

Knowledge and Practice on Hepatobiliary Disease Among Mothers' of Under-Five Children in SGPGIMS Lucknow (UP)

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Abstract

Liver disease is a threat to the early childhood and increases the incidence of mortality among children. The present study aimed to understand the knowledge and practice of mothers about liver disease and its frequency in children and find association of knowledge score with selected demographic variables, correlate the knowledge and practice of the participants. Descriptive survey approach was used in this study. Mothers who brought their children with hepatobiliary diseases were the samples. Structured knowledge questionnaires and practice questionnaires were used for collecting the data from 60 samples that were selected by purposive sampling technique. On assessment it was found that 60 percent of the subjects had poor knowledge about the liver diseases and 66.7 percent had moderately adequate practice about the topic. As per chi-square values researcher concluded that there is no significant association of selected demographic characteristics with existing knowledge. Majority of the mothers did not possess knowledge regarding the hepatobiliary diseases. It is very important to provide adequate knowledge about liver diseases to the mothers of under-five children.

Chronic liver disease is an uncommon problem in infancy and early childhood and often presents a diagnostic difficulty due to atypical presentation and lack of experience. One of the goals of evaluating a liver function abnormalities is to quickly narrow the broad differential list of causes to prevent progressive liver disease. Some of the signs and symptoms of liver diseases in children resemble those of adult. But in children there is need of more specific diagnostic evaluation to differentiate the actual causes (Amel et al, 2012).

Friends, family, and healthcare workers often reassure parents that their infants' jaundice is normal, requires neither investigation nor treatment, and will resolve without adverse consequences. Unfortunately, misdiagnosis of liver disease like biliary atresia, cholydoctal cyst, hepatitis etc. as physiologic jaundice delays the identification of important liver disease and substantially impairs long-term health. In response to an observed pattern of late referral of infants, other disorders should be ruled out in infants presenting with jaundice that persists after 2 weeks of life. This is achieved by providing primary care physicians with criteria for early identification reinforcing the need to test for the condition at 2–3

weeks of age in jaundiced infants, and providing an approach to investigation (Saud et al, 2016).

It is important to check fractionated serum bilirubin levels in these patients and immediately refer the patients with conjugated hyper bilirubinaemia to a paediatric gastroenterologist for further evaluation. Conjugated hyperbilirubinaemia, pale stool or white stool and dark urine are the cardinal features of liver disease. Early recognition and a stepwise diagnostic evaluation of the infant are essential in successfully treating or managing the complications of the metabolic and infectious liver diseases of the infant and for surgically relieving obstruction in patients who have biliary atresia, and understanding the mothers' knowledge and practice about liver disease and its frequency in children.

Review of Literature

A prospective study of chronic liver diseases in infancy and pre-school children from August 1999 to July 2001 in the Iraqi gastroenterology centre Baghdad showed that the commonest courses of chronic liver diseases in infancy were extra hepatic bile duct disease (50%) and metabolic liver disease (37.5%). The most common causes in pre-school children were chronic virus B hepatitis and metabolic congenital liver disease (18.5%). Another descriptive study on 100 mothers about neonatal jaundice

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showed that knowledge of mothers related to neonatal jaundice was low (34%) although the beliefs of mothers related to neonatal jaundice were high (78%). There is a high significant relationship between mother's knowledge and their beliefs.

Burnham (2014) conducted an exploratory study on 13 focus group participants and provided 254 discrete comments. Emerging themes included: negative lifestyles/ behaviours, lack of chronic liver diseases (CLD) knowledge, negative attitudes/emotions, stigma and negativity, health insurance, inaccessible / high cost medical care, drug/alcohol abuse, and discriminately sharing CLD diagnoses. The participants' lack of CLD knowledge was a key factor in how patients perceived prevention, risks, causes, and treatment. These findings contribute to provide a benchmark for future, more extensive studies and interventions.

In a descriptive study by Allia Vaeza in Iran, the total participants were 59 women, 98.55 percent of the Baluch ethnicity, 83.05 percent of the mothers housewives; 72.88 percent of the neonates of the mothers questioned had neonatal jaundice within the first 28 days of birth; 58.67 percent of mothers knew that neonatal jaundice was a "sign of serious illness" and "could damage the brain"; 97.73 percent of neonates with jaundice within the first 28 days survived and 97.67 percent of the surviving babies had no abnormalities; 77.5 percent of mothers had given their neonate with jaundice antibiotics and other remedies or herbs.

The cross-sectional study by Nasrin Khalesi on 400 cases who delivered at Al-Ebne Abitaleb hospital in Zahedan-Iran during April and May 2016, showed that the mean knowledge score of mothers was 7.25 and SD 2.1 out of 21, the mean attitude and SD 18.5 and 3.7 out of 25. The mean behaviour score and standard deviation was 6.8 and 2.3 out of 10.5.

