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**Prevalence of The Viral Hepatitis B Infection in Al-Jamhoori Teaching Hospital in Mosul- district - Iraq**

**ABSTRACT**

**Background:** Hepatitis B virus (HBV) is the most prevalent of the hepatitis viruses that cause chronic liver infections in humans, and it is a major public health concern worldwide. It is transmitted through blood, unprotected sex, shared or re-used needles, and from an infected mother to her newborn baby during pregnancy or delivery.

**Objective(s):** Examine the quality of life related to health among patients with chronic viral hepatitis B, as well as to define the relationship between the quality of life associated with health and the demographic characteristics of patients.

**Methodology:** A descriptive quantitative analysis was performed between January 2020 and December 2020 in Al- Jamhoori teaching hospital in the city of Mosul, anon likelihood (purpose sample) of (69) persons with chronic viral hepatitis B who were follow-up clients in Al- Jamhoori Teaching Hospital. Data were collected using a semi-constructed questionnaire consisting of three parts of the demographic data form, the elements of the medical information, and the major quality of life domains comprising six main domains: physical, psychological, freedom level, social, environmental and spiritual. A panel of experts in various specialties determined the validity of the content. Usage of the test-retest system in the pilot study determined the reliability of the instrument. Data is objectively described and evaluated using the procedures of descriptive and inferential statistical analysis.

**Results:** The study found that chronic viral hepatitis B occurs more frequently in individuals in urban-suburban areas were (87.18%) than in rural areas (12.82%). Chronic viral hepatitis B is more prevalent in males (81.54%) than in females (38.46%). chronic viral hepatitis B is more prevalent in married (21.85%) than in unmarried, chronic viral hepatitis B is more prevalent in housewife women were (33.33%) than another woman, chronic viral hepatitis B is more prevalent in low-level education (25.64%) than others. The incidence also increases with the increase in the number of hospital visits (89.74%). The low living situation also shows an increase in hepatitis B infection (64.10%).

**Conclusion:** The study concluded that chronic viral hepatitis B occurs more frequently in individuals in urban-suburban areas than in rural areas. Chronic viral hepatitis B is more prevalent in males than in females, chronic viral hepatitis B is more prevalent in married than in unmarried, chronic viral hepatitis B is more prevalent in housewife women than other women, chronic viral hepatitis B is more prevalent in low-level education than others. The incidence also increases with the increase in the number of hospital visits. The low living situation also shows an increase in hepatitis B infection.

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### **Introduction:**

Bloodborne infections such as the hepatitis B virus are considered to be significant yet preventable public health challenges in the developing world. HBV is the main cause of chronic liver illness, particularly cirrhosis and hepatocellular carcinoma <sup>(1)</sup>. Unsafe vaccines, sperm, physical intercourse, and dissemination to their babies from infected mothers provide transmission channels. The strongest public health approach for disease prevention and control is to use routine population-based monitoring data to track the severity and spread of diseases; <sup>(2)</sup> to identify high-risk subgroups; <sup>(3)</sup> to guide national strategic strategies for prevention and control; <sup>(1)</sup> to review intervention activities. About 350 million individuals are sick with HBV globally. Among the persons at greatest risk are tourists (hepatitis is endemic in some countries), day care workers, and jail inmates and employees<sup>(4,5)</sup>.

### **Methodology:**

In order to attain the early specified targets, a descriptive quantitative design was carried out via the present research. The research cycle was carried out between January 2020 and December 2020. The research was performed in Al-Jamhoori teaching hospital in Mosul.

The research group included a purposeful "non-probability" sample of (69) untreated viral hepatitis B patients attending the hospital and outpatients clinically for surgical follow-up.

**Results:**

**Table 1.** Participants' distribution by their socio-demographic characteristics

Variables		Frequency (N= 100)	%	Cumulative percent
Gender	male	43	62.31	43
	female	26	37.68	69
Age groups	14 - 24	12	17.39	12
	25 - 35	11	15.94	23
	36 - 46	9	13.04	32
	47 - 57	14	20.28	46
	58 - 68	15	21.73	61
	69 and above	8	11.59	69
	Statistics Mean ± SD	39.14 ± 12.11 (yrs.)		
Marital status	single	14	20.28	14
	married	48	69.56	62
	divorced	3	4.347	65
	widower	3	4.34	68
	separated	1	1.44	69
Residency	countryside	9	13.04	9
	urban	60	86.95	69
Occupation	employ	24	34.78	24
	unemployed	4	5.79	28
	student	3	4.34	31
	housewife	25	36.23	56
	workless	2	2.89	58
	wage earner	11	15.94	69

Level of education	illiterate	18	26.08	18
	read and write	14	20.28	32
	primary	11	15.94	43
	secondary	12	17.39	55
	institute or more	14	20.28	69
The number of hospital entering for follow-up	Once	5	7.24	5
	Twice	2	2.89	7
	Three or more	62	89.85	69
Socio-economic status	Low	45	65.21	45
	moderate	24	34.78	69

