

# Neonatal Jaundice: Knowledge, Attitude and Practice of Mothers in Gwoza Local Government Area of Borno State, North-Eastern Nigeria

Bello M<sup>1</sup>, Yahaya SJ<sup>2</sup>, Amodu Mary<sup>2</sup>, Sa'ad YM<sup>1</sup>, Simon Pius<sup>1</sup>

Department of Paediatrics, University of Maiduguri, Maiduguri, Nigeria.<sup>1</sup>

Department of Community Medicine, University of Maiduguri, Maiduguri, Nigeria.<sup>2</sup>

---

**Abstract:** To determine the knowledge, Attitude and Practice of mothers towards neonatal Jaundice in Gwoza local government area of Borno State. This cross-sectional study was conducted among 400 mothers who were identified using traditional birth attendants and immunization clinics. Interviewer administered structured questionnaire were administered, responses from respondents were recorded by ticking appropriate answers on the questionnaire. Data obtained was entered into a computer and analyzed using SPSS statistical analysis software version 16 of 2007 and descriptive analysis done. The age of the mothers ranged between 14 – 40 years with a mean of 27years. Most of the mothers are aware of neonatal jaundice with most of them getting awareness from friends and families (92.4%) with only a few admitting to getting knowledge from medical personnel (5.7%). Eighty six percent of the mothers agree to jaundice causing illness in the newborn, 16.1% admits that jaundice in early life is caused by evil spirits. Sixty seven percent of mothers in Gwoza community admit to taking their jaundiced babies to hospitals where as 19.4% resort to traditional medications with 13.2% of the mothers doing nothing to their jaundiced newborn. we conclude that knowledge gap exists among mothers of babies who had neonatal jaundice in Gwoza local government area and suggests incorporating health talk on neonatal jaundice during antenatal visits. Campaigns, both through the electronic media and religious gatherings in churches and mosques will go a long way in improving outcome of these jaundiced babies.

**Keywords:** Neonatal Jaundice, Attitude/Practice of mothers/Gwoza, North-Eastern Nigeria.

---

## I. INTRODUCTION

Neonatal jaundice is a common condition found in neonatal units the world over but more so in the developing world such as Nigeria.<sup>1-4</sup> It is a significant cause of neonatal morbidity and mortality world-wide and is estimated to be present in 60% of term and 80% of preterm babies.<sup>1,5</sup> Many cases of neonatal jaundice pass unnoticed or are identified late by mothers making them present to hospitals late.<sup>6-7</sup> This can lead to complications such as bilirubin encephalopathy and even death. Interventions to stop progression of neonatal jaundice will reduce the morbidity and mortality associated with this condition.<sup>6,8</sup> Since most of the mothers deliver at home assisted by traditional birth attendants, the ability of mothers to recognize neonatal jaundice early; becomes important so as to seek for therapy early.<sup>7</sup> We therefore document the knowledge; attitude and practice of mothers towards neonatal jaundice in Gwoza local government area of Borno State.

## II. METHODS

The study was conducted in Gwoza local government area of Borno State over a period of 6 weeks. The L.G.A lies in the South-Eastern part of Borno state between latitude 11 degrees and longitude 13.5 degree. The climate is dry between November and April, Cold from November to February with the harmattan period between December and January. The wet season begins in April and lasts for about 5 months with a rainfall of about 25 inches. Actual population is 312,200 based on the 2006 census.

The study design was cross sectional descriptive study aimed at assessing the knowledge, attitude and practice of mothers towards jaundice in neonates at Gwoza L.G.A of Borno State. The study was conducted among 400 mothers of neonates aged between 14-45 years who were identified using traditional birth attendants and immunization clinics. The tools for the study were an interviewer administered structured questionnaire. Responses from the respondents were recorded by ticking the appropriate answers on the questionnaire. In each of the wards selected by multistage sampling, questionnaires were administered to mothers who delivered in the last 4 weeks until all of such mothers were reached. Call backs were made thrice on occasions where respondents were unavailable until such mothers were attended to. In a village where there were no enough respondents, the excess questionnaires were transferred to another ward with excessive respondents.

