Effect of A Planned Teaching Programme on Knowledge Regarding Danger Signs and Its Management in Neonates Among Staff Nurses in A Selected Hospital At Ernakulum District, Kerala

Nursing

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Introduction

Baby is God's way of saying the world should go on. The birth of a baby is one of the most inspiring and emotional event that occur in one's life..[2] The newborn period includes the time from birth to 28 days of life.[3]During this time newborns must make many physiological and behavioural adaptations to extra uterine life.

Danger signs are the serious clinical problem in the worldwide. According to World Health Organization statistics in 2011 of estimated 130 million, infants born each year worldwide, 4million die in the first 28 days of life. Two thirds of world's neonatal deaths occur in just 10 countries mostly in ASIA, Pakistan is number 3 among these countries with an estimated 298.000 neonatal deaths annually and a reported neonatal mortality rates 49/1000 live birth Pakistan accounts for 7% of global neonatal deaths. Infection 36%, pre term birth 28%, and birth asphyxia 23% totally it accounts for 87% of neonatal deaths worldwide. since cause of neonatal death vary by country and which the availability and quality of health care understanding neonatal mortality in relation to these factors is crucial.[6]

A study conducted in India, Danger signs of neonatal illnesses: perceptions of caregivers and health workers. More than half of the caregivers recognized fever, irritability, weakness, abdominal distension/vomiting, slow breathing and diarrhoea as danger signs in neonates. Seventy nine (39.5%) of the caregivers had seen a sick neonate in the family in the past 2 years, with 30.38% in whom illness manifested as continuous crying. Health care was sought for 46 (23%) neonates. It concludes that there is no universal recognition of danger signs in neonates, there is a need to give priority to implementing Integrated Management and Childhood Illness (IMNCI).[9]

According to UNICEF statistics on may 2011 newborn have the highest risk of death among all children. Each day about 9000 babies die within first 28 days of life of the neonatal period most of them are born in developing countries and most of them die at home, infections, asphyxia and preterm births because 80% of these deaths, improving neonatal survival is essential to achieve the millennium development goal of reducing child. Globally there are 3.3million neonatal deaths each year accounting for 41%of all deaths of children of under the age group of 5. The distribution of under five deaths and neonatal deaths by direct cause in 2008 were pneumonia 10%, sepsis 15%, preterm birth complication 29%, birth asphyxia 22%, other 12%, congenital 7% and neonatal causes.[15]

A surveillance study was conducted to estimate the incidence of neonatal jaundice and hyperbilirubinemia in a poor urban community in Karachi. The samples were collected from 1690 newborn with 59 days of life and data was collected by clinical assessment. The findings of the study showed that out of 1690 young infants during the study period, 466 infants (27.6%) were found to have jaundice. Overall detected rate of hyperbilirubinemia (bilirubin >5 mg/dl) among 1690 newborn was 39.7/1000 live births (95%). Rate of plasma bilirubin levels in the range of 15–20 mg/dl was 13/1000 live births (95%); levels >20 mg/dl were observed in 3.5/1000 live births (95%). The proportion of newborn with bilirubin≥15 mg/dl was significantly higher. The study concluded that significant burden of untreated severe neonatal jaundice, causing potential neurological sequel, exists in developing countries such as Pakistan. WHO guidelines are needed for screening and appropriate management of neonatal jaundice in developing countries.[16]

Studies suggest that if newborn danger signs are not recognized and left untreated can lead to complications and newborn morbidity and mortality. Effective and early management in hospitals and prompt health care for the newborn danger signs serve as a backbone in reduction of newborn mortality. According to IMNCI emphasizes that health workers should be able to identify the danger signs among newborn for appropriate care seeking.[22]

Objectives

Objectives are to;

1. assess the knowledge of staff nurses regarding Danger Signs and its Management in Neonates before and after the Planned Teaching Programme.
2. determine the effect of Planned Teaching Programme on knowledge of staff nurses regarding Danger Signs and its Management in Neonates.
3. find the association between pre-test knowledge score of staff nurses regarding Danger Signs and its Management in Neonates and the selected demographic variables.

