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# Incidence of Sexually Transmitted Infections among Pregnant Women in State Specialist Hospital Osogbo, South- Western Nigeria

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**Abstract**

Sexually transmitted infections are acknowledged worldwide as significant public and reproductive health issues that can lead to adverse pregnancy outcomes like stillbirth, neonatal death, intrauterine growth retardation, premature rupture of the membrane, preterm birth, low birth weight, prematurity, congenital deformities, infant pneumonia, blindness, and other complications if not properly treated or left untreated. The research aims to provide useful insights on the burden of sexually transmitted infections (STIs) among pregnant women in state specialist hospital Osogbo, Osun-State by studying the incidence of specific pathogens such as Candida, Hepatitis B virus (HBV), Syphilis, and *Trichomonas vaginalis*. A total of 912 pregnant women were recruited for this study. The subject was tested for HBV, *Candidiasis*, *Trichomonas vaginalis* and syphilis infection. The study revealed that out of 912 pregnant women 323 (35.4%) were infected with various etiologic agent. *Candida* species had the highest percentage of infection occurrence with 260 (28.5%), followed by Hepatitis B virus was 6.7%, *Treponema pallidum* was 0.1% and *Trichomonas vaginalis* was 0.1%. Pregnant women in age group 25-29 years had the highest infection rate with 148 (42.8%) out of which 18 were infected with HBV, TV (1) while the remaining 130 were infected with C. spp. 260 species of Candida were isolated with *Candida albicans* had the highest occurrence 185 (20.2%). *Candida albicans*, 10(5.4%) were sensitive to itraconazole, 140(75.6%) were sensitive to clotrimazole, 185(100%) were sensitive to amphotericin, 25(13.5%) were sensitive to fluconazole, 30(16.2%) were sensitive to ketoconazole. The study enhances knowledge of antifungal susceptibility patterns in Candida species, revealing significant differences in sensitivity to various antifungal drugs. This information is essential for developing appropriate treatment plans for pregnant women with Candida infections. This information can guide healthcare professionals, policymakers, and researchers in developing specific interventions to enhance maternal health outcomes in the region.

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***Keywords****: incidence, sexually transmitted infections, pregnant women*

## Introduction

Maternal, reproductive, and child health worldwide has been significantly impacted by sexually transmitted infections (STIs), with developing nations like Nigeria bearing a heavier weight of the issue [1]. Sexually transmitted infections globally contribute to a significant burden of morbidity and mortality, impacting both quality of life and sexual and reproductive health [2]. Sexually Transmitted Infections (STIs) place a significant financial burden on households and national health systems in middle and low-income nations, and negatively impact the well-being of individuals [2]. STIs are acknowledged worldwide as significant public and reproductive health issues that can lead to adverse pregnancy outcomes like stillbirth, neonatal death, intrauterine growth retardation, premature rupture of the membrane, preterm birth, low birth weight, prematurity, congenital deformities, infant pneumonia, blindness, and other complications if not properly treated or left untreated [3]. Common STIs include Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), Syphilis, genital herpes, *Neisseria gonorrhoeae,* and *Trichomonas vaginalis* [3].

Syphilis is a systemic disease caused by Treponema pallidum that can be transmitted through sexual contact, blood transfusion, and vertical transmission. It is a disease that can be effectively controlled through public health measures because of the presence of reliable diagnostic tests and cost-effective treatment options [4]. The World Health Organization (WHO) approximates that there are 10-12 million new cases of syphilis annually. In developed countries, the seroprevalence during pregnancy is typically modest, varying from 0.02% in Europe to 4.5% in certain regions of the United States [4]. Nevertheless, prenatal clinics in Africa have regularly reported high rates of syphilis seropositivity ranging from 3% to 18% [5].

