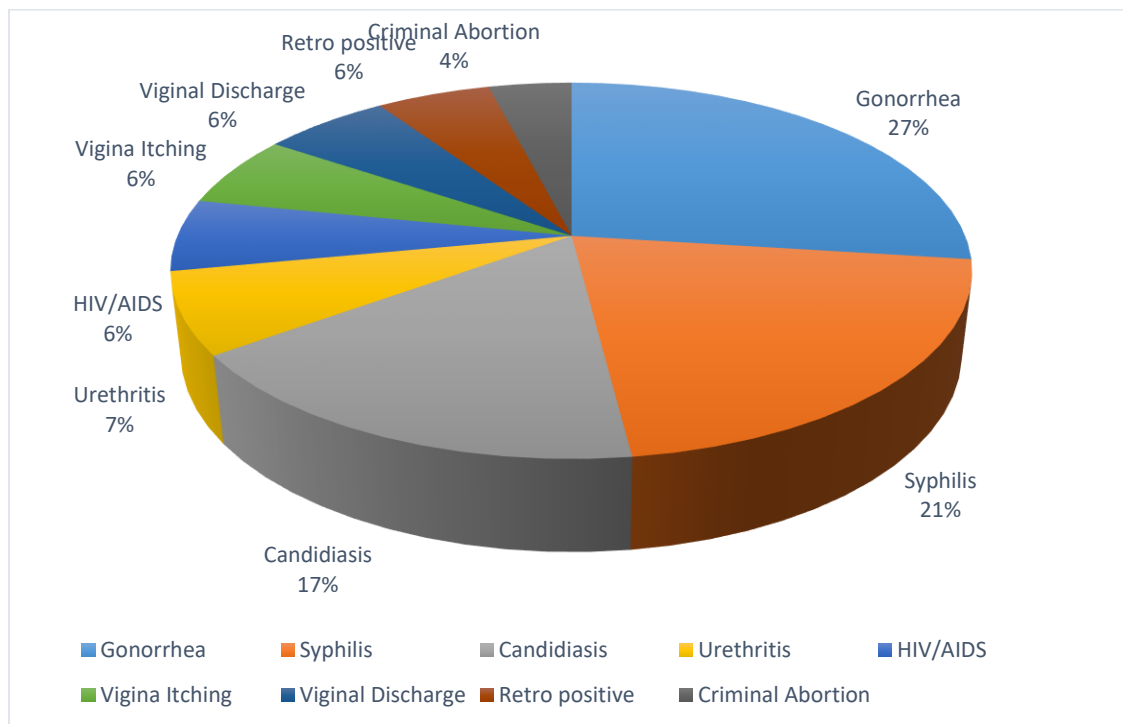


Figure 2: Types and Prevalent Rates of Adolescent Reproductive Health Problems
Source: Field Survey, 2020

Other non STI reproductive health problems reported were: vaginal itching (6.2%), vaginal discharge (6.1%), retro-positive infection (5%) and criminal abortion (4%).

