

ORIGINAL ARTICLE

Knowledge and Attitude of Adolescents About Hepatitis Virus Type B in Baghdad City/Al Resafa

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ABSTRACT

Introduction: Hepatitis B is a viral infection that affects the human liver and may cause both chronic and acute illnesses, although it does so without causing symptoms at first. HBV is a virus belonging to the Hepadnaviridae family with odd features that resemble retroviruses. It is a species of the genus Orthohepadnavirus and a virus belonging to the Hepadnaviridae family with extraordinary characteristics that resemble retroviruses. According to the World Health Organization, hepatitis B infected 296 million individuals in 2019 and killed 820,000 people, the majority of whom died of cirrhosis and hepatocellular carcinoma (primary liver cancer). **Objective:** The research was conducted with the aim of assessing adolescents' knowledge about hepatitis B virus in Baghdad. **Methods:** AA project with a cross-sectional approach performed in Baghdad city (Resafa- side), In several secondary and middle school (Al- kanat, Al- Mutamizat , Al-Mustansyria ,Al-Umara ,Al-Markazia and Al-Motamaizin secondary schools) (Non probability study), the size of sample was 280. The studies begin from first of May 2018 to first of March 2019. Data was obtained by questionnaire fill out a form by middle and secondary school pupils at age 10-19 years to collect socio- demo-graphic information. **Results:** The results showed that 67.1% were males and 85% of them were more than 15 years. 65.7% were at 4th class and 56.7% of them were had a school secondary maternal educational background of mother at secondary level. 8.5% of the respondents had family history of hepatitis, descriptive statistics of general knowledge about HBV, mode of transmission, symptoms and complication were poor also the attitude of respondents regarding the disease was poor. **Conclusion:** These unsatisfactory result highlight the importance of ongoing HBV education in order to enhance adolescent awareness and attitudes about the virus .

Keywords: Knowledge, Rubella disease Paramedical Students

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INTRODUCTION

Hepatitis B virus (HBV) disease which infects the liver, it is a worldwide public health problem. It ranks tenth for the causes of death in the world (1). World Health Organization statistics (2015) show that there are 240 million people in the world infected with (HBV) . An approximate 780000 people die each year as a result of viral Hepatitis B complications, according to this large statistic. Furthermore, since viral Hepatitis B will last for several years without causing symptoms, the majority of infected individuals are unaware of their infection .(2) Hepatitis B is a liver infection that causes a chronic

inflammation as a result of HBV. During the acute phase of the disease we note that the majority of patients do not show any symptoms. The symptoms may stay several weeks in who are symptomatic. There are five types of viral hepatitis A, B, C, D and E (3).

Hepatitis B is a public health issue that causes chronic illness and puts people at risk of death from investigation liver cancer and cirrhosis. (2). Hepatitis B commonly occurred in the Middle East countries compared to United States and Europe. The percentage of infection ranges 0.6% in Iraq - 8% in Sudan. Hepatitis B various greatly from place to place according to mode of trans mission (3). HBV can be spread through multiple mechanisms, involving contact with blood, blood products, hemodialysis, sexual intercourse and contaminated needles (4). More than 60,000 cases of HBV annually infected by HCWs due to contaminated

sharp injuries (5).

Dentists, physicians, nurses, and hospital medical staff are high risk infection due to contact with body fluids and blood (6).HBV is characterizes by long incubation period and symptom with a different outcomes. In (5 – 10 %) HBV cases are difficult to resolve (2).HBV infection cause alterations in the liver over time, such as untreated active hepatitis and hepatocellular carcinoma . Hepatitis B and primary liver cancer seem to have a similar relationship (7) . With advancing age, we notice that the risk of developing chronic hepatitis decreases. About (90% (of infected between birth until 6 months of age,)20–60%(between 6 months to 5 years,)1,5- 25% (children will develop cirrhosis or primary liver cancer. The recent global of disease estimates indicate a high mortality and morbidity attributable to chronic hepatitis B, however it has declined over the past decades (8). Approximately 70% of patients with acute HBV infection are asymptomatic, Hepatitis failure occurs in less than 1% of patients. Abdominal pain, nausea, fatigue ,fever, and knee pain with or without jaundice are some of the symptoms that appear when it is symptomatic . The average incubation period for HBV is 90 days (range 60-150 days) from the time of jaundice exposure and 60 days (range 40-90 days) from the time of elevated liver enzymes exposure .The majority of people with chronic HBV are unable to work (9).

