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Influence of Parity on Health Seeking Behaviours among Pregnant Women Infected with Sexually Transmitted Infections (STIs) in Delta State, Nigeria

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Abstract

The study determined health seeking behaviours (HSBs) among pregnant women infected with STIs attending antenatal care clinics in Delta State, Nigeria. Two research questions were answered and one hypothesis was tested at 95% confidence level. A descriptive survey design was utilized to execute the study. The population for the study was 2280 pregnant women attending ANC in General Hospitals in Delta State diagnosed with STIs (January, 2018-December, 2022). The sample for the study comprised 342 randomly selected pregnant women. A structured questionnaire (HSBPWANCCQ) was used for data collection. The HSBPWANCCQ was validated by three experts while its reliability index o.63 was established using Pearson Product Moment correlation coefficient. Mean ($\overline{X}$) and standard deviation (SD) were used to answer the research questions whereas ANOVA was used to test the hypothesis. Finding showed that there was very high level HSBs among the studied group ($\overline{X}$=2.41: SD=0.94). Nulliipara ($\overline{X}$=2.53: SD=0.95) had the highest HSB among all the categories of women. ANOVA revealed that parity made no statistically significant difference in the HSBs of pregnant women infected with STIs in Delta State (p-value=0.990 >0.05 alpha level of significance). Based on the findings a sustained enlightenment of pregnant women on the need to always seek appropriate treatment for STIs was recommended.

Keywords: Health seeking behaviour, Sexually transmitted infections, Parity

Introduction

Health seeking behaviour (HSB) of pregnant women infected with sexually transmitted infections (STI) cannot be over investigated. This is because cases of STIs still abound in many parts of the world (Isara & Baldeh, 2021; Pereira & Carmo, 2014). Statistics show that each year more than 340 million new curable STIs occur in reproductive aged men and women (WHO, 2015). Yosef (2021) put the world new cases of curable STIs at 500 million whereas Park (2019) revealed that more than one (1) million people acquire STI everyday globally. Park showed that STIs prevalence, in terms of number, cannot be comprehensive due to inadequate reporting and the secrecy that surround them.

The rampant cases of STIs are really of great concern in the area of this study. This is because WHO (2015) showed that the infections are most prevalent in developing countries. In Sub-Saharan Africa alone about 25.6m people were living with HIV and approximately 80 per cent carry hepatitis B (Liu et al., 2015). In Nigeria, females, especially girls, are the major victims of

STIs due to some factors such as poor access to health services and the absence of sexuality education (Obiekwe, 2017).

Sexually transmitted infections (STIs) are communicable diseases that are principally transmitted from person to person through sexual contact. Isara and Baldeh (2021) indicated that more than 30 different bacteria, viruses and parasites are transmitted that way. Some of these STIs are treatable while some have no known cure yet. Isara and Baldeh stated that they were among the major causes of prenatal morbidity in Africa. In specific terms Park (2019) listed the complications of STIs as stillbirth, neonatal death, low birth weight, prematurity, congenital deformity and a host of others. The complications of the infections on the woman are also dire. For example, one of the predominant malignancies of women in Nigeria which is cervical cancer has been linked to the high rates of Human papillomavirus-HPV (World Health Organization [WHO], 2023). According to WHO, HPV is responsible for the recent introduction of routine vaccination of girls aged 9-14 years against the virus in the country.

Sexually transmitted infections have serious consequences beyond the immediate impact on the body. They have added serious economic effect on the person and the family at large. For instance, they account for a substantial proportion of outpatient health care visits among adults of reproductive age in the world (Park, 2019). The economic burden is likely to be grave in the location of this study, where health care services are generally expensive (Aleke & Nwankwo, 2017). It could be based on high out-of-pocket-payment for health services in the country coupled with lack of confidence in the work staff and ignorance that victims of STIs avoid the use of the orthodox health facilities (Umoke et al., 2018).

