



## Assessment of Mothers' Knowledge and Practices Regarding Care of their Children with Hepatitis Viruses

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### Abstract

**Background:** Hepatitis is an inflammation of the liver cells that is caused by a variety of infectious viruses.

**Aim:** This study aimed to assess of mothers' knowledge and practices regarding care of their children with hepatitis viruses.

**Design:** A descriptive design was utilized in this study. Sampling: A purposive sample comprised of 60 mothers having children with Hepatitis Viruses was selected to conduct this study.

**Setting:** This study was conducted at blood diseases outpatient clinic in University hospital affiliated to Beni Suef University Hospital.

**Sample:** A purposive sample were included in the study.

**Tools:** Two tools were used in this study Tool (1): A structured questionnaire to assess mothers' knowledge regarding Hepatitis Viruses. Tool (2): Practice checklists to assess mothers' reported practices regarding care of their children with Hepatitis Viruses.

**Results:** Findings of this study showed that,60% of studied mothers had unsatisfactory level of knowledge , and their total practices were inadequate also there was a highly statistically significant relation between total knowledge and practices of mothers and their characteristics particularly educational level and occupation  $p \leq 0.05$ .

**Conclusion:** The studied mothers had unsatisfactory level of knowledge and inadequate practices regarding care of their children with Hepatitis Viruses, there was a statistically significant difference between studied mothers' total level of knowledge and reported practices and their characteristics.

**Recommendations:** Continuous educational program for mothers about hepatitis viruses are required to increase their awareness and performance regarding care of their children with hepatitis viruses.

**Keywords:** Children, Knowledge, Hepatitis viruses, Practice

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### Introduction:

Hepatitis virus infection is a major children health problem in developing countries. Hepatitis is an inflammation of the liver cells that is caused by a variety of infectious viruses and noninfectious agents which leading to health problems which may reach to be fatal. There are five main types of the hepatitis virus; hepatitis A Virus, B, C Virus, D and E. (ferri, 2020).

Hepatitis A is transmitted through oral-fecal, hepatitis B is transmitted through perinatally mother to infant and blood product transfusion, hepatitis c is transmitted through contaminated needles and blood product transfusion, hepatitis D is transmitted through parentally mother to infant and blood transfusion and hepatitis E is transmitted through oral-fecal (Hodler, Kubik-Huch&Schulthess, 2018).

Many children with hepatitis may be asymptomatic or may experience the common

clinical manifestations of flu-like symptoms. Symptoms of hepatitis can include; fever, fatigue, loss of appetite, nausea, vomiting, abdominal pain, dark urine, light-colored stools, joint pain, and jaundice (Kao & Chen, 2018).

Contaminated food Exposures significantly associated with Hepatitis A Virus infection were attending nursery or pre-school, contact with person attending nursery or pre-school. Exposures to blood were significantly association with and remain the risk for Hepatitis B Virus and Hepatitis C Virus infections in Egypt(Kellerman &Rakel, 2020).

Safe and effective vaccines are available to prevent HBV. This vaccine also prevents HDV and given at birth strongly reduces transmission risk from mother to child. Chronic hepatitis B infection can be treated with antiviral agents. Treatment can slow the progression of cirrhosis. A vaccine also

exists to prevent infections of hepatitis E. (Cantey & Shane, 2021).

Antiviral medicines can cure more than 95% of persons with hepatitis C infection, thereby reducing the risk of death complication. Hepatitis A is most common in low- and middle-income countries due to reduced access to clean and reliable water sources and the increased risk of contaminated food. A safe and effective vaccine is available to prevent hepatitis A. (Manglik, 2021).

Mothers play a major role in providing care giving assistance and contact with their hepatic children. Mothers support their children to fulfill their basic needs and giving direct care such as administration of medication and treatments, providing personal hygiene and preparation of meals. The assistance also provides a combination of direct care, health education, enhancing self-care and contributing in the prevention of complications in hepatic child and help in minimizing the transmission of infection (Amer et al., 2021).

The nurse must possess a sound knowledge and understanding of the care adequately for children while maintaining a safe working environment can make contributions towards the prevention of viral hepatitis. Also, the nurse's responsibility is to educate parents regarding the importance of screening at the recommended time to prevent or reduce complications (Ferri, 2019).

