

## **Assessment of Nurses' Knowledge toward Hepatitis Disease in The Hemodialysis Units and Prevalence of Hepatitis in Nurses**

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### **ABSTRACT**

**Objectives:** To assess nurses' knowledge toward hepatitis disease in hemodialysis units, To found the association between nurses' knowledge toward hepatitis disease in hemodialysis units and their demographic characteristics, To assess the prevalence of hepatitis in nurses.

**Methods:** A quantitative non experimental study was conducted in hemodialysis unit in AL-Husain Teaching Hospital in Al Nasiriya the study was carried out from (15th September 2020) to (9th June 2021), an on probability purposive sampling which consist of (75) of the nurse that working in hemodialysis unit in al Husain teaching hospital. The questionnaire composed from three parts: part one was included demographical question, the second contain medical information about viral hepatitis and strip ready testes result, and lastly the third part composed of general knowledge about viral hepatitis signs and symptoms, prevention and prevention. The instrument was presented to (16) expert from several universities to be valid. The data was analyzed using SPSS descriptive and inferential data analysis.

**Result:** of study was showed that the percentage of (88,89%) nurses had a poor knowledge about hepatitis and their prevalence among nurses working in hemodialysis unit in ALHusain teaching hospital. Moreover, the current study indicate that there is a significant relationships between overall assessment nurses knowledge and level of education of nurses working in hemodialysis unit in al Husain teaching hospital and in their training session about infection control at (p value = 0,05 ; f test = 3,6721) while (p value = 0,002 and f test = 3,21) for the educational level.

**Recommendation:** The result of study recommended: Encourage all nurses who works in hemodialysis unit to participate in educational program to raise their information regarding general information and the main principle regarding transmission with hepatitis patient. Arrange monthly meeting including case study lectures to discussion recently issue toward infection control in order to minimize transmission of infection.

**Keywords:** hepatitis, nurse, assessment, hemodialysis

### **Introduction**

Hepatitis means an inflammation of the liver, a toxic poisonous or harmful substance or a viral infection are the main causes (1).

Viral hepatitis may be acute or chronic infection that infected the liver and cause inflammation due to virus, in acute inflammation discrete signs and symptoms onset and resent infection, while chronic inflammation is a serious infection which leads to chronic infection with chronic complication (2).

Acute viral hepatitis, on the other hand, may progress to chronic hepatitis. HBV infection is considered chronic when HBsAg, hepatitis Be antigen (HBeAg), and high titers of hepatitis B viral RNA persist in the blood for more than 6 months. Hepatitis C infection is considered chronic when HCV RNA persists in the blood for more than 6 months. (3)

Viral hepatitis is a generalized global problem that affects the health of millions of people annually, causing death and disability. Millions of people live with viral hepatitis and their lives are at risk (4).

Hepatitis A, B, C, D, and E are the five forms of viral hepatitis that have been identified so far. In terms of mode of transmission (fecal-oral route), hepatitis A and E are similar, while hepatitis B, C, and D share several characteristics. The disease is significant because it is easily transmitted, has a high morbidity rate, and causes extended absence from school or work (5).

Hepatitis, a general term for liver inflammation, can be caused by a variety of infectious (viral, bacterial, fungal, and parasitic organisms) and non-infectious (nonviral, bacterial, fungal, and parasitic organisms) and infectious (eg, alcohol, drugs, autoimmune diseases, and metabolic diseases). Hepatitis A virus (HAV), hepatitis B virus (HBV), and hepatitis C virus are the most common causes of viral hepatitis in the United States (HCV). These three viruses can all cause severe illness. In addition, HBV and HCV infection may progress to chronic infection. Chronic hepatitis carriers, on the other hand, are infectious and can spread the disease for years (6).

Many individuals infectious with viral hepatitis which may occur with symptoms or without depend on the period of incubation or specific hepatitis virus of infected, the most common signs are anorexia, feeling of sickness, vomiting, fever, weakness, fatigue, and allergy. In addition, minimum common signs of disease included dark urine, lighting stools, an abnormally high body temperature with liver disease, and jaundice. Their symptoms appeared in the late stage of the disease (7).

## Methodology

A quantitative non-experimental study was conducted in Al-Husain Teaching Hospital, the study conducted on nurses in the Hemodialysis unit in the hospital, to identify their levels of knowledge about this disease and the prevalence. Interview technique by face to face with the nurses that used in order to fill out the questionnaire. As well as by made some test for them (HBs antigen and HBc antibody, strip ready test for both). A non-probability purposive sampling which consists of (75) of the nurses have been chosen and also it was selected to assess knowledge of the nurses regarding prevention and precaution with patient hepatitis that has been chosen from hemodialysis unit. The instrument was presented to (15) expert from several universities to be valid, the result of study was showed that the percentage of (88.89%) nurses had a poor knowledge about hepatitis and their prevalence among nurses working in hemodialysis unit in Al-Husain teaching hospital. Moreover, the current study indicate that there is a significant relationship between overall assessment nurses knowledge and level of education of nurses working in hemodialysis unit in Al-Husain teaching hospital and in their training session about infection control at ( $p$  value = 0.05 ;  $f$  test = 3.6721) while ( $p$  value = 0.002 and  $f$  test = 3.21) for the educational level.

