

## Assessment of Nurse's Knowledge Regarding Prevention and Precautions for Patients with Hepatitis Type(C) in AL-Suwairah General Hospital

Shahlaa Ali Talib <sup>1</sup>

Sabah Abbas Ahmed <sup>2</sup>

\* Adult Nursing Department,  
Collage of Nursing, University  
of Baghdad, Wasit Health  
Directorate, Iraq.

\*\* Adult Nursing Department,  
Collage of Nursing,  
University of Baghdad, Iraq.

### Corresponding author:

Shahlaa Ali Talib; Adult  
Nursing Department, Collage  
of Nursing, University of  
Baghdad, Wasit Health  
Directorate, Iraq.

Email:

[Shahlaa.ali1202a@conursing.uobaghdad.edu.iq](mailto:Shahlaa.ali1202a@conursing.uobaghdad.edu.iq)

### ABSTRACT

**Background:** Viral Hepatitis C management needs prevention, screening, and care because they increase quality of life and reduce costs. Health policy and decision makers around the world are trying to improve people's health and quality of life through initiatives, initiatives, and effective measures to minimize the prevalence of illnesses.

**Objective:** the study aimed at assess nurses' knowledge prevention and precautions for patients

### الخلاصة:

**خلفية البحث:** تحتاج إدارة التهاب الكبد الفيروسي (ج) إلى الوقاية والفحص والرعاية لأنها تزيد من جودة الحياة وتقلل من التكاليف. يحاول صناع السياسات والقرارات الصحية في جميع أنحاء العالم تحسين صحة الناس ونوعية حياتهم من خلال المبادرات والتدابير الفعالة للحد من انتشار الأمراض.

**الهدف:** هدفت الدراسة إلى تقييم معارف الممرضين فيما يتعلق بالوقاية والاحتياطات لمرضى التهاب الكبد من النوع (ج) ووجدت ان هناك اختلافات بين المعرفة في الدراسة والبيانات الديموغرافية.

**المنهجية:** تم اجراء هذه الدراسة بطريقة البحث الكمي دراسة التصميم الوصفي التي أجريت على الممرضين من أجل التعرف على الوعي حول هذا المرض في الفترة من 11 / تشرين الأول / 2020 الى 10 / نيسان / 2021، واستخدمت عينة غرضية غير احتمالية تتكون من 60 ممرض/ة. تم استخدام الإحصاءات الوصفية واختبار ارتباط بيرسون لتحليل البيانات باستخدام SPSS.

**النتائج:** أشارت نتائج إلى أن متوسط معرفة الممرضين المشاركين في هذه الدراسة كان منخفضاً.

**الاستنتاجات:** فيما يتعلق بالوقاية والاحتياطات لمرضى التهاب الكبد من النوع (ج)، هناك نقص بالمعرفة بين الممرضين والممرضات. لا توجد فروق بين المعرفة في الدراسة والبيانات الديموغرافية.

**التوصيات:** تشجيع الممرضين على التسجيل في الدورات التدريبية لزيادة معرفتهم وكذلك تحديث معلوماتهم وحفظها للوقاية والاحتياطات للمراجعين المصابين بالتهاب الكبد من النوع (ج). يجب أن تكون المراجعة والمتابعة للممرضين مفيدة بعد جلسة التنقيف للرصد والتقييم و لتحسين معرفتهم لتأكيد تطبيقها في مهنتهم.

**الكلمات المفتاحية:** معارف، الوقاية والاحتياطات، التهاب الكبد الفيروسي نوع (ج).

with hepatitis Type C and found differences between the knowledge in study and demographic data.

**Methodology:** Quantitative research descriptive design study conducted on of nurses in order to identify awareness about this disease during the period from 11 \ October \ 2020 to 10 April \ 2021, and used a non-probability purposive sample consists of 60 nurses. Descriptive statistics and the Pearson correlation test were used to analyze data using SPSS.

**Results:** The study results indicated that the mean of nurses' knowledge of the participants was low.

**Conclusion:** Knowledge in terms of prevention and precautions for patients with hepatitis type C, nurses were deficit knowledge. There are no differences between the knowledge in study and demographic data.

**Recommendation:** The Encouraging nurses to be registered in training sessions to increase their

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knowledge to save them up to date toward prevention and precautions for clients with hepatitis type C. Review and follow-up for nurses need to be useful after education session to monitor, assess and to improve their knowledge to confirm their application.