The objectives of the study in Baghdad, evaluate teenage understanding and attitudes toward the hepatitis B virus .

MATERIALS AND METHODS

An analysis was carried out to determine the level of awareness and behavior of the participants . 280 adolescent at age 10-19 years about HBV in Baghdad city from 1st May 2018 to 1st of March 2019. Information of this study was obtained by a questionnaire fill out a form by middle and secondary school pupils(Al-kanat, Al-Mutamizat, Al- Mustansyria, Al-Umara, Al-Markazia and Al- Motamizin secondary school) at age 10-19 years to collect five sections. The first socio-demographic and occupational characteristics, the second use for collects participants knowledge about general information of the disease, third and fourth was relevant to mode of transmission HBV from to a patient, symptoms and complication of disease, the fifth one related to attitudes of respondents toward the disease, each question had three multiple choices which scored according to arbitrary systems ,by given the correct answer one point (fair), the very correct answer two point (good) ,and the wrong answer no point (poor), and by summation the total of each results which indicate the level of awareness for each parts of the subject of the study . Likert scale questions were used to assess their knowledge and attitudes . The majority of them were closed-ended questions, which were chosen because the answer are descriptive, to the point ,and

simple to analyze, especially given the large number of respondents.

Statistical analysis.

- Descriptive statistics:
- Tables (Frequencies, Percentages).
- Mean of score (MS) , Relative sufficiency (RS), and Standard Deviation. It is calculated by the formula below:-

$$RS \left(\frac{\text{Mean of score}}{\text{No. of Scoring scales}} \right) \times 100\%$$

- Inferential statistics:
- Used to accept or reject the statistical hypotheses, included the following:-

1- Chi-Square // used for testing the distribution of Observed frequencies and there is none restricted of an expected outcomes.

$$\chi^2 = \frac{\sum_{(all\ i)} (O_i - E_i)^2}{E_i}$$

O_i // Observed frequency of group i .
 [E] _i // expected frequency.

2- Binomial test // used for testing the differences of distribution of Observed frequencies of the categories (ordinal or nominal) scale and 50% of an expected outcomes will be none restricted.

The abbreviations comparison significant used the followings:

- 1- Significant at P<0.05 , (S).
- 2- No n significant at P>0.05 (NS).
- 3- Highly significant at P<0.01 (HS). (10) .

RESULTS

Table I revealed the socio-demographic characteristic of the respondents showing that 67.1% were males and 85% of them were more than 15 years. 65.7% were at 4th class and the educational background of their mother at primary level. 8.5% of the sample study has family history of hepatitis infection.

Table I: The Socio-demographic characteristic of sample study's.

Characters	No.(%)	Total	Pv
Gender	Male	188(67.1)	280
	Female	100(35.7)	
1 Age of Respondents	Less than 15 years	42 (15)	280 (100)
	More than 15 years	238 (85)	
2 Education	2 nd class	40 (14.3)	280 (100)
	3 rd class	56 (20)	
	4 th class	184 (65.7)	

Table I: The Socio-demographic characteristic of sample study's. (CONT.)

Characters	No.(%)	Total	Pv
3 Educational	Illiterate 28 (10)	280 (100)	0.02 ^x
	Primary 93 (33.3)		
Background of Mother	Secondary 159 (56.7)		
	Higher education 33 (18.3)		
4 Family history of hepatitis	Positive 24 24 (8.5)	280 (100)	0.04 ^x
	Negative 256		

(No. = Number, % = percent)

Significant at P<0.05.

Non-Significant at P>0.05.

Highly Significant at P<0.01

Table II shows descriptive statistics of general knowledge about HBV with comparison significance and assessments for relative sufficiency's coefficients according to scoring scale's cutoff point. The results show illustrated failure assessment.

Table II: General information about HBV of respondents.

Information about HBV	No.	MS	DS	RS	Ass.
Ever heard about hepatitis B	280	0.75	0.42	77	Pass
It's a viral disease?	280	0.21	0.45	28	Failure
Its affected adolescents?	280	0.19	0.47	26	Failure
It can be acquired from patients to health one	280	0.23	0.4	31	Failure
Its serious disease?	280	0.64	0.34	67	Pass
Knowledge about vaccine	280	0.22	0.43	25	Failure
Doses of hepatitis vaccine	280	0.3	0.4	23	Failure
Visiting to dental doctor increase chance for hepatitis	280	0.72	0.41	72	Pass

(Cutoff Point: RS % =50.0)

Table III revealed failure of assessment according to scaling scales regarding mode of transmission of HBV.

