

## Evaluation of Knowledge, Attitude, Practice about Neonatal Jaundice among the Pharmacy Students

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### ABSTRACT

A significant proportion of term and preterm infants develop neonatal jaundice. Jaundice in an otherwise healthy term infant is the most common reason for readmission to hospital. Jaundice is caused by an increase in serum bilirubin levels, largely as a result of breakdown of red blood cells. Bilirubin is conveyed in the blood as unconjugated bilirubin, largely bound to albumin. The liver converts bilirubin into a conjugated form which is excreted in the bile. Very high levels of unconjugated bilirubin are neurotoxic. The present study aimed to evaluate knowledge, attitude and practice of neonatal jaundice. The cross-sectional, questionnaire based survey was conducted among the pharmacy students. The questionnaire consist of four sections: demographic, knowledge, attitude, practice. There are 150 response are collected.

**RESULT:** In our study, out of 150 respondents 6.7% were male and 93.3% were female pharmacy students. Of all pharmacy students answering the questionnaire. [B.Pharm (58%), D.Pharm (24.7), Pharm.D (17.3%)]. We observed most of the students had a poor knowledge level (39.07%), positive attitudes (60.14%) and good practice level (65.06%).

**CONCLUSION:** This study showed that pharmacy students had less awareness of neonatal jaundice. So they need more awareness about neonatal jaundice. Periodic educational interventions can improve these parameter of jaundice. This study will bring awareness among the students towards neonatal jaundice.

**KEYWORDS:** Neonatal jaundice, Knowledge, Attitude, Practice, Pharmacy students.

### I. INTRODUCTION:

Neonatal jaundice is one of the most common clinical signs in newborn infants. Jaundice present as yellow discolouration of the skin and sclera in infants, indicating a raised serum bilirubin level leading to accumulation of bilirubin in the tissues, including the skin and mucous membranes. Jaundice is thought to be visible at bilirubin levels of around 90micro mol/litre in babies with pale skin tones. The detection of jaundice is more difficult in babies with dark skin tones, but the sclera are always white and inspection of the eyes is a crucial part of visual assessment of jaundice. Around 60% of the term and 80% of preterm infants develop jaundice in the first week of life and 10% of breastfed infants remain jaundice up to 1month of age. Jaundice was the most common reason for admission from home to neonatal unit in England for term infants.

Most infants who become jaundiced develop jaundice in the first week of life, and in the majority of cases it is mild and harmless. Breast-fed infants are more prone to develop physiological jaundice in the first week of life. The key challenge is to differentiate the rate baby with significant jaundice which might lead to bilirubin encephalopathy and kernicterus from the majority of babies in whom jaundice will be harmless. It is also essential to identify infants with conjugated hyperbilirubinaemia who have biliary atresia as early as possible to improve outcome. The outcome for babies with biliary atresia whose surgery is performed at less than 6 weeks of age is must better than in those whose surgery is delayed by late diagnosis.

The current national guideline in UK from the National Institute for Health and Care Excellence (NICE) (2016) recommends a review of all infants with risk factors for neonatal jaundice within the first 48 hours of life and assessment of serum bilirubin level in any infants with clinical jaundice.

**II. MATERIALS AND METHODS:**

The cross-sectional questionnaire based survey was conducted among the pharmacy students. The questionnaire consist four section: demographic, knowledge, attitude, practice towards Neonatal jaundice. The questionnaires consisted of questions include in previous studies that examined the knowledge, attitude, practice of pharmacy students. The questionnaire was comprised 30 questions. The questions were distributed as follows: 20 questions were related to knowledge, 5 questions related to attitude, 5

questions were related to practice. Five questions were included at the beginning of the survey to collect demographic data like age, gender, education status, occupation, place. The response to the questionnaire were analyzed by performing descriptive statistics. The study was conducted over a period of 3 months from September 2023 to November 2023. The responses to the questionnaire were analyzed by performing descriptive analysis.

**III. RESULTS:**

In our study, out of 150 respondents 6.7% were male and 93.3% were females pharmacy students. Of all pharmacy students answering the questionnaire, 58% were B.Pharm students, 24.7% were D.Pharm students, 17.3% were Pharm.D students. The average of all responding pharmacy students were 33.33%. There are listed in Table-1.

**Table-1: Demographical profile of sample (n=150)**

DEMOGRAPHICAL FACTORS	CATEGORIES	TOTAL (n=150)%
Age	17	68(45.3%)
	18	67(44.7%)
	19	9(6%)
	20-25	6(4%)
Gender	Male	10(6.7%)
	Female	140(93.3%)
Education status	B.pharm	87(58%)
	D.pharm	37(24.7%)
	Pharm.D	26(17.3%)
Place	Rural	106(70.7%)
	Urban	44(29.3%)

Among 150 students, 95(63.3%) of the students were aware on discovery on neonatal jaundice, 40(26.7%) of the students were aware on definition of neonatal jaundice, 14(9.3%) % of the students were aware on how long does jaundice

last in new born, all of the students were aware on the first symptom of the jaundice shows on the body, 7(4.7%) % of the students were aware on how fast can jaundice go away, 50(33.3%) of the students were aware on neonatal period, 18(12%)

of the students were aware on the body part which is mostly affected by neonatal jaundice, 16(10.7%) of the students were aware on the therapy used for neonatal jaundice, 6(4%) of the students were aware on the first test for jaundice, 123(82%) of the students were aware on the organ which is mostly affected by jaundice, 96(64%) of the students were aware on neonatal range of jaundice, 67(44.7%) of the students were aware on the time required for reduce bilirubin level after the phototherapy, 22(14.7%) of the students were aware on causes of jaundice, 12(8%) of the students were aware on the color of the stool in the

condition of jaundice, 112(74.7%) of the students were aware on the food which should avoided in the condition of jaundice, 39(26%) of the students were aware on the fastest way to cure neonatal jaundice, 88(58.7%) of the students were aware on indication of the neonatal jaundice, 73(48.7%) of the students were aware on derivative form of the jaundice, 43(28.7%) of the students were aware on manifesting of the hyperbilirubinemia as yellow in the body, 26(17.3%) of the students were aware on prevention of the infant’s eye by eye shield. There are listed in table-2

