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PREVALENCE OF HEPATITIS B VIRUS INFECTION AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE UNIT AT BUGIRI GENERAL HOSPITAL- BUGIRI DISTRICT. A CROSS-SECTIONAL STUDY.

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ABSTRACT

Background

This study aims to determine the prevalence of HBV and its risk factors most responsible for the Hepatitis B virus among pregnant women attending antenatal care (ANC) at Bugiri General Hospital-Bugiri District.

Methodology

A total of 70 pregnant women were tested for HBsAg within November for 7 days in 2023. The study was carried out using a descriptive cross-sectional study design and it provided information concerning the situation at that given time, by doing so, the status of the pregnant women concerning the presence or absence of Hep B virus was assessed and involved data collection and measuring prevalence using the hospital-based HBsAg strip test specific for Hepatitis B virus screening. The Data was collected using the Quantitative method to determine prevalence and the Qualitative method was used to determine behavioral risk factors associated with Hep B infections among pregnant mothers attending ANC at Bugiri Hospital by use of Questionnaires.

Results

18.6% were tested positive and 81.4% tested negative. The majority 65(92.9%) had one sexual partner 11(84.6%) had Hep B infection, and 58(82.9%) were pierced with unsterilized sharps out of which 10(76.9%) had Hepatitis B infection. 66(94.3%) did not have a history of Hep B infection among their family members of which 11(84.6%) had Hepatitis B infection. The age group most affected by Hepatitis B virus infection among pregnant women attending antenatal clinics was 20-24 years with a prevalence of 30.8%.

Conclusion

This study underscores the need for increased awareness and education about HBV, along with the implementation of appropriate preventive measures to curb the spread of the virus

Recommendation

HBV is still a common problem among pregnant mothers attending ANC. Therefore, there should be timely screening for HBV for every pregnant mother attending ANC presenting with likely signs and symptoms of the disease.

Keywords: *Hepatitis B Virus, Pregnant Women, Antenatal Care Unit, Bugiri General Hospital*
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Background of the study

The Hepatitis B virus belongs to the family Hepadnaviridae and is highly hepatotropic, causing acute and chronic liver diseases including cirrhosis and hepatocellular carcinoma. The Hepatitis B virus is estimated to have caused 820,000 deaths worldwide by contributing to chronic hepatitis and hepatocellular carcinoma. Infection with HBV infection is a serious public health problem worldwide, with over 360 million carriers. 60 million of these are residents in Sub-Saharan Africa. HBV infection causes HCC which is the second commonest cause of death from cancers among women in Gambia. The commonest route of spread of HBV is vertical transmission.

Globally, WHO revealed that the Western Pacific Region boasts the highest HBV epidemiological burden, this is followed by the African Region, as infected respectively, 6.2% and 6.1%. In the WHO Region of Europe, Asia South-East Region as well as the Region of Eastern Mediterranean, the population generally, is proportionately infected with estimates of 1.6%, 2.0%, and 3.3%, respectively(Afolabi et al., 2022). More so, in the WHO American Regions, 0.7% of the population is reported to have been infected. The prevalence of HBV infection in Tanzania was reported to be 8.8% and 6%, respectively, where 74% of North-eastern Tanzanian women before the study above have been documented to be HBV-positive (Afolabi et al., 2022). A study done by Ekouevi *et al.*, (2017) revealed that within Sub-Saharan Africa, the prevalence of

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Hepatitis B infection ranges from 5%- 10% in pregnant mothers.

A report done by Bayo et al., (2017) revealed that Hepatitis B is a serious liver infection caused by the hepatitis B virus. It's either acute or chronic, having chronic hepatitis B increases the risk of developing liver failure, liver cancer, or cirrhosis condition that permanently scars the liver. Signs and symptoms of hepatitis B range from mild to severe and usually appear about one to four months from the time of infection, although you could see them as early as two weeks post-infection. Some people usually young children may not have any symptoms. Hepatitis B signs and symptoms include abdominal pain, dark urine, fever, joint pain, loss of appetite, nausea, vomiting, weakness, fatigue, and jaundice. Hepatitis B is transmitted from one person to another through having unprotected sex with an infected person, sharing needles contaminated with infected blood, and Infected pregnant mother passes the virus to the newborn, homosexuals. The pregnant mother is at a risk of contracting infections, with HBV being one of them. There are several risk factors that the pregnant mother is exposed to making her susceptible to infections. The factors range from individual, sociodemographic, and health system factors, and with appropriate consideration of these factors, proper measures can be undertaken. Hepatitis B vaccination has been included in child immunization all over the world. World Hepatitis Day on the 28th of July yearly of every year increases awareness and understanding of viral Hepatitis as a global target of reducing new viral Hepatitis infections by 90% and reducing deaths by 65% by 2030.