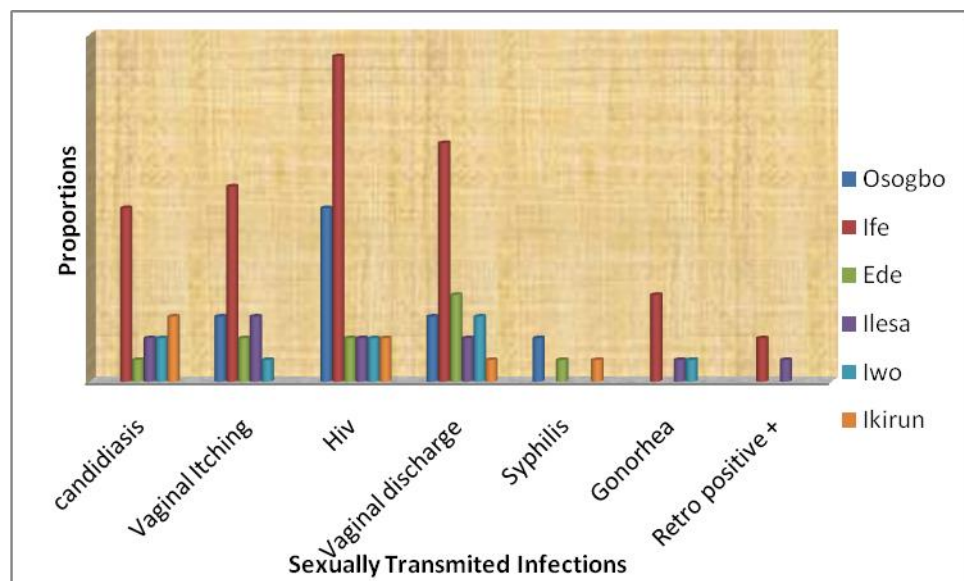


Figure 3: Inter Urban Variation in the Incidence of Adolescents' Reproductive Problem
Source: Field Survey, 2020

In Figure 3, the result of analysis of inter-urban variations in the scope and content of adolescents' reproductive health problems and needs reveals that Candidiasis, vaginal itching, vaginal

discharge and HIV were common to all the cities. The proportion of most reproductive health infections was highest in Ile- Ife. Ile-Ife and Osogbo have highest proportions of adolescents with HIV. Ife had the highest proportions of gonorrhea and urethritis, while Osogbo has the highest proportion in syphilis followed by Ede and Ikirun.

Conclusively, Ile-Ife had the highest proportion in most of the reproductive health problems followed by Osogbo, Ikirun, Ede, Iwo and Ilesa. Ife being the second largest city and host of a Federal University in the State and other privately owned institutions is the home for many adolescents from different places who are largely sexually active.

However, the observations of intra-urban variations in incidence of reproductive health problems as summarized in Figure 4 reveal that the high density areas had the highest proportion of cases of candidiasis (55.2%); HIV (60.3%) and gonorrhea (50.5%). Cases of vaginal discharge (47.8%) and vaginal itching (42.6%) were highest in the medium density residential areas. Apart from cases of vaginal itching and gonorrhea which were respectively 20.7 and 20.4 percents in the low density residential areas, none of the cases exceeded 15 percent in the low density residential areas.

Over fifty percent of the incidences of reproductive health problems occurred in the high density residential areas. It can be deduced that reproductive health problems are most acute among adolescents in the high density areas of our cities, followed by those in the medium density areas. These areas are inhabited largely by the low and medium classes in the society.

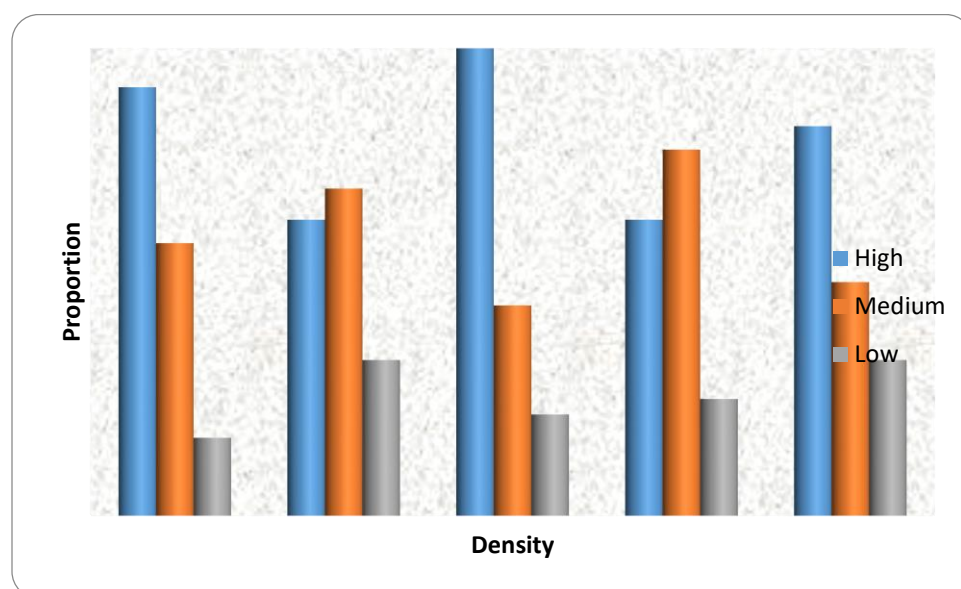


Figure 4: Intra-urban Variations in the Incidence of Reproductive Health Problems