Other implications of STIs include infertility and discrimination against the victims. Infertility is especially of public health importance in the area of the study since Nigerians generally see children as vital status symbol (Da'am et al., 2024). Moreover, according to Yosef (2021), in Ethiopia a person attending a health facility is ashamed to admit having STI. In Delta State too, just as in many other parts of Nigeria, anyone who is diagnosed with STI like HIV/AIDS is discriminated against (Ugwuoke, 2016-2017). Such victims might even engage in suicidal behaviours on finding out their HIV status. According to the author, many HIV/AIDS cases have died as result of avoidance of antiretroviral treatment. Experience has also shown that many persons who have such infections in Nigeria, Delta State inclusive, go to health facilities very far from their residential domains to access treatment just to avoid being seen by familiar persons.

Delta State is located in the southern part of Nigeria. Result from the 2018 Nigeria National HIV/AIDS Indicator and Impact Survey showed that the state had a slightly higher HIV prevalence rate (1.9%) than the national rate of 1.4 per cent for persons aged 15-49 years (United Nations Programme-UNAIDS/ National Agency for the Control of AIDS (NACA, 2019). The magnitude of the problem might be appreciated more if the figure is translated into absolute number. It is instructive to note that this kind of estimate miss outliers who are most often the victims. From the UNAIDS/NACA report women were more than two times likely to be living with HIV/AIDS than their male counterparts. The situation might not be different with other STIs. This is because Yosef (2021) showed that STIs were widely reported among pregnant women in Africa. Obiekwe (2017) also indicated that STIs were common among teenage pregnant women in Nigeria.

The high level of prevalence of HIV/AIDS and other STIs among women is disturbing because they rarely show symptoms of infection. Balamurugan and Bendigeri (2012) disclosed that the

asymptomatic nature of STIs in women makes their detection difficult. The implication of this is not only that they harbour the aetiologic agent until the infection becomes chronic but also they are likely to transmit it to their spouses.

Perhaps due to the asymptomatic nature of STIs, stigma associated with the disease or as a result of high cost of health care in Nigeria as shown by Aleke and Nwankwo (2017) pregnant women do not seek health services promptly on account of the infection. Investigations on the possible barrier to health seeking behaviours under that circumstance have focused on other variables different from parity (Aboagye & Agymang, 2013; Akeju et al., 2016; Lalunji & Akinyemi, 2018). To the best of the knowledge of the researchers, no study has been conducted on the role of parity on HSBs of pregnant women infected with STIs attending ANC clinics in Delta State. Hence the present study was conducted to fill in this gap.

Health seeking behaviour has to do with action taken by an individual who is apparently healthy to preserve and maintain his or her health status. Lalunji and Akinyemi (2018) defined HSB as any action or inaction undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy. They pointed out that HSB can be inappropriate if it is sought from patent medicine vendors, chemist, traditional healers, family member or not doing anything. Udenweze (2019) restated that HSB can be appropriately sought from the formal sector which entails professional care. According to Oberoi et al. (2016), HSB is preceded by decision-making process hence; the authors submitted that the Health Belief Model is suitable for its explanation. Such decisions is influenced by how accessible the health care services are, particularly to the vulnerable groups like the youth and pregnant women.

Health seeking behaviours among pregnant women infected with STIs in the context of this study means measures they take with the aim of treating and preventing the disease that could adversely affect them and/or their baby in utero, during and even after birth. This study dwelt on HSB of pregnant women, who have been diagnosed of STI/s and were aware of their status during ANC in General Hospitals in Delta State. In fact, as a matter of routine pregnant women in Nigeria attend ANC clinics for regular evaluation, health education, counseling and treatment of any observed adverse conditions (Umoke et al., 2017). Dele (2016) pointed out that many of the formal health care facilities have equipment and trained personnel to carry out basic STI screening in Nigeria including HIV counseling and testing of pregnant women in order to prevent mother to child transmission of the infection whether in utero or during childbirth.

The number of times a woman has given birth after a completed 24 weeks of pregnancy is termed parity. This is irrespective of whether the child was born alive or stillborn. Peters (2009) stated that parity is used to indicate the number of pregnancies a woman has undergone that have resulted in the birth of a baby capable of survival. A woman that has never given birth to a foetus of the above gestational age is described as a nullipara. Primipara refers to a woman who has given birth from only one pregnancy while multipara is a woman who has given birth from two to four pregnancies. A woman is said to be a grand multipara if she has given birth to five pregnancies or more.

