

**KNOWLEDGE ,ATTITUDES AND PRACTICES OF HEALTH WORKERS ABOUT HEPATITIS B
VACCINATION AT KASANGATI HEALTH CENTER IV WAKISO DISTRICT.
A CROSS-SECTIONAL STUDY.**

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Abstract

Introduction

Purpose

The purpose of the study was to assess the Knowledge, Practice, and attitude of health workers about Hepatitis B Vaccination.

Objective

The study had three specific objectives; to determine the Knowledge of Hepatitis B vaccination among Health workers in Kasangati Health Center IV, To determine the Attitude towards Hepatitis B vaccination among Health workers in Kasangati Health Center IV, and to determine the Practice towards Hepatitis B vaccination among Health workers in Kasangati Health Center IV.

Methodology

The research was a cross-sectional study in which both qualitative and quantitative data were collected from a sample of 59 respondents who were obtained using a random sampling technique; the data collection method was a face-to-face interview using a questionnaire.

Results

The study findings showed that 86.6% of respondents had ever heard about Hepatitis B Vaccination. However, while some health workers demonstrated a good understanding of hepatitis B, there were gaps in knowledge among others. Furthermore, the study indicated that the majority (80%) of the study respondents were willing to receive Hepatitis B Vaccination. The study also revealed that 62% of the study respondents had received Hepatitis B Vaccination, 33% of the respondents.

Conclusion

The vaccination coverage among health workers was not optimal, with a significant proportion remaining unvaccinated. This gap in practice may be attributed to various factors, including the perceived risks of vaccination and potential side effects, as well as logistical challenges in accessing vaccination services within the healthcare facility.

Recommendations

Health workers should receive regular and comprehensive training on hepatitis B, its transmission, prevention, and the safety and efficacy of the vaccine.

Keywords: Knowledge, Attitudes, Practices, Health Workers, Hepatitis B, Vaccination.

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Background of the study

Hepatitis B virus infection is an infectious disease of Public Health importance since an excess of 2 billion people worldwide are infected and is responsible for 780, 000 deaths annually. Mostly Hepatitis B Virus infection-related morbidity and mortality are a result of complications from chronic infection: Cirrhosis and Hepatocellular Carcinomas

Preventing Hepatitis B Infection averts the development of complications including chronic disease and liver cancer. The disease has no cure but immunizing people against it can prevent initial infection. Thus, primary prevention by vaccination to increase Herd Immunity remains the main focus in controlling Hepatitis B Virus infection.

The complete vaccination series consists of three doses of vaccine, the first two doses are usually given one month apart, with the third dose 6 months later and a complete

series of immunizations protects for at least 25 years. The vaccines are highly effective with a greater than 95% rate of Sero-conversion. All adults at risk for Hepatitis B Infection, those whose Hepatitis B Surface Antigen (HBsAg) tests are positive and those who want protection from Hepatitis B Virus should be vaccinated against Hepatitis B Virus.

WHO and CDC suggested different age group recommendations for vaccination: 18 years and younger, 19 years and older. In Australia Hepatitis B Vaccination in adults runs between ages 18 to 49 years. In low resource settings, that is low-income countries like Uganda with a high prevalence of 10% Hepatitis B Infection. Vaccination was conducted among adults (15-64) years old.

Globally the coverage of those who were fully vaccinated against Hepatitis B Virus infection was more than 1 billion. Studies have shown that adults who are mostly at risk have low rates of HBV vaccination ranging from 25% -44 %.

In the Sub-Saharan African region, 16% to 43% fully received the three-dose vaccination compared to that of Europe which is 81 %.

The government of Uganda introduced a vaccination program for adolescents and adults against Hepatitis B virus infection whose prevalence stands at 4.1%.

In Uganda, 17.6% million people out of the 42 million populations have been vaccinated against Hepatitis B Virus infection since the mass vaccination campaign was rolled out in 2015. It was found that only 69 of 127 (54.3%) districts were covered.

This low coverage was due to low Knowledge Attitude Practice towards Hepatitis B Vaccination. Thus, the research intended to assess Knowledge Attitude Practice among Health workers in Kasangati Health Center IV Wakiso District.