It involves a systematic screening for HBV markers of infection (HBsAg) in pregnant women, followed, if positive, by active-passive immunization of the newborn within the first 24 hours of life, combining hepatitis B vaccine and hepatitis B immunoglobulin (HBIG) injected in two different sites(Choisy et al., 2017). This strategy may reduce by 75–90% the mother-to-child HBV transmission, but it is difficult to generalize in highly endemic areas because of its high costs reported by Choisy et al., (2017).

Sub-Saharan Africa has been noticed as having the highest prevalence of hepatitis B with about 80 million carriers of HBV, and a prevalence ranging between 5% to 10% in the pregnant women population reported by Ekouevi *et al.*, (2017).

Similarly, the prevalence of HBV infection in sub-Saharan Africa was reported to range from 5% to 20%, with prenatal transmission estimate rates ranging from 1% to 5%. According to Mugabiirwe et al., (2022) Uganda is known to be a highly endemic area of the infection with an estimated national prevalence of 10.0%. The regional distribution of disease varies, with the highest prevalence in the Northern region; prevalence is 19% in the Northwest and 25.0% in the Northeast. The national prevalence of HBV infection among women attending antenatal care was 4.1% in the year 2018. Studies done in Uganda around 2018 estimated the prevalence of hepatitis B virus infection among pregnant women attending antenatal care to be 2.9% at Mulago National Referral Hospital in central Uganda, 5 11.8% at two hospitals in northern Uganda, and 3.1% at Mbarara Regional Referral Hospital in western Uganda. To determine the prevalence of HBV among pregnant women attending the ANC Clinic at Bugiri General Hospital- Bugiri District.

Specific objectives

i)To determine the prevalence of HBV infection in pregnant women attending the ANC Clinic at Bugiri General Hospital - Bugiri district.

ii)To establish behavioral risk factors most responsible for HBV infection in pregnant women attending the ANC Clinic at Bugiri General Hospital- Bugiri district.

iii)To determine the age group most affected by HBV infection in pregnant women attending antenatal at Bugiri General Hospital-Bugiri district.

METHODOLOGY

Study Design

The study was carried out using a descriptive cross-sectional study design and it provided information concerning the situation at a given time, by doing so, the status of the pregnant women concerning the presence or absence of Hepatitis B virus was assessed and it involved data collection and measuring prevalence using the hospital-based test specific for Hepatitis B virus screening.

Study Area

The study was carried out at the Antenatal care of Bugiri Hospital in Bugiri district which is found in eastern Uganda 71 kilometers from Jinja Regional Referral Hospital and 68 kilometers from Jinja town. The hospital is located in Bugiri town which is 152km from the capital city Kampala. A research study was done from July to November 2023

Study population

The study population embraced all pregnant mothers who will attend at antenatal clinic before the sample size is obtained with a free will to consent to participation in the study.

Sample size determination

The sample size to be involved in the study was determined using the Kish and Leslie (1970)formula i.e.

$$n = \frac{Z2pq}{d2}$$

Where;

n = Estimated sample

Z= (score for 95% confidence interval)

p = prevalence of Hep B as 4.8% according to Ekouevi *et al.*, (2017). d= Allowancesampling error

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q= (1-P) which is the population without the desired characteristics. Given that; Z=1.96, p=0.048, q=1-P, d=0.05
Therefore;$n = Z2pq$
$d2$
n = (1.96)2 x 0.048x (1−0.048)
(0.05)2
n =
(3.8416 x 0.045696)
(0.0025)
n =70.2183

Based on the calculation, the study sample was 70 Respondents.

