

Research Article

Effectiveness of an Awareness Programme on Knowledge of Postnatal Mothers regarding Management of Selected Minor Disorders of Neonates in Postnatal Wards of Maternity Hospital, SKIMS, Soura, Srinagar

Nasir Ahmad¹, Zareefa Bano², Aisha Akhter³, Munira Kachroo⁴, Haseena Naz⁵,
Adil Ahmad⁶, Farzana Batool⁷, Yasmeena Hassan⁸, Nusrat Nabi⁹

^{1,5,6,7,8,9}MSc Student, ²Assistant Professor and Guide, ³Assistant Professor and Co-guide, ⁴Principal, Mader-e-Meharban Institute of Nursing Sciences and Research, SKIMS, Soura, Srinagar, Jammu and Kashmir, India.

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Corresponding Author:

Nasir Ahmad, Mader-e-Meharban Institute of Nursing Sciences and Research, SKIMS, Soura, Srinagar, Jammu and Kashmir, India.

E-mail Id:

nasir.k1111@gmail.com

Orcid Id:

<https://orcid.org/0009-0007-8815-8820>

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A B S T R A C T

Background: After birth, the health of a baby depends on the healthcare measures adopted by the family, particularly by the mother. Raising awareness about minor neonatal problems and neonatal care practices mainly contributes to the reduction of neonatal morbidity and mortality. The aim of this study was to assess the knowledge of postnatal mothers regarding the management of minor illnesses in their neonates and evaluate the effectiveness of the awareness programme in increasing their knowledge.

Methodology: A quantitative research approach was used with a pre-experimental one-group pre-test post-test design. 55 mothers were selected by non-probability convenience sampling method and their knowledge was assessed using a self-structured interview schedule.

Results: On pre-test, out of 55 study subjects, majority (87.3%) were found to possess inadequate knowledge, only 12.7% were found to have moderate knowledge, and none had adequate knowledge. On post-test, majority (87.3%) of study subjects were equipped with adequate knowledge, only 12.7% had moderate knowledge and none had inadequate knowledge. The mean post-test knowledge score of the study subjects was significantly higher than the mean pre-test knowledge score at 0.05 level of significance.

Conclusion: Majority of the study subjects had inadequate knowledge regarding the management of selected minor disorders of neonates which indicated that they need awareness in this regard to take care of their neonates.

Keywords: Knowledge, Minor Disorders of Neonates, Management, Postnatal Mothers, Awareness Programme

Introduction

The neonatal period is the most crucial time for a child's survival, as it is the time of extensive and ongoing system transitions from the uterine environment to the external world.¹ A mother, being the primary observer of a baby, most frequently becomes worried due to minor physical and physiological peculiarities in her baby. For every mother, the first priority is to protect the baby from sickness and to deal with any signs of sickness promptly. One of the most difficult tasks is to find the balance between allowing the sickness to take the natural course or rushing to a doctor every time for minor issues. Therefore adequate knowledge among mothers is important to prevent the disorders of neonates, with early detection and management of minor disorders in neonates by seeking appropriate and timely services to prevent complications and reduce neonatal morbidity and mortality. The study aimed to assess the effectiveness of an awareness programme on the knowledge of postnatal mothers regarding the management of selected minor disorders of neonates.²

A neonate is said to be healthy when the neonate meets all the physical, physiological, intellectual, psychological and social requirements appropriate to their growth and development. The neonatal period is the time of the initial 28 days of life. The first seven-day period is known as the early neonatal period. The late neonatal period reaches out from the seventh to the 28th day. The physical and mental prosperity of an individual relies upon the right management of events in the perinatal period. It is the most vulnerable time for a child's survival as it exhibits a series of extensive and ongoing system transitions from the uterine environment to the external world.³

As per the United Nations International Children's Emergency Fund (UNICEF), the global number of neonatal deaths for the year 1990 was 5 million which was reduced to 2.4 million in 2019. In 1990, the global neonatal mortality was 37 per 1000 live births which reduced to 21.7 per 1000 live births in 2019. Europe and Northern America have the lowest neonatal mortality rates while in Sub-Saharan Africa, it is the highest.⁴ India recorded 0.75 million neonatal deaths in 2013, the highest number for any country in the world. Every year 25 million children are born in India which is one-fifth of the world's total annual childbirths.² Every minute one of these babies dies due to prematurity, infection, birth asphyxia, congenital malformations or poor feeding practices. Nearly 40% of neonatal deaths occur during labour or within the first 24 hours of birth, 35% of neonates die due to prematurity, 33% due to neonatal infections, 20% due to birth asphyxia, and 9% due to congenital malformations. Nearly 3.5 million babies in India are born premature, 1.7 million are born with birth defects and one million babies are discharged each year

from special neonatal care units (SNCUs). These neonates have a high risk of death, stunting and developmental delay thus contributing to neonatal mortality.³ Mumbai-based International Institute for Population Sciences conducted National Family Health Survey (NFHS-5) and released a report showing marked improvement in key maternal and child health indicators for Jammu and Kashmir, with a reduction in neonatal mortality by 22 points from 32.9 to 9.8, infant mortality reduced 16 points from 32.4 to 16.3, and under 5 mortality rate saw a decrease of 19 points from 37.6 to 18.5.⁵