Hepatitis B virus disease is a severe liver infection that poses a significant worldwide health issue. Hepatitis B infection is linked to an increased risk of mortality due to cirrhosis, liver cancer, and non-liver malignancies [6]. Hepatitis B virus (HBV) is transmitted through exposure to contaminated blood or body fluids, unprotected sexual contact with an infected individual, blood transfusion, use of contaminated needles, syringes, and sharps, and vertical transmission from mother to child. There is a risk of transmitting HBV to a new-born delivered by a woman who tests positive for hepatitis B surface antigen (HBsAg). This risk is increased with the presence of hepatitis B envelope antigen (HBeAg) [7]. The reported prevalence of HBsAg among pregnant women varies regionally. Globally, the estimated prevalence of chronic HBV infection among women of reproductive age is 3.5%. In African nations, the frequency varies from 6% to 25% [8]. In Nigeria, a national survey revealed a 12.2% prevalence of hepatitis B among the general population, whereas a systematic review reported a prevalence of 14.1% among pregnant women [8].

Candida is the primary cause of vaginitis, with 75% of women experiencing at least one episode in their lifetimes. Pregnancy increases the likelihood of developing vulvovaginal candidiasis (VVC) [9]. Progesterone and estrogen levels rise during pregnancy, particularly in the final trimester. Progesterone suppresses the anti-Candida function of neutrophils. Oestrogen decreases the vaginal epithelial cells' ability to prevent the growth of Candida albicans on them. Around 75% of women typically have this fungus without it causing any harm to them [9]. Candidiasis is commonly seen during a typical pregnancy without posing a serious threat to the foetus [9].

However, vaginal candidiasis can have a detrimental impact on pregnancy. Untreated vaginal candidiasis can result in chorioamnionitis leading to abortion and preterm in pregnant women, congenital infection in new-borns, and pelvic inflammatory disease-causing infertility in non-pregnant women [9].

*Trichomonas vaginalis* is known to be a widespread parasite found in the male and female genital system. Globally, an estimated 180 million people are infected yearly. T. vaginalis is mostly spread through sexual contact but can also be transmitted through sharing towels and underpants with an infected individual [10]. T. vaginalis cases often go misdiagnosed due to its lack of focus in sexually transmitted infections control and its asymptomatic condition in approximately half of affected individuals. The disorder is identified as a significant contributor to pathology in the fields of obstetrics and gynaecology [10].

Many individuals have been exposed to HBV, Candidiasis, *Trichomonas vaginalis*, and syphilis infections due to common means of transmission. A prenatal investigation on pregnant women aged 15-49 found that 7.1% were positive for HBsAg, 2.7% for anti-HCV, 4.9% for anti-HIV, and 24.2% for HTLV-1 IgM antibodies. In Osogbo, the co-infection rates were 0.5% for HBV/HCV, HBV/HIV, HIV/HTLV-1, and HCV/HTLV-1, 1.1% for HBV/HTLV-1, and 0% for HCV/HIV co-infections [11]. No studies have been completed on co-infection involving HBV, Candidiasis, Trichomonas vaginalis, and syphilis.

This research aims to fill a crucial vacuum by investigating the frequency and features of sexually transmitted infections (STIs) among pregnant women within the particular setting of Osogbo, Osun State. Maternal and child health is a worldwide concern, and sexually transmitted infections (STIs) can greatly affect the health of both mothers and new-borns. Emphasizing a state specialty hospital in Osogbo is crucial due to the possible differences in STI incidence across various locations and healthcare facilities. This discovery is important since untreated STIs during pregnancy can lead to serious consequences like stillbirth, neonatal mortality, preterm birth, and congenital abnormalities. The research intends to provide useful insights on the burden of sexually transmitted infections (STIs) in this community by studying the incidence of specific pathogens such as *Candida, Hepatitis B virus* (HBV), Syphilis, and *Trichomonas vaginalis*. Studying demographic characteristics like age, antibiotic use, and dressing patterns that affect STI prevalence might offer a detailed viewpoint for developing specific interventions and healthcare practices. The research aims to establish the frequency of STIs in pregnant women at the state specialist hospital in Osogbo, examine the demographic factors linked to STI occurrence, evaluate the precision of various testing methods, and investigate the susceptibility patterns of Candida species to antifungal treatments. The aims are in line with the main goal of thoroughly describing the landscape of sexually transmitted infections in pregnant women in this particular healthcare context.

