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## A Descriptive study to assess the level of knowledge on neonatal infection among postnatal mothers

**Muthulakshmi C and Keerthiga K**

### Abstract

The neonatal stage in the first month of life; the neonatal period is the first 4 week of a Childs life. Infections of neonatal during neonatal period are called as neonatal infections. Neonatal infections are the most common cause of neonatal mortality. The present aim of the study was to access the knowledge regarding neonatal infection among postnatal mothers who were admitted in the postnatal ward at saveetha medical college and hospital. A quantitative approach with descriptive research design was adopted for the present study. 60 postnatal mother among which (n = 60) were selected by using non-probability purposive sampling technique. A self –structured method questionnaire was used to collect both the demographic data and the existing level of knowledge on neonatal infection among postnatal mothers. Among 60 study participants, the mean score on existing level of knowledge on neonatal infection among postnatal mothers was found to be 6.13 with standard deviation 2.07 hence the findings of present study conducted that, postnatal mothers had an inadequate level of knowledge on neonatal infection.

**Keywords:** neonatal infection, knowledge, postnatal mother

### Introduction

The term “neonatal infections” during this background paper includes all infections apart from diarrhoeal diseases and neonatal tetanus. Among the infections, sepsis and pneumonia account for the bulk of the burden. Neonatal sepsis may be a blood infection which will be caused by variety of various bacteria, including *Escherichia coli* (*E. coli*), *Listeria*, and certain strains of *Streptococcus*. *Streptococcus agalactiae* (Group B *Streptococcus*, GBS) is that the commonest explanation for neonatal sepsis in many countries, though lower rates are reported from many low-income countries particularly in South Asia. Early-onset neonatal sepsis is seen within the primary seven days of life and most frequently appears within 24 hours of birth where the baby is infected from the mother before or during the delivery. Preterm delivery, rupture of membranes longer than 24 hours before birth, infection of the placental tissue and amniotic fluid (chorioamnionitis), and B *Streptococcus* infection during pregnancy increases an infant’s risk of early-onset sepsis. Late-onset neonatal sepsis occurs after day eight of life and is acquired after delivery. Having a catheter during a vessel and/or staying within the hospital for an extended period of your time increases an infant’s risk of sepsis after delivery <sup>[1]</sup>.

Neonatal mortality is increasingly recognized as a crucial global public health challenge that has got to be addressed if we are to scale back child health disparities between rich and poor countries. Quite one-third are estimated to flow from to severe infections, and 1 / 4 are thanks to the clinical syndrome of neonatal sepsis/pneumonia. Case fatality rates for neonatal infections remain high among both hospitalized new-borns and people within the community <sup>[2]</sup>.

Neonatal sepsis continues to be a crucial explanation for morbidity and mortality worldwide thanks to the shortage of adequate preventive and therapeutic strategies in low income settings and thanks to the increased survival of preterm and low-weight new-borns with lengthy stays in NICUs in high-income countries <sup>[3]</sup>.

Globally, 4 million new-born die per annum before they reach the age of 1 month. Out of them 1.5 million new born die in 4 countries of south Asian including Nepal. Neonatal infections currently cause about 1.6 million deaths annually in developing countries. Consistent with World Health Organization (WHO, 2009) estimates, there are about 5 million neonatal deaths a year, 98% occurring in developing countries. Infection, prematurity, and birth asphyxia a are the most causes <sup>[3]</sup>.

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and mortality among neonates in developing countries accounting for 30-50% of total deaths annually. Childhood mortality is usually used as broad indicator of the social development or a selected indicator of health conditions of a rustic [4].

Neonatal sepsis may be an explanation for high mortality and morbidity albeit the antibiotic was administered correctly. It's divided in early onset sepsis that's present within the first week of life and therefore the late onset sepsis from day 7 to twenty-eight days of life. The EOS is related to vertical transmission and therefore the commonest source of infection is that the vaginal bacteria flora from the mother [5].

Neonatal sepsis is defined as a clinical syndrome in an infant 28 days of life or younger, manifested by systemic signs of infection and isolation of a bacterial pathogen from the blood stream. Diagnosis and treatment of sepsis may be a great challenge facing neonatologists in NICUs [6].

Neonatal sepsis still remains the highest three causes for neonatal morbidity and mortality globally also as in Bhutan. NM constitutes 70% of IMR. The main causes of NM are prematurity (38%), neonatal infection (31%), and congenital malformations (16%). There are not any comprehensive researches done thus far to review the status of neonatal sepsis in Bhutan [7].

In 2018 the worldwide death rate was 18 per 1000 live births, accounting for two .5 million neonatal deaths. This represents approximately 7000 neonatal deaths a day. Among the under-five mortalities, quite two – fifth of deaths occur during the time of life and one third of those neonatal deaths are thanks to infection [8].

The established Integrated Management of Neonatal and Childhood Illness (IMNCI) about neonatal sepsis is clinical features, includes the presence of two or more of persistent fever, (> 37.5) degree C or persistent hypothermia (60 per min), severe chest in drawing, grunting, not feeding well, movement only stimulated, bulged fontanel, convulsion, lethargic or unconsciousness alongside >2 of the haematological criteria like total leukocyte count, absolute neutrophil count, platelet count, and random blood glucose were wont to diagnose neonatal sepsis cases [9].