The data obtained was entered into a computer and analyzed using SPSS statistical analysis software version 16 of 2007 and descriptive analysis done

## III. RESULTS

During the 6 weeks period of study, June – July 2011, a total of 400 questionnaires were administered to mothers of neonates in the 3 districts of Gwoza local government area, namely; Gwoza, Ngoshe and Kirawa. The responses were coded, analyzed and results presented below.

Table 1 shows the demographic characteristics of the respondents in the study area. A total of 400 questionnaires were administered to mothers of neonates. The diagnosis of neonatal jaundice was made based on the clinical description of the yellowish discoloration of the skin, sclera and mucous membrane seen during the first 28 days of life. The respondents were between the ages 14 to 40 years. The major ethnic group was Mandara having 122 (30.5%), followed by Glavda with 99 (24.8%). The religious affiliations in the community were predominantly Muslims consisting of 376 (94%) while the remaining were Christians. Other aspects of the socio-demographic characteristics are shown in table 1.

**Table 1**

### **SOCIODEMOGRAPHIC CHARACTERISTICS OF MOTHERS OF NEONATES STUDIED IN GWOZA LOCAL GOVERNMENT AREA**

<b>VARIABLES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
<b>AGE (YEARS)</b>		
<20	61	15.1
20 – 24	106	26.6
25 – 29	113	28.3
30 – 34	79	19.8
35 – 39	36	9.0
40 – 44	05	1.2
TOTAL	400	100

**TRIBE/ETHNIC GROUP**

Glavda	99	24.8
Waha	40	10.0
Guduf	42	10.5
Mafa	11	2.8
Matakam	09	2.2
Mandara	122	30.5
Wula	04	1.0
Others	73	18.2
TOTAL	400	100

**RELIGION**

Islam	376	94.0
Christianity	24	6.0
Others	0	0
TOTAL	400	100

**MARITAL STATUS**

Single	01	0.2
Married	390	97.5
Divorced	04	1.0
Widowed	05	1.2
TOTAL	400	400

**OCCUPATION**

Farming	40	10
Trading	80	20
Teaching	17	4.2
Nomadic	01	0.2
Others	262	65.3
TOTAL	400	100

**EDUCATIONAL STATUS**

None	94	23.5
Quranic	171	42.8
Primary	74	18.5
Secondary	48	12
Tertiary	13	3.2
TOTAL	400	100

**PARITY**

1-5	167	41.8
6-10	162	40.5
11 and above	71	17.7
TOTAL	400	100

**Table 2****PREVALENCE OF NEONATAL JAUNDICE IN GWOZA LOCAL GOVERNMENT AREA OF BORNO STATE**

NEONATAL JAUNDICE	FREQUENCY	PERCENTAGE
Present	28	26.4
Absent	59	55.7
Did not pay attention	19	17.9
<b>TOTAL</b>	<b>106</b>	<b>100</b>

Table 2 shows the prevalence of neonatal jaundice in this study as 28 (26.4%). Fifty nine (55.7%) of the mothers do not have jaundice appearing in their present child. The remaining 19 (17.9%) of the mothers did not really pay attention to discover jaundice.

**Table 3****AWARENESS OF NEONATAL JAUNDICE AMONG MOTHERS OF NEONATES STUDIED IN GWOZA LOCAL GOVERNMENT AREA**

AWARENESS/SOURCE OF INFORMATION	FREQUENCY	PERCENTAGE
<b>AWARENESS</b>		
Yes	106	26.5
No	294	73.2
<b>TOTAL</b>	<b>400</b>	<b>100</b>
<b>SOURCE OF INFORMATION</b>		
Media	02	1.9
Friends	63	59.4
Family	35	33.0
Medical personnel	06	5.7
<b>TOTAL</b>	<b>106</b>	<b>100</b>

Table 3 summarises the level of awareness of mothers to neonatal jaundice. One hundred and six (26.5%) of the 400 mothers interviewed were aware of neonatal jaundice while 294 (73.2%) of respondents had never heard about jaundice occurring in neonates. Majority of those aware of the disease got such information through friends and family members 63 (59.4% and 35 (33.0%) respectively. Television which is an important source of information is not available in many homes and even if available, inadequate power supply may pose another hindrance.