This research is unique because it specifically examines sexually transmitted infections (STIs) in pregnant women in Osogbo, providing detailed data that adds to the overall knowledge of maternal health in Nigeria. Adding in-depth analysis, including comparing testing methods and antifungal susceptibility patterns, enhances the current research. Furthermore, focusing on demographic factors that impact STI prevalence provides a specialized viewpoint that can assist healthcare professionals and policymakers in creating specific treatments for this at-risk group. This project intends to address a significant knowledge vacuum, offer practical insights, and introduce innovative results to the mother and child health profession.

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## Materials and Method

### Research Area

This study was conducted in the state specialist hospital Osogbo, Osun State. The State Specialist Hospital, Asubiaro, Osogbo, is a multicentre facility located in Osogbo the capital of Osun State, Nigeria. It serves as one of the major referral centres in the state, receiving patients from all the local government areas in the state.

### Research Design

The study utilized a cross-sectional approach to examine HBV, *Candidiasis, Trichomonas vaginalis* and syphilis infection among pregnant women attending antenatal screening at state specialist hospital Osogbo, Osun State. The investigation took place from April to September 2023.

### Study Population

A total of 912 pregnant women were recruited for this study who were attending antenatal screening.

### Informed Consent

Informed consent was sought from the participants before specimen collection. The patients who did not return their consent form were excluded from the study.

### Ethical Approval

The approval of the Ethical Review Committee of the state specialist hospital Osogbo, Osun State, was obtained. All experiment was performed in accordance with Good Laboratory Practice (GLP) regulations.

### Specimen Collection

Aseptically and with minimal stasis, 5 millilitres (5mls) of venous blood were drawn from each subject using a sterile syringe and needle from the ante-cubital vein into EDTA bottle. The blood specimens will be centrifuged at 1200 revolution per minute (rpm) for 5 minutes.

High vaginal swab was collected from each participant using a previously described method [12]. Briefly, high vaginal swab from the vagina was collected using a sterile swab stick aided with sterile speculum. A structured questionnaire was administered to obtain demographic characteristics (such as age, marital status, level of education, occupation, parity, and gestational age) from each participant.

### Methodology

1. **Serological test for Hepatitis B Virus**

The latex rapid agglutination slide test was used to detect hepatitis B surface antigen. Reactive sample were confirmed using an enzyme-linked immunosorbent assay (ELISA) kit produced by Bio Rad France.

**2. Enzyme-linked immunosorbent assay (ELISA) for Hepatitis B Virus**

All reagent and specimens were brought to room temperature (+20 to +30) before assay. Water bath was adjusted to $+27\pm1^{0}$c. Two wells were reserved for blank and 50ul of control and specimen were added to appropriate wells of the microtiter plate (3 negative controls and 2 positive controls), 50ul of anti HBs peroxidase solution were added to each well except the blank. Plate was gently tapped and the protective backing from the adhesive slip were removed and pressed onto the

reactions plate. The reaction plate was incubated in water bath at $+37^0$c. The adhesive slip was removed, and the plate were washed, equal volume of substrate solution A and B were mixed and 100ml of the mixture were added to each well including the blank well. The plate was covered and incubated for 30minutes at $20\text{-}30^0$c. 100ul of 2N $H_2S0_4$ were added to each plate to stop the reaction. The absorbance of the test and control were determine using spectrophotometer at 450/650nm.