#### Significance of the study:

Globally, viral hepatitis affects millions of children around the world which estimated that most children (90%) have been infected with the hepatitis A virus before the age of 10 years, most often without symptoms. Infection rates are low in high-income countries. Disease may occur among children and adolescents in high-risk groups (Chang & Schwarz, 2020).

Viral hepatitis is one of Egypt most significant Children health challenges, with an estimated 8–10 million child, or 10% of the population. Hepatitis A infection occurred most commonly among children < 16 years age, while Hepatitis B infection occurred among ages 16–35 years. Also, Egypt has the highest prevalence of hepatitis C in the world, estimated nationally at 14.7% (Informatics & Berger, 2021). So from the researcher point of view it's important to conduct this study to assessed mothers' knowledge and practices regarding care of their children with hepatitis viruses.

#### Aim of the study:

This study aimed to assess mothers' knowledge and practices regarding care of their children with hepatitis viruses.

#### Research Questions:

1. What is the level of mothers' knowledge and practices regarding care of their children with hepatitis viruses?

2. Is there a relation between the mothers' knowledge and practices regarding care of their children with hepatitis viruses and their characteristics?

#### Subjects and methods:

##### I- Technical Design:

The technical design for the study included research design, research setting, subject and tools for data collection.

##### Research Design:

A descriptive research design was used to achieve the aim of the study.

##### Research Setting:

This study was conducted at Beni-Suef University Hospital in outpatient pediatric clinics which was located on the ground floor include four rooms and Provide services like screening, diagnosis, follow up, treatment and counseling for children with various diseases in beni suif . The pediatric clinic receives children with blood diseases every Monday from 9 am until 2 pm.

##### Research Subject:

A purposive sample was used to achieve the aim of this study. The study sample consists of 60 mothers having children suffering from hepatitis viruses who attended to the previously mentioned setting.

##### Inclusion criteria:

- Mothers having children diagnosed with hepatitis viruses aged from 6:12 years.
- children Both gender and free from any other chronic physical or mental diseases.

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##### Tools for data collection:

Two tools were used in this study and were developed by the researcher after reviewing the related literature.

##### First Tool: Structured Questionnaire

The questionnaire was written in a simple Arabic language. It was consist of the following three parts:

- **Part I:** Characteristics of the studied mothers, it included: age, educational level, occupation, residence and marital status.
- **Part II:** Characteristics of children diagnosed with hepatitis virus: it included: age, gender, onset of the disease, and past medical history.
- **Part III:** concerned with assess studied Mothers' knowledge about hepatitis viruses: included (definition of hepatitis viruses, types, etiology, clinical manifestations, complications, investigations, methods of prevention and care of their children with hepatitis viruses).

**Scoring system:** according to the answers obtained from the studied mothers, a scoring system was followed to assess the knowledge of studied mothers regarding Hepatitis viruses. Each question scored (1) for correct and complete answer and each incorrect answer scored (0). The total degree

was (25) and then converted into percentage as the following:

- Satisfactory knowledge  $\geq 75\%$
- Unsatisfactory knowledge  $< 75\%$

#### **Second Tool: Mother's reported practices**

It was adapted from (Bowden, et.al 2019) and modified by the researcher It includes 44 items with done and not done answer format to assess mothers' practices regarding care provided for their children with hepatitis viruses. such as( isolation, measurement of diet balance , hand washing, oral care, nail trimming and bathing) .

**Scoring system for mothers practices:** according to the responses obtained from the studied mothers, a scoring system was followed to assess the total scores of mothers' practices were evaluated by giving (1)score for done answer and (0) score for not done answer, then the scores are converted to percentage and total scores categorized as the following:

- Adequate practices ( $\geq 75\%$ )
- Inadequate practices ( $< 75\%$ )

#### **Tools Validity: -**

The developed tool was formulated and submitted to three experts in pediatric nursing to assess the content validity.

#### **Tools Reliability:**

Reliability of the tools was tested to determine the extent to which the questionnaire items related to each other. Cronbach's Alpha was used to determine the internal reliability of the tool. It was (0.826) for knowledge questionnaire and (0.931) for practice checklists.

#### **Ethical Considerations:**

An official permission to conduct the study was obtained from the Scientific Research Ethical Committee of Faculty of Nursing Helwan University. The studied nurses were informed that participation in the study is voluntary and subjects were be given complete full information about the study and their role before signing the informed consent. The ethical considerations included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it would not be accessed by any other party without taking permission of the participants.