Table IV shows descriptive statistics of knowledge about symptoms and complications of Hepatitis B comparison significant and assessments for relative sufficiency's coefficients according to scoring scale's cutoff point. The results illustrated failure assessment.

Table III: Knowledge about mode of transmission of the virus.

Information items	No.	MS	DS	RS	Ass.
Transmitted by infected needle	280	0.71	0.42	76	Pass
Transmitted by tooth brush	280	0.23	0.45	24	Failure
Transmitted by infected blood	280	0.25	0.41	20	Failure
Transmitted through the air	280	0.21	0.42	21	Failure
Transmitted through saliva	280	0.67	0.4	75	Pass
Transmitted by urine	280	0.1	0.3	22	Failure
Transmitted by endoscopy and colonoscopy	280	0.31	0.46	23	Failure
Transmitted by tattooing	280	0.23	0.42	22	Failure
Transmitted by placenta from mother to baby	280	0.22	0.44	23	Failure
Transmitted by sexual contact	280	0.77	0.4	78	Pass

(Cutoff Point :RS % =50.0)

Table IV: knowledge about hepatitis B virus disease (symptoms and complications).

Information items	No.	MS	DS	RS	Ass.
Symptoms appear soon after entrance of the HBV	280	0.22	0.42	20	Failure
No any symptoms with infection	280	0.25	0.4	23	Failure
Jaundice ,dark urine and vomiting are symptoms of diseases	280	0.72	0.45	78	Pass
Hepatitis lead to cirrhosis	280	0.24	0.44	24	Failure
Increase risk of liver cancer	280	0.26	0.41	23	Failure
Liver failure is one of the complication	280	0.31	0.42	25	Failure
Patients may die from the disease	280	0.78	0.4	77	Pass

(Cutoff Point: RS % =62.0)

Table V shows descriptive statistics of attitude of the respondents about hepatitis B virus with comparison significant and assessments for relative sufficiency's coefficients according to scoring scale's cutoff point. The result shows that more than a half of the studied items were recorded failure.

Table V: Attitude of the respondents about hepatitis B disease.

Information items	No.	MS	DS	RS	Ass.
Consider hepatitis B disease as major health problem	280	0.72	0.4	76	Pass
Its safe to visit infected person	280	0.22	0.43	23	Failure
Its safe to kiss infected person	280	0.75	0.45	78	Pass
Believe to go for screening	280	0.24	0.42	24	Failure
Think to take vaccine against the virus	280	0.74	0.4	73	Pass
Number of doses of vaccine	280	0.12	0.3	23	Failure

CONTINUE

Table V: Attitude of the respondents about hepatitis B disease.

Information items	No.	MS	DS	RS	Ass.
Ask for blood screening during transfusion	280	0.25	0.42	23	Pass
Its safe to use cup of infected person	280	0.24	0.44	26	Failure
Life style put you at risk of HBV infection	280	0.23	0.42	24	Failure
You must protected from hepatitis B infection	280	0.72	0.41	67	Pass
Need more information about hepatitis B?	280	0.24	0.43	26	Failure

(Cutoff Point: RS % =61.64)

DISCUSSION

The results of the research revealed that there are major variations in the grouping of demographical characteristics factors examined at $P < 0.01$, this result is similar to the results of the study done by Mudawi HM.2008 in Sudan when he studies the knowledge of People about hepatitis B (11). This may be due to the similarity of social condition between two country.

The study revealed that there are poor knowledge of adolescents about hepatitis B viral regarding general information about the disease, this results disagree with the results of nader et.al 2013 when he find good information of adolescents about hepatitis B virus (12). Other results of this study is poor assessment about the root of transmission of the virus, this results disagree with the results of a study done by Mohmoud Abo Salem et.al 2015 in Egypt, he find good information regarding transmission of HBV(13).

Finding of this study indicate that adolescents in Baghdad city had poor knowledge regarding symptoms and complication of the HBV, The results of the study are similar to what Tairo et.al 2017 found when you search the same subject in china (14), this may be due to the ignorance of adolescents about the dangers of subject. This study showed that more than half of the studied items were recorded failed about the attitude of adolescents about HBV, this results disagree with the finding of the study done by Minhal et.al 2010 in India he found the majority of adolescents had good attitude regarding HBV, this may be due to the presents of good educational program in this area (15). Other study carried out among Turkish community by VanDer et.al 2010 revealed good attitude of adolescents this may be due to better access related information than other (16).