Source: Field Survey, 2020

Incidence of Reproductive Health Problems in the Study Area by Age and Gender

The common STIs found among adolescents in the study area are gonorrhea, syphilis and HIV/AIDS. Other non STIs encountered were vaginal itching, vaginal discharge, trichomoniasis, genital herpes and candidiasis. Therefore, the six most prevalent cases are gonorrhea, syphilis,

HIV/AIDS, candidiasis, vaginal itching and vaginal discharge. Prevalent rates were found to increase with age, but rates were highest among adolescents in the 18-20 years, see Figures 5 and 6. Male adolescents were slightly more affected than their female counterparts in all cases, suggesting that this group is the major source of transmission of STIs including HIV/AIDS. The trend in incidence of major STIs is fluctuating, which tends more towards increase than decline. The incidence of STIs is highest among adolescents in the high density, low class residential areas than their counterparts in the medium and low density areas.

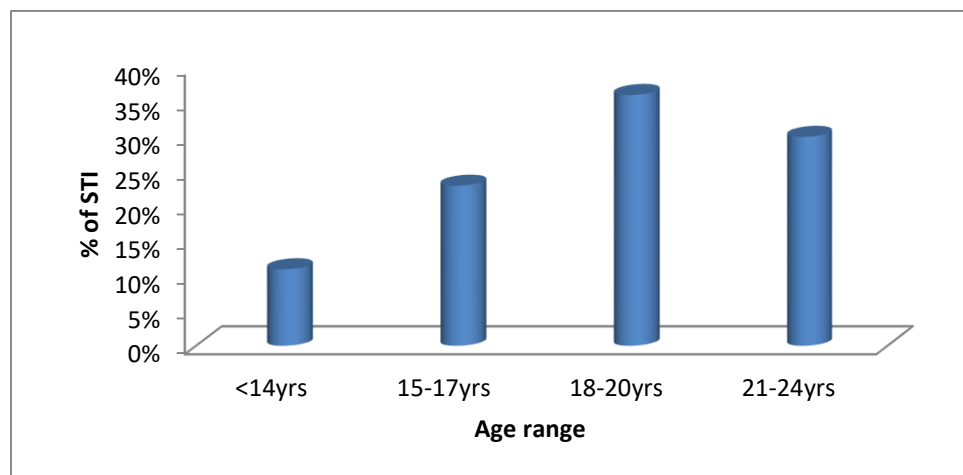


Figure 5: Proportion of Sexually Transmitted Infections Among Adolescents by Age
Source: Field Survey, 2020

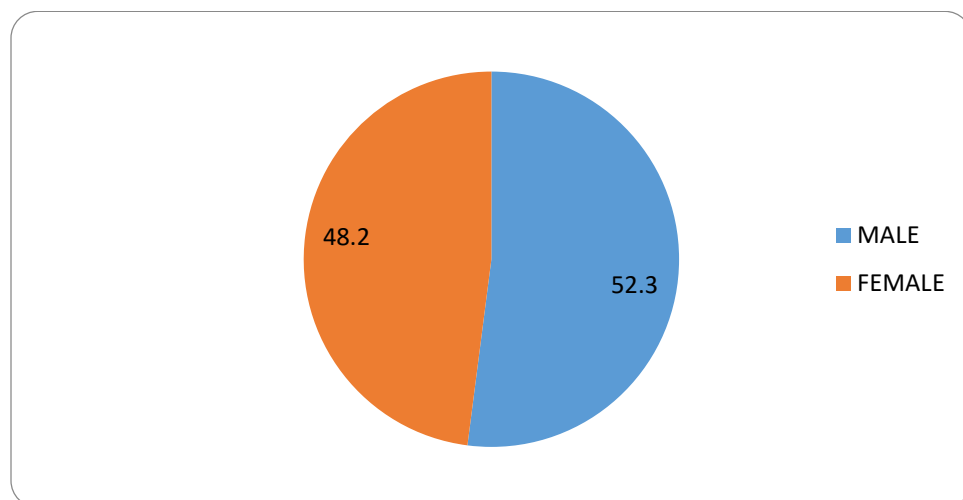


Figure 6: Proportion of Sexually Transmitted Infections among Adolescents by Sex
Source: Field Survey, 2020

Growth Trend of STI and other Reproductive Health Problems

In order to analyze the growth trend in incidence of reproductive health problems, the total number of reported cases between 2000 and 2020 was noted. The result as illustrated in Figure 7 shows that there was a sharp increase in reported cases from near zero in 2000 and 2001 to about 70 in 2002 and 2003. The highest number of cases (100) was reported in 2005. However, there

was a gradual decline in incidence during the two year period spanning 2007 to 2009, when reported cases decreased from 2005 figure of 100 to 40 cases in 2006.