**Table 4****KNOWLEDGE OF COMPLICATION OF NEONATAL JAUNDICE AMONG MOTHERS OF NEONATES STUDIED IN GWOZA LOCAL GOVERNMENT AREA**

KNOWLEDGE OF COMPLICATIONS	FREQUENCY	PERCENTAGE
Knows One	13	12.2
Know Two	15	14.2
Know Three	17	16.0
Knows All	21	19.8
Does not Know Any	40	37.8
<b>TOTAL</b>	<b>106</b>	<b>100</b>

Table 4 assesses the knowledge of the following complications; excessive sleeping, poor feeding, body stiffness and convulsions. A total of 13 (12.2%) knew about one complication, 15 (14.2%) knew about 2 complications and 17 (16.0%) knew about 3 complications. Mothers who knew about all the 4 complications were 21 (19.8%) where as 40 (37.8%) did not know any of such complications. (chi-square/P value).

**Table 5**

**ATTITUDE OF MOTHERS WITH NEONATES TOWARDS NEONATAL JAUNDICE IN GWOZA LOCAL GOVERNMENT AREA**

	<b>A</b>	<b>I</b>	<b>D</b>
Attending ANC helps prevent jaundice in newborn	84 (79.2%)	16 (15.1%)	6 (5.7%)
Jaundice in early life has effect on newborn	91 (85.9%)	12 (11.3%)	3 (2.8%)
Jaundice in early life can be treated in hospital	94 (88.7%)	09 (8.5%)	3 (2.8%)
Jaundice in early life is caused by evil spirits	17 (16.1%)	47 (44.3%)	42 (39.6%)
Jaundice appearing in early life runs in families	48 (45.3%)	41 (38.7%)	17 (16%)
Exposing the baby to sunlight can help treat Jaundice in early life	23 (21.7%)	65 (61.3%)	18 (17%)
Jaundice in early life is not a problem to worry about	15 (14.2%)	05 (0.5%)	86 (81.3%)
Delivery before 9 months is a cause of this disease	39 (36.8%)	56 (52.8%)	11 (10.4%)

**ANC = Antenatal care, A = Agree, I =Indifferent, D = Disagree**

Table 5 indicates the idea the mothers have about neonatal jaundice. It was found that 84 (79.2%) of them agreed that attending antenatal care helps prevent jaundice in newborn, 16 (15.1%) were indifferent while 6 (5.7%) disagreed. A total of 91 (85.9%) agreed that jaundice in early life has effect on newborn, 12 (11.3%) were indifferent while 3 (2.8%) disagreed. Other aspects of mothers attitude towards neonatal jaundice is as shown in Table 4

**Table 6**

**COMMUNITY PRACTICE TOWARDS NEONATAL JAUNDICE IN GWOZA LOCAL GOVERNMENT AREA**

<b>COMMUNITY PRACTICE</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Taken to hospital	71	67.0
Given traditional medications	21	19.4
Do not know	14	13.2
<b>TOTAL</b>	<b>106</b>	<b>100</b>

Table 6 revealed that a good number of women who knew about neonatal jaundice 71 (67.0%) believed that it could be treated in the hospital while 21 (19.8%) have the opinion that traditional medications could be given. The remaining respondents 14 (13.2%) were unaware of the treatments to be offered though some believed that it clears on its own without any intervention.

#### IV. DISCUSSION

The present study revealed a low prevalence of neonatal jaundice in Gwoza local government area. Most of the mothers attested to absence of jaundice or did not pay attention to the presence or absence of neonatal jaundice.