Sampling technique

The study used a simple random sampling technique because it offered equal chances to all members in the set to be selected, was easy to administer, and eliminated bias. Respondents were picked randomly, interviewed after obtaining verbal consent from them and their blood samples taken for investigation

Sampling procedure

Participants were given numbers on small pieces of paper numbered 1 to 20 which corresponded to those put in a box after which they were randomly picked participants who had even numbers were selected for the study and the process repeated until the sample size was reached.

Data collection method

The Data was collected using the Quantitative method to determine the prevalence and the Qualitative method will be used to determine the health system-related factors and behavioral risk factors associated with Hep B infections among pregnant women attending antenatal care at Bugiri General Hospital by use of Questionnaires and Interviews respectively.

Data collection tool(s)

Data was collected using well-structured questionnaires written in simple English language and were filled by the researcher himself. Data collection sheets were used to extract information from laboratory registers and this facilitated necessary information. Stationeries were also used to note necessary information.**Questionnaires**
Data was collected using interviewer-administered questionnaires (Appendix II) and pre-tested to collect information regarding the objectives of the study. This is because interviewer-administered questionnaires removed the necessity of the respondent being literate.

Data collection procedure

This included obtaining a permission letter from the research committee of St. Francis Schools of Health Sciences which was presented to the Medical Superintendent Director/ Head of Department at Bugiri General Hospital to permit to conduct research from there. Also, a letter seeking consent was presented to the participants, and blood samples were collected in EDTA vacutainer tubes from the pregnant women with consent.

Experimental procedure

An experimental study involving specimen collection and processing was both used to determine the prevalence of Hepatitis B virus infection among pregnant mothers attending ANC at Bugiri Hospital. 4 ml venous blood from the respondent will be collected EDTA bottle and HBsAg strips were used to screen for the presence of Hepatitis B virus in respondents' samples. From the same sample, HIV status was determined to rule out Hepatitis B co-infection with HIV using 1/2 Determine. The results from both tests will be read after 15 minutes to eliminate false negative results.

Dependent variables

The dependent variable was the prevalence of Hepatitis B infection among pregnant women attending ANC at Bugiri Hospital in Bugiri District. It was obtained by testing respondents, where the expected outcome was the proportion of respondents with Hepatitis B infection.

Independent variables

The independent study variables that were considered in the study area are;
Socio-demographic characteristics of respondents (sex, age, marital status, education, occupation, and place of residence).
Behavioral risk factors for HBV infection among pregnant mothers attending ANC at BugiriHospital, Bugiri District.
It will be measured by asking respondents about those having more than one life sexual partner, condom use during sexual intercourse, and others. Health system factors responsible for HBV infection among pregnant women attending ANC services at Bugiri Hospital, Bugiri District. Respondents were asked, whether the Hepatitis B immunization service is available at a nearby health facility.

Piloting the Study

Piloting the study was conducted for one week before collecting the actual data; this gave highlights about the challenges of the study at Bugiri General Hospital, Bugiri District.

Pre-testing; of the data collection tools such as the questionnaire was carried out before use in the study.

Inclusion Criteria

All pregnant women attending ANC at Bugiri General Hospital with consent to participate were included in the study.

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Exclusion Criteria

All pregnant women attending the antenatal care unit at Bugiri General Hospital, who were too sick, and already vaccinated for hep B and those who rejected to consent for the study participation will be excluded.

Data analysis, presentation, and management.

After data collection, each questionnaire (appendix II) was checked for completeness and any gaps were filled immediately before mothers left. The questionnaires (appendix II) were kept safe and raw data will be analyzed using SPSS and Excel software as well and presented in the form of frequency tables, graphs, and charts.

Ethical considerations

An introductory letter from St Francis Schools of Health Sciences – Uganda Institution of Allied Health was presented to the district health Officer and Medical Superintendent Director / Head of Department at Bugiri GeneralHospital, Bugiri District through the institution's research committee will issue permission to the researcher to conduct the study from there. All information was treated with confidentially and privacy.

RESULTS,

Socio-demographic characteristics of respondents (n=70) attending the antenatal clinic at Bugiri General Hospital- Bugiri District.