#### **II- Operational Item:**

##### **Preparatory Phase:**

It included reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop tools for data collection.

#### **Pilot study:**

The pilot study was carried out at february, 2022 on 10% (6) to examine the clarity of questions and time needed to complete the study tools. Based on the results, no modifications were done. Subjects included in the pilot study were included in the main study sample.

#### **Field work:**

The actual field of work was carried out over six months started from February (2022) to the end of August (2022). For data collection, each mother was interviewed and assessed individually using the study tools. The researcher was available at the study setting every Monday from 9am to 2 pm and started by introduced herself to mothers. The researcher provided a simple explanation about the aim of the study to gain their cooperation, and how to fill in knowledge questionnaire and to assure the mothers about the anonymity of their answers and that the information will be used for scientific research only and will be strictly confidential. The researcher then distributes the questionnaire among the studied mothers. The time consumed for completion of the questionnaire format was 10-15 minutes. As regards the mothers' practice, time consumed for answering their reported practices was 10-20 minutes..

#### **III- Administrative Item:**

A written approval letter was being issued from Dean of Faculty of Nursing-Helwan University. The letter was being directed to the general manager of Beni-Suef University Hospitals asking for cooperation and permission to conduct this study. After explanation of the study aim, an official permission was obtained from the Dean of Faculty of Nursing and the General Manager of Beni-Suef University Hospitals. Consent was obtained from mothers ensuring complete privacy and total confidentiality.

#### **IV-Statistical Item:**

Data was computed and analyzed using Statistical Package for the Social Science (SPSS), version 24 for analysis. The P value was set at 0.05. Descriptive statistics tests as numbers, percentage, mean and standard deviation (Mean  $\pm$  SD), were used to describe the results. Appropriate inferential statistics such as "F" test or "t" test were used as well. When p-value  $< 0.05$ , is considered that there is statistically significant difference. And when p-value  $< 0.001$ , is considered that there is highly statistically significant difference.

**Results:**

**Part I: characteristics of studied mothers**

Table (1): Distribution of studied mothers as regarding their characteristics. (n=60)

Items	N	%
<b>Age</b>		
20 <30 years	34	<b>56.7</b>
30 <40 years	22	36.7
≥ 40 years	4	6.7
<b>Mean±SD</b>	<b>30.72±7.31</b>	
<b>Marital status</b>		
Married	58	<b>96.7</b>
Widowed	2	3.3
<b>Educational level</b>		
Illiterate	30	<b>50.0</b>
Read & write	8	13.3
Basic education	12	20.0
University education	10	16.7
<b>Occupation</b>		
Work	6	10.0
House wife	54	<b>90.0</b>
<b>Residence</b>		
Rural area	54	<b>90.0</b>
Urban area	6	10.0
<b>Past history of viral hepatitis during pregnancy</b>		
Yes	0	0.0
No	60	<b>100.0</b>
<b>Family history of viral hepatitis</b>		
Yes	14	23.3
No	46	<b>76.7</b>

Table (1) shows that, more than half (56.7%) of the studied mothers' their age group was 20 <30 years with mean±SD 30.72±7.31, most (96.7%) of them were married and half (50%) of them was illiterate. Also, most (90%) of the studied mothers were

house wives and from rural areas, all of them didn't get viral hepatitis during pregnancy and more than three quarters (76.7%) of them didn't have any family history of viral hepatitis.

