

Awareness of Hepatitis B among Ombada Community Population in 2017, Sudan, Khartoum

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Abstract

Background: Hepatitis B is an inflammatory disease of the liver. In severe cases, it may lead to permanent liver damage including liver cirrhosis or hepatocellular carcinoma and may ultimately lead to death. A rising in awareness of population about it lead to decrease chance of attributing these disease.

Objectives: The aim of this study was to assess the knowledge and attitude toward hepatitis B and how this is related to demographic characteristics.

Methodology: Descriptive cross-sectional study, community based survey conducted among 288 participants from ombada through structure questionnaire, comprised of Socio-demographic data, knowledge and attitudes.

Result: Of total 288 participants 186 (64.6%) are female and main age group are 21.5 years (32.3%), Regarding literacy 143 (49.7%) are at level of university, 86 (29.9%) are employee and 158 (54.9%) are married. Ninety-one percent of the study group had heard of hepatitis B and the majority of them (68.4%) were aware that Hepatitis B is cause by virus and 62.5% of them think that HBV infection is treatable.

Conclusion: The majority of responders showed some knowledge regarding HBV transmission. However, there are still misconceptions regarding the attitudes, which reflect a false perception of the disease among population. This calls for well-structured health education programs stressing on such misconceptions.

Keywords: *Hepatitis B; Knowledge; Attitude*

Introduction

Hepatitis B viral (HBV) infection is inflammatory disease of liver which can progress to cirrhosis and in last stage to liver cancer (hepatocellular carcinoma) [1], remain a major global health problem affecting all countries, Regarding current estimates, globally, approximately two billion people are infected with HBV [2].

It has many types: hepatitis A, B, C, D and E, hepatitis A and E which are associated with acute form of illness. Hepatitis B and C which can progress to chronic form, then hepatitis D infection which always occur with hepatitis B and hepatitis B is most come in Sudan.

The illness is serious and very infectious which affect life of people example of these many surgeons loss their jobs due to their infection.

After the virus enter body can become acute (resolve in less than 6 month) or become chronic (lifelong infection), in chronic can be symptomatic or asymptomatic, later one is dangerous because carrier (asymptomatic) spread the disease without knowing that.

The injury is not direct by virus, virus affect cells that stimulate immune system and causes destruction to infected cell by CD8 cytotoxic T cell (due to immune reaction) [2].

Problem Statement

The viral hepatitis B is dangerous disease and most of community Population had poor knowledge about the disease.

Justification and rational

I had did these research to know knowledge of population about these illness and to convey information of this research to health sectors to raise knowledge and attitude of Sudanese community, and health education to insert sessions about hepatitis b and major illness in school curriculums.

Research questions

These research ask questions that its answers determent what intervention must be done and degree of awareness about these illness.

Materials and Methods

Study design

Cross section study-community based.

Study areas

Ombada found in western Omdurman, it's largest municipal area in Khartoum state, where estimated at around 20.695 square kilometers, this widening geographical space make it one of the most localities densely populated, it's population now is more than two million people.

Study populations

Adults who are above 18 who agree to include in the study, not in medical field.

Sampling

Probability sampling by convenient sampling and size by equation of unknown population;

$n = z^2 p (1-p) / d^2$; n = sample size; z = standard deviation = 1,96; p = prevalence = .75; d = error = .05;

$n = 1.96^2 * .75 (1-.75) / .05^2 = 288.12$

Study variable

I had study the percentage of people who aware of hepatitis B (depend on education of responders).

Plane for data collection

Collected by structural questionnaire with close ended Question offer design will be filling by responder.

Plane for data analysis

I had used SPSSv20 program to analyze my data, relevant statistical test will be use, tables and graphs will be use to present data.

Ethical issues

Verbal consent from any participant in the study and any information will be confidential and consent will be taken from community medicine department in university of Khartoum faculty of medicine.

Research Results

Personal data	Frequency	Percentage
Age		
18 - 25	93	32.3
26 - 36	86	29.9
37 - 47	56	19.4
48 - 58	41	14.2
Above 58	12	4.2
Gender		
Male	102	35.4
Female	186	64.6
Educational level		
Illiterate	7	2.4
Khalwa	6	2.1
Primary	24	8.3
Secondary	75	26
University	143	49.7
Occupation		
Housewife/unemployed	77	26.7
Worker	32	11.1
Employee	86	29.9
Student	79	27.4
Other	14	4.9
Social status		
Married	158	54.9
Unmarried	115	39.9
Divorced	11	3.8
Widow	4	1.4
Married	158	54.9

Table 1: Personal data of participant of ombada population about hepatitis B in 2017 (n = 288).

Most participant are female, main age group are 21.5 years, Regarding literacy are at level of university, are employee and married.

	Frequency	Percentage
Yes	264	91.7
No	24	8.3

Table 2: Illustrate hearing about hepatitis B of ombada population in 2017.

The responder rate is 91.7%.