For the level of awareness of neonatal jaundice by mothers, a large percentage of mothers (73.2%) are not aware of neonatal jaundice, only a small percentage (26.5%) had awareness on neonatal jaundice with most of them having heard about it from friends and family with only a few 5.7% and 1.9% having had awareness from medical personnel and the media. This is not acceptable in this century. This may be explained by paucity of both print and electronic media and the absence of light in such localities. There is the need for more health education campaign through the electronic media and by health personnel in health centres.

The health implications of neonatal jaundice relates to the neurotoxic effects of unconjugated hyperbilirubinaemia as severely affected babies develop brain damage with attendant morbidity and or even mortality.<sup>1</sup> The mothers in this study demonstrated a fairly adequate awareness of some complications of severe neonatal jaundice. There is however, a need to reinforce this knowledge so that mothers can bring in such jaundiced babies to health facilities early to prevent these complications.<sup>2, 8</sup>

Regarding the attitude of mothers and the community towards neonatal jaundice, a large percentage of the community believes that neonatal jaundice can be treated in hospitals with only a few believing in traditional medications or not knowing what to do. Most of the mothers demonstrated a fairly good attitude towards neonatal jaundice, many believing that attending antenatal care will help in preventing neonatal jaundice. This is in agreement with reports from other studies.<sup>2, 7</sup> Many mothers also believe that neonatal jaundice can be treated in hospitals and can affect the new born early in life. However, some of the attitude of mothers such as the believe that jaundice is caused by evil spirits and that exposure to sunlight can help treat jaundice needs to be dispelled as these can prevent them bringing their babies early to the hospital until such a time when complications sets in.

#### V. CONCLUSIONS

We conclude that some knowledge gaps exist among mothers of babies who had neonatal jaundice in Gwoza local government area. Their attitude and practices towards neonatal jaundice is also not optimal.

We recommend that knowledge about neonatal jaundice should be incorporated into the health talk during antenatal visits. Campaigns, both through the electronic media and religious gatherings in Churches, Mosques will go a long way in bridging gaps in knowledge and improve outcome in these jaundiced babies.

#### REFERENCES

1. Berrman RE, Kliegman RM, Jenson HB, editors, Nelson Textbook of Paediatrics, 16<sup>th</sup> ed. Philadelphia: Saunders; 2005.P. 511-28
2. BA Egube, AN Ofili, AR Isara, JU Onakewhor. Neonatal jaundice and its management: Knowledge, attitude, and practice among expectant mothers attending antenatal clinic at University of Benin Teaching Hospital, Benin City, Nigeria. Nigerian Journal of Clinical Practice. Apr-Jun 2013. Vol 16; 2:188 – 194
3. Olusoga B Ogunfowora and Olusoji Daniel. Neonatal jaundice and its management: knowledge, attitude and practice of community health workers in Nigeria. BMC Public Health 2006, 6:19
4. Ogunfowora OB, Adefuye PO, Fetuga MB. What do expectant mothers know about neonatal jaundice? International Electronic Journal of Health Education 2006;9:134-40
5. Margaret Brethauer MSN, RN, Lynn Carey PhD, RN. Maternal Experience with Neonatal Jaundice. The American Journal of Maternal/Child Nursing, 2010,35:1; 8-14
6. Nasrin Khalesi, Fatemeh Rakhshani. Knowledge, attitude and behavior of mothers on neonatal jaundice. JPMA.org.pk/full\_article\_text.php?article\_id=1567
7. BKNR Rodrigo, Gayan Cooray. The knowledge, attitude & behavior on neonatal jaundice of postnatal mothers in Provincial General Hospital, Badulla. Sri Lanka Journal of Child Health, 2011; 40(4): 164-168
8. Amirshaghghi A, Ghabili K, Shoja MM, Kooshavar H. Neonatal jaundice: knowledge and practice of Iranian mothers with icteric newborns. Pak J Biol Sci, 2008 Mar 15; 11 (6):942-5
9. NY Boo, FRCP, CY Gyan, YW Gian, KSL Lim, MW Lim, H Krishna-Kumar, MRCOG. Malaysian Mothers' Knowledge & Practices on Care of Neonatal Jaundice. Med J Malaysia 2011, 66(3); 239-243.