3. **Serological test for Syphilis**

Qualitative Rapid Plasma Reagin (RPR) test kit (cal. Tech diagnostics Inc, Chino, California, U.S.A) were used to detect Syphilis. All reactive sera were then subjected to the quantitative RPR test to estimate their titre. The Treponema palladium haemagglutination antibody (TPHA) test was used as confirmatory test for all positive RPR sera.

4. **Wet preparations to detect motile *Trichomonas vaginalis***

A drop of sterile physiological saline was dispensed and high vaginal swab were emulsified. The preparation was covered with a cover slip and immediately examined microscopically using the 10x and 40x objectives.

**5. Processing of samples for *Candida species***

**Direct Examination:** Wet mount of all swab samples was made in sterile normal saline on a clean slide and the preparation were covered with a cover slip and immediately examined microscopically using the 10x and 40x objectives.

**Culture and differentiation:** the HVS sample were cultured on saboraud dextrose agar (SDA) containing 2% chloramphenicol. The inoculated plate was incubated at $37^0$c and examine after 48hrs for cream coloured pastry colonies. Isolate from SDA were inoculated on CHROMagar (France) using an inoculating needle and were incubated at $37^0$c for 72hrs. The suspected *Candida albicans* isolate were then confirmed using gram staining, germ tube test and sugar assimilation test.

**Antifungal Susceptibility Testing**: In vitro susceptibility of Candida isolates was performed according to the manufacturer's instructions (Neo-Sensitabs user's guide; Rosco Diagnostica, Taastrup, Denmark) and M44-A guidelines (CLSI M44; 2009).

**Statistical analysis**

The result obtained was organized and subjected to appropriate statistical analysis. Statistical Package for Social Science (SPSS) version 26.0 was used in all the statistical analysis. Chi-square was used to determine the association between age and infection acquisition and level of significance set at as $p \leq 0.05$.

**Results**

A total of 912 pregnant women were recruited for this study with mean age 27.46±8.26 years. The subject was tested for HBV, *Candidiasis, Trichomonas vaginalis* and syphilis infection. The prevalence of sexually transmitted infection among pregnant women were presented in figure 1. The figure revealed that the prevalence of sexually transmitted infection among pregnant women was 35.4%. Table 1, shows the prevalence of each pathogen detected among pregnant women. The study revealed that out of 912 pregnant women 323 (35.4%) were infected with various etiologic agent. *Candida* species had the highest percentage of infection occurrence with 260 (28.5%), followed by Hepatitis B virus was 6.7%, *Treponema pallidum* was 0.1% and *Trichomonas vaginalis* was 0.1%.

Table 2, shows the age distribution of infections among pregnant women. Pregnant women in age group 25-29 years had the highest infection rate with 148 (42.8%) out of which 18 were infected with HBV, TV (1) while the remaining 130 were infected with C. spp, followed by 30-34 years with 98 (37.5%) out of which 78 were infected with C. spp while the remaining 20 were infected with HBV, 20-24 years were 55 (30.1%) out of which 42 were infected with C. spp while the remaining 13 were infected with HBV, 35-39 years were 19 (17.90%) out of which 10 were infected with C. spp, TP (1), while the remaining 8 were infected with HBV, while age group 40-44 years had the lowest infections rate with 2 (11.7%) which were infected with HBV.

Table 3, shows the results of the comparison between serological test and confirmatory test for Hepatitis B virus and Syphilis infection (using ELISA). Out of the 71 Hepatitis B subject positive for serological screening test of Hepatitis B, only 61 were positive for confirmatory test which showed the number of true positive. 10 were showed to be false positive. Out of 9 subject positive for serological screening test of Syphilis, only 1 was positive for the confirmatory test which showed that only 1 was true positive while 8 were false positive.