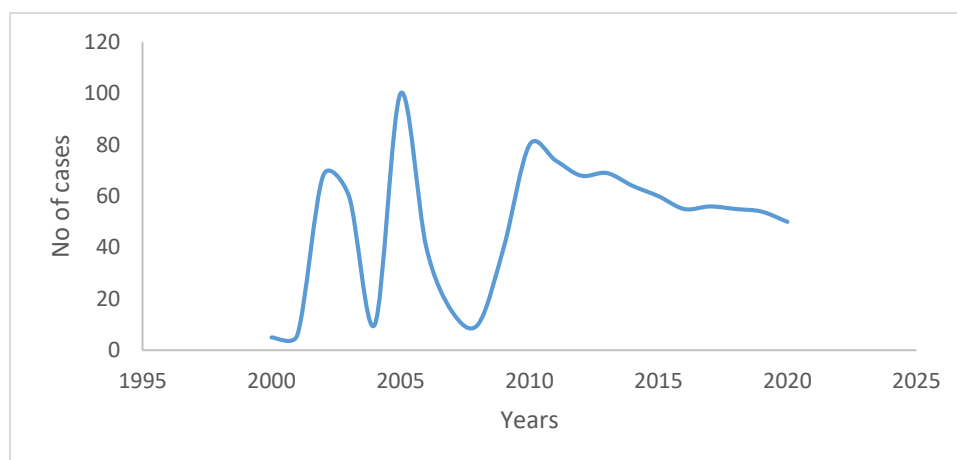


Figure 7: Trends in Incidence of Sexually Transmitted Infections between (2000 and 2020)
Source: Hospital Record, 2000-2020

The interpretation of the growth trend should be treated with caution as the observed pattern tends to reflect more of the history of data or record keeping in the two hospitals than actual number of reported cases. First, it should be noted that apart from the five cases in 2000 and six cases in 2001, the trend increased gradually across 2002 to 2004. This could be as a result of the rise in sexual activities of the adolescents through uncontrollable internet use and uncensored media shows. The profile described above also highlights the inconsistent nature of data keeping in developing countries. Otherwise, only five and six cases were reported in 2000 and 2001, while 68 and 100 cases recorded, respectively in 2002 and 2005, defy any scientific justification. Also, Table 1 shows that the spearman rank correlation is approximately 0.30 and it is not significant. This suggests that the variation in the trend is not dependent on years but on some other factors. The factors could be poor access to contraceptives coupled with lack of adequate knowledge of use, societal disapproval of contraceptive use among adolescents; the practice of heterosexuality; certain STIs such as gonorrhoea, chlamydia, HIV and syphilis which can be passed from an infected mother to the child. This could be considered by future researchers.

Table 2: Spearman's correlations of trends in incidence of STI

			Cases	Years
Spearman's rho	Cases	Correlation Coefficient	1.000	.299
		Sig. (2 - tailed)	.	.261
		N	16	16
	Years	Correlation Coefficient	.299	1.000
		Sig. (2 - tailed)	.261	
		N	16	16

Source: Field Survey (2020)

Variation in Scope and Content of Sexually Transmitted Infections in the State

The scope of the reproductive health problems shows that the trend increases from year 2000 to 2010 before a gradual decrease in the trend occurred with two year per movement average. Also, in Table 2 the reproductive health problem of the adolescents in the area shows that there is a significant difference in the incidence of candidiasis, vaginal itching and HIV cases across the six cities, while there was no significant difference in the incidence of vaginal discharge, syphilis, gonorrhoea and urethritis across the selected cities in Osun State. Therefore, adolescents' reproductive health problems vary in scope and content.