In another cross sectional descriptive study by Haq (2012) out of 1000 distributed questionnaires, 780 were returned with a response rate of 78.0 percent; 420 (53.8%) respondents were male with mean age of 32.76 ± 9.40 years; 208 (26.7%) had intermediate level of education and 354 (45.4%) were unemployed. Mean scores for knowledge, attitude and practice were 8.74 ± 2.7 , 3.72 ± 1.2 and 2.76 ± 1.1 respectively. Significant and positive linear correlations between knowledge-attitude ($r = 0.296$, $p < 0.01$) knowledge-practice ($r = 0.324$, $p < 0.01$) and attitude-practice ($r = 0.331$, $p < 0.01$) were observed. Area of residence (locality) was the only variable significantly associated with mean KAP of the study respondents. Extensive health educational campaign should be provided

to general population and especially to the residents of rural areas.

Need for study: The hepatic and hepatobiliary diseases are a common cause of morbidity and mortality in children. The term chronic liver disease implies a long standing irreversible change in the hepatic structure that may end in complications like cirrhosis leading to premature death. Liver biopsy histopathology by an expert and its correlation with laboratory investigations plays an important role in the diagnosis of CLD. The major cause of deaths in patients with CLD is the end-stage liver disease and the only way to prevent and treat these patients is by liver transplantation. Health care personnel like nurses need to be well aware about the common clinical symptoms of CLD, normal biochemical indicators especially in rural community.

To find the spectrum and magnitude of liver disorders in children, a descriptive study was conducted in Sher-i-Kashmir Institute of Medical Sciences, Srinagar India. The mean age of patients was 9.34 ± 4.8 years with a range of 1-18 years, chronic liver disease (50%), acute liver disease (31%), hydatid liver (7.5%), congenital hyperbilirubinemia (3%) and miscellaneous. Furthermore, same incidence happen from various places and there is lack of research study carried out by medical or para medical profession, hence, there is need to educate general population regarding incidence of liver diseases in children and its worsening (Jan et al, 2014).

Objectives

This study was undertaken with the following objectives:

1. To assess the knowledge and practice of subjects on hepatobiliary diseases.
2. To correlate the knowledge and practice of the participants.
3. To associate the level of knowledge of participants with selected demographic variables.

Methods

Study design and settings: This descriptive study was conducted among mothers who had less than five-year children with liver diseases, and attended the department of paediatrics, SGP GIMS, Lucknow. The mothers were selected using purposive sampling technique; 60 respondents were targeted for the study. The study was conducted from May 2016 to February 2017. Mothers of under-five children with liver diseases, who could read and write Hindi or English, were included. Mothers having reported illness

or stress, serious ill children were excluded from data collection.

Structured knowledge questionnaire, which was developed by the investigator and validated by experts in nursing, was used for collecting the data. The tool was divided into three parts.

Part 1: Demographic characteristics – This was designed to elicit the personal information and source of information on hepatobiliary diseases, consisting of 9 items.

Part II: Knowledge on hepatobiliary diseases - The participants were instructed to select the most appropriate answer for the question and place the tick mark against corresponding places. Three areas were general information & causes, signs & symptoms, prevention and treatment. Altogether there were 21 items with a maximum possible score of 21. The scoring was done arbitrarily and was classified as Poor knowledge (1-7), Moderate knowledge (8-15), Good knowledge (16-21). Cronbach's alpha was used to test reliability of structural knowledge questionnaires and the value was $r=0.862$.

Part III: Practice was assessed using practice questionnaires, which included Yes or No questions. A score of 1 was given for 'yes' response and 0 for 'no' response. The scoring was arbitrarily classified as inadequate practice (1-3); moderately adequate practice (4-6); Adequate practice (7-10).

The data was collected after obtaining administrative permission from concerned authority and written consent from the mothers of under-five children. The investigator collected data from mothers of under-five children. After collecting the data, a self-instructional module on liver disease and its prevention treatment and practices was given to create awareness among the mothers. The data was analysed by using statistical measurement and tabulated.

Results

Description of sample characteristics: The analysis of demographic variables of 60 mothers revealed (Table 1) that majority of mothers ($n=41$, 68.3%) belonged to the age group 21-25 years. Majority ($n=32$, 57%) of mothers had completed secondary school, 47 (78%) were housewives, majority ($n=38$, 63%) belonged to Hindu religion. Majority, 38 (63.3%) of mother with single child, the family's monthly income of 35 (58.3%) were Rs 1000-5000, 35 (58.3%) lived in nuclear family whereas 25 (41.7%) were from joint families.