Table 4, shows the distributions of the species of Candida isolated in this study. 260 species of Candida were isolated. *Candida albicans* had the highest occurrence 185 (20.2%), followed by *Candida parapsilosis* 39 (4.2%), *Candida glabrata* 26 (2.8%), *Candida tropicalis* 8 (0.8%) while *Candida krusei* with the least cases 2 (0.2%). Table 5, shows the antifungal susceptibility pattern of the isolated candida spp. In relation to *Candida albicans*, 10(5.4%) were sensitive to itraconazole, 150(81.1%) were dose dependent, while the remaining 25(13.5%) were resistant. 25(13.5%) were sensitive to fluconazole, 25(13.5%) were dose dependent, while the remaining 135(73%) were resistant. 30(16.2%) were sensitive to ketoconazole, 35(19%) were dose dependent, while the remaining 120(64.8%) were resistant. 140(75.6%) were sensitive to clotrimazole, 30(15.2%) were dose dependent, while the remaining 15(8.6%) were resistant. 185(100%) were sensitive to amphotericin. In relation to *Candida parapsilosis*, 37(94.8%) were sensitive to itraconazole while the remaining 2(5.2%) were dose dependent. 38(97.5%) were sensitive to fluconazole while the remaining 1(2.5%) were dose dependent. 36(92.3%) were sensitive to ketoconazole, 2(5.2%) were dose dependent, while the remaining 1(2.5%) were resistant. 35(89.6%) were sensitive to clotrimazole, 2(5.2%) were dose dependent, while the remaining 2(5.2%) were resistant. 39(100%) were sensitive to amphotericin. In relation to *Candida glabrata*, 26(100%) were dose dependent to itraconazole. 26(100%) were resistant to fluconazole. 12(46.2%) were sensitive to ketoconazole, 13(50%) were dose dependent, while the remaining 1(3.8%) were resistant. 13(50%) were sensitive to clotrimazole while the remaining 13(50%) were dose dependent. 26(100%) were sensitive to amphotericin. In relation to *Candida tropicalis*, 8(100%) were dose dependent to itraconazole. 8(100%) were resistant to fluconazole. 7(87.5%) were dose dependent to ketoconazole while the remaining 1(12.5%) were resistant. 8(100%) were sensitive to clotrimazole. 8(100%) were sensitive to amphotericin. In relation to *Candida krusei*, 2(100%) were dose dependent to itraconazole. 2(100%) were resistant to fluconazole. 2(100%) were sensitive to ketoconazole. 2(100%) were sensitive to clotrimazole. 2(100%) were sensitive to amphotericin.