>: more than , < : less than , SD= standard Deviation

Table (1) indicates that the bulk of the research sample (62.31%) is male and the rest is female, as well as demonstrating that the overwhelming majority of the study sample is in the fifth age group segment and accounted for (21.73 % ). The majority of the sample are married and they accounted for (69.56 %) of the entire sample with respect to the marital status of the patient. This table indicates that the largest proportion of the survey population lived in an urban suburban

area and accounted for (86.95 %) of the total sample. In addition, housewives are the main groups in the research sample about their occupational status and they were accountable for (36.23 % ). The larger percentage of them can read and write and are responsible for (26.08 %) of the entire sample in proportion to the patient's level of education. In comparison, three or more hospitals are the main category of the research population with respect to the number of hospitals joining for follow-

up and they have accounted for (89.85 %). Finally, the findings indicate that the main category of the research population is below the low level of socio-economic status in the latter table and with respect to the social status of the patient (65.21 %).

### **Discussion:**

It was observed during the course of the present study that (62.31 percent) of the study sample are males and the remainder are females, which may be due to higher attendance of males at the teaching hospital in Gastroenterology and Hepatology. Trépo et al 2014 They report that there were (340) male and (37) female chronic viral hepatitis B (303) in the sample population<sup>(4)</sup>. Also, MacLachlan et al 2015 who report that the sample population consisted of (103) males and (45) females with chronic viral hepatitis B<sup>(6)</sup>.

The main age group of the study population was within (58-68) years of age and accounted for (21.73%), mean (39.14) years of age of patients (14->73), and standard deviation (12.11). Daud et al 2015 found The mean age was (46.1) years and SD was (46.1)

years old (11.7)<sup>(7)</sup>. The largest percentage of the research sample was married couples who formed a percentage (69.56 %). This finding coincides with Ashraf et al 2010 Those who have noticed that married people are more likely to get hepatitis B virus<sup>(8)</sup>.

The largest proportion of the research sample resides in Urban residences, and they accounted for (86.95 %) of the sample. This finding coincides with Wang et al 2015 and Xue et al 2017 who discovered that the greatest proportion of the survey is in a metropolitan area and that they comprise (61%) of their research sample. This finding may be attributed to urban health education, which is higher than rural health education, resulting in the early detection of viral hepatitis B<sup>(9,10)</sup>.

Salehi et al 2016, Fotos et al 2018 and Zhu et al 2016 classifying their research population as rural and urban in terms of residence. They find out that urban neighborhoods are home to the largest proportion of the survey sample and that they comprise (66.2 %) of their

research sample. With respect to the occupation status, housewives are the bulk of the survey sample and they accounted for (36.23 %) <sup>(11-13)</sup>. This outcome disagrees with Tozun et al 2015 and Harris et al 2016, who observed that most of the patients in the study were operating and accounted for (69%) of their study sample <sup>(14, 15)</sup>.

The majority of the research sample is read and written and accounted for (26.08 %) of the total sample with respect to the degree of schooling, this finding is in agreement with Pratha et al 2017 <sup>(16)</sup>, the findings suggest that the majority of the study sample is poor in literacy and also in agreement with Chan et al 2016 and Evon et al 2016, who suggests that the majority of the study patients are illiterate and who found the mode of transmission is primarily by (homosexual and narcotics abuse), and all of them are habits of low educational level and that explains, why the HBV is more prevalent in this population groups <sup>(17, 18)</sup>.

The incidence of hepatitis B virus among people who frequently visit hospitals was (89.85 %) of the study

sample. This result is in agreement with the findings of Midhin 2012 in his study <sup>(19)</sup>. The majority of the study samples (65.21 %) are within the low level with regard to socioeconomic status. This finding agrees with Xue et al 2017 and Midhin 2012 <sup>(10,19)</sup>, who discovered that the vast majority of their research has a very low socioeconomic status.

### **Conclusion:**

The study concluded that chronic viral hepatitis B occurs more frequently in individuals in urban-suburban areas than in rural areas. Chronic viral hepatitis B is more prevalent in males than in females, chronic viral hepatitis B is more prevalent in married than in unmarried, chronic viral hepatitis B is more prevalent in housewife women than other women, chronic viral hepatitis B is more prevalent in low-level education than others. The incidence also increases with the increase in the number of hospital visits. The low living situation also shows an increase in hepatitis B infection.

## Recommendations:

Based on the conclusion of the analysis, the report may indicate that:

1. In order to determine the quality of life of chronic viral hepatitis B patients, intensive systematic large population-based (national level) research should be carried out.
2. The Ministry of Health should use a health-oriented mass media approach to improve population understanding and understanding of the route of transmission and the risk factor of chronic viral hepatitis B.
3. Involving all public and non-governmental agencies in a drive to improve national wellbeing

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