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Table 1:

		Frequency	Percent	Positive	Percent	Negative	Percent
AGE(YEARS)	15-19	13	18.6	1	7.7	12	21.1
	20-24	18	25.7	4	30.8	14	24.5
	25-29	15	21.4	3	23.1	12	21.1
	30-34	13	18.6	2	15.3	11	19.3
	35-39	7	10.0	3	23.1	4	7.0
	>39	4	5.7	0	00.0	4	7.0
	Total	70	100	13	100	57	100
MARITAL STATUS	SINGLE	13	18.6	3	23.1	10	17.5
	MARIED	57	81.4	10	76.9	47	82.5
	Total	70	100	13	100	57	100
LEVEL OF EDUCATION	None	5	7.1	1	7.7	4	7.0
	Primary	10	14.3	3	23.0	7	12.2
	Secondary	27	38.6	4	30.8	23	40.4
	Tertiary	28	40.0	5	38.5	23	40.4
	Total	70	100	13	100	57	100
OCCUPATION	House wife	14	20.0	1	7.7	13	22.8
	Farming	28	40.0	5	38.5	23	40.4
	Formal employment	15	21.4	4	30.8	11	19.3
	Traders	10	14.3	2	15.3	8	14.0
	Handicraft	3	4.3	1	7.7	2	3.5
	Total	70	100	13	100	57	100
RESIDENCE	Rural	50	71.4	9	69.2	41	71.9
	Urban	20	28.6	4	30.8	16	28.1
	Total	70	100	13	100	57	100

The results from Table 1 show that the majority of the respondents 18 (25.7%) were of the age group 20- 24 years with a high prevalence of Hepatitis B of 30.8%,15(21.4%) were of the age group of 25-29 years with Hepatitis B prevalence of 15(23.1%), followed by the age group of 15-19 years and 30-35 years that had the same number of respondents 13(18.6%) with Hepatitis B prevalences of 1 (7.7%) and 2 (15.3%) respectively, 7 (10.0%) were of the age group 35-39 years and Hepatitis B prevalence of 3 (23.1%)and the minorityof the respondents 4 (5.7%)were above 39 years and Hepatitis B prevalence of 0%. On information about Marital status, the majority were married 57(81.4%), and among them, 10 (76.9%) were Hepatitis B positive, 13 (18.6%) were single mothers with 3 (23.1%) Hepatitis B, 10 (17.5%) and 47(82.5%) were Hepatitis B negative single and married mothers respectively.

Regarding educational level, the Majority were educated with Tertiary level 28(40.0%), 5(38.5%) of them tested positive for Hepatitis B virus and 23(40.4%) tested

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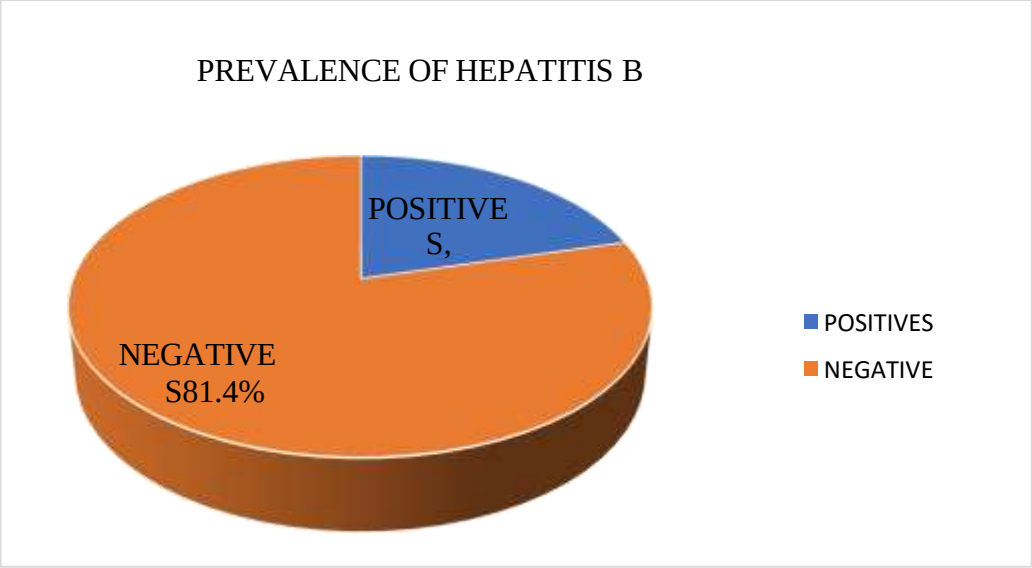
negative, followed by Secondary level 27(38.6%) with 4(30.8%) of them who tested positive for Hepatitis B virus, 23(40.4%) tested negative. And very few had completed primary level 10(14.3%) among them 3(23.0%) tested positive for Hepatitis B virus and 7(12.2%) tested negative and finally (7.1%) had never gone to school but among them,1(7.7%) tested positive for Hepatitis B virus and 4(7.0%) tested negative.