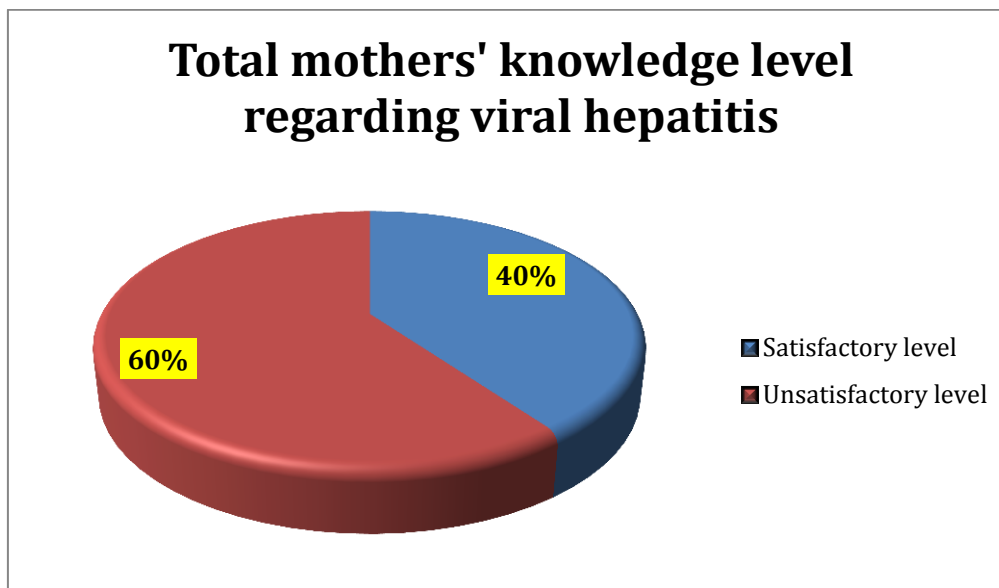
Table (2): Distribution of the studied children according to their characteristics (n=60).

Items	N	%
<b>Age / years</b>		
6 < 8 years	44	<b>73.3</b>
8 < 10 years	14	23.4
10 ≤ 12 years	2	3.3
<b>Mean±SD</b>	<b>7.00±1.38</b>	
<b>Gender</b>		
Male	32	<b>53.3</b>
Female	28	46.7
Daily habits of children		
<b>Does the child eat fast food?</b>		
Yes	38	<b>63.3</b>
No	22	36.7
<b>Does the child wash hands after using the toilet?</b>		
Yes	22	36.7
No	38	<b>63.3</b>
<b>Does the child wash his hands before and after eating?</b>		

Yes	44	73.3
No	16	26.7
<b>Does the child share his personal equipment with the members of the house?</b>		
Yes	56	93.3
No	4	6.7

Table (2) reveals that, less than three quarters (73.3%) of the studied children their age group was 6 < 8 years with mean±SD 7.00±1.38, more than half (53.3%) of them were males, less than two thirds (63.3%) of them were eat fast food and

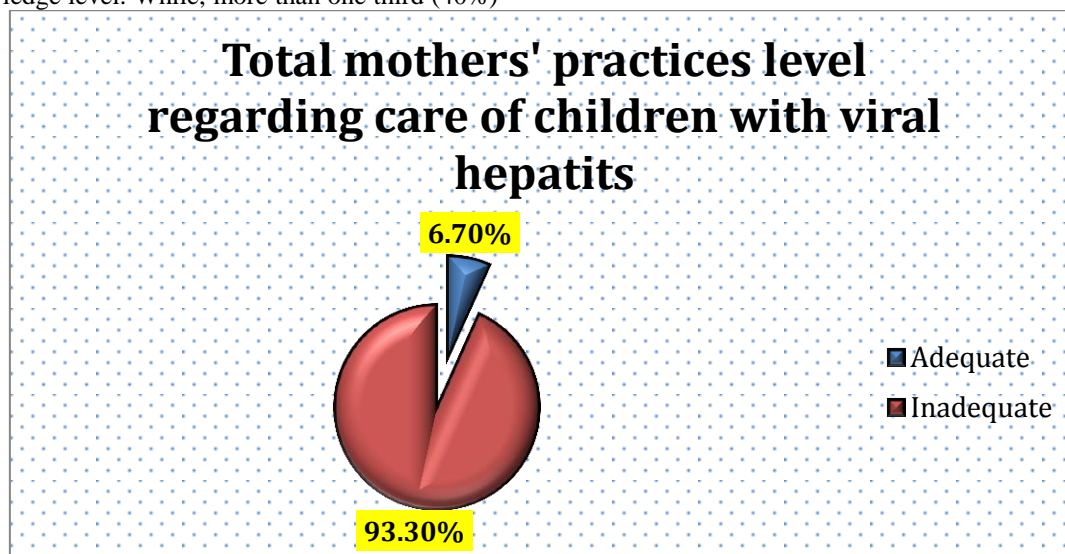
didn't wash their hands after using the toilet. Moreover, less than three quarters (73.3%) of the studied children wash their hands before and after eating and most (93.3%) of them shared their personal equipment with the members of the house.



**Figure (1)** Percentage distribution of total mothers' knowledge level regarding viral hepatitis.

Figure (1) illustrates that, more than half (60%) of the studied mothers had unsatisfactory knowledge level. While, more than one third (40%)

of them had satisfactory level of knowledge regarding viral hepatitis.