Studies have been conducted on HSBs of pregnant women infected with STIs in different parts of the world (Aboagye & Agyemang, 2013; Balamurugan & Bendigeri, 2012). According to Suchman (2015), recent studies on HSB concerning STIs showed that delay in seeking care is common among STIs patients. The prevalence of delay, in seeking treatment for STIs in both

industrialized and developing countries is high. Isara and Baldeh (2021) showed that over all prevalence of STIs in West Coast Region of the Gambia was high. From the report STIs were more prevalent in women aged 15-24 years, unemployed and primipara. Lalunji and Akinyemi (2018) reported that the HSBs on the sample they studied had greater effect on larger families than smaller ones. Lalunji and Akinyemi also showed that a great proportion of the sample of civil servants in Ibadan utilized the formal system of care. The authors indicated that inappropriate HSBs was common among those with large families. This was attributed to more economic hardship among such families. Umoke et al. (2021) found that prevalence of hepatitis B virus was more among pregnant women, who were under 20 years, multi/grandpara and among those who had secondary education while syphilis was more among primipara and those less than 20 years of age.

Research Questions

The following two research questions were posed to guide the study.

1. What is the extent of HSBs of pregnant women infected with STIs diagnosed in General Hospitals in Delta State?
2. What is the extent of HSBs of pregnant women infected with STIs diagnosed in General Hospitals in Delta State based on parity?

Hypothesis

One null hypothesis was postulated to give direction to the study and was tested at 0.05 level of significance.

H01 There is no significant difference in the health seeking behaviours of pregnant women infected with STIs diagnosed in General Hospitals in Delta State based on parity.

Methods

A descriptive survey design was utilized to execute the study. The population for the study was 2280 pregnant women attending ANC in the 28 General Hospitals in Delta State diagnosed with STIs from January 1st 2018 to December 31st 2022 (Delta State Hospital Management Board, 2023). The sample for the study comprised 342 pregnant women infected with STIs selected through multi-stage sampling procedure. In stage one all the twenty-eight General Hospitals were clustered into three senatorial zones of Delta North, Delta Central and Delta South. Stage two involved the use of simple random sampling technique of balloting without replacement to select three general hospitals from each senatorial zone yielding 9 General Hospitals. Stage three was the selection of 38 pregnant women from each sampled hospital using systematic simple random sampling technique starting with a random start. Here lists of all the women diagnose with STIs were compiled for each hospital. Starting with a random start of 4 every 7th number in the list was deemed to have been selected until all the 38 women were selected. This was repeated for each of the 9 hospitals involved in the study. This gave rise to 342 sampled women.

A self-structured questionnaire known as HSB of pregnant women attending ANC clinic questionnaire (HSBPWANCCQ) was used for data collection. The instrument had parts ‘A’ and ‘B’. Part ‘A’ had one (1) item on demographic information- parity of the respondents while part ‘B’ had six (6) items on extent of HSBs of the women. The response options were as follows ‘Very Often’, ‘Often’, ‘Rarely’ and ‘Never’. The respondents were asked to tick (√) to indicate

how frequently they had sought health care services for STIs (i.e., as it applied to them). In order to protect the privacy of the respondents the HSBPWANCCQ was anonymous. The instrument was validated by three experts in public health and test retest method was used to test its reliability. Spearman Rank Order statistics was used to determine the reliability coefficient and it yielded a value of 0.64. Thus the instrument was adjudged to be suitable and hence used for data collection.

The copies of the instrument were distributed to the pregnant woman with the help of the heads of each of the hospitals' units and collected on the spot. Participation in the study was purely voluntary. Out of the 342 copies of the HSBPWANCCQ distributed 299 were returned giving a return rate of 88 per cent. Data generated from 299 copies of the instrument that were correctly filled in were analyzed using mean($\bar{X}$) and standard deviation (SD) for answering the research questions posed to guide the study. The data were analyzed on item-by-item basis to indicate the mean responses and standard deviations (SDs). The response options were weighted as follows 'Very Often' = 3, 'Often' = 2', 'Rarely' = 1, and 'Never' = 0. Based on this, the limits of real numbers were used to interpret both the item-by-item and overall mean scores as follows: 0.00-0.49 = very low extent (VLE), 0.50-1.49 = low extent (LE), 1.50-2.49 = high extent (HE) and 2.50-3.00 = very high extent (VHE) of HSBs. The mean scores and overall mean score and standard deviations were presented in tables and used for description as well as to answer the research questions posed to guide the research. Analysis of variance (ANOVA) was used to test the only null hypothesis postulated to guide the study at 0.05 level of significance.