Concerning occupation, most of the respondents were peasants farmers 28(40.0%) with 5(38.5%) testing positive for Hepatitis B virus and 23(40.4%) testing negative, followed by Formal employees 15(21.4%) of which 4(30.8%) were tested positive for Hepatitis B virus and 11(19.3%) tested negative, followed by housewives with the frequency of 14(20.0%) of which 1(7.7%) tested positive for Hepatitis B virus and 13(22.8%) tested negative for Hepatitis B virus, followed by Traders 10(14.3%) out of them 2(15.3%) tested positive for Hepatitis B virus while 8(14.0%) tested negative for Hepatitis B virus and finally Handcraft with the frequency of 3(4.3%) out of which 1(7.7%) tested positive for Hepatitis B and the 2(3.5%) tested negative for Hepatitis B.

Information about respondents' residents showed that majority 50(71.4%) lived in rural areas of which 9(69.2%)tested positive for Hepatitis B virus, 41(71.9%) tested negativefor Hepatitis B virus and the rest of respondents lived in urban areas 20(28.6%) of which 4(30.8%) tested positivefor Hepatitis B virus and 16(28.1%) tested negative for Hepatitis B virus.

Prevalence of Hepatitis B among pregnant women (n=70) attending antenatal clinicat Bugiri General Hospital - Bugiri District. (Laboratory results).

Figure 1 A pie chart showing Hepatitis B prevalence among Respondents (n=70)



From the figure above, a total of 70 pregnant women were tested for hepatitis B Virus during the study period, of which 18.6% tested positive and 81.4% tested negative. This gives the prevalence ofHepatitis B among pregnant women attending he antenatal clinic at Bugiri General Hospital as 18.6%.

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Behavioral risk factors are most responsible for Hepatitis B among pregnant women(n=70) attending the antenatal clinic at Bugiri General Hospital- Bugiri District.

Table 2; shows the behavioral risk factors most responsible for Hepatitis B virus infection among respondents (n=70)

		Frequency	Hepatitis B Virus	Hepatitis B Virus
			Positives	Negatives
Sexual Partners with In Year of Study	One	65(92.9%)	11(84.6%)	54(94.7%)
	Multiple	5(7.1%)	2(15.4%)	3(5.3%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)
Having Under Gone Major Surgery	Yes	2(2.9%)	0(0.0%)	2(3.5%)
	No	68(97.1%)	13(100.0%)	55(96.5%)
	Total	70(100.0)	13(100.0%)	57(100.0%)
Contacts With Individual Having Hepatitis B Infection.	Yes	2(2.9%)	2(15.4%)	0(0.0%)
	No	68(97.1%)	11(84.6%	57(100.0%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)
History Of Infections Among Family Members	Yes	4(5.7%)	2(15.4%)	2(3.5%)
	No	66(94.3%)	11(84.6%)	55(96.5%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)
Exposure To Blood / Blood Transfusion.	Yes	5(7.1%)	1(7.7%)	4(7.0%)
	No	65(92.9%)	12(92.3%)	53(93.0%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)
Condom Use in Multiple Sexual Partners	Yes	7(10.0%)	2(15.4%)	5(8.8%)
	No	3(4.3%)	2(15.4%)	1(1.8%)
	Not Applicable	60(85.7%)	9(69.2%)	51(89.4%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)
Pierced With Unsterilized Sharps	Yes	58(82.9%)	10(76.9%)	37(64.9%)
	No	12(17.1%)	3(23.1%)	20(35.1%)
	Total	70(100.0%)	13(100.0%)	57(100.0%)

Regarding piercing with unsterilized sharps**,** 58(82.9%) of the respondents had ever been pierced with unsterilized sharp tools, and out of that 10(76.9%) tested positive for Hepatitis B whereas 12(17.1%)had never been pierced with unsterilized sharp tools of which 3(23.1%)tested positive for Hepatitis B virus infection.