**Figure (2):** Percentage of total mothers' practices regarding care of their children with viral hepatitis (n=60).

Figure (2) illustrates that, most (93.3%) of the studied mothers' had inadequate practices level. While, minority (6.7%) of them had adequate

practices level regarding caring of children with viral hepatitis.

**Table (3):** Relation between Characteristics of studied mothers and their total level of knowledge (n=60)

Items	N	Satisfactory		Unsatisfactory		X2	P value
		N	%	N	%		
<b>Age</b>							
20 <30 years	34	22	36.7	12	20.0	4.92	0.85
30 <40 years	22	10	16.6	12	20.0		
≥40 years	4	4	6.7	0	0.0		
<b>Marital status</b>							
Married	58	34	56.7	24	40.0	1.37	0.24
Widowed	2	2	3.3	0	0.0		
<b>Educational level</b>							
Illiterate	30	22	36.7	8	13.35	10.13	0.017*
Read & write	8	6	10.0	2	3.3		
Secondary education	12	6	10.0	6	10.0		
University education	10	2	3.3	8	13.35		
<b>Occupation</b>							
Work	6	2	3.3	4	6.7	1.97	0.160
House wife	54	34	56.7	20	33.3		
<b>Residence</b>							
Rural area	54	32	53.3	22	36.7	.123	0.725
Urban area	6	4	6.7	2	3.3		
<b>Family history of viral hepatitis</b>							
Yes	14	4	6.7	10	16.7	7.516	0.006**
No	46	32	53.3	14	23.3		

\* Statistically significant at  $p \leq 0.05$ ; \*\* Highly statistical significant at  $p \leq 0.01$

Table (4) shows that, there was a statistically significant relation between the studied mothers'

total knowledge and their educational level and family history of viral hepatitis.

**Table (4):** Relation between Characteristics of studied mothers and their total practices (n=60).

Items	N	Adequate		Inadequate		X2	P value
		N	%	N	%		
<b>Age</b>							
20 <30 years	34	30	50.0	4	6.7	3.27	0.194
30 <40 years	22	22	36.6	0	0.0		
≥40 years	4	4	6.7	0	0.0		
<b>Marital status</b>							
Married	58	54	90.0	4	6.7	.148	0.701
Widowed	2	2	3.3	0	0.0		
<b>Educational level</b>							
Illiterate	30	30	50.0	0	0.0	21.42	0.000**
Read & write	8	8	13.3	0	0.0		
Secondary education	12	12	20.0	0	0.0		
University education	10	6	10.0	4	6.7		
<b>Occupation</b>							
Work	6	4	6.7	2	3.3	7.619	0.006**
House wife	54	52	86.6	2	3.3		
<b>Residence</b>							
Rural area	54	52	86.6	2	3.3	7.619	0.006**
Urban area	6	4	6.7	2	3.3		
<b>Family history of viral hepatitis</b>							
Yes	14	12	20.0	2	3.3	1.704	0.192
No	46	44	73.4	2	3.3		

\* Statistically significant at  $p \leq 0.05$ ; \*\* Highly statistical significant at  $p \leq 0.01$

Table (5) reveals that, there was a statistically significant relation between the studied mothers' total practices level and their educational level, occupation and residence.

**Table (5): Correlation between total knowledge and total practice**

Total practice	Total knowledge	
	R	.675
P	0.000**	

\* Statistically significant at  $p \leq 0.05$ ; \*\* Highly statistical significant at  $p \leq 0.01$

Table (6) shows that, there was strong positive correlation between total knowledge and total practice level

### Discussion:

Hepatitis is a fiery state of the liver that can be self-limiting or lead to fibrosis, cirrhosis, or even carcinoma of the liver. Many viruses affect the liver resulting in transient and innocuous hepatitis. However, hepatotropic viruses are viruses which target the liver primarily, and each one of these can lead to clinically significant hepatitis and in some cases development to chronic viral hepatitis with viral persistence (Magalhães et al., 2019).