Knowledge on regarding hepatobiliary diseases:

The finding related to knowledge of 60 mothers revealed that majority ($n=36$, 60%) of mothers had poor knowledge; 13 (21.3%) had good knowledge and 11 (18.3%) of mothers had moderate knowledge regarding hepatobiliary disease.

Chi-square test was computed to assess the association between the knowledge scores of mother and the selected variables. This showed no association between age (χ^2 - 11.737), Education (χ^2 - 4.640), Occupation (χ^2 - 2.162), Religion (χ^2 - 3.507), Number of children (χ^2 - 2.616), Family income (χ^2 - 5.207), Type of family (χ^2 - 1.220), lower than that of table values at significance level of 0.05. As a result, null hypothesis is accepted and concluded that the existing

Table 1: Distribution of sample characteristics in frequency and percentages (N=60)

Demographic variable	Frequency	Percentage
<i>Age of mother</i>		
a. Less than 20 years	6	10.0
b. 21-25 years	41	68.3
c. 26- 30 years	11	18.3
d. More than 30 years	2	3.3
<i>Education status of mother</i>		
a. Primary	6	10.0
b. Secondary	32	53.3
c. Graduation	19	31.7
d. Post-graduation and above	03	5.0
<i>Occupational status of mother</i>		
a. Government service	10	16.7
b. Private sector	47	78.3
c. House wife		
<i>Religion</i>		
a. Hindu	38	63.3
b. Muslim	13	21.7
c. Christian	9	15
<i>Number of children</i>		
a. No children	10	16.7
b. One child	38	63.3
c. Two child	9	15
d. More than two child	3	05
<i>Monthly income in Rupees</i>		
a. Rs. 1000-5000 per month	35	58.3
b. Rs. 5001-10000 per month	18	30.0
c. Above 10,000 per month	7	11.7
<i>Type of family</i>		
a. Nuclear family	35	58.3
b. Joint family	25	41.7

Table 2: Knowledge of mothers regarding hepatobiliary diseases (N=60)

Category of knowledge	Frequency	Percentage	Mean & Standard deviation
Poor	36	60.0	1.62 and 0.825
Moderate	11	18.3	
Good	13	21.7	

Table 3: Association between knowledge level of mothers and selected variables (N=60)

S. No	Socio-demographic variable	Knowledge			Df	Chi-square (χ^2)
		Poor	Moderate	Good		
1	<i>Age of mother</i>				6	11.737 Not Significant
	a. Less than 20 years	5	0	1		
	b. 21-25 years	26	9	6		
	c. 26- 30 years	5	2	4		
2	<i>Education status of mother</i>				6	4.640 Not Significant
	a. Primary	3	1	2		
	b. Secondary	21	6	5		
	c. Graduation	9	4	6		
3	<i>Occupational status of mother</i>				4	2.162 Not Significant
	a. Government service	3	0	0		
	b. Private sector	6	2	2		
	c. House wife	27	11	11		
4	<i>Religion</i>				4	3.507 Not Significant
	a. Hindu	21	9	8		
	b. Muslim	9	2	2		
	c. Christian	6	0	3		
5	<i>Number of children</i>				6	2.616 Not Significant
	a. No children	5	2	3		
	b. One child	23	7	8		
	c. Two child	7	1	1		
6	<i>Monthly income in Rupees</i>				4	5.207 Not Significant
	a. Rs. 1000-5000 per month	18	8	9		
	b. Rs. 5001-10000 per month	13	1	4		
	c. Above 10,000 per month	5	2	0		
7	<i>Type of family</i>				2	1.220 Not Significant
	a. Nuclear family	19	7	9		
	b. Joint family	17	4	4		

knowledge of subjects was not significantly associated with the selected demographic characteristics.

The finding related to knowledge of 60 mothers revealed that majority (n=40, 66.70%) of mothers had moderate adequate Practice, 13 (21.7%) of mothers had inadequate practice and 7 (11.7%) had adequate practice regarding hepatobiliary disease.

Relation between knowledge and practice scores: The relationship between knowledge and practice on hepatobiliary diseases was computed using Perarson's correlation coefficient. It showed that there was a significant positive correlation ($r=0.62$, $p<0.05$) between knowledge and practice regarding hepatobiliary diseases, which indicates that knowledge level increases practice also increased.