The age group most affected by Hepatitis B virus infection among pregnant women attending the antenatal clinic at Bugiri General Hospital-Bugiri District. (n=70).

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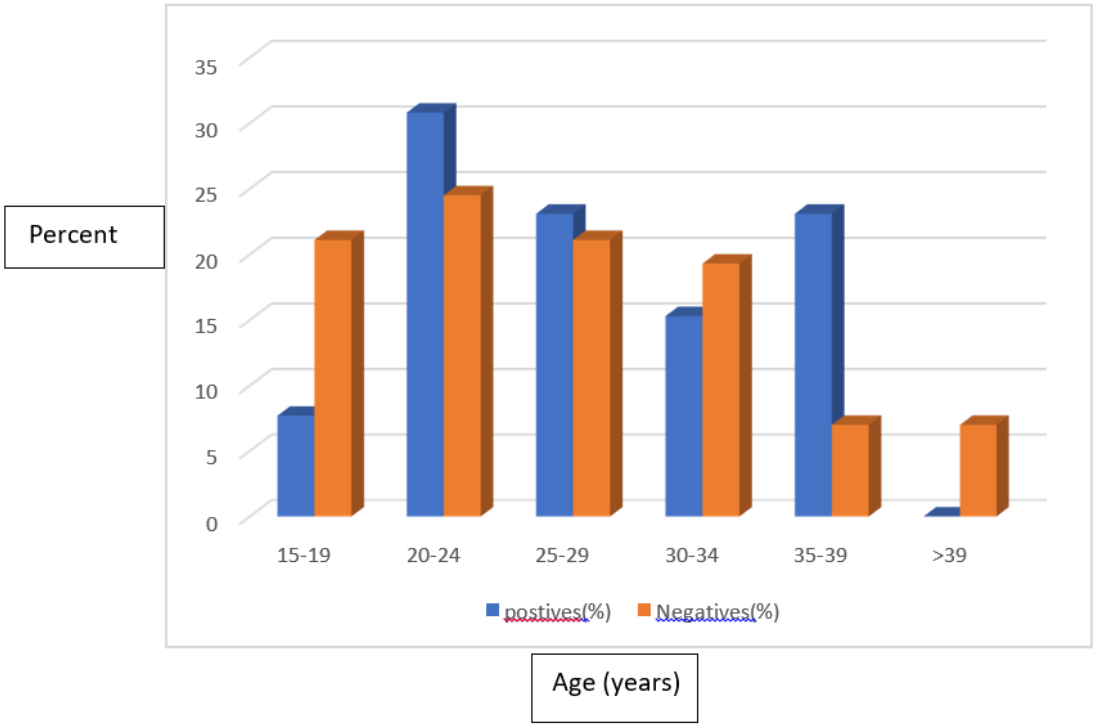
Figure 2; Shows a bar graph showing the percentage prevalence of Hepatitis B among age groups



From the figure above, the most affected age group is 20-24 years with a Hepatitis B virus infection prevalence of 30.8% tested positive, followed by the age groups of 25-29 years and 35-39 years that have the same Hepatitis B virus infection prevalence of 23.1%, followed by the age group of 30-34 years that had hepatitis B virus infection prevalence of 15.3%, followed by the age group of 15-19 years with a prevalence of 7.7% and lastly the age group above 30years was not affected among the study population therefore all the respondents in the research never tested positive for HepatitisB virus infection.

DISCUSSION

Socio-demographic characteristics of respondents (n=70) attending Bugiri Hospital- Bugiri District.In terms of age, the majority of women 25.7% were in the age group of 20-24 years, followed by 21.4% who were in the age group of 15-19years. The prevalence of HBV was highest at 30.8% among women aged 20-24 years, followed by 23.1% among women aged 25-29 years and 35- 39 years. Interestingly, no positive cases were detected among women over the age of 39 years. This could be due to several factors such as low exposure to the virus or better immunity developed over time. This differs from a report conducted in Malaysia, where adults aged between 27- 40 years and more were likely to be exposed to Hepatitis B risk behaviors.

Regarding marital status, the majority of women 81.4% were married. The prevalence of HBV was higher among married women at 76.9% compared to the prevalence in single women at 23.1%. This could be attributed to the fact that married women are more likely to engage in sexual activity, which is one of the major modes of HBV transmission.