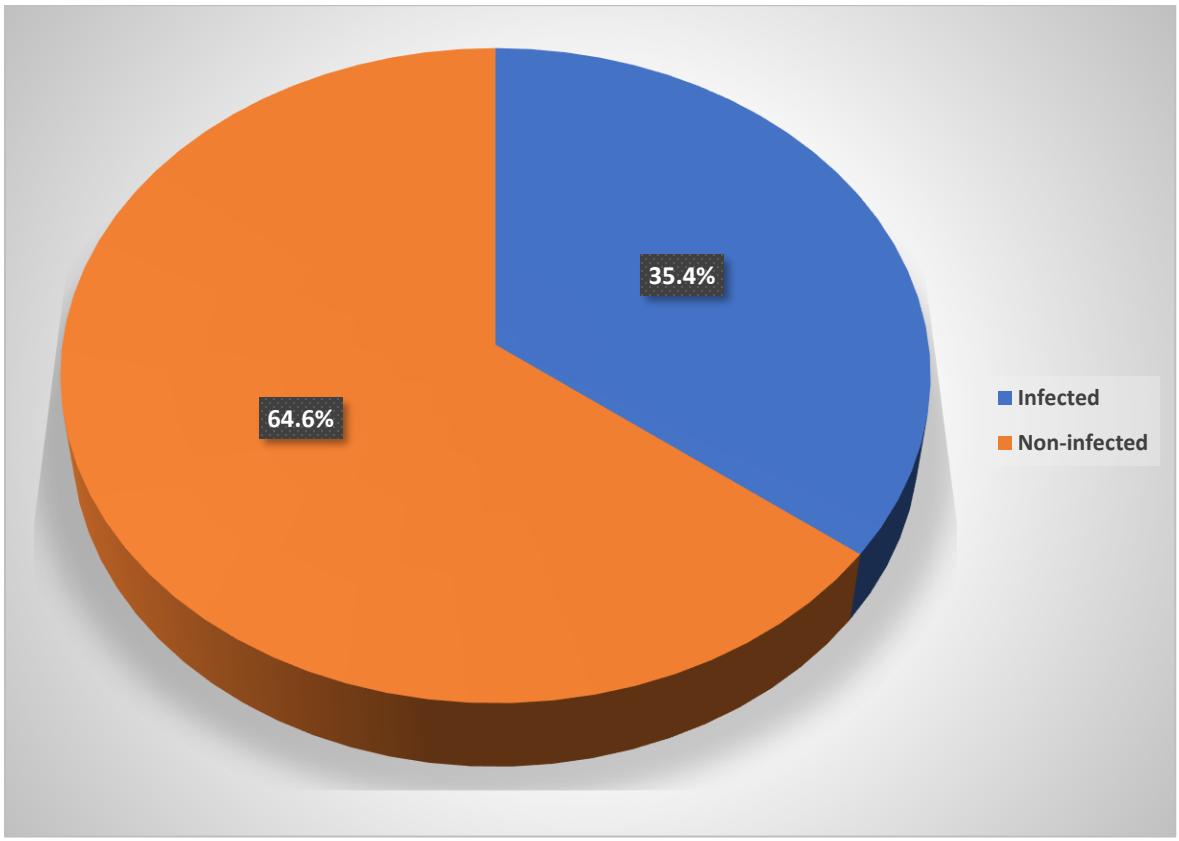


**Figure 1: Graphical representation of the prevalence of STI among pregnant women.**

**Table 1: Prevalence of pathogen specific infection among pregnant women**

| Pathogens | Number detected | Percentage (%) |
|---|---|---|
| Hepatitis B Virus | 61 | 6.7 |
| *Treponema palladium* | 1 | 0.1 |
| *Trichomonas vaginalis* | 1 | 0.1 |
| *Candida species* | 260 | 28.5 |
| **Total** | **323** | **35.4** |

**Table 2: Age specific distribution of infections among pregnant women**

| Age group | No tested | Positive N(%) | No positive for actual pathogen detected | | | | p-value |
|---|---|---|---|---|---|---|---|
| | | | HBV | TP | TV | C. spp | |
| 20-24 | 183 | 55(30.1%) | 13 | - | - | 42 | |
| 25-29 | 345 | 149(42.8%) | 18 | - | 1 | 130 | |
| 30-34 | 261 | 98(37.5%) | 20 | - | - | 78 | 0.03 |
| 35-39 | 106 | 19(17.9%) | 8 | 1 | - | 10 | |
| 40-44 | 17 | 2(11.7%) | 2 | - | - | - | |
| **Total** | **912** | **323(35.4%)** | **61** | **1** | **1** | **260** | |

**Note: T.P=*Treponema palladium;* T.V=*Trichomonas vaginalis ;* C. spp=*Candida species;* HBV=*Hepatitis B Virus***

**Table 3: Comparison between serological test and confirmatory test for Hepatitis B virus and Syphilis infection.**

| Infection | No positive by rapid screening test (%) | No positive by confirmatory test (%) | No of False positive (%) |
|---|---|---|---|
| **Syphilis** | 9 (0.9) | 1 (0.1) | 8 (0.8) |
| **HBV** | 71 (7.7) | 61 (6.7) | 10 (1.1) |