**Keyword:** Knowledge, Prevention and Precautions, Hepatitis type C.

## INTRODUCTION

Surgical Viral hepatitis is an inflammatory dysfunction of the liver that can be caused by viruses, drugs, and toxins which transmitted from one individual to another, hepatitis consists of five types (A-E) however, only three of viral hepatitis are important in public health care which included hepatitis A, B, and C virus. Both virus of hepatitis B and hepatitis C infection reasons about 80 percent of hepatocarcinoma (HCC) that considered the fifth widespread cancer in men and the seventh most common in women <sup>(1)</sup>.

Viral hepatitis, caused by a long-term infection with the hepatitis C virus (HCV), is one of the most common causes of liver inflammation worldwide. Hepatitis C infection affects between 130 and 150 million people worldwide <sup>(2)</sup>.

According to Centers for Disease Control (CDC), 2017 every year, 500,000 people suffer from hepatitis C-related diseases. Antiviral treatment for hepatitis C virus infection appears to be effective, according to evidence. However, certain side effects, such as pain symptoms of oral ulcers, will cause therapy to be discontinued. Inadequate oral hygiene can exacerbate the side effects. With approximately 71 million people infected worldwide, chronic hepatitis C virus (HCV) infection is a public health problem. Its predisposition to liver, fibrosis, cirrhosis, and liver cancer makes it a leading cause of liver-related morbidity and mortality. Hepatitis C causes nearly 399,000 deaths per year worldwide, the majority of which are due to cirrhosis and hepatocellular carcinoma <sup>(2)</sup>.

According to the Centers for Disease Control and Prevention, universal precaution is a collection of activities that must be carried out to avoid infections from

blood or body fluids, as well as to protect health workers and patients from infection <sup>(3)</sup>. Hand washing, avoiding direct contact by using protective barriers, safe handling, and disposal are all four basic practices of universal precaution <sup>(4)</sup>. Nurses are responsible for facilitating patient care arrangements between primary health care practitioners, clinicians, and other support providers, using the essentials of participate health care to achieve optimum health for patients and support services <sup>(5)</sup>.

Nurses play an important role in the fundamental service of health-care activity related to hepatitis C, which involves delivering educational sessions for patients and other health-care personnel, such as protecting patients from harm and risk needle removal. Nurses educate patients or their families about increasing virus screening, participating in strategies or obligations to treatment, explaining the outcome to the family, and introducing patient support to other health professionals, all of which strategies facilitate effective communication and teamwork in the practice <sup>(6)</sup>.

Precaution is a step taken ahead of time to avoid anything harmful in the health-care system, such as proper application and disposal of sterile syringes, needles, and lancets after use, sterilization of work environments, and wearing gloves and gowns to prevent disease transmission. Using infection-controlling practices such as avoiding contact with body fluids, blood, rashes, and mucous membranes, although infection is the most dangerous problem because of the increased cost of examination and therapy to treat the infection in the hospital, it is also the most interesting for morbidity and mortality rates. Furthermore, prohibit

another patient from using the hospital beds, which pose a risk of infection transmission to another patient (7).

In Iraq, a viral hepatitis prevention and control program began in the early since 1973; the national blood transfusion center in Baghdad has been screening donated blood for HBs Ag. One of the most significant techniques of this program is to test blood for HBs Ag prior to donation. As a result, it is advised to avoid contracting hepatitis by taking precautions such as being cautious with needles and wearing gloves while assisting a bleeding accident victim. Furthermore, a vaccination program for this population should be considered (8).

### **AIMS OF THE STUDY**

The study aimed to assess nurses' knowledge prevention and precautions for patients with hepatitis Type C and found differences between the knowledge in study and demographic data.

### **METHODOLOGY**

#### **- The Study Design:**

Quantitative research descriptive design started from 11 October 2020 to 10 April 2021, the study conducted of nurses in order to identify and improve their knowledge about this disease by using a questionnaire reading previous studies.

#### **- Administrative Arrangements:**

Researcher got approval to conduct the study from the University of Baghdad, faculty of Nursing after clarifying the objectives of the study and its importance, as well as formal approval about questionnaire obtained from the Ministry of Planning-Center Council for Statistics to start the study in the 20 December 2020. In 20 December 2020 received official approval from Waist Health Director-The Centre for Training and Development Staffs to doing the study in the AL-Suwairah General Hospital.