CONCLUSION

The results showed 67.1% were male and 85% of them were more than 15 years. 65.7% were at 4th class and 56.7% of them were had a school secondary maternal educational background of mother at secondary level.

8.5% of the respondents had family history of hepatitis, descriptive statistics of general knowledge about HBV, mode of transmission, symptoms and complication were poor also the attitude of respondents regarding the disease was poor.

RECOMMENDATION

These discouraging results highlight the need for ongoing HBV education in order to strengthen teenage awareness and attitudes . Need for more health education programs to identify the hepatitis B virus in adolescents and focusing on immunization program to decrease the infection with this virus, and further research is necessary aimed to increased knowledge about the disease in adolescents. Acknowledgements.

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REFERENCES

- Othman, S.M., Saleh, A.M. & Shabila, N.P. Knowledge about Hepatitis B infection among medical students in Erbil city Iraq. *European Scientific Journal* . 2013 ;9.(10) : 22-28 .
- World Health Organization. WHO issues its first hepatitis B treatment guidelines. Retrieved Friday, 2015; August 28,.
- World Health Organization. Hepatitis B. (Factsheet no. 204) [internet]. Geneva, Switzerland. 2013 .
- Saeed Awadh AL Asmaril, Shelian Juweed ALnomsil , Faisal Dahial Dahashl, Abdul Wahab Aliasseril. Knowledge , Attitude and practice towards Hepatitis B Virus among Medical Students in Tabuk City, Saudi Arabia. *The Egyptian journal of Hospital Medicine* .2018; 72 (1) :3776- 3780.
- Abdnur, A.W., Kassahum, H. Assessment of knowledge, Attitudes and practices toward prevention of hepatitis B virus infection among students of medicine and health sciences in Northwest Ethiopia *BMC Research Notes* . Aug 2016; 9:410.
- Sazia, H., Sarder ,M.H., Syed,T.H. Knowledge, Attitude and practice on hepatitis B infection among infected patients in a Homoeopathy

- Medical Center in Dhaka City, Bangladesh, South East Asia journal of public health, 2016 ; 6(1) : 27-31.
- 7- Solaiman F, Ahmed S, Akhter SM, Saha AK, Uddin H, Azad MAK, et al. Preventive Practice on Hepatitis B Infection among Dentists in Selected Hospitals at Dhaka City, Bangladesh. City Dent Coll. Journal 2014; 10(1):13-17.
 - 8- GBD. Mortality and Causes of Death Collaborators. Global, regional, and national age-sex specific all-cause and cause-specific mortality for 240 causes of death, 1990–2013: a systematic analysis for the Global Burden of Disease Study. Lancet 2015; 385: 71–117.
 - 9- McMahon BJ. The natural history of chronic hepatitis B virus infection. Hematology: 2009 ;49(5 Supple):S45-55.
 - 10- Graham, A. Lancook .A dictionary of statistics, Oxford University press, 2014.
 - 11- Mudawi HM. . Epidemiology of viral hepatitis in Sudan. Clin. Exp Gastroenterology. 2008 ;1: 9–13.
 - 12- Nader Roushan, Mohsen Nasiri Toosi,. Hepatitis B Knowledge among Iranian Adolescents: Iran Red Crescent Med J. 2013 ;15(12): e11558.
 - 13- Mahmoud Abo Salem,Howaida Al Shazaly, Aml Salama, Asherf Abdo Ahmed Elseidy. Knowledge and attitudes regarding hepatitis viruses among secondary-school students in Menoufia governorate .2015 ; 28 Issue : 2 : 415-419.
 - 14- Tairo, B. B , Francisco, B. M., Oliveira , M. V., da Rocha, S.S. Vulnerabilities for hepatitis B: Knowledge, Attitudes and practices of school adolescents, journal of nursing, Brazil,2017 ; ISSN: 1981-8963
 - 15- Ali, M.T., Ameera K. Impact of information sources on the knowledge of adolescents about hepatitis B. J Pak Med Assoc. India,2010 ; 60(12):1072-1075 .
 - 16- Ytje, J., Helene, A., Onno, D., Richardus, J. Awareness, knowledge and self-reported test rates regarding Hepatitis B in Turkish-Dutch: a survey. BMC Public Health. 2020 ;10:512-518.