In terms of education level, the highest prevalence of HBV was observed among women with tertiary education 38.5% compared to those with lower education levels. This could be attributed to the fact that educated women may be more likely to engage in risky behaviors such as multiple sexual partners or sharing of needles during medical procedures. This study corresponds with that conducted by Kayondo et al.,2020 where 76.7%77 of the study participants had at least attained secondary education and beyond. (Kayondo et al., 2020) Regarding occupation, the highest prevalence of HBV was observed among women engaged in farming 38.5%, and formal education 30.8%. This could be attributed to the fact that

these occupations may involve exposure to blood and other bodily fluids.

Lastly, in terms of residence, the prevalence of HBV was higher among women living in rural areas 69.2% compared to those living in urban areas 30.8%. This could be attributed to poor hygiene and sanitation practices, limited access to healthcare, and low awareness about the disease in rural areas. Overall, the data highlights the importance of identifying high-risk groups and implementing targeted interventions to prevent HBV transmission among pregnant women attending ANC clinics. Such interventions could include promoting sex practices, ensuring safe blood transfusions, and increasing awareness and education about hepatitis B virus infection

Prevalence of Hepatitis B among pregnant women attending ANC at Bugiri General Hospital-Bugiri District.

The objective of the study was to determine the prevalence of the Hepatitis B virus among pregnant women attending ANC at Bugiri General Hospital, Bugiri District. Out of the 70 pregnant women tested, 13 tested positive for HBsAg and thus positive for HBV.

This gave a prevalence of Hepatitis B infection among pregnant women as 18.6%. This finding indicates that these results were higher than most of those reported previously within the region and elsewhere. So many factors were attributable to this, for instance, results differ from the prevalence reported in southern regions of China as in total population, 1964 pregnant women were HBsAg positive, with a prevalence rate of 11.74% (Deng et al., 2023). This could also be extended to try and explain the prevalence difference seen in Mohosost Hospital Lab where the prevalence was 5.44% (Keomalaphet et al., 2017) and 8.03% in Temeke, Tanzania (Manyahi et al., 2017) and back to home in Northern Uganda where it was 11.8% as reported by (Bayo et al., 2017)

Behavioral risk factors most responsible for Hepatitis B in Pregnant Women attending ANC at Bugiri General Hospital, Bugiri District.

The objective of the study was to establish the behavioral risk most responsible for Hep B in pregnant women attending ANC at Bugiri General Hospital, Bugiri district. The data analysis and interpretation revealed the major findings under this objective. It revealed most of the risk factors were sexual partners, major surgery, contact with an infected person, history of infections among family members, exposure to blood/blood transfusion, condom use in multiple sexual partners, and piercing with unsterilized sharps. From the results, it can be observed that out of the total respondents, 92.9% had only one sexual partner in the year of the study, whereas 7.1% had multiple partners. which were in line with a study conducted in Nigeria in 2018 among 400 pregnant women which found that the main risk factors for HBV infection were having a history of multiple sexual partners and having a family member with HBV infection Okolo *et al*., (2019) and in China in 2016 by Xu *et al.*, (2018 The risk factors of having undergone major surgery, having contact with infected persons, having a history of family members with infections, and coming into contact with infected fluids or transfusion history gave the prevalences of 0.0%,15.4%,15.4%, and 7.7% respectively. This is agreed with another study in Northwest Ethiopia by Gedefaw*et al.*, (2019). 2.6% of respondents had undergone major surgery, whereas 97.4% had not. Only 2.6% of respondents had contact with an individual having a Hepatitis B infection, whereas 97.4% did not. Similarly, only 5.2% of respondents had a history of infections among family members. 6(7.8%) of respondents had exposure to blood/blood transfusion, Regarding the use of condoms, 9.1% of respondents used condoms in multiple sexual partners, 3.9% did not use condoms, and 87.0% did not find it applicable. Among the respondents, 62.3% had pierced with unsterilized sharps, whereas 37.7% had not. These results are in line with a study carried out by Kayondo *et al*., (2020)among pregnant women attending antenatal clinics in Mulago Hospital. Henceforth, most of the 13 pregnant mothers who tested positive for HBV had at least one of the known risk factors and some even had two or more. Overall, the table provides a comprehensive overview of the potential risk factors associated with Hepatitis B virus infection.