#### **- Ethical considerations during collecting data**

Ethical considerations are necessary for protecting a person's rights related to data collected, confidentiality and promote professional study

conduct, the following ethical issues were applied which dependent:

- Agreement to participate is voluntary.
- Respect the privacy of participants during the interview.
- Respect the participant feeling by encouraging, honest, and open communication, and listen effectively to understand the nurses' responses about health issues.
- Questions to the nurses are phrased in a way that is easily understandable according to his or her educational level and cultural background as well as language proficiency.

#### **- Setting of the Study**

Study was conducted in Wasit province, AL-Suwairah General Hospital, the period which is the researcher required for collect the data from study sample was from 15 February 2021 to 15 March 2021. The setting of the study was chosen purposive to be adopted as a place for this study. All hospital units were included in the study are (emergency department, major operations department, and surgery department) to collect the sample.

#### **- Sample of the Study:**

Non probability purposive sample consists of 60 nurses has been chosen, all of them working in AL-Suwairah General Hospital, - The sample of study group has been chosen from hospital wards, operation room, emergency department and Surgical internists department.

- The number of nurses who are opted to study according to their availability at this department.
- Nurses work in AL-Suwairah General Hospital regardless their job title.
- A nurse who is work duration in hospital is more than one year.

#### **- Study Instrument:**

The questionnaire used in this study were constructed after a reviewing the previous literature

**Part I: Demographic data and information related to nurses work**

This part consists of (9) elements that include nurses data (age, gender, Monthly income, educational level, marital status, total years of experience in the nursing field, Workplace in the hospital, Years of experience in the emergency department, major operations department, and surgery department and training courses.

**Part II: General information about the disease to measure Nurses Knowledge Regarding Prevention and Precautions for Patients with Hepatitis**

This part consisted of (51) questions which divided in to five elements that include measurement of nurses knowledge related to nature of the hepatitis C which contain (16) items, measurement transmission of hepatitis C contain (12) items, measurement precautions in giving injection to patients with hepatitis C contain (6) items, while measurement management and treatment of patients with hepatitis C contain (9) items, measurement prevention and precaution of hepatitis C contain (8) item. Questionnaire as multiple choices, each question has (2) choices and was scored through giving the better answer (2) I know, and I don't know (1).

**- Validity of the Instrument**

The questionnaire validity and suitability for the study was obtained after distribution to 11 expert panels. All scientific and logical views that have been posed by the experts were utilized and added. The

experience of experts was ranging between 10 years to 30 years.

**- Reliability of The Questionnaire:**

To find out the reliability in order to identify the stability of questionnaire must perform small study (pilot study) and applied the reliability of questionnaire determine by use SPSS program (v 20) it was (r= 0.89), this result statistically are acceptable.

**- Data Gathering**

The sample of study was nurses; they are working at AL-Suwairah General Hospital. The researcher collect the data from the sample by using questionnaire form consist from three parts (Demographic, knowledge). Data are gathering from nurses by self-report from (31) January to (15) March 2021. The time consume with each one about (15-20) minutes.

**- Statistical Analysis**

The SPSS (Statistical Package of Social Sciences) version 20 and Microsoft Excel (2010) were used to analyze the collected data of the study.

**- Descriptive Data Analysis**

**A.** Statistical tables which are "Frequencies and percent".

**B.** Mean of scores "M .s."

**- Inferential approach**

One Way ANOVA test to test the difference between the number of nominal standards of random variables dichotomous as nurses knowledge in different groups and their demographic.

**RESULTS**

**Table (1): Descriptive Statistic of Socio-Demographic Characteristic of the Study (n= 60)**

| Demographic Data | Groups        | F  | %    |
|------------------|---------------|----|------|
| Age / Years      | 20 – 24 years | 20 | 33.4 |
|                  | 25 - 29 years | 16 | 26.7 |
|                  | 30 - 34 years | 13 | 21.7 |
|                  | 35 - 39 years | 1  | 1.6  |
|                  | 40 - 44 years | 5  | 8.3  |