**Table 4: Distributions of the species of Candida isolated**

| Isolated Candida species | Number detected | Percentage |
|---|---|---|
| ***Candida albicans*** | 185 | 20.2% |
| ***Candida parapsilosis*** | 39 | 4.2% |
| ***Candida glabrata*** | 26 | 2.8% |
| ***Candida tropicalis*** | 8 | 0.8% |
| ***Candida krusei*** | 2 | 0.2% |
| **Total** | **260** | **28.2%** |

**Table 5: In vitro antifungal activities of Itraconazole, Fluconazole, Ketoconazole, Clotrimazole and Amphotericin B.**

| Species | Antifungal Drugs | | | | |
|---|---|---|---|---|---|
| | Itraconazole | Fluconazole | Ketoconazole | Clotrimazole | Amphotericin B. |

| | S<br>DD<br>R | S<br>DD<br>R | S<br>DD<br>R | S<br>DD<br>R | S<br>DD<br>R |
|---|---|---|---|---|---|
| ***Candida albican*** | 10 (5.4%)<br>150 (81.1%)<br>25 (13.5%) | 25 (13.5%)<br>25 (13.5%)<br>135 (73%) | 30 (16.2%)<br>35 (19%)<br>120 (64.8%) | 140 (75.6%)<br>30 (16.2%)<br>15 (8.2%) | 185 (100%)<br>0 (0%)<br>0 (0%) |
| ***Candida parapsilosis*** | 37 (94.8%)<br>2 (5.2%)<br>0 (0%) | 38 (97.5%)<br>1 (2.5%)<br>0 (0%) | 36 (92.3%)<br>2 (5.2%)<br>1 (2.5%) | 35 (89.6%)<br>2 (5.2%)<br>2 (5.2%) | 39 (100%)<br>0 (0%)<br>0 (0%) |
| ***Candida glabrata*** | 0 (0%)<br>26 (100%)<br>0 (0%) | 0 (0%)<br>0 (0%)<br>26 (100%) | 12 (46.2%)<br>13 (50%)<br>1 (3.8%) | 13 (50%)<br>13 (50%)<br>0 (0%) | 26 (100%)<br>0 (0%)<br>0 (0%) |
| ***Candida tropicalis*** | 0 (0%)<br>8 (100%)<br>0 (0%) | 0 (0%)<br>0 (0%)<br>8 (100%) | 0 (0%)<br>7 (87.5%)<br>1 (12.5%) | 8 (100%)<br>0 (0%)<br>0 (0%) | 8 (100%)<br>0 (0%)<br>0 (0%) |
| ***Candida krusei*** | 0 (0%)<br>2 (100%)<br>0 (0%) | 0 (0%)<br>0 (0%)<br>2 (100%) | 2 (100%)<br>0 (0%)<br>0 (0%) | 2 (100%)<br>0 (0%)<br>0 (0%) | 2 (100%)<br>0 (0%)<br>0 (0%) |
| **Total 260** | **47 (18%)** | **63 (24.2%)** | **80 (30.8)** | **198 (76.2%)** | **260 (100%)** |

**Note: S= Susceptible; DD= Dose Dependent; R= Resistant.**

**Discussion**

This study investigates the frequency of sexually transmitted illnesses among pregnant women receiving care at the state specialist hospital in Osogbo, Osun State. The study found a high prevalence rate of 35.4% of sexually transmitted infections among pregnant women in the study area, which was comparable to a previous study in 2022 that reported a prevalence of 24%. The higher prevalence in this study compared to [13] can be due to the bigger sample size in the present investigation. *Candida albicans* is the most common sexually transmitted infection in the study, with a prevalence of 28.5%, followed by Hepatitis B, Syphilis, and *Trichomonas vaginalis*. This study's results align with the findings of references [14, 15, 16]. The investigations indicated that factors like women's age, antibiotic use, pregnancy stage, and clothing choices contributed to the high occurrence of *Candida albicans* [17]. The frequency of HBV and syphilis aligns with the results of a previous study due to the high endemicity of hepatitis B in the country and its easy transmission in areas with poor hygiene [17]. Furthermore, a study by [18] has linked older age, married status, multiple sex partners, poor cleanliness, and socioeconomic position to the likelihood of *Trichomonas vaginalis* infection.