General Objectives

To determine the Knowledge, Attitude, and Practices among Health workers in Kasangati Health Center iv Wakiso District about Hepatitis B Vaccination to determine the progress towards Hepatitis B Vaccination.

Methodology

Study design

The study was conducted through a descriptive cross-sectional study design quantitative in nature. The study design was selected because it aids in rapid data collection and allows a snap short interaction with a small group of respondents at one point in time thus allowing conclusions across a wide population to be drawn. The study design was used to assess the knowledge attitude and practices of health workers in Kasangati Health Centre IV.

Study area

The study was carried out at Kasangati Health Centre IV which is a public health care facility. It is located in Central Uganda and has an elevation of 1,196 meters. Kasangati Health Centre IV is situated nearby to Gayaza town and the village of Bulindo in Wakiso District. Wakiso District shares a border with Nakaseke District, Luwero District, Kalangala District, Mpigi District, and Mityana District. Bulindo Village is a neighborhood in Kira Municipality and it is situated 3.5 kilometers east of Kajjansi HCIV. The coordinates of Kajjansi HCIV are 0°26'9.0" N, 32°36'5.0" E (Latitude: 0.43776572995; Longitude: 32.6023498284).

Study population

In this study, the study population was composed of health workers in Kasangati Health Centre IV.

Sample size determination

The sample size was obtained using the Kish Leslie Formulae

$n =$

Where; $n =$ sample size

$Z =$ score corresponding to 95%

Confidence interval = 1.96

$p =$ prevalence (0.96%)

$q = 100 - p$

$=$ precision /sampling error (5%)

Therefore, $n =$

$=$

$N = 59$ Respondents

Sampling technique

The study used was simple random probability sampling technique to avoid bias.

Sampling procedure

A simple random sampling technique where a researcher selects the ideal sample size and uses a random or lottery-based method to choose variables was used for recruiting respondents for the study as it is fast and cost-effective.

The researcher generated a list of health workers in Kasangati Health Center, their names were put on pieces of paper and put into a basin and Shelford, names were randomly picked without replacement. This would continue until the sample size was attained.

Data collection technique

Data was collected using questionnaires because they allow convenience and privacy and ensure confidentiality.

Data collection tool

A self-administered questionnaire was issued to respondents. The tool was to be used to collect data on demographics, knowledge, attitudes, and practices of health workers about Hepatitis B vaccination.

Data collection procedure

The structured questionnaire was divided into four sections; The first section was to be used to collect data about socio-demographic profile, the second section was used to assess knowledge of health workers about their knowledge hepatitis B vaccination, the third section was used to assess attitudes towards hepatitis B vaccination and the fourth section was used to assess practices of health workers about hepatitis B vaccination.

Study variables

Independent Variables

The independent variables of the study included;

Knowledge: the theoretical understanding and awareness of Hepatitis B vaccination among health workers at Kasangati Health Centre IV.

Attitude; a feeling or way of thinking of health workers that affects Hepatitis B Vaccination at Kasangati Health Centre IV

Practices; the method of Hepatitis B vaccination used by health workers at Kasangati Health Centre IV

Dependent variable

The dependent variable for this study was the Hepatitis B vaccination.

Quality control

The quality of the study was guaranteed by taking into consideration the following: pre-visits to the study area for the exercise with authorities were conducted before the study. Data collection was done by the researcher herself and her trained assistants.

Research instruments like questionnaires were checked for errors of omission to ensure consistency, completeness, and accuracy in filling out the questionnaire.

Data analysis and presentation

Data was analyzed using mean (standard deviation), for categorical data was analyzed using age and frequencies and presented in tables.

Ethical considerations

An introductory letter from the Medicare Health Professionals College research committee introducing the researcher was presented to the Head of Kasangati Health Centre IV seeking permission to carry out research.

Confidentiality, dignity, and respect of all participants were considered. The researcher sought consent and did not coerce respondents.