|   |                           |           |             |
|---|---------------------------|-----------|-------------|
|   | <b>45 and older</b>       | <b>5</b>  | <b>8.3</b>  |
| <b>Gender</b>                               | <b>Male</b>               | <b>23</b> | <b>38.4</b> |
|   | <b>Female</b>             | <b>37</b> | <b>61.6</b> |
| <b>Education level</b>                      | <b>Nursing School</b>     | <b>3</b>  | <b>5</b>    |
|   | <b>Nursing secondary</b>  | <b>19</b> | <b>31.6</b> |
|   | <b>Nursing Institute</b>  | <b>24</b> | <b>38.3</b> |
|   | <b>College of Nursing</b> | <b>14</b> | <b>23.3</b> |
| <b>Years of experience</b>                  | <b>Postgraduate</b>       | <b>1</b>  | <b>1.8</b>  |
|   | <b>&lt;5 years</b>        | <b>29</b> | <b>48.3</b> |
|   | <b>5-10 years</b>         | <b>18</b> | <b>30</b>   |
| <b>Workplace</b>                            | <b>&gt;10 years</b>       | <b>13</b> | <b>21.7</b> |
|   | <b>Operations</b>         | <b>20</b> | <b>33.3</b> |
|   | <b>Emergency</b>          | <b>20</b> | <b>33.3</b> |
| <b>Years of experience in surgery wards</b> | <b>Surgical</b>           | <b>20</b> | <b>33.3</b> |
|   | <b>1-5 years</b>          | <b>36</b> | <b>60</b>   |
|   | <b>6-11 years</b>         | <b>12</b> | <b>20</b>   |
| <b>Training session in nursing</b>          | <b>&gt;11 years</b>       | <b>12</b> | <b>20</b>   |
|   | <b>No</b>                 | <b>20</b> | <b>33.3</b> |
|   | <b>1 session</b>          | <b>27</b> | <b>45</b>   |
|   | <b>2 sessions</b>         | <b>11</b> | <b>18.4</b> |
|   | <b>≥ 3 sessions</b>       | <b>2</b>  | <b>3.3</b>  |

(Freq.): Frequency, (%): percentage

Table 1 show findings demonstrated the distribution of the nurses their demographic characteristics in term of frequencies and percentage.

**Table (2): Statistical distribution overall assessment of Nurses Knowledge**

| <b>Overall Assessment for Study</b> | <b>Freq.</b> | <b>%</b>     | <b>M.s</b>  | <b>S. d.</b> |
|-------------------------------------|--------------|--------------|-------------|--------------|
| <b>Bad</b>                          | <b>54</b>    | <b>90.0</b>  | <b>1.16</b> | <b>0.346</b> |
| <b>Good</b>                         | <b>6</b>     | <b>10.0</b>  |             |              |
| <b>Total</b>                        | <b>30</b>    | <b>100.0</b> |             |              |

(M.s) mean of score 1.5, (S. d.) stander deviation 0-50 bad, 50-100 good

Table 2 show the deficit knowledge in study regarding hepatitis C virus might be due to several reasons; the nurses do not develop and update their knowledge continuously, most of nurses who work in health institutions quit book reading so they do not follow up and only indulge in nursing practices, consequently they became unable to remember some information particularly the knowledge that related to hepatitis infection.

**Table (3): Mean differences between the overall Knowledge toward their Demographic Data**

| <b>Demographic Data</b> | <b>p-value</b> | <b>Sig</b> |
|-------------------------|----------------|------------|
| <b>Age / Years</b>      | <b>0.65</b>    | <b>N.S</b> |
| <b>Gender</b>           | <b>0.28</b>    | <b>N.S</b> |
| <b>Education level</b>  | <b>0.55</b>    | <b>N.S</b> |

|  |             |            |
|--|-------------|------------|
| <b>Years of experience</b>                   | <b>0.45</b> | <b>N.S</b> |
| <b>Workplace</b>                             | <b>0.5</b>  | <b>N.S</b> |
| <b>Years of experience current workplace</b> | <b>0.65</b> | <b>N.S</b> |
| <b>Training session</b>                      | <b>0.3</b>  | <b>N.S</b> |

f- ANOVA

Table 3 show from study finding demonstrated that there is no statistical significant between demographic data of study sample and their knowledge at p-value >0.05.