Results

Table 1**: Mean Ratings of HSBs among Pregnant Women Infected with STIs in Delta State (n=299)**

S/N	Item - Health seeking behaviour of women diagnosed with STIs:	$\bar{X}$	SD
1	Since you were diagnosed to have STI how often have you sought for its treatment from a hospital/clinic	2.07	.87
2	Since you were diagnosed to have STI how often have you sought for the treatment from a patent medicine store	2.91	.91
3	Since you were diagnosed to have STI how often have you sought for its treatment from a traditional birth attendant (TBA)	2.53	.98
4	Since you were diagnosed to have STI how often have you sought for its treatment from a faith healing center/prayer house	2.51	1.01
5	Since you were diagnosed to have STI how often have you administered medications for its treatment without consulting a physician	2.34	.98
6	Since you were diagnosed to have STI how often have you sought for its treatment from a pharmaceutical store	2.09	.87
	Over all mean ($\bar{X}$) and standard deviation (SD)	2.41	.94

Result in Table 1 shows that the HSBs of pregnant women with STIs had a grand mean score of 2.41 with standard deviation of 0.94 which fell within the limit of $\bar{X}$=1.50-2.49 indicating high extent of HSB. The Table also indicates high extent of HSBs on all the listed items.

Table 2: **Mean Ratings of HSBs among Pregnant Women Infected with STIs in Delta State Based on Parity (n-299)**

S/N	HSBs Items	Nullipara (n = 72) $\bar{X}$ SD	Primipara (n = 103) $\bar{X}$ SD	Multipara (n = 98) $\bar{X}$ SD	Grandmultipara (n = 36) $\bar{X}$ SD
2	Since you were diagnosed to have STI how often have you sought health care for its treatment from the hospital/clinic	2.85 .90	2.11 .85	2.93 .89	2.70 .45
3	Since you were diagnosed to have STI how often have you sought health care for the treatment from the patent medicine store	2.86 .94	2.93 .88	2.90 .93	2.20 .89
4	Since you were diagnosed to have STI how often have you sought health care for the treatment from traditional birth attendant (TBA)	2.58 1.01	2.54 . 97	2.38 .96	2.60 .89
5	Since you were diagnosed to have STI how often have you sought for the treatment from faith healing center/prayer house	2.50 1.04	2.53 .98	2.43 1.09	2.80 1.10
6	Since you were diagnosed to have STI how often have you administered medications for its treatment without consulting a physician	2.29 .93	2.391.00	2.33 1.03	1.80 .84
7	Since you were diagnosed to have STI how often have you sought for its treatment from a pharmaceutical store	2.10 .88	2.50 .96	2.09 .98	2.60 .75
	Over all mean ($\bar{X}$) and standard deviation (SD)	**2.53 .95**	**2.50 .94**	**2.51 .98**	**2.45 .82**

Result in Table 2 shows that nulliparous pregnant women diagnosed with STIs had the highest overall mean score of 2.53 with a standard deviation of 0.95. Since the overall mean score falls within 2.50-3.00, the HSBs of the nulliparous women was of very high extent (VHE). This was followed by multiparous women ($\bar{X}$=2.51: SD= 0.98). From the same Table 1 primipara ($\bar{X}$= 2.50: SD=0.94) and grandmultiparous pregnant women ($\bar{X}$=2.45: SD=0.82), who were diagnosed with STIs also had very high extent (VHE) HSBs.

Table 3: **Summary of One–Way ANOVA Verifying the Hypothesis of no Significant Difference in the HSBs of Pregnant Women Infected with STIs diagnosed in General Hospitals in Delta State based on Parity**

Source	Sum of Squares	DF	MeanSquare	F	p-value
Between Groups	1.954	3	.651	.045	.990
Within Groups	4814.972	335	14.373		
Total	4816.926	338			

Significance p≤0.05

Table 3 shows that the probability value .990 is greater than the 0.05 alpha level. Since the p-value is higher than the 0.05 level of significance, the null hypothesis which stated that there is no significant difference in the HSBs of pregnant women infected with STIs in Delta State based on parity was not rejected.