Neonatal health problems are frequently found ranging from minor physical or physiological peculiarities to serious life-threatening illnesses. Minor problems cannot be ignored without proper assessment. Early diagnosis and prompt management of serious problems help to overcome life-long disability, neonatal morbidity and mortality.⁶ World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) jointly launched Every Newborn Action Plan (ENAP), a road map to reduce neonatal deaths due to preventable causes. ENAP recommended raising awareness among mothers about preventable minor neonatal disorders. There are various disorders a child can suffer at anytime, especially in the neonatal period. Some require just awareness regarding their management as they subside on their own. Some demand simple management which can even be done at home, while others require doctor's consultation or medical and nursing interventions. A mother must be fully aware of the management of minor neonatal disorders otherwise she would get worried about her neonate which in turn will affect her neonate adversely.^{7,8}

Joseph et al.⁹ conducted a descriptive study in a selected hospital in Mangalore among 95 postnatal mothers selected by purposive sampling technique. The study aimed to assess the knowledge of postnatal mothers regarding selected minor disorders of neonates. The results revealed that the maximum number (51.6%) of postnatal mothers had poor knowledge, only 30.6% of postnatal mothers had average knowledge, about 15.7% had good knowledge, and very few (2.1%) had excellent knowledge regarding selected minor neonatal disorders. Researchers in this study came to the conclusion that there exists a statistically non-significant association of knowledge scores of study subjects with their selected demographic variables (age, educational status, occupation, place of residence and type of family).

The Neonatal Mortality Rate is not uniform across the country. Although Kerala and Tamil Nadu have low Neonatal Mortality Rates (less than 20 per 1000 live births), Odisha, Madhya Pradesh, and Uttar Pradesh lead in front with high Neonatal Mortality Rates (more than 35 per 1000 live births). The neglected nutritional health and health

education of girl children or mothers are the fundamental reasons for the adverse state of perinatal health in the country.¹⁰

The aforementioned facts revealed that education among mothers is an important aspect to prevent neonatal disorders and to limit their complications through timely management and prevention of lifelong disabilities. The investigator came to the conclusion that awareness programmes for mothers need to be conducted regarding common minor neonatal disorders like vomiting, diarrhoea, napkin rashes, cradle cap, physiological jaundice etc. The awareness programme could be more effective as postnatal mothers are eager to know about neonatal care. The researcher believed that postnatal mothers should possess adequate knowledge regarding the management of selected minor disorders of neonates to reduce neonatal mortality and morbidity due to preventable causes.

Objectives

- To assess the pre-test knowledge of postnatal mothers regarding the management of selected minor disorders of neonates
- To assess the post-test knowledge of postnatal mothers regarding the management of selected minor disorders of neonates
- To evaluate the effectiveness of the awareness programme on the knowledge of postnatal mothers regarding the management of selected minor disorders of neonates by comparing pre-test and post-test knowledge scores
- To find out the association of pre-test knowledge scores of postnatal mothers regarding the management of selected minor disorders of neonates with their selected demographic variables (age, educational qualification, occupation, type of family, parity, and place of residence)

Methodology

A quantitative research approach was adopted and knowledge regarding the management of selected minor neonatal disorders was assessed by a self-structured interview schedule.

Research Design

Pre-experimental one-group pre-test post-test design was used to assess the effectiveness of the awareness programme on the knowledge of postnatal mothers regarding selected minor disorders of neonates. The study was conducted at Maternity Hospital, SKIMS, Soura, Srinagar on 55 postnatal mothers, selected through non-probability convenience sampling technique from 19 Sep 2022 to 4 Oct 2022. Ethical approval for the study was obtained from the Institutional Ethics Committee, SKIMS, Soura

and informed consent was obtained from all participants before starting the study.