Sources	Frequency	Percentage
Your relative/college	60	21
School/university	27	9.4
Social media	151	52.4
Other	27	9.4
Causes		
Bacterial	14	4.9
Virus	197	68.4
Fungi	5	1.7
Parasites	6	2.1
Don't know	43	14.9

Table 3: Shows source of information and causes about hepatitis B in ombada in 2017.

Knowledge						
	Yes		No		Don't know	
	F	P	F	P	F	P
Symptoms						
Headache	78	27.1	22	7.6	165	57.3
Nausea and vomiting	113	39.2	20	6.9	132	45.8
Yellowish of skin and sclera	174	60.4	9	3.1	82	28.5
Discolored urine	147	51.0	10	3.5	108	37.5
Tired and fatigue	135	46.9	8	2.8	122	42.4
Pain in abdomen	112	38.9	16	5.6	137	47.6
Symptoms appear directly after infection	46	16	122	42.4	97	33.7
Symptoms appear in any patient	56	19.4	115	39.9	94	32.6
Transmission						
Air	49	19.4	160	55.6	56	17.0
Hand-Shaking	37	12.8	47	16.3	181	62.3
Eating with patient	86	29.9	30	10.4	149	51.7
Shivering tools or tattooing	123	42.7	22	7.6	120	41.7
Sexual intercourse	118	41	27	9.4	120	41.7
Mother to her fetus	129	44.8	17	5.9	119	41.3
Blood and organ transmission	171	59.4	11	3.8	83	28.8
Surgical instruments or needles	137	47.6	17	5.9	111	38.5
Mosquito and insect	30	10.4	50	17.4	185	64.2
Disease transmit from a symptomatic patient	123	42.7	49	17	93	32.3
Fate						
Patient can get rid of it	122	38.9	55	19.1	98	34
Lead to liver cancer	142	49.3	28	9.7	95	33

Table 4: Knowledge of hepatitis B symptoms, transmission and fate among ombada population in 2017.

Attitudes	Yes		No		Don't know	
	F	P	F	P	F	P
Has vaccine	192	66.7	12	4.2	61	21.2
Had definitive treatment	180	62.5	33	11.5	52	18.1
Avoid handshaking	55	19.1	183	63.5	27	9.4
Avoid dealing with them	63	21.9	169	58.7	33	11.5
Avoid living with them	80	27.8	147	51	38	13.5
Avoid using them tools	203	70.5	38	13.5	24	8.3
Affecting life of patients	215	74.7	12	4.2	38	13.2
Occupations restriction	153	53.1	23	8	89	30.9

Table 5: Attitude toward hepatitis B patients among ombada population in 2017.

	F	P
Scoring of knowledge		
1 (poor)	134	46.5
2 (average)	132	45.8
3 (good)	22	7.6
Scoring of attitude		
1 (bad)	63	21.9
2 (acceptable)	159	55.2
3 (good)	66	22.9

Table 6: Illustrate scoring of awareness of ombada population in 2017.

Scoring of knowledge is out of 21; <=7 is poor, >=8 to <=14 average and >=15 is good.

Scoring of attitude is out of 8; <=3 is bad, >=4 to <=6 average and >=7 is good.

Age	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	70.487 ^a	72	.528
Likelihood Ratio	73.760	72	.420
Linear-by-Linear Association	.086	1	.770
N of Valid Cases	288		
a. 75 cells (78.9%) have expected count less than 5. The minimum expected count is .04.			
Gender	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	11.678 ^a	18	.863
Likelihood Ratio	12.997	18	.792
Linear-by-Linear Association	1.207	1	.272
N of Valid Cases	288		
a. 14 cells (36.8%) have expected count less than 5. The minimum expected count is .35.			
Educational level	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	95.534 ^a	90	.325
Likelihood Ratio	98.912	90	.244
Linear-by-Linear Association	.789	1	.375
Occupation	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	95.420 ^a	72	.034
Likelihood Ratio	86.066	72	.123
Linear-by-Linear Association	.114	1	.735
N of Valid Cases	288		
a. 71 cells (74.7%) have expected count less than 5. The minimum expected count is .05.			
Social status	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	61.508 ^a	72	.806
Likelihood Ratio	58.642	72	.872
Linear-by-Linear Association	6.107	1	.013
N of Valid Cases	288		
a. 72 cells (75.8%) have expected count less than 5. The minimum expected count is .00.			

Table 7: Illustrates Correlation between knowledge and demographic data.

Discussion

This is a community based Descriptive cross-sectional study; this study design is considered a suitable design for this type of studies as it is the design of choice in many previous studies, conducted to assess the knowledge, attitude in ombada population and correlation of knowledge to demographic data. The population of the study was 288 participants. Most of them 143 (49.7%) were at level of university education, most of them 186 (64.6%) were female, main age group are 21.5 years, 86 (29.9%) employee and 158 (54.9%) married.