Study Findings

Socio-demographic factors of study participants

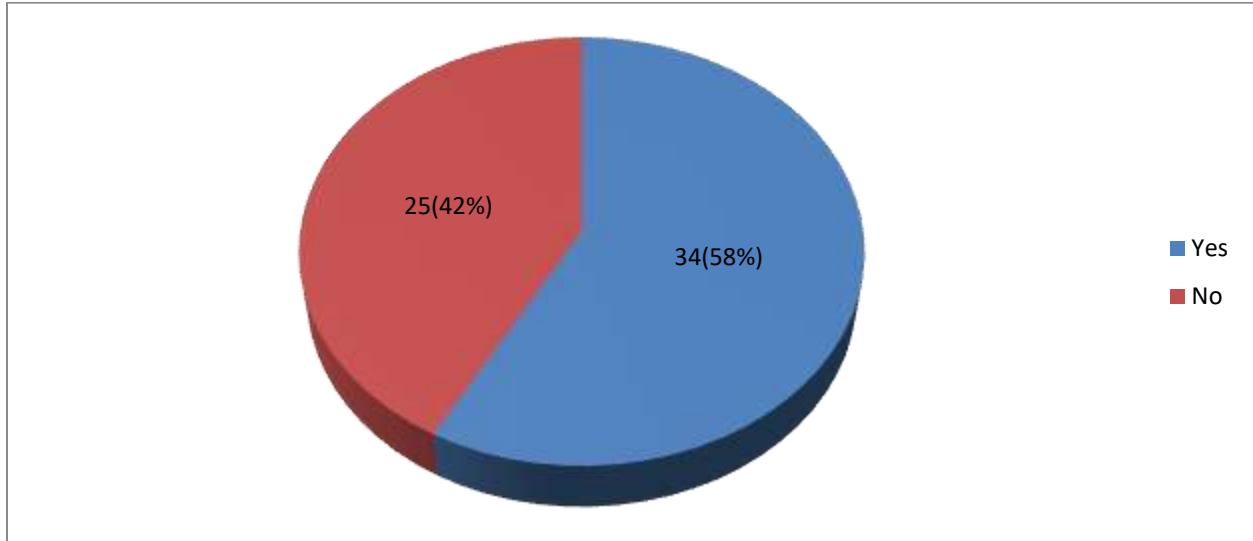
Majority of the respondents 42% were between the age brackets of (21-31) years while the minority 5% were between (51-60) years. When it came to sex, 72 (72%) of the respondents were females and 28 (28%) males participated in the study. By tribe, 52 (52%) respondents were Baganda, 11 (11%) Basoga. Most of the respondents 32 (32%) were Catholics, and the least 10 (10%) were in the Advent religion. Furthermore, 42 (42%) of the respondents were singles, whereas 26 (26%) fell among other groups. As per the education level of the respondents, 38 (64%) were of certificate level, while 5(8%) were bachelor holders. Majority of the respondents 40 (40%) fell into others while minority 5 (5%) were Civil servants.

Table 1: Socio-demographic characteristics of study participants

N=59

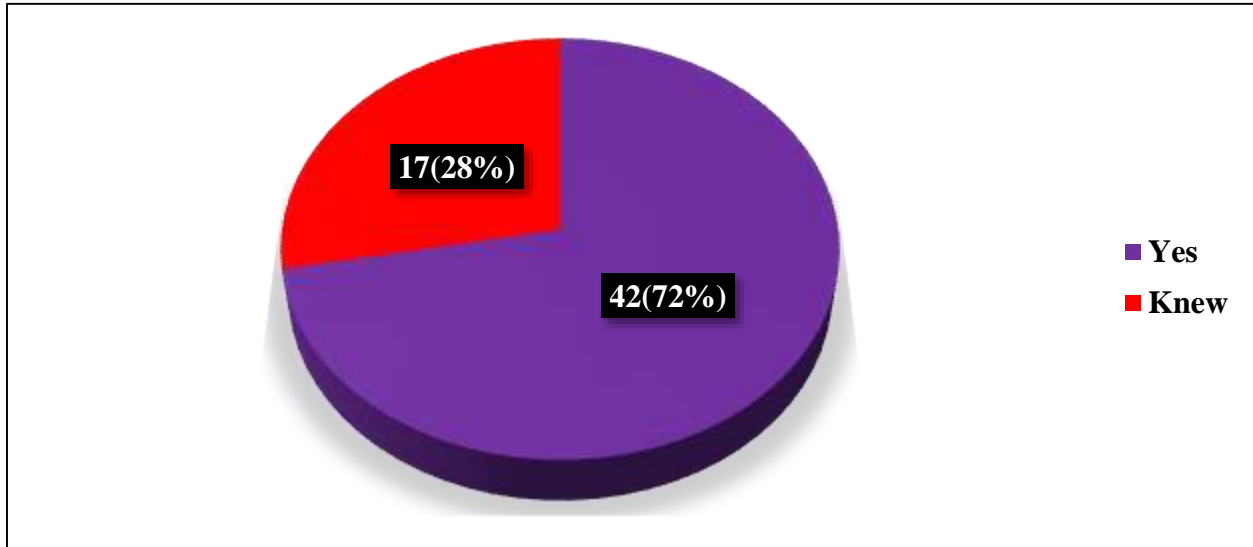
Socio-demographic Characteristic	Category	Frequency (N=100)	Percentage (%)
Age range	21-31 years	25	42
	32-43 years	21	36
	44-50 years	9	15
	51-60 years	4	7
	Total	59	100
Sex	Male	17	28
	Female	42	72
	Total	59	100
Tribe	Muganda	31	52
	Musoga	6	11
	Munyankole	11	19
	Others	11	18
	Total	59	100
Religion	Catholic	19	32
	Born again	12	20
	Muslim	17	29
	Advent	4	7
	Others	7	12
	Total	59	100
Marital status	Single	22	37
	Married	21	36
	Others	16	27
	Total	59	100
Educational level	Certificate	38	64
	Diploma	17	28
	Bachelor	5	8
	Total	59	100
Occupation	Student	21	35
	Civil servant	38	65
	Total	59	100