Discussion

Result in Table 1 showed that pregnant women diagnosed with STIs in Delta State had very high extent (VHE) of HSBs. This finding was consistent with Park's (2019) submission that seeking health care services for STIs was high globally. Lalunji and Akinyemi (2018) also showed that a large proportion of civil servants in Ibadan, Oyo State sought health care services generally. The present finding is unexpected since, according to Ugwuoke (2016-17), there is stigmatization against STI in the area of the study. Yosef (2021) also showed that in Ethiopia women infected with STI are ashamed of seeking health care in the clinic.

An explanation to the high extent of HSBs of the pregnant women infected with STIs in the location of the present study could be the premium value placed on children in Delta State and Nigeria generally. It is, therefore, not surprising that despite the asymptomatic nature of the disease in the women as pointed out by Balamurugen and Bendigeri (2012) they utilized all forms of health services in order to cure the infection and protect the children in their wombs. Perhaps, it was the high cost of treatment in hospitals as shown by Aleke and Nwankwo (2017) that made the pregnant women have high extent of health seeking behaviour on all forms of the listed items irrespective of their appropriateness in the same Table 1. It is worthy to note that most of the respondents sought treatment from sources which were categorized as inappropriate or non-professionals (Oberoi et al., 2016; Udenweze, 2019).

Viewed against the backdrop of the finding by Suchman's (2015) that delay in seeking care is common among STIs' patients, one may be tempted to doubt the validity of this finding. However, the sampled women in the study might have been diagnosed with the infection during their routine antenatal checkups by chance. Thus the issue of delay in presenting themselves for treatment was out of the question.

Result in Table 2 showed that nulliparous pregnant women diagnosed with STIs had the highest health seeking behaviours (VHE) among the different categories of the sample studied. This finding is predictable. This is because Isara and Baldeh (2021): Obiekwe, 2017: Umoke et al. (2021): The WHO (2010) showed that over all prevalence of STIs was more in younger women who were primipara. Consequently, if all other factors remain constant the proportion of this group of pregnant women infected with STIs seeking treatment will invariably be higher than the others. Additionally, older nulliparous women are likely to be more conscious about the safety of their babies in utero since age is not on their side for additional pregnancies compared to the multi and grandparous women who already have large families. Another possible reason for higher level of HSBs among the nullipara is their likely higher level of education. This is because in the location of the present study adult literacy is still low and level of education, and by extension knowledge about seeking solution for health problem, tapers off with age (Umoke et al., 2017).

The null hypothesis which stated that there is no significant difference in the HSBs of pregnant women infected with STIs diagnosed in General hospitals in Delta State based on parity was not rejected (Table 3). Therefore, the finding was not statistically significant. The result is not amazing since, as earlier on pointed out it could be sequel to the high value attached to children that made them seek health intervention on being diagnosed to be infected with STIs. The finding could also be attributed to the high adult literacy in Delta State. During the course of their education and experience in life the pregnant women might have understood the implications of STIs on their health and that of their spouses as well.

Conclusions

Based on the finding of the study the following conclusions were reached.
Pregnant women diagnosed with STIs in General Hospitals in Delta State had very high extent (VHE) of HSBs.
Nulliparous pregnant women diagnosed with STIs had the highest HSBs among the different categories of the sample studied in Delta State.
There was no statistically significant difference in HSBs among the different categories of pregnant women diagnosed with STIS in General Hospitals in Delta State.

Recommendations

Based on the conclusions from this study the researchers recommended the sustenance of enlightenment of pregnant women, irrespective of their parity, to always seek appropriate treatment for any diagnosed STIs. They should be sensitized to go for periodic check-ups even when they are not pregnant since some of the infections are asymptomatic. Furthermore, public health professionals should counsel pregnant women who contract STIs to stop hiding their problem as early diagnosis results in positive treatment outcome. Public health official should also investigate to find out why pregnant women in the location of the present study opt for treatment outside health facilities where the diagnoses were made.

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