**In the present study, as regard Characteristics of studied mothers,** the current study revealed that, more than half of the studied mothers' age group was  $20 < 30$  years with mean $\pm$ SD  $30.72 \pm 7.31$ . This study was in agreement with Sheha et al., (2020) who carried out a study entitled "Effect of Educational Program on Mother's Knowledge and Practices Regarding Hepatitis C Virus in Rural Areas, El-fayoum, Egypt" and mentioned that more than half of the studied mothers' age group was with 18 years to 28 years with mean $\pm$ SD  $28.86 \pm 8.53$ . Also, this result was on the same line with Lisker-Melman et al., (2020) who conducted a study entitled "Maternal knowledge of the risk of vertical transmission and offspring acquisition of hepatitis B, North America" stated that more than half of the studied mothers' their age were  $18 < 30$  years.

The present study reported that, most of the studied mothers were married and half of them were illiterate. This finding was supported by Metawilly et al., (2022) in recent study titled "Mother's awareness about zero dose of hepatitis B vaccination for their new born baby at birth" and mentioned that all of the studied mothers' were married. Meanwhile, this study was on the same line with Fukuoka et al., (2022) in their study titled "The impact of treatment on the psychological burden of mothers of children with chronic hepatitis C virus infection" and stated that, one third of the studied mothers were not read and not write.

The current study represented that, most of the studied mothers were house wives and from rural areas. This result was in agreement with Amer et al., (2021) in their study titled "Effect of family empowerment nursing intervention on caregivers'

strains and health-related quality of life of children with hepatitis C" and reported that more than two thirds of the studied mothers were house wife. Meanwhile, this finding was in disagreement with Abaah et al., (2023) in their study titled "Physical and social wellbeing of family caregivers of children with hepatitis B associated chronic liver disease in Ghana" and found that less than half of the studied family caregivers were from rural areas. The present study revealed that, all of the studied mothers didn't get viral hepatitis during pregnancy. This result was agreed with Mpangah et al., (2022) in their study titled "Knowledge and treatment practices of hepatitis B infection in children among mothers in krachi districts in Ghana" and stated that more than three quarters of the studied mothers weren't get viral hepatitis during pregnancy. Meanwhile, this study was disagreed with Killard et al., (2021) in their study titled "Knowledge, attitude and practices among family caregivers of children with hepatitis B at Ndola teaching hospital" and mentioned that less than half of the studied mothers hadn't acquired hepatitis during pregnancy.

The current study reported that, more than three quarters of the studied mothers didn't had family history of viral hepatitis. This finding was similar to Hambridge et al., (2019) who conducted a study entitled "Hepatitis B mother-to-child transmission in the eastern region of Ghana" and represented that more than two thirds of the studied mothers didn't had family history for viral hepatitis. Meanwhile, this study was dissimilar to Gebrecherkos et al., (2020) who carried out a study entitled "Knowledge, attitude, and practices towards hepatitis B virus among pregnant mothers attending antenatal care at the University of Gondar comprehensive specialized hospital" and stated that slightly more than half of the studied mothers didn't had family member with viral hepatitis.

**Concerning Characteristics of the studied children,** the present study represented that, less than three quarters of the studied children age group was  $6 < 8$  years with mean $\pm$ SD  $7.00 \pm 1.38$ . This result was supported by Hassanin et al., (2021) in their study title "Burden of parasitic infection and its impact on growth of children with

hepatitis C virus” and mentioned that more than three fifth of the studied children’s age group from 6 to 10 years with mean±SD 7.43 ± 2.64. Meanwhile, this finding was disagreed with **Ibrahim et al., (2020)** who conducted a study entitled “Cognitive impairment in children with chronic hepatitis C virus” and stated that minority of the studied children’s age group less than 10 years with mean±SD 11.62 ± 3.38.

The current study revealed that, more than half of the studied children were males and less than two thirds of them were eat fast food and didn’t wash their hands after using the toilet. This study was on the same line with **Usman et al., (2022)** in their study titled “Outcome of treatment in children with chronic viral hepatitis C” and stated that more than half of the studied children were males. Also, this result was agreed with **Venkatesan, (2022)** in their study titled “New guidance for researching acute hepatitis in children” and mentioned that majority of the studied children eat fast food and had low personal hygiene are the main reasons for viral hepatitis.

The present study reported that, less than three quarters of the studied children wash their hands before and after eating and most of them shared their personal equipment with the members of the house. This finding was similar to **Cevik et al., (2022)** in their study titled “Acute hepatitis of unknown origin in children” and found that more than two thirds of the studied children were take care for their hand cleanliness before and after eating foods. Also, this study was agreed with **Wang et al., (2022)** in their study titled “Acute hepatitis of unknown aetiology among children around the world” and mentioned that the contributed factors of viral hepatitis among the children are fast food and sharing personal equipment as spoons.