Table 3: Incidence of Sexually Transmitted Infections across the Six Selected Cities

		Sum of Squares	Df	Mean Square	F ratio	Sig.
Candidiasis	Between Groups	61.271	5	12.254	17.099	.000
	Within Groups	7.167	10	.717		
	Total	68.438	15			
Itching	Between Groups	311.833	5	62.367	87.023	.000
	Within Groups	7.167	10	.717		
	Total	319.000	15			
HIV	Between Groups	601.500	5	120.300	2.4063	.000
	Within Groups	.500	10	.050		
	Total	602.000	15			
Vaginal Discharge	Between Groups	79.667	5	15.933	2.298	.123
	Within Groups	69.333	10	6.933		
	Total	149.000	15			
Syphilis	Between Groups	44.564	4	11.141	8.356	.006
	Within Groups	10.667	8	1.333		
	Total	55.231	12			
Gonorrhoea	Between Groups	77.083	5	15.417	1.563	.256
	Within Groups	98.667	10	9.867		
	Total	175.750	15			
Urethritis	Between Groups	219.938	5	43.988	2.410	.111
	Within Groups	182.500	10	18.250		
	Total	402.438	15			

Source: Field Survey (2020)

The pattern of the STI incidence in Figure 8 reveals a sharp increase in reported cases from near zero in 2000 and 2001 to about 70 in 2002 and 2003. The highest number of cases (100) was reported in 2005. Meanwhile, there was a gradual decline in incidence during the two year period spanning 2007 to 2009, when reported cases decreased from 2005 figure of 100 to 40 cases in 2006. The pattern of the STI incidence is perceived to lack scientific explanation, this may not

be far-fetched from adolescents' lack of courage to access the available medical treatment due to stigma. Majority of people that contacted STI prefer seeking traditional help to orthodox treatment this was also confirmed by (Adeboyejo and Obidiya, 2016)

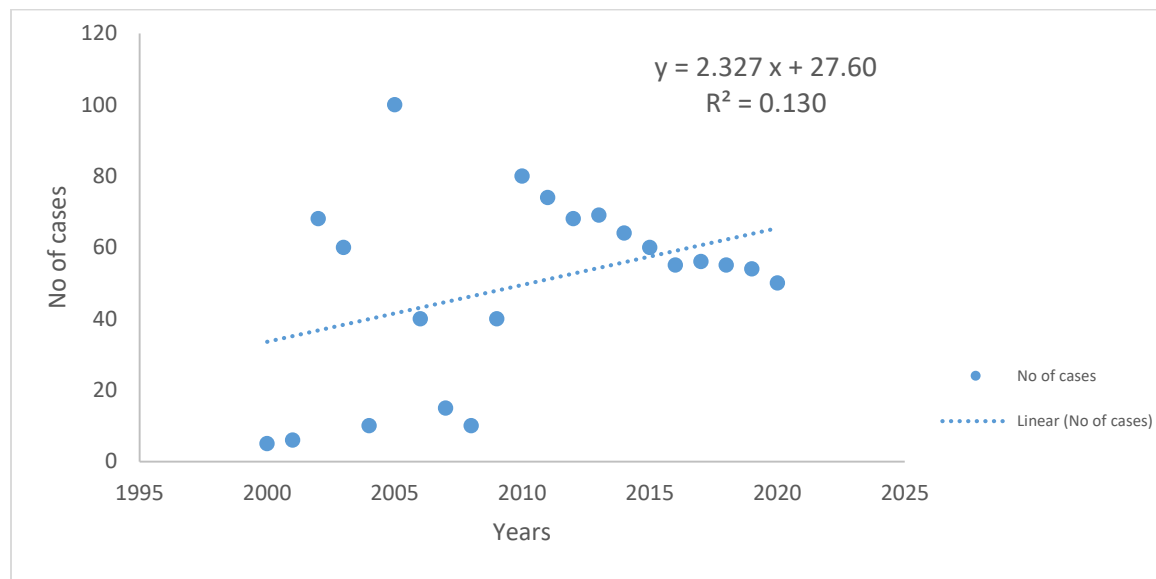


Figure 8: Scope in Incidence of Sexually Transmitted Infections across the Cities (2000-2020)

Source: Field Survey (2020)

Comparism of the Pattern of Incidence of STI in the Area and the Predicted Distribution within (2021-2050)

Meanwhile, the predicted distribution in Figure 9 shows that there will be gradual but gentle rise in the number of cases recorded as the year rolls by. The interpretation of the growth trend should be treated with caution as the observed pattern tends to reflect more of the history of data or record keeping in the two hospitals than actual number of reported cases. Also, the predicted distribution is purely mathematical assertion which may not be totally error-free. Therefore, the difference between the two could be as a result of some factors such as the inconsistent nature of data keeping in developing countries, prediction error and lack of courage on the path of the adolescent to seek appropriate help from hospital among others.