The age group most affected by Hepatitis B virus infection among pregnant women attending the antenatal clinic at Bugiri General Hospital-Bugiri District.

The objective of the study was to find out the age group most affected by Hepatitis B virus infection among pregnant women attending the antenatal clinic at Bugiri General Hospital, Bugiri District. From the data analyzed, the most affected age group was 20-24 years with Hepatitis B virus a prevalence of 30.8%. This could be attributed to the fact that this age group is in the active reproductive ages and hence influences themselves more into sexual intercourse than other age groups and also involves themselves in multiple sexual partners thus having a high prevalence. The study findings were similar to that of (Derick et al., 2018) conducted among pregnant women attending Mbarara Regional Referral Hospital which revealed the age group of 18- 24 years as the most age group.

CONCLUSIONS.

This study specifically sought to determine the prevalence of the Hepatitis B virus among pregnant women and the behavioral risk factors most responsible for the Hepatitis B virus among pregnant women attending ANC at Bugiri

General Hospital. The study established that, among the respondents, 13 individuals were positive for Hepatitis B virus (HBV) out of a total of 70 respondents. The data suggests that several factors may contribute to the prevalence of HBV in the population, such as exposure to infected blood or bodily fluids, contact with individuals with HBV infection, and engagement in risky sexual behaviors.

Among those who reported having multiple sexual partners within the year of the study, 92.9% of those with one partner and 84.6% of those with more than one partner were positive for HBV. This highlights the importance of safe sexual intercourse practices to prevent the transmission of the virus.

Interestingly, only 2.9% of respondents reported having undergone major surgery, and none of them were positive for HBV. This could be due to the implementation of proper infection control measures in the hospital setting.

Similarly, only 2.9% of respondents reported having contact with individuals who have HBV infection, and all of them tested positive for HBV. This emphasizes the importance of taking precautionary measures to prevent the transmission of the virus, especially for those who have close contact with infected individuals.

Regarding family history of infection, 5.7% of respondents reported having a history of infection among family members, all of whom tested positive for HBV. This suggests the possibility of vertical transmission of the virus from infected mothers to their children.

A significant proportion of 82.9% of respondents reported being pierced with unsterilized sharps, and 62.5% of them tested positive for HBV. This highlights the importance of proper sterilization of medical equipment to prevent the transmission of the virus.

The prevalence of HBV among pregnant women attending ANC at Bugiri General Hospital was 18.18.6%, which is higher than those of the previous studies conducted within the region and elsewhere, this demands urgent interventional measures to be taken at Bugiri. The significant risk factor for Hepatitis B virus infection among pregnant women was a history of multiple partners

RECOMMENDATIONS

To the pregnant women attending ANC at Bugiri General Hospital, Bugiri district.

Abstinence from early sexual engagement, being faithful to one husband as multiple sexual partners increase the risk of infection, use of a condom and hepatitis B vaccination and avoid body piercing. The data underscores the need for increased awareness and education about HBV, along with the implementation of appropriate preventive measures to curb its spread among pregnant women attending ANC at Bugiri General Hospital.

To ANC Staff at Bugiri General Hospital, Bugiri District Health workers should educate pregnant mothers during their ANC visit about HBV, transmission, symptoms, and prevalence.

To the Government of Uganda through the Ministry of Health. Allocate funds and other resources toward massive awareness creation concerning Hepatitis B to fill the huge information gap that exists concerning the disease. Mass vaccination to prevent the transmission of the virus.

LIST OF ABBREVIATIONS/ ACRONYMS

ANC: Antenatal Care
EDTA: Ethylene Di-amine Tetra Acetic Acid
EPI: Expanded Program on Immunization
HBIG: Hepatitis B Immunoglobulin
HBsAg: Hepatitis B virus surface Antigen
HBV: Hepatitis B Virus
HCC: Hepato-Cellular Carcinoma
HIV: Human Immune Deficiency Virus.
LMICs: Low and middle-income countries
MLT: Medical Laboratory Technology
PDR: People's Democratic Republic
WHO: World HealthOrganization
MTCT: Mother-to-child transmission
CHB: Chronic Hepatitis B

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