Methodology

Setting of the study : Samaritan Hospital, Pazhanganad
Research approach : A Quantitative approach was con sidered appropriate for this study.
Research design : Pre- experimental one group pre-test – post test design.
Sample : 40
Sampling technique : Non probability consecutive sampling technique.
Data collection Instrument: Structured Knowledge questionnaire

Data collection:

Data collection procedure is a process of gathering information to address the research Problem. After obtaining approval of ethics committee and permission from the authorities data was collected with 40 samples selected by using non probability consecutive sampling technique. After introducing about the self and purpose of the study, written consent was obtained assuring maximum anonymity and confidentiality. Pre test was conducted to assess the knowledge regarding Danger Signs and its Management in Neonates among staff nurses by using structured knowledge questionnaire. The Planned Teaching Programme was conducted on the same day about 45 minutes using slide. The post test to assess the effectiveness of Planned Teaching Program was conducted using the same tool on 5th

day onwards. At the end, respondents were thanked for their co-operation. The investigator didn't have any problems during the data collection process.

Data Analysis

The data were analysed, interpreted and organized under the following headings.

Section 1	: Description of the sample characteristics
Section 2	**:** Knowledge of staff nurses regarding Danger Signs and its Management in Neonates.
Section 3	: Effect of a Planned Teaching Programme on Knowledge regarding Danger Signs and its Management in Neonates among Staff Nurses.
Section 4	: Association between the knowledge of staff nurses regarding Danger Signs and its Management in Neonates and selected demographic variables.

Section 1: Description of the sample characteristics

Demographic variable	category	F	%
Age in years	21-30	39	97.5
	31-40	1	2.5
	41-50	0	0
	>50	0	0
Gender	Male	0	0
	Female	40	100
Educational Status	GNM	18	45
	BSC(N)	22	55
Years of Working experiences	0-1	30	75
	1-2	7	17.5
	3-5	2	5
	5 & above	1	2.5
Area of Working Experience	Maternity ward	18	45
	Paediatric Ward	15	37.5
	NICU	7	17.5
Previous exposure to information regarding Danger Signs & its management	Yes	14	35
	No	26	65
Previous experience in handling a neonate with Danger Signs & its management	Yes	5	12.5
	No	35	87.5

Table 1: Socio Demographic Characteristics

The above table showed that the socio demographic characteristics of the respondents 97.5% were under the age group of 21-30 years and the majority 100% belongs to female gender. The 55% subjects are having the educational qualification of BSc (N) and 75% are under 0-1 years of working experience. Similarly 45% participants are having working experience in maternity ward. The majority 65% respondents not having previous exposure to information regarding danger signs & its management in neonates and 87.5% participants are not having the previous experience in handling the neonate with danger signs and its management in neonates.

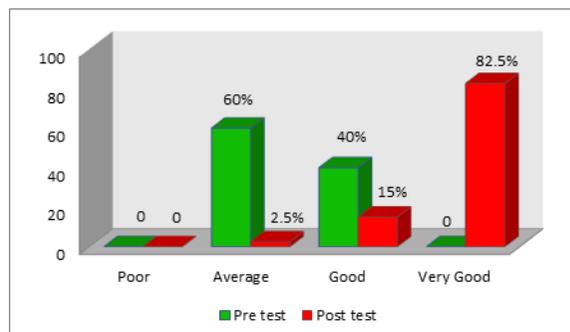**Section 2: Knowledge of staff nurses regarding Danger Signs and its Management in Neonates.**

Table 2: Mean and mean percentage of knowledge regarding Danger Signs and its Management in Neonates among the sample (N=40)

Maximum possible knowledge score	Pre-test		Post-test	
	Mean	Percentage (%)	Mean	Percentage (%)
48	23.575	49.11	40.35	84.06

Table 2 showed that the mean post-test knowledge score (40.35) and mean percentage (84.06%) was higher than that of the mean pre-test knowledge score (23. 575) and mean percentage (49.11%). It is evident that the mean post-test knowledge score was higher than the mean pre-test knowledge score.