[19] has highlighted gender disparities as a factor that reduces educational and economic prospects for women and promotes risky sexual behaviour, such as participating in transactional sex and diminishing bargaining power for condom use. Biological variables including vaginal microbiome and a thinner vaginal lining can enhance women's susceptibility to acquiring sexually transmitted infections compared to men. The study's Table 2.0 shows that teenagers aged 25 to 29 had the greatest STI rate. This is because this age range corresponds to the peak of childbearing and reproductive activity in Nigerian society [20]. Intense sexual activity increases the likelihood of contracting sexually transmitted illnesses, which can therefore make women more susceptible to these infections [16]. This study's results align with a previous study conducted by [19], which reported a significant prevalence of sexually transmitted infections among individuals in that age group.

The study found that the ELISA approach is more sensitive than the test methodology shown in Table 3.0 for serology testing in diagnosing HBV and syphilis. This study found that ELISA had greater rates of sensitivity and specificity for STIs compared to serology. It also assessed diagnostic accuracy, noting a higher number of false positive results. This study demonstrated a notable variation in sensitivity between ELISA and fast diagnostic testing, indicating the necessity of confirmatory testing for pregnant women to prevent misdiagnoses. Our study's results align with those of the study by [21], however we observed a larger rate of false positives compared to other studies, possibly due to the use of different diagnostic kits.

*Candida albicans* is the most commonly isolated species of candida, as shown in Table 4.0 which is similar to the finding of [16]. This could be due to the increased levels of reproductive hormones during pregnancy, particularly progesterone and estrogen in the final trimester. These hormones play a role in inhibiting neutrophils' anti-Candida activity and reducing vaginal epithelial cells' ability to prevent the growth of *Candida albicans* [22]. Approximately 75% of women typically have this fungus without it causing any harm. Candidiasis is commonly seen during a typical pregnancy without posing a substantial risk to the fetus. Pregnancy can be adversely impacted by candidiasis [23]. The study found that itraconazole had a high sensitivity rate, while fluconazole had a high resistance rate, consistent with a previous study [25]. The cause of this remains unclear and presents a constraint to this study, highlighting the need for additional research to explore its impact on antifungal therapy of candida infection in pregnant women.

**Conclusion**

This study reveals the significant occurrence of sexually transmitted infections (STIs) among pregnant women in the state specialist hospital in Osogbo, Osun State. The prevalence percentage of 35.4% highlights the importance of STIs in maternal health in this particular healthcare environment. Candida albicans has become the most common sexually transmitted illness, highlighting the need to manage fungal infections in pregnant women. The lower incidence rates of Hepatitis B, Syphilis, and Trichomonas vaginalis emphasize the variety of STIs that impact pregnant women in the region.

Pregnant women aged 25-29 had the highest incidence of sexually transmitted infections according to the age distribution research. This demographic information highlights the necessity for focused initiatives and healthcare policies designed for particular age groups. The study's results on the diagnostic precision of testing methods, specifically highlighting the superiority of the ELISA

technique over quick diagnostic testing for Hepatitis B and Syphilis, have implications for the dependability of screening approaches in antenatal care.
The study enhances knowledge of antifungal susceptibility patterns in Candida species, revealing significant differences in sensitivity to various antifungal drugs. This information is essential for developing appropriate treatment plans for pregnant women with Candida infections.
This study thoroughly evaluates the frequency of sexually transmitted infections (STIs) in pregnant women in Osogbo. It also gives important information on demographic factors, diagnostic methods, and antifungal resistance trends. This information can guide healthcare professionals, policymakers, and researchers in developing specific interventions to enhance maternal health outcomes in the region.

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