Inclusion Criteria

Postnatal mothers who fulfilled the following criteria were included in the study:

- Admitted to postnatal wards of Maternity Hospital, SKIMS, Soura Srinagar
- Undergone caesarean section at Maternity Hospital, SKIMS, Soura, Srinagar during the data collection period
- Interested to participate in the study

Exclusion Criteria

The following postnatal mothers were excluded from the study:

- Admitted in wards other than postnatal wards of Maternity Hospital, SKIMS, Soura, Srinagar
- Delivered their babies via normal vaginal deliveries
- Not interested to participate in the study

Development of the Tool

The developed awareness programme (intervention) comprised literature related to the definition, causes, clinical manifestations, diagnosis, prevention and management of selected minor neonatal disorders. After content validity and modification of the tool, a self-structured interview schedule was developed for the selected minor disorders of neonates. Test re-test, Karl Pearson's coefficient correlation was used to calculate reliability. Reliability was found as $r = 0.92$ which indicated that the tool was reliable for the study. A self-structured interview schedule consisting of 99 items in dichotomous format with yes or no options, scoring as 1 (one) mark for a correct answer and 0 (zero) for a wrong answer. Categorisation of scores was done as follows: (0-50) inadequate, (51-75) moderate, and (76-99) adequate.

Results and Discussion

Findings related to Demographic Variables of Study Subjects

Maximum study subjects (50.9%) were in the age group of 25-30 years, 30.9% belonged to the age group of more than 30 years, and 18.2% were 20-25 years of age. A higher number of study subjects (36.4%) had educational status as illiterate, 30.9% had primary/ middle level, 20.0% had higher secondary level, and 12.7% were graduate or post-graduate. A higher number of study subjects (60.0%) were non-working. Maximum study subjects (65.5%) were from nuclear families. Most of the study subjects (72.7%) were primiparous and 27.3% were multiparous. Maximum study subjects (74.5%) were from rural areas as depicted in Table 1.

A similar study was conducted by Leena et al.¹¹ to assess the knowledge regarding minor neonatal disorders among postnatal mothers in a selected hospital in Mangalore. Findings revealed that 71.6% of the study subjects belonged to the age group of 21-25 years, 16.6% belonged to the age group of 26 -30 years, and 11.67% belonged to the age group of 16-20 years. About 33.3% of study subjects had an educational qualification of up to high school level, 31.67% had studied up to secondary school level, 15% had up to primary level, and 21.1% were illiterate. Maximum (56.67%) study subjects were from rural areas. Only 40% of the participants were working. Maximum (58.33%) study subjects belonged to joint families and majority (76.67%) of the subjects were primiparous.

Findings related to the Assessment of Knowledge Level of Study Subjects regarding Management of Selected Minor Disorders of Neonates

The findings of the study showed that in pre-test, out of 55 study subjects, maximum (87.3%) possessed inadequate knowledge, only 12.7% had moderate knowledge, and none of the study subjects was equipped with adequate knowledge as depicted in Table 2. A similar study was conducted by Seshmalini¹² who assessed the effectiveness of a planned teaching programme on the knowledge regarding the management of selected minor disorders of neonates among postnatal mothers admitted in a postnatal ward at the Institute of Obstetrics and Gynecology and Government Hospital for Women and Children, Chennai, Tamil Nadu. The

findings showed that on pre-test, majority of study subjects (76.7%) had inadequate knowledge, 23.3% had moderate knowledge, and none of the study subjects had adequate knowledge regarding the management of selected minor disorders of neonates.

The findings of the study revealed that in post-test, out of 55 study subjects, majority (87.3%) had adequate knowledge, whereas only 12.7% had moderate knowledge, and none of the study subjects had inadequate knowledge regarding selected minor disorders of neonates as depicted in Table 3. A similar study conducted by Seshmalini¹² showed that on post-test, majority of study subjects (81.7%) had adequate knowledge, only 18.3% had moderate knowledge, and none of the study subjects had inadequate knowledge.

The mean post-test knowledge score (84.11 ± 9.148) of the study subjects regarding the management of selected minor disorders of neonates was significantly higher than the mean pre-test knowledge score (36.35 ± 9.125) at 0.05 level of significance. This indicates that the awareness programme was effective in enhancing the knowledge of postnatal mothers regarding the management of selected minor disorders of neonates as depicted in Table 4. In a similar study conducted by Seshmalini,¹² the mean post-test knowledge score (20.60 ± 2.70) was higher than the mean pre-test knowledge score (10.78 ± 2.94) at 0.05 level of significance. Therefore the planned teaching programme regarding the management of selected minor disorders of neonates was effective.