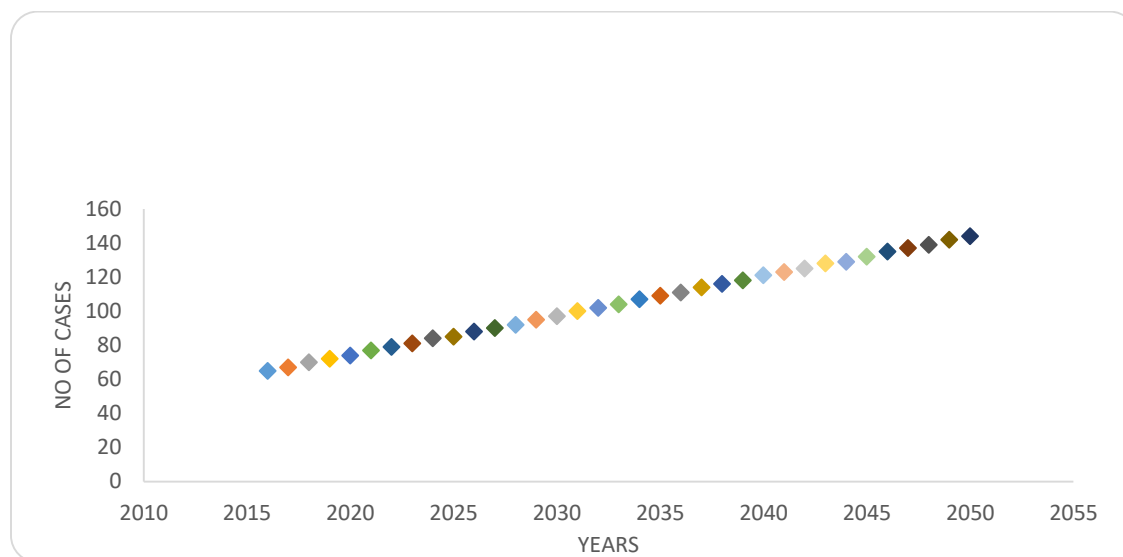


Figure 9: Predicted Distribution of Sexually Transmitted Infections in the Cities between (2021-2050)

Source: Field Survey (2020)

CONCLUSION

Analysis of inter-urban variations in the scope and content of adolescents' reproductive health problems and needs divulges that the percentage of the most reproductive glitches was highest in Ile- Ife followed by Osogbo. However, the observation of intra-urban disparities in incidence of reproductive health problems reveals that among the most common reproductive problem, the high density areas had the highest proportion of cases followed by the medium density residential areas also affirmed by (Adeboyejo and Onyeonoru, 2013). In the low density residential areas none of the cases exceeded 15 percent while more than half of the incidences of reproductive health problems occurred in the high density residential areas.

The analysis of the growth trend in incidence of reproductive health problems revealed that the observed pattern tend to reflect more of the history of data or record keeping in the two hospitals than actual number of reported cases. This exposes the poor record keeping attitude of developing countries confirmed by (Koumamba et al. 2021). The high density area, where the low class of the society resides should be given priority in reproductive health care, reproductive health topics like causes, prevention and cure of STIs should be introduced in the junior secondary school classes. Adolescents should be encouraged to visit the hospital whenever they experience any STIs. All the medical facilities in town should be mandated to take proper records of adolescents' reproductive health problems and discharge their duty without discrimination against adolescents.

Furthermore, sexual and reproductive health problems investigated as done by this research should be duly attended to. Adolescents' should be given access to services to prevent, diagnose and treat STIs; and counselling on safe reproductive health. Young people should also be empowered to know and exercise their rights – including the right to delay marriage and the right to refuse unwanted sexual advances (UNFPA, 2014). International and local health agencies in collaboration with governments, civil society, young people and youth-serving organizations should actively promote and protect the sexual and reproductive health and human rights of adolescents.

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