Chi-square test was computed (Table 2) to assess the association between the knowledge scores of

mother and the selected variables. This showed no association between age ($\chi^2 - 11.737$), education ($\chi^2-4.640$), occupation ($\chi^2-2.162$), religion ($\chi^2-3.507$), number of children ($\chi^2-2.616$), family income ($\chi^2-5.207$), type of family ($\chi^2 - 1.220$), lower than that of table values at significance level of 0.05. As a result, null hypothesis is accepted and concluded that the existing knowledge of subjects was not significantly associated with the selected demographic characteristics.

Discussion

Present study was conducted to assess mother's knowledge and practice regarding hepatobiliary diseases. Statically revealed that the knowledge level of majority of mothers (n=36, 60%) had poor knowledge, 13 (21.3%) of mothers had good knowledge and 11 (18.3%) of mothers had moderate knowledge regarding hepato-biliary disease. Health practice showed that 40 (66.7%) had poor; 13 (21.7%) had inadequate practice and 7 (11.7%) had adequate practice towards liver diseases.

Analysis of the association with demographic characteristics revealed that the calculated chi-square values at 0.05 level

of significance of the personal characteristics such as age, education, religion, occupation, type of family, family income, is lower than that of the table value, the hence research hypothesis can be rejected and researcher reached the conclusion that the existing knowledge of the samples was not significantly associated with the selected socio demographic variables of the sample. It is important to provide the adequate knowledge about common signs and symptoms of the liver diseases among children and pay medical attention. The importance of antenatal diagnosis, regular follow-up during post-natal period helps reduce the mortality and morbidity.

The data analysis using SPSS Version 20 brought out values of study variables: frequencies, percentages, standard deviation and mean of score; inferential statistical data analysis approach was used by application of the Chi-square test.

The study was supported and conducted by Hassan Saud Abdul Hussein in Holy Karbala City among 100 mothers, which showed that a high proportion (34%) of mothers had poor knowledge regarding neonatal jaundice, while the beliefs of mothers related to neonatal jaundice were high (78%).

Table 4: Practice of mothers regarding hepatobiliary diseases

S.No	Mother practice towards disease condition	f	%	Mean & SD
1	Inadequate practice	13	21.7	1.900 & 0.5734
	Moderate adequate practice	40	66.7	
	Adequate practice	7	11.7	

Most of samples were young mothers within age group 26-30 years old and most of them were intermediate school graduate, most of them housewives and most of the mothers (65%) living in urban areas. About 53 percent and 50 percent of mothers got information concerning neonatal jaundice from doctors and nurses respectively. The mothers' knowledge towards care of neonatal jaundice was low due to lack of educational programmes or mothers perceptions concerning jaundice disease.

The present study results are supported by a descriptive study conducted in Ayder Referral Hospital on March 2009 to May 2009 among health workers knowledge, attitude and perception towards jaundice in which only 4 percent of respondents selected correct answer; the health workers were fairly clear in some aspects of jaundice and had inadequate knowledge in other aspects of jaundice. Most of the health workers had positive perception towards modern medicine whereas poor knowledge about traditional medicine for the treatment of jaundice. The health workers need an education and training about jaundice to update their knowledge and other study at community level should be conducted to know more about traditional method of treating a jaundice (Alemu, 2011).

Implications

Nursing practice: Paediatric nurses should play a major role in providing information on knowledge and practice regarding liver diseases among the mothers. They can conduct regular health education session for mothers or caregivers regarding disease, treatment, prognosis and care at home.

Nursing education: Periodical health education programme should be conducted by the student nurses in hospitals, schools, and community. Periodically, conduct curriculum convection based on the needs of the society. Nurses need to take role as a motivator, facilitator, educator, counsellor and researcher. **Nursing administration:** The nurse administrator should formulate policies, protocols, guidelines and system of care in collaboration with the multi-disciplinary team. Nurse administrator ensures professional practice with evidence based research which is very effective. In-service education and clinical teaching programmes should be conducted to improve the knowledge of the police personnel. The nurse administrator should organise teaching programme to bring awareness. **Nursing research:** Considering the poor level of knowledge and moderate practices of mothers of under-five mothers, research needs to be conducted on liver diseases.

Recommendations

Based on the present study it is recommended that a similar study be undertaken on a large sample. Also, conduct a comparative study between institutional and non-institutional delivery, and an experimental study may be done to measures effectiveness of intervention.

Conclusion

This study showed that majority of the mothers blindly accepted the child's condition without having any knowledge. Besides, compulsory institutional delivery facilities for early detection and treatment is important for pathological jaundice and there should be provision for health education session for mothers with emphasis on importance of liver diseases. Also, anganawadi workers and nurses can perform vital role to reduce disability among the children. Due to low awareness about liver diseases, many children permanent disability. Developing country like India, there were only few tertiary unit having a pediatric gastroenterology department in public sector, hence, establish in various places based density of population.

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