Table I. Frequency and Percentage Distribution of Study Subjects according to their Demographic Variables

(n = 55)

Variables	Category	Frequency	Percentage
Age of mother (years)	20-25	17	18.2
	25-30	28	50.9
	> 30	10	30.9
Educational qualification	Illiterate	17	36.4
	Primary/ middle	20	30.9
	Higher secondary	11	20.0
	Graduate and above	7	12.7
Occupation	Working	22	40.0
	Non-working	33	60.0
Place of residence	Rural	41	74.5
	Urban	14	25.5
Parity	Primipara	40	72.7
	Multipara	15	27.3
Type of family	Nuclear family	36	65.5
	Joint family	19	34.5

Table 2. Frequency and Percentage Distribution of Study Subjects according to their Pre-test Knowledge Scores

(n = 55)

Knowledge Level	Knowledge Score	Frequency (f)	Percentage (%)
Inadequate	0-50	48	87.3
Moderate	51-75	7	12.7
Adequate	76-99	0	0

Table 3. Frequency and Percentage Distribution of Study Subjects according to their Post-test Knowledge Scores

(n = 55)

Knowledge Level	Knowledge Score	Frequency (f)	Percentage (%)
Inadequate	0-50	0	0
Moderate	51-75	7	12.7
Adequate	76-99	48	87.3

Table 4. Comparison of Pre-test and Post-test Knowledge Scores of Study Subjects regarding Management of Selected Minor Disorders of Neonates

(n = 55)

Test	Mean \pm SD	Mean Difference	Paired 't' Test	p Value	Result
Pre-test	36.35 \pm 9.125	47.760	25.288	< 0.001**	Significant
Post-test	84.11 \pm 9.148				

** Significance level 0.05.

Table 5. Association of Pre-test Knowledge Scores of Study Subjects with their Selected Demographic Variables

n = 55

Variables	Category	Adequate Knowledge	Moderate Knowledge	Inadequate Knowledge	Chi-square Test	df	p Value	Table Value	Result
Age in years	20-25	0	3	14	1.633	2	0.442	5.991	Non-significant
	25-30	0	2	26					
	> 30	0	2	8					
Educational qualification	Illiterate	0	2	15	0.253	3	0.969	7.815	Non-significant
	Primary/ middle	0	3	17					
	Higher secondary	0	1	10					
	Graduate and above	0	1	6					
Occupation	Working	0	4	18	0.982	1	0.322	3.841	Non-significant
	Non-working	0	3	30					
Type of family	Nuclear family	0	6	30	1.456	1	0.228	3.841	Non-significant
	Joint family	0	1	18					

Parity	Primipara	0	5	35	0.007	1	0.934	3.841	Non-significant
	Multipara	0	2	13					
Place of residence	Rural	0	7	34	2.739	1	0.098	3.841	Non-significant
	Urban	0	0	14					

Association of Pre-test Knowledge Score of Study Subjects with their Selected Demographic Variables

The present study revealed a statistically non-significant association of the pre-test knowledge score of postnatal mothers with their selected demographic variables like age in years ($p = 0.442$), educational qualification ($p = 0.969$), occupation ($p = 0.322$), parity ($p = 0.934$), type of family ($p = 0.228$), and place of residence ($p = 0.098$) as depicted in Table 5. A similar study was conducted by Leena et al.¹¹ for the assessment of knowledge regarding minor disorders of neonates among postnatal mothers in a selected hospital in Mangalore. In this study, the researcher found a statistically non-significant association of the pre-test knowledge score of postnatal mothers with selected demographic variables like age, occupation, educational qualification, place of residence, type of family, and parity.

Recommendations

Based on the findings of the present study and keeping in mind the limitations of the study, the following suggestions are offered to conduct further studies:

- Similar studies can be replicated for larger samples to generalise the findings.
- Similar studies can be conducted to find out the practice level of postnatal mothers related to the management of selected minor disorders of neonates.
- Comparative studies can be conducted among urban and rural postnatal mothers on knowledge regarding the management of selected minor disorders of neonates.
- A follow-up study can be conducted to determine the effectiveness of the awareness programme.

Conclusion

Based on the findings of the study the below-mentioned conclusions were drawn:

- Pre-test findings showed that the study subjects had inadequate knowledge regarding the management of selected minor disorders of neonates. So, health awareness programmes are required to improve their knowledge in this area.
- There was an improvement in the knowledge of study subjects after the implementation of the awareness programme regarding the management of selected minor neonatal disorders which was evident from the post-test knowledge scores. Thus awareness

programme was effective in imparting education.

- There was a non-significant association of pre-test knowledge scores of study subjects with their selected demographic variables i.e. age, educational qualification, occupation, parity, type of family, and place of residence which indicated that these variables probably have no effect on their knowledge.

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Conflicts of Interest: None

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