**Table-2: Responses of knowledge related questions.**

S NO.	KNOWLEDGE RELATED QUESTIONS	CORRECT RESPONSE <sub>n</sub> (%)	INCORRECT RESPONSE <sub>n</sub> (%)
1	Neonatal jaundice was discovered in	95(63.3%)	55(36.7%)
2	Neonatal jaundice is a	40(26.7%)	110(73.3%)
3	How long does jaundice last in new born	14(9.3%)	136(90.7%)
4	Where does jaundice show its first symptom	150(100%)	0(0%)
5	How fast can jaundice go away	7(4.7%)	143(95.3%)
6	Neonatal period considered as	50(33.3%)	100(66.7%)
7	Neonatal jaundice is mostly affected in	18(12%)	132(88%)
8	Which of the therapy is used to treat the neonatal jaundice	16(10.7%)	134(89.3%)
9	What is the first test for jaundice	6(4%)	144(96%)
10	Which organ is mostly affected by jaundice	123(82%)	27(18%)
11	Normal range of jaundice	96(64%)	54(36%)
12	Phototherapy reduce bilirubin within	67(44.7%)	83(55.3%)
13	Jaundice is caused due to	22(14.7%)	128(85.3%)
14	Which color of the stool is present in the jaundice condition	12(8%)	138(92%)
15	What foods should you avoid if you have jaundice	112(74.7%)	38(25.30%)
16	What is the fastest way to cure jaundice in neonatal	39(26%)	111(74%)
17	Neonatal jaundice is a common clinical sign that indicates	88(58.7%)	62(41.3%)
18	The term jaundice derived from french word of	73(48.7%)	77(51.3%)
19	Hyperbilirubinemia clinically manifesting as yellow in	43(28.7%)	107(71.3%)
20	Eye shield must be placed over the infants eyes to prevent	26(17.3%)	124(82.7%)

Among 150 students, 133(88.7%) of the students were accept that jaune is a French word of jaundice which means yellow, 75(50%) of the students were accept that neonatal jaundice affected 84% of new born at least 35 week of gestation, 73(48.7%) of the students were accept

that bilirubin is the end product of heme, 80(53.3%) of the students were accept that very high level of unconjugated bilirubin are neurotoxicity, 90(60%) of the students were accept that over dose of acetaminophen causes jaundice. There are listed in table-3.

**Table-3: Responses of attitude related questions.**

S.NO	ATTITUDE RELATED QUESTION	CORRECT RESPONSE n(%)	INCORRECT RESPONSE n(%)
1	Jaune is a french word of jaundice which means yellow	133(88.7%)	17(11.3%)
2	In a more recent study neonatal jaundice affected 84% of new born at least 35 week of gestation	75(50%)	75(50%)
3	Bilirubin is the end product of heme	73(48.7%)	77(51.3%)
4	Very high level of unconjugated bilirubin are neurotoxicity	80(53.3%)	70(46.7%)
5	Over does of acetaminophen causes jaundice	90(60%)	60(40%)

Among 150 students, 125(83.3%) of students were correctly responded on jaundices causes weight in baby, 98(65.3%) of students were correctly responded on vitamin D drops help to treat neonatal jaundice, 109(72.7%) of students were correctly responded on new born recover from

neonatal jaundice, 54(36%) of students were correctly responded on jaundice babies sleep longer period, 102(68%) of students were correctly responded on breast milk cure neonatal jaundice. There are listed in table-4.

**Table-4: Responses of practice related questions.**

S.NO	PRACTICE RELATED QUESTION	CORRECT RESPONSE n(%)	INCORRECT RESPONSE n(%)
1	Jaundice causes weight loss in baby	125(83.3%)	25(16.7%)
2	Vitamin D drops help to treat neonatal jaundice	98(65.3%)	82(34.7%)
3	New <u>borns</u> recover from neonatal jaundice	109(72.7%)	41(27.3%)
4	Jaundice babies sleep longer period	54(36%)	96(64%)
5	Breast milk cure neonatal jaundice	102(68%)	48(36%)

#### IV. DISCUSSION:

The present study was a questionnaire based study which include the pharmacy students about neonatal jaundice. The ultimate aim of this process is evaluate knowledge of student towards neonatal jaundice .This study shows that undergraduate pharmacy students as B.Pharm(58%),D.pharm(24.7%),and post graduate students as Pharm.D((17.3%). From our study, we observed most of the respondents had a poor knowledge level (39.07%) and a considerable proportion had a good knowledge level (60.93%). The term of attitudes and practices ,only 60.14% and 65.06% had positive attitude and practices respectively, while 39.86% and 44.94% had negative attitude and practices.

#### V. CONCLUSION:

This study showed that pharmacy students had average awareness of neonatal jaundice. It is necessary to improve the knowledge related to the neonatal jaundice. Periodic educational interventions can improve the knowledge. In our study most of the students have not correct answer of knowledge related questions. This study will bring awareness among the students towards neonatal jaundice.

#### Finding source:

No finding sources.

#### Conflict to interest:

There are no conflicts of interest.

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