Figure 1: Distribution of respondents by their views on whether hepatitis B can be cured
N=59



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Figure 2: Distribution respondents by their views on whether Hepatitis B can be prevented N=59



Majority of the respondents 42 (72%) had a view that Hepatitis B can be while only 17 (28%) of the respondents said that it cannot be prevented.

Table 2: Distribution of respondents by their knowledge of the interval for Hepatitis B Vaccination

N=28

Variable	Category	Period	Frequency (N=28)	Percentage (%)
Vaccination interval	1 st shot	A month	11	18
		12 weeks	11	18
		0 days	30	50
		A year	8	14
	2 nd shot	A month	15	25
		4 month	19	32
		7 days	6	11
		2 years	19	32
	3 rd shot	6 months	21	36
		17 weeks	23	39
		5 days	0	0
		10 days	15	25

Knowledge among health workers on Hepatitis B Vaccination

Majority of the respondents 34 (58%) had a view that Hepatitis B can be cured while 25(42%) said that it cannot. Majority of the respondents 30 (50%) of the respondents suggested that the interval period for the first dose was zero

days, 19 (32%) a month for the second dose and 23 (39%) 17 weeks for the third dose.

Majority of the respondents 46(78%) knew that three doses are required for a complete protection from Hepatitis B while minority 13(22%) of the respondents felt that two doses are enough.

Figure 3: Distribution of respondents by their feelings on the number of doses required for a complete protection from Hepatitis B.