## DISCUSSION

### Demographic Factors of Descriptive Statistic (table 1):

Findings demonstrated the distribution of the nurses their demographic characteristics in term of frequencies and percentage. Age of the nurses ranged from 20 years and above, revealed that the majority (33.4%) of nurses. From view of point the nature of work, the operation, emergency and surgical wards need to be young nurses. As well as, this age group which can provide and perfect nursing intervention efficiently and correctly, since most of the nurses who have many years of service period move away to the primary health sector, the younger nurses could stay in the hospital care. Also, results come with results of study conducted in Diwaniya Teaching Hospital and deals with prevention of hepatitis. Their findings revealed that most of participants were young nurses who aged 20-24 years old <sup>(9)</sup>.

Findings related to gender, demonstrated the female nurses were predominate in both, it constituted (61%) as being the female more responses to participants in the study. Our findings agree with study conducted in Nigeria, deals with hepatitis precautions among nurses.). In findings of Hassan and Muhbes (2020), the percentage of females was higher than males, because female's nurses were more in the study than male's nurses. In addition, male's nurses' sample refused participating in the study <sup>(9)</sup>.

Most of study participants were has less than 5 years of employment and work 1-5 years in operation, emergency and surgical wards with one session of training. The few years of nursing experience in

selected wards could be explained by the fact that has a frequent rotating from one unit to another within the hospital. Findings come with results from health care workers in Saudi Arabia. They found that most of nurses work in specialist areas of hospital (work load) were have less years of employment due to frequent transportation among wards from period to period <sup>(10)</sup>.

### - Overall knowledge responses in study (table 2):

The deficit knowledge in study regarding hepatitis C virus might be due to several reasons; the nurses do not develop and update their knowledge continuously, most of nurses who work in health institutions quit book reading so they do not follow up and only indulge in nursing practices, consequently they became unable to remember some information particularly the knowledge that related to hepatitis infection. In South Africa, the overall, knowledge on notification of viral hepatitis was poor among health care professionals especially nurses <sup>(11)</sup>.

In Iraq, study of Hassan and Muhbes (2020), mentioned that nurses with moderate level of knowledge regarding hepatitis were in medical or surgical ward and hemodialysis unit to involve in educational courses to raise their knowledge regarding general information and the main principles regarding precautions and prevention with patients hepatitis <sup>(9)</sup>. As well as, as the country went through a war crisis and medical equipment and training courses were not available, which led to limitation of

knowledge (an health resources play an important roles in knowledge aspects) <sup>(12)</sup>.

It is important to note the importance of the nurses' knowledge in the workplace which is confirmed study deals with nursing implications from the hemodialysis to discharge: therapy following prevention of infections. It's confirmed that nurses, who have a unique knowledge of safe handling and patient care, can improve staff safety and patient outcomes in several areas of healthcare organizations, as well as reduce the mortality and morbidity of hepatitis by learning more about the disease <sup>(13)</sup>.

- **Mean differences (ANOVA) between the overall Knowledge in study and their Demographic Data ( table3):**

From study finding demonstrated that there is no statistical significant between demographic data of study sample and their knowledge at p-value >0.05. It is exciting Chi-square depicts there training sessions were significantly associated with nurses knowledge in study at p-value ≤0.05. Findings come with study of Mustafa and Taha (2016), they showed that there is no significant correlation between knowledge about hepatitis virus among nurses and some of the demographic characteristics <sup>(14)</sup>. Also, there were no significant statistical differences mean knowledge score and health care workers demographic

characteristics at p=0.05 <sup>(15)</sup>. As well as, there is a significant association between the nurses' knowledge and number of training courses at less than (0.05) <sup>(16)</sup>. Also, findings come with findings of study conducted in Iran, they depicts that most of socio-demographic variables were insignificant associated with knowledge about hepatitis <sup>(17)</sup>.

## CONCLUSION

Knowledge in terms of prevention and precautions for patients with hepatitis type C, nurses were deficit knowledge. There no difference between nurses' knowledge and all demographic charters tic.

## RECOMMENDATIONS

1. Encouraging nurses to be enrolled in training sessions to improve their knowledge to keep them up to date toward prevention and precautions for patients with hepatitis type C.
2. Reassessment and follow-up for nurses need to be applied after education session to monitor, evaluate and to promote their knowledge to ensure their application in job.
3. Health directorate need to be providing equipment and facilities in operation, emergency and surgical wards to implementation of professional nursing practice.
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