Neonatal infection occurs as early or late infections. Their timing gives clues for determining causative agents [10]. Sepsis defined as life- threatening organ dysfunction resulting from dysregulated host response to infection, affects over 25 million children per annum, causing an estimated 3 million deaths in neonates, children and adolescents globally [11].

The purpose of the study [1] to assess the knowledge regarding neonatal infection among postnatal mothers and [2] to find out the association between the existing level of knowledge on neonatal infection among postnatal mothers

with their selected demographic variables.

## Methods and Materials

The quantitative approach with descriptive research design was adopted for the present study. After obtaining ethical clearance from the Institutional Ethical Committee (IEC) of Saveetha Institute of Medical And Technical Sciences and a formal permission from the department head of Obstetrics and Gynaecology Unit, the study was conducted. A total of 60 postnatal mothers who are admitted in postnatal ward (n=60) and the postnatal mothers who met the inclusion criteria were selected as the study participants by using non probability purposive sampling technique. The inclusion criteria for the study participants were the postnatal mothers between the age group of 20- 35 years, who are willing to participate and able to read, write and understand Tamil and English. The exclusion criteria for the study participants were postnatal mothers who are not able to read Tamil and English. The purpose of the study was explained by the investigator to each of the study participant and a written informed consent was obtained before collecting the data. The demographic data and the current level of knowledge was collected was obtained from them. The demographic data and the existing level of knowledge was collected by using the self-structured questionnaire and the collected data were tabulated and analysed by using descriptive and inferential statistics.

## Results and Discussion

### Section A: Demographic Characteristics

Among 60 study participants, 29(48.3%) were aged between 25 – 29 years, 35(58.3%) were Hindus, 21(35%) were housewives, 31(51.77%) were degree holders, 48(80%) belonged to nuclear family, 22(36.7%) had a family income of Rs.5000 to 10000 per month, 34(56.6%) had two children, 47(78.4%) were both vegetarian and non-vegetarian and 20(33.3%) received information through television.

### Section-B: Assessment of level of knowledge on neonatal infection among postnatal mothers

The assessment of level of knowledge on neonatal infection among postnatal mothers revealed that 58(96.67%) had inadequate knowledge and 2(3.33%) had moderate knowledge, respectively [Table 1 and Figure 1].

**Table 1:** Frequency and percentage distribution of demographic variables of postnatal mothers. N = 60

Level of Knowledge	No.	%
Inadequate (0 - 10)	58	96.67
Moderate (11 – 15)	2	3.33
Adequate (16 – 20)	-	-

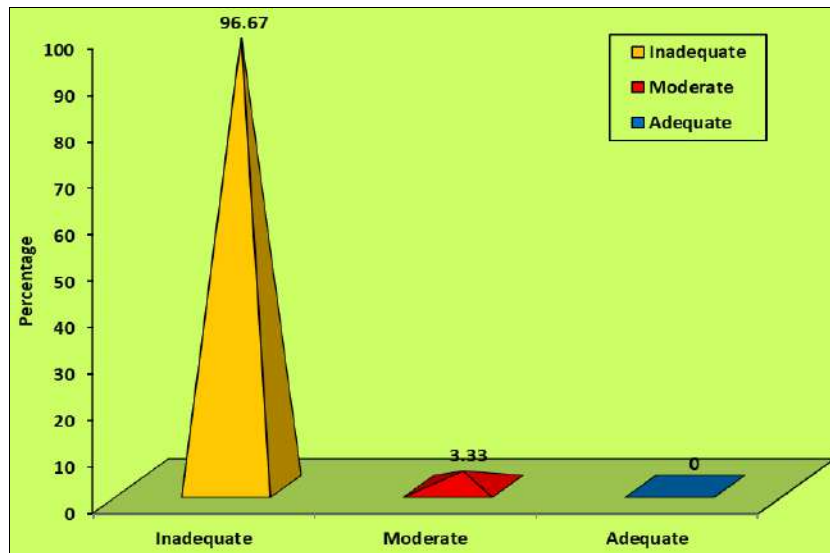


Fig: Level of Knowledge

The present study findings is supported by Jimba Jatsho, 1 Sep (2020) [7] was conducted to assess clinical and bacteriological profile of Neonatal sepsis among the neonates. The results concluded that, out of 2313 samples on that 321 have criteria for clinical sepsis. Majority (66%) were early – onset, culture negative sepsis.

This finding was supported by Kareem Jamal Hamad 30 June (2019) was conducted to assessment of knowledge of neonatal jaundice among mothers attending maternal and Pediatric hospital. The results concluded that, out of 100 samples 88% had poor knowledge of neonatal jaundice.

**Section C: Association of level of knowledge on neonatal infection among postnatal mothers with selected demographic variables**

**Table 2:** Assessment of knowledge scores on neonatal infection among postnatal mothers. N = 60

Knowledge	Mean
Minimum Score	1.0
Maximum Score	13.0
Mean	6.13
Standard Deviation	2.07

For the present study, the mean score of knowledge scores on neonatal infection among postnatal mothers was 6.13 with standard deviation 2.07 with minimum score of 1.0 and maximum score of 13.0

**Conclusion**

Thus the findings of the present study revealed that, the existing level of knowledge on neonatal infection among postnatal mothers was average and there is a need to improve the knowledge about neonatal infection through pamphlet distribution and create awareness by conducting health education programmes.

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**Conflict of interest**

Author’s declare no conflict of interest.

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