N=59

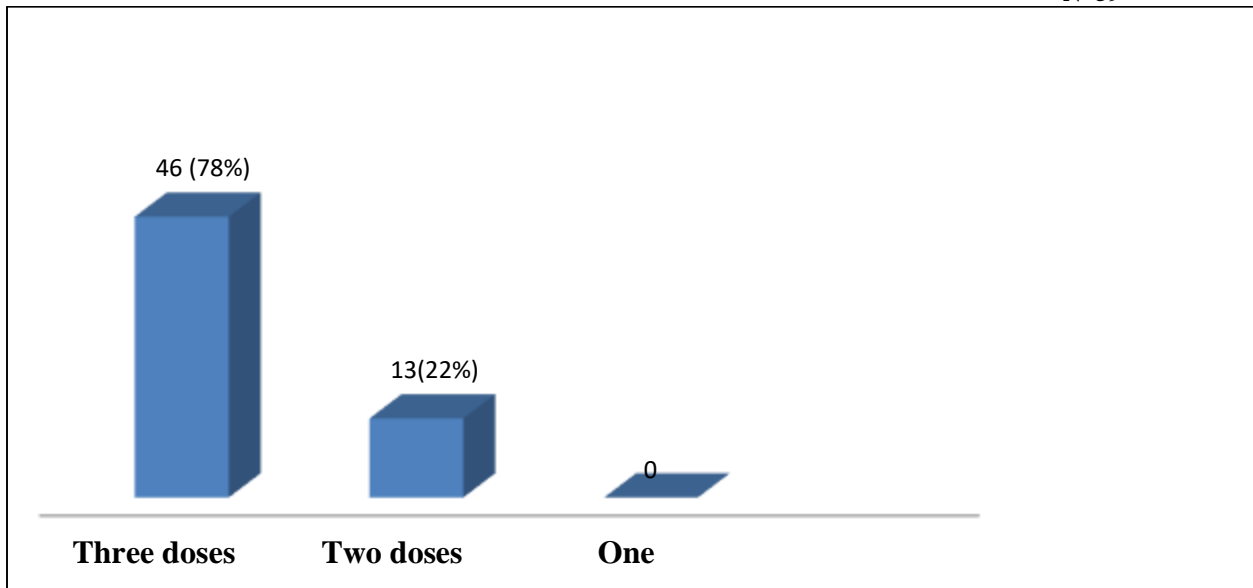


Table 3: Distribution of respondents by their willingness to receive Hepatitis B vaccination and their willingness to recommend Hepatitis B Vaccination to friends

		N=59	
Variable	Category	Frequency N = 100	Percentage (%)
Willingness to receive Hepatitis B	Willing	47	80
	Not willing	11	18
	I don't know	1	2
Willingness to recommend Hepatitis B vaccination to friends	Yes	44	75
	No	15	25

Attitude among health workers on Hepatitis B vaccination

Majority 47(80%) were willing to receive Hepatitis B Vaccination 11 (18%) are not willing to receive Hepatitis B Vaccination and 1 (2%) didn't know whether to take Hepatitis B Vaccination or not. Out of the 100 respondents,

44 (75%) were willing to recommend Hepatitis B Vaccination to friends yet 15 (25%) were not willing.

Majority of the respondents (40)68% felt that Hepatitis B Vaccination should be made compulsory to everyone while minority 19(32%) of the respondents felt that it shouldn't be made compulsory.

Figure 4: Distribution of respondents by their feelings of whether Hepatitis B Vaccination should be made compulsory to every one