264 (91.7%) of participants of my study were heard about hepatitis B compare to 74%, 91% in rural and urban of West of Ghana. The main sources of information related to HB were social media which is common source of information in the most of papers. About 197 (68.4%) were know the cause is virus while in rural Ghana and urban Ghana were 67% and 57% respectively, and 43 (14.9%) didn't know the causes.

Response on knowledge was labeled as 'yes' or 'no' or 'don't know'. Knowledge was scored by giving 1 for a correct answer and 0 for a wrong answer. The scale measured knowledge from a maximum of 21 to a minimum of 0. Scores ≤ 7 were taken as poor, $\geq 8 \leq 14$ as average and > 14 as good knowledge of HBV.

Knowledge was assessed by asking questions about causes, symptoms, transmission modes and treatment of HBV. Knowledge about symptoms like headache, yellowish color of sclera and skin, nausea and vomiting and some of patient remain a symptomatic were 78 (27.1%), 174 (60.4%), 113 (39.2%) and 115 (39.9%) while in Quetta of Pakistan 25.1%, 37.9%, 26.9% and 24.4% respectively.

Other symptoms are tired and fatigue, discolored urine and pain in abdomen which about 135 (46.9%), 147 (51%) and 112 (38.9%) respectively. Overall 122 (42.4%) had known symptoms not appear directly after infection.

There is an overall agreement that shaving tools or tattooing 123 (42.7%) could transmitted infection while in Poland, Vietnamese American, rural and urban of Ghana were 86.6%, 63%, 34% and 25%. and surgical instruments or needles was 137 (47.6%) while in other like rural and urban Ghana, Oman, India, Cambodian Americans, Poland, Quetta Pakistan and Bantam of Ghana were 56%, 41%, 53.2%, 83.3%, 92%, 86.1%, 39% and 80.57% respectively.

Transmitted from mother to her fetus during pregnancy in my study was 129 (44.8%) and in other studies in Vietnamese American, rural, urban of Ghana, Turkish-Dutch, Omani, Cambodian Americans, Poland and Quetta, Pakistan were 83%, 67%, 56%, 54%, 57.5%, 69%, 50% and 25.4% respectively and sexual intercourse was 118 (41%) but in Vietnamese American, Turkish-Dutch, Cambodian Americans, Poland, Quetta Pakistan and Bantam of Ghana were 69%, 53%, 72%, 54.1%, 21.4% and 82.28% respectively.

Regarding shaking-hand 37 (12.8%), eating with patient 86 (29.9%) Air (cough) 49 (19.4%) not agreed these could transmitted hepatitis B while in Vietnamese American were 75%, 36%, 31% in Cambodian Americans were 76%, 33% and 29% respectively.

Mosquito or insect 30 (10.4%) agreed that could transmit the infection which is not true but in the majority of participants 123 (42.7%) were know that patients with HBV infection could transmit infection if not had symptoms and look healthy While in Vietnamese American was (78%) and in Turkish-Dutch was 54%.

122 (38.9%) of responder told that patients who affected can get rid of disease and 142 (49.3%) agree that hepatitis B can lead to liver cancer. While in Turkish-Dutch 56% and 25% respectively.

Knowledge poor or average or good were 46.5%, 45.8% and 7.6% respectively. Mean was 8.06.

Attitudes of participant toward patient with hepatitis B which were thought of had vaccine, definitive treatment, affect life of patient and restrict chance of occupation for patient as 192 (66.7%), 180 (62.5%), 215 (74.7%) and 153 (53.1%) respectively while in rural and urban Ghana were 58% and 61% according to vaccine, affect life of patient were 40% and 47% and in Oman 50.7%, 46.4% according to

vaccine and affected life. In Bantam-Ghana though of vaccine and definitive treatment were 61.5% and 47.7%. Most of responders had positive attitude to patients in hand shaking 183 (63.5%), dealing with them 169 (58.7%) and living with them 147 (51%) and about 203 (70.5%) avoid using tools of patients.

In rural and urban of Ghenia about 40% - 33%, 34% - 59%, 12% - 16% and 29% - 30% according to attitude of dealing, living, hand shaking and using tools of patients. In Oman 35.4% felt uncomfortable when hand shaking patients, 47.9% didn't preferred to live with patients and 52.5% had no problem to deal with them.

Attitudes bad, acceptable and good were 21.9%, 55.2 and 22.9% respectively. Mean was 3.97.

I didn't found relation between knowledge and demographic data of participants.

Conclusion

The study concluded the knowledge about hepatitis is good, and the participants' attitude and practice towards diarrhea was found to be positive.

Recommendations

Depending on the results of this study we recommend the following:

- Improvement of awareness of hepatitis B in Sudan.
- Improve the educational level of population.
- Due to the importance of this subject in further studies with wider scope should be considered.
- Insertion of hepatitis b information in schools curriculums.
- Conduct vaccination campaigns.
- Conduct health education campaigns.

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