## Result

**Table (4.1) Descriptive statistics (frequency and percentage) for the demographic data of nurses.**

Items	Sub-groups	Study group Total = 72	
		Frequency	Percentage
Age / Years	20-29	54	75.0
	30-39	15	20.8
	40-49	3	4.2
Gender	Female	49	68.1
	Male	23	31.9

<b>Marital Status</b>	Single	36	50.0
	Married	36	50.0
<b>Residency</b>	Rural	14	19.4
	Urban	58	80.6
<b>Levels of Education</b>	Nursing School	23	31.9
	Nursing Institute	28	38.9
	Faculty of Nursing	20	27.8
	Postgraduate	1	1.4
<b>Years of experience</b>	1-7	59	81.9
	8-14	7	9.7
	15-21	6	8.3
<b>Training sessions about infection control</b>	Yes	21	29.2
	No	51	70.8
<b>Place of holding courses</b>	No Training	51	70.8
	Inside Iraq	16	22.2
	Outside Iraq	5	6.9
<b>No. of Training Courses</b>	0	51	70.8
	1-2	13	18
	≥ 3	8	11

Table (1) shows descriptive statistics (frequency and percentage) for the demographic data of nurses, it explains that the majority of the nurses subgroup are : nurses with ages between (20-29) years old (75 %), female nurses (68.1%), married nurses (50%), those who live urban residents (80.6%), nurses graduated from institute of nursing (38.9%), those with experience (1-7) years (81.9%), those who participated in training courses (70.8%), those who have training courses in Iraq (22.2%), those who participated in (1-2) courses (18%) .

### Discussion

Regarding the study finding in the table (1) related to the descriptive of the socio-demographic characteristics of the nurses. The result shows that (75%) of nurses at age (20-29) years.

In quasi-experimental study conducted by (8), the study finding indicated that (56%) of subjects at age (20-30) years. In a descriptive study conducted by (9), the results found that the mean of sample age was 23.6 years. In a descriptive study carried out by (10), the study results show that the (50.2%) of the study sample age (19-22 years). In a descriptive study carried out by (10), the findings indicated that (52.7%) of nurses at age (20-30) years. In a descriptive study carried out by (11), the results show that (88%) of nursing students age (20-24) years. In a cross-sectional descriptive hospital-based study conducted by (13), the finding indicated that (65.5%) of nurses at age (21-30) years. In a descriptive survey design was carried out by (14), the results show that (80.2%) of nurses at age less than 25 years. This finding supported the present study finding.

According to the nurses gender, (68.1%) of nurses were females. (8) found that (56%) of subjects were females. (9) found that (75%) of sample were males. (10) found that (73.3%) of sample were females. (11) found that (63.6%) of nurses were females. This finding consisted with the present study finding. The finding of present study is inconsistent with the finding of (12), they found that (63.2%) of sample were males.

In respect to the marital status, (50%) of nurses single and another half are married. (14) found that (67.2%) of nurses unmarried. (12) found that (80%) of sample single. This finding supported the finding of the present study.

Regarding to level of education, (38.9%) of nurses have been graduated of nursing institute. (8) found that (60%) of nurses had nursing institute graduated. This finding in same line of the present study. While, the finding of (11) they found that (80%) of nurses had secondary nursing school and (13) found that (72.7%) of nurses had educational level university and above. This finding inconsistent with our finding.

According to years of experience, (81.9%) of nurses have (1-7) years of experience in nursing. (8) found that (58%) of nurses had (1-5) years of experience in nursing. (11) found that (36.4%) of nurses had (5-10) years of experience. This finding supported the present study finding. (13) found that (59.1%) of nurses had years of experience less than 2 years. This finding disagree with our finding.

As regard to the training sessions, (70.8%) of nurses not participate in training sessions about infection control. While, (29.2%) participate in training sessions, (22.2%) of them inside Iraq. (18%) of nurses had participate in (1-2) training courses. The finding of (14) supported our study finding, they found that (87.9%) of nurses not received training sessions about Post Exposure Prophylaxis (PEP) for hepatitis B virus infections.

## Conclusion

A young female nurse who haven't participant in the training courses graduated from institutions have an experience less than 7 years.

A medical information of nurses about viral hepatitis that they haven't been infected with viral hepatitis in the other hand the percentage of vaccinated nurse is small compared to the risk of being working in hemodialysis units. Nurses knowledge in idiom of transmission of hepatitis were poor. Nurses marital status have no affected on their knowledge in Quito the opposite of level education that awn significant effect.

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