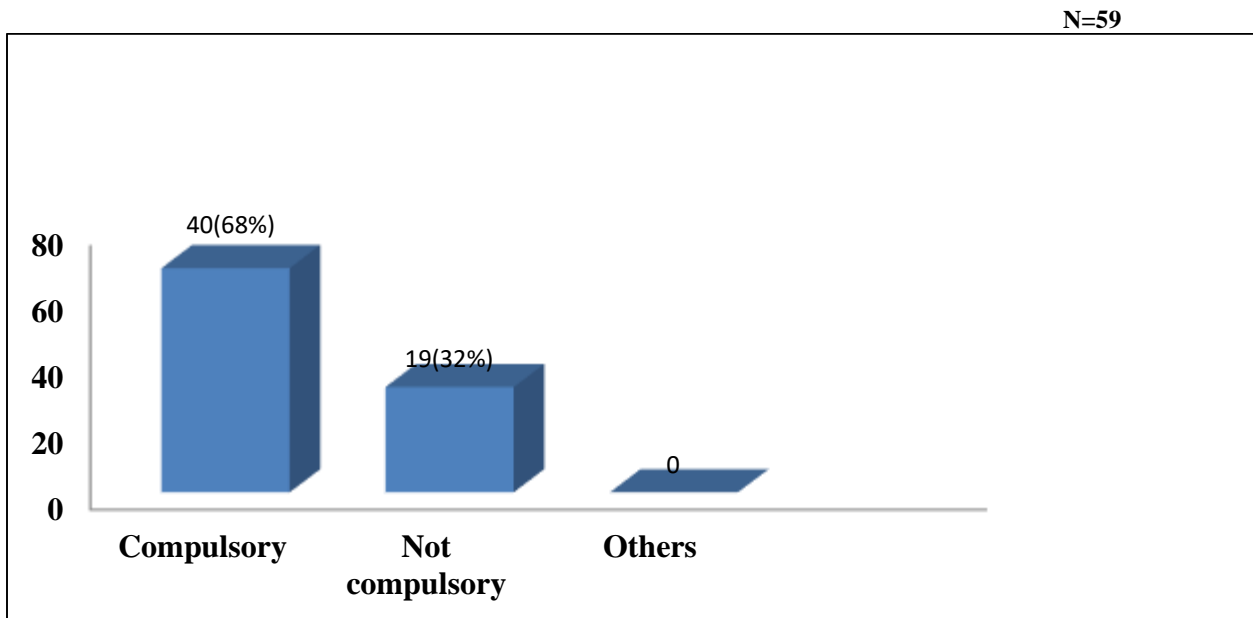


Table 4: Distribution of respondents by how they perceived themselves to be at risk of Hepatitis B Virus if not vaccinated and their willingness to be screened for hepatitis B virus

N=59			
Variable	Category	Frequency N = 100	Percentage (%)
Perceive self to be risk at risk of Hepatitis B	At risk	30	50
	Not at risk	30	50
Willingness to be screened for Hepatitis B vaccination	Willing	50	85
	Not willing	9	15

Out of the 100 respondents, only 50% perceived themselves to be at risk of HBV yet also 50% of the respondents didn't perceive themselves to be at risk of HBV. Majority 85% of the respondents were willing to be screened for hepatitis B virus while minority 15% was not willing to be screened for HBV.

Table 5: Distribution of respondents by whether they would like to be screened for hepatitis B virus and whether they are vaccinated or not

N=59			
Variable	Category	Frequency N = 100	Percentage (%)
Screened for Hepatitis B Virus	Yes	17	28
	No	42	72
Vaccination status	Vaccinated	37	62
	Not vaccinated	19	33
	I don't know	3	5

Practices among health workers on Hepatitis B vaccination

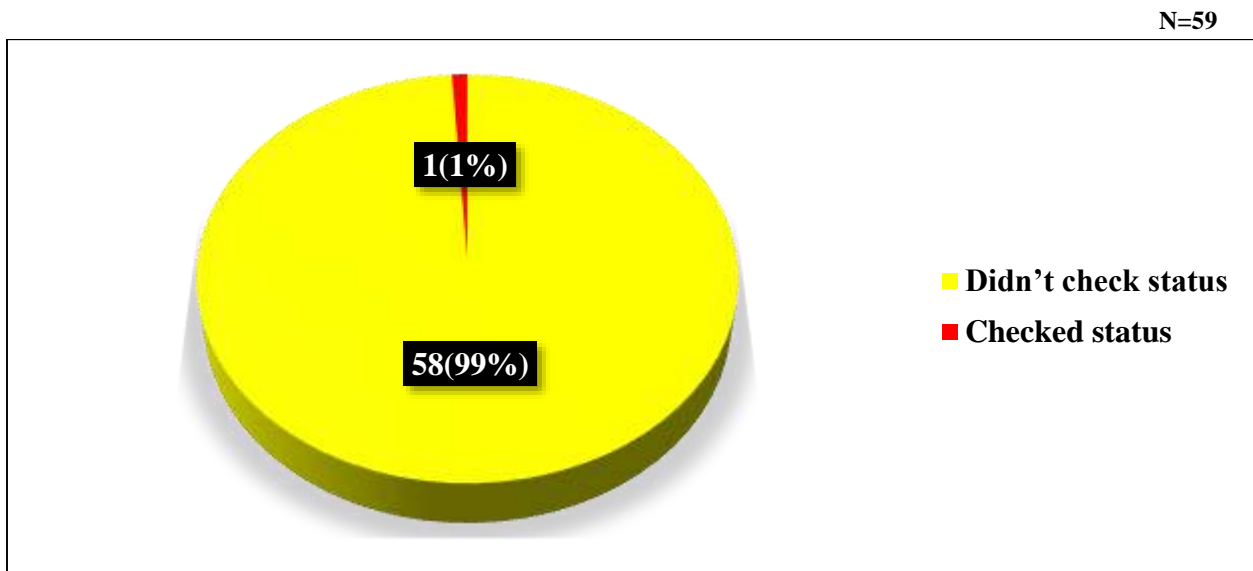
Majority of the respondent 62% were vaccinated yet minority 33% were not and 5% didn't know if they were vaccinated. From the 100 respondents 72% had not screened for hepatitis B virus yet minority 28% had

screened for HBV. Majority of the respondents 32 (55%) had taken the first shot, 11 (19%) had taken the second shot and 15 (26%) of the respondents had acquired the full dose. Almost all the respondents 58(99%) did not check their hepatitis B status after Hepatitis B Vaccination while only 1(1%) of the respondents checked their hepatitis B status after Hepatitis B Vaccination.