**In relation to total mothers’ knowledge level**, the present study reported that, more than half of the studied mothers had unsatisfactory knowledge level. While, more than one third of them had satisfactory level of knowledge regarding viral hepatitis, in the researcher point of view, this could be related to that less than three quarter of the studied mothers reported that hadn’t have information about viral hepatitis.

This finding was supported by **Alotaibi et al., (2021)** in their study titled “Exploration of knowledge, attitude, and practices among mothers of children with viral hepatitis in Saudi Arabia” and found that more than three fifth of the studied mothers’ had unsatisfactory knowledge level regarding viral hepatitis. Also, this study was on the same line with **Giao et al., (2019)** who carried out a study entitled “Mothers’ misconceptions about hepatitis B disease and hepatitis B vaccine” and stated that majority of the studied mothers had unsatisfactory level of knowledge.

**Regarding relation between characteristics of studied mothers and their total knowledge**, the present study represented that, there was a statistically significant relation between the studied mothers’ total knowledge and their educational level and family history of viral hepatitis.

This result was similar to **Tu et al., (2022)** in their study titled “Analysis of knowledge, attitude and practices of mothers’ of children with hepatitis B in Jiangsu” and reported that there was a statistically significant difference between total knowledge of mothers and their educational level. Meanwhile, this study was dissimilar to **Rajamoorthy et al., (2019)** who carried out a study entitled “Knowledge and awareness of hepatitis B among mothers in Malaysia” and stated that there was no statistically significant relation between the studied mothers’ total knowledge and their family history for viral hepatitis.

**Concerning relation between characteristics of studied mothers and their total practices**, the current study revealed that, there was a statistically significant relation between the studied mothers’ total practices level and their educational level, occupation and residence.

This finding was on the same line with **Alotaibi et al., (2021)** in their study titled “Exploration of knowledge, attitude, and practices among mothers of children with viral hepatitis in Saudi Arabia” and found that there was a statistically significant difference between the studied mothers’ total practices and their educational level. Meanwhile, this result was in disagreement with **Sheha et al., (2020)** who carried out a study entitled “Effect of Educational Program on Mother's Knowledge and Practices Regarding Hepatitis C Virus in Rural Areas, El-fayoum, Egypt” and stated that there was no statistically significant difference between the studied mothers’ practices and their occupation and residence. hepatitis.

**Concerning correlation between total knowledge and total practices**, the current study found that, there was strong positive correlation between total knowledge and total practices level, in the researcher point of view, this might be related to that good knowledge lead to good practices and vice versa.

This result similar to **Sheha et al., (2020)** who carried out a study entitled “Effect of Educational Program on Mother's Knowledge and Practices Regarding Hepatitis C Virus in Rural Areas, El-fayoum, Egypt” and reported that there was positive correlation between total mothers’ knowledge and practices. Also, this study on the same line with **Mpangah et al., (2022)** in their study titled “Knowledge and treatment practices of hepatitis B infection in children among mothers in krachi districts in Ghana” and mentioned that there



was strong positive correlation between total knowledge and practices.

### Conclusion

The current study findings concluded that, more than the half of the studied mothers had unsatisfactory total level of knowledge and inadequate reported practice regarding care of their children suffering from hepatitis viruses. Also, there was a statistically significant difference between studied mothers' total level of knowledge and reported practices and their characteristics.

### Recommendations

**Based on the finding of the current study, these points are recommended:**

- Instruct mothers about healthy habits in diet and cleanliness to avoid any complication.
- Constantly training programs to increase awareness of mothers having children with hepatitis viruses to ensure enough knowledge and decrease complications that may occur to their children.
- A simplified, comprehensive and clarified arabic guided picture booklet about hepatitis viruses must be available in all child clinics for each newly admitted children diagnosed with hepatitis viruses and their mothers.
- Encouraging regular follow-up and regular investigations of children with hepatitis viruses for early detection of complications.
- Instruct mothers regarding the importance of their children screening for early detection of hepatitis viruses cases.
- Replication of the study on a large sample in other different setting is highly recommended to assess the needs of mothers who have children suffering from hepatitis viruses.

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