Table 6: Distribution of respondents by how many doses of Hepatitis B Vaccination acquired

			N=62
Variable	Category	Frequency N = 100	Percentage (%)
Doses received	First dose	32	55
	Second dose	11	19
	Full dose	15	26

Figure 5: Distribution of respondents by whether they had checked their immune status after Hepatitis B Vaccination



Discussion

Socio-demographic characteristics of respondents

The study findings indicated that the majority of the respondents 42% were between the age brackets of (21-31), and 72% were females. This was probably because, in the health sector, most workers are female and fresh from school. It was also revealed that 52% of respondents were Baganda. Most of the respondents 32% were Catholics. Furthermore, 42 (42%) of the respondents were singles. As per the education level of the respondents, 64% were of certificate level, while 8% were bachelor holders. The

majority of the respondents 40% fell into others while the minority 5% were Civil servants.

Knowledge of Hepatitis B Vaccination among Health workers

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This study revealed that most of the respondents 58% had knowledge about the number of doses of a complete full dose of vaccine for protection from Hepatitis B Virus as 72% of the respondents didn't know it whereas 28% of them knew it. The majority of the respondents 72% had a view that Hepatitis B can be while only 17 (28%) of the respondents said that it cannot be prevented.

The study found that while some health workers demonstrated a good understanding of hepatitis B, there were gaps in knowledge among others. These gaps included aspects of disease transmission, the importance of vaccination, and the risks associated with hepatitis B infection.

This study revealed that most of the respondents never had knowledge about the number of doses of a complete full dose of vaccine for protection from Hepatitis B Virus as 72% of the respondents didn't know it whereas 28% of them knew it. This could probably have been due to inadequate sensitization about Hepatitis B Vaccination among respondents in this study.

Attitude towards Hepatitis B Virus Vaccination among Health Workers

This study revealed that the majority (80%) of the study respondents were willing to receive Hepatitis B Vaccination, 18% were not willing to receive it and 2% of them didn't know whether to receive it or not. Attitudes toward hepatitis B vaccination among health workers were generally positive. Many recognized the importance of vaccination not only for their protection but also for setting an example for the community. This could probably be due to the faith and trust of the respondents towards the Hepatitis B Vaccines provided to them by the Ministry of Health. This is in slight agreement with the results from the study that was done by Abdnur (2016), where 94% were willing and believed that they needed to receive Hepatitis B Vaccination.

This study revealed that 75% of the study respondents were willing to recommend Hepatitis B Vaccination to friends while 25% of them were not willing to recommend it. This could probably be because the respondents in the study had faith and trust in the vaccines provided by the Ministry of Health. The study results slightly agree with the results from

the study that was conducted by Abiola (2014), which reflected that 96.4% of the study respondents were willing to recommend it to their friends who have not had it.

This study revealed that the majority (78%) of the study respondents felt that Hepatitis B Vaccination should be made compulsory for everyone while 22% of them felt the opposite. This could probably be because many of the respondents had faith in the vaccines provided by the Ministry of Health to the respondents of this study and a few had fallen victim to Hepatitis B virus complications like liver cancer or lost someone because of it. This is in slight agreement with the results from the study that was done by Henri (2016), which showed that 93% of the respondents felt that Hepatitis B Vaccination should be made compulsory.

This study revealed that 50% of the study respondents perceived themselves as to be at risk of Hepatitis B Virus if not vaccinated while the other 50% didn't perceive themselves as at risk of Hepatitis B virus infection. This could probably be because of the inadequate health education about Hepatitis B Vaccination by the respondents of this study.

This study established that 85% of the study participants were willing to be screened for Hepatitis B virus while only 15% of respondents never wanted to be screened for Hepatitis B Virus. This could probably be because the screening was for free and the respondents of this study could access it at any time.

Practices towards Hepatitis B Virus Vaccination among Health Workers

This study revealed that 62% of the study respondents had received Hepatitis B Vaccination, 33% of the respondents were not vaccinated and 5% didn't know whether they were vaccinated. This could probably be due to low sensitization about Hepatitis B Vaccination. This is in disagreement with the results from the study that was done by Sazia (2016), which showed that 70.7% didn't take Hepatitis B Vaccination.

This study revealed that the majority (72%) of the study respondents had not screened for Hepatitis B virus while only 28% of them had screened for Hepatitis B virus. This could probably be because of fear that screening is charged. This is in disagreement with the results from the study done by Abdnur (2016), which showed that 23 (9.3%) screened for Hepatitis B virus.

The study showed that 26% of the respondents had acquired the recommended 3 doses for Hepatitis B Vaccination, 55%

had taken the first shot and 19% had taken the second dose. This could probably be because of a loss of follow-up for the second dose and third dose. This slightly disagrees with the results from the study that was done by Abdnur (2016) which showed that of the 4.9% of respondents who had taken vaccination only 2% of the vaccinated respondents had completed the recommended 3 doses.

This study revealed that a minority (1%) of the study respondents had checked their immune status after Hepatitis B Vaccination while 99% of the respondents didn't bother checking their immune status. This is probably because of the absence of follow-up for the third dose where information about checking immune status is given. This agrees with the results from a study that was done by Abebaw et al (2017), which showed that 1.5% of the respondents had checked their immune status after vaccination.

Conclusion

This study specifically sought to determine the level of knowledge, attitude, and practices towards Hepatitis B Vaccination. The study established that the vaccination coverage among health workers was not optimal, with a significant proportion remaining unvaccinated. This gap in practice may be attributed to various factors, including the perceived risks of vaccination and potential side effects, as well as logistical challenges in accessing vaccination services within the healthcare facility. Therefore, these findings clearly show the risk of Hepatitis B infection of the respondents in the Wakiso district due to poor practice and an average knowledge of Hepatitis B Vaccination.

Recommendation

Based on the study findings, the following recommendations can be made to improve the knowledge, attitudes, and practices of health workers about hepatitis B vaccination at Kasangati Health Center IV in Wakiso District:

Ongoing Training and Education: Health workers should receive regular and comprehensive training on hepatitis B, its transmission, prevention, and the safety and efficacy of the vaccine. These educational programs should be tailored to address specific knowledge gaps identified in the study.

Addressing safety concerns: effort should be made to address health workers' concern about vaccine safety and side effects. This can be achieved by providing accurate information on the safety profile of the hepatitis B vaccine

and by creating a supportive environment for reporting and managing any adverse events.

Promote a Culture of Vaccination: Healthcare leaders and supervisors should actively promote a culture of vaccination within the healthcare setting. Encouraging health workers to be vaccinated and leading by example can positively influence their attitudes and practices.

Community Education: Health workers can play a crucial role in educating the community about the importance of hepatitis B vaccination. It is essential that they are well-informed and can effectively communicate the benefits of vaccination to the public.

Further Research: Additional research can be conducted to explore in more depth the reasons behind health workers' concerns and hesitancy regarding hepatitis B vaccination. This can help tailor interventions more specifically to address these concerns.

List of abbreviation and acronyms

CDC:	Centre of Disease Control
HBV:	Hepatitis B Vaccine
HBVc:	Hepatitis B Vaccination Coverage
HBsAg :	Hepatitis B Surface Antigen
KAP:	Knowledge Attitude and Practice
MOH:	Ministry of Health
OPD:	Out Patient Department
UAHEB:	Uganda Allied Examination Board
WHO:	World Health Organization

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PUBLISHER DETAILS:

Publishing Journal: Student's Journal of Health Research Africa.

Email: studentsjournal2020@gmail.com or admin@sjhresearchafrica.org



(ISSN: 2709-9997)

Publisher: SJC Publisher Company Ltd

Category: Non-Government & Non-profit Organisation

Contact: +256775434261(WhatsApp)

Email: admin@sjpublisher.org

Website: <https://sjpublisher.org>

Location: Wisdom Centre Annex, P.O. BOX. 113407 Wakiso, Uganda, East Africa.