Fig.1.Bar diagram showing the distribution of samples according to the Knowledge level of Staff Nurses before and after the administration of Planned Teaching Programme.

Knowledge Level of Staff Nurses

The graph showed that majority of the staff Nurses were having average knowledge 24 (60%) in the pre test, where as in post test majority sample had very good knowledge 33 (82.5%) regarding the danger signs and its management in neonates.

Section 3: Effect of a Planned Teaching Programme on Knowledge regarding Danger Signs and its Management in Neonates among Staff Nurses.

Table 3: Mean Standard deviation and t value of knowledge of samples regarding Danger Signs and its Management in Neonates.
(N=40)

Knowledge	Pre test		Post test		t value	p value
	Mean	SD	Mean	SD		
	23.575	4.140	40.35	5.260	19.07*	0.000

*significant at 0.05 level

Data in the table depicted that the mean post test knowledge score was 40.35 and mean pre test knowledge score is 23.575. The calculated t value (t= 19.068) is greater than the tabled t value (t=2.02) at 0.05 level of significance which indicated that Planned Teaching Programme is effective in increasing the knowledge of staff nurses. The mean post test knowledge score of staff nurses after administration of Planned Teaching Programme on Danger Signs and its Management in Neonates is significantly higher than the mean pre test knowledge score.

Section 4: Association between the Knowledge of Staff Nurses and the selected Demographic variables.

It shows that there is no significant association between knowledge score & demographic variables as calculated p value is more than 0.05 in the area of Age (p=0.457), years of working experience (p=0.368), Area of working experience (p=0.360), Previous exposure to information regarding Danger Signs and its Management in Neonates (p=0.945), Previous experience in handling a Neonate with Danger Signs (p=0.452)

It also shows that there is significant association between knowledge score & demographic variables as calculated p value is less than 0.05 in the area of educational status (p=0.002)

Conclusion

A baby is an angel whose wings decrease as his legs increase. As increasing them self, they have to be adjust with external environment; somehow few newborns will fail to adjust, shows non-specific signs. This signs are the Danger signs in neonates. It is very difficult to identify and mange the neonates with Danger Signs.

treatment of neonates is truly one of the most challenging tasks imaginable. The ill newborns are not just small adults. They have unique physiological and developmental needs. There is various approach is designed to promote a continuous flow of information and includes an open system architecture, as well as innovative and non-invasive technologies that keep pace with the baby´s changing needs.

Paediatric nurses have challenging role in providing nursing care for the age range from infant till toddler, which requires developmental appropriate care and diligence in assessment of patient and parental concerns. Every parent should feel like "My baby is in good hands and everything being taken care of". It will be a great reward for the paediatric nurse.

Recommendations

- Senior nurses should play a vital role in staff education programme on danger signs and its management in neonates as mentors and role models and should be given incentives for these roles.
- For nursing services, it is recommended that the Nursing Education Services, which is responsible for in-service training, re-evaluates their approaches for education to meet the increasing needs of new graduates due to the fast changing technological advancement.
- The study finding implies that there is a need for regular education programme for improving their knowledge regarding Danger Signs and its Management in Neonates. Therefore the nurse should be able to reduce the complication while giving care.
- Nursing educators must constantly monitor clinical practice and re-evaluate the curriculum to ensure that necessary knowledge and skills to assess Danger Signs and its Management in Neonates are achieved from the educational programme.
- Nurse administrator can make policy decision to incorporate continuing education and staff development programme on danger signs and its management in neonates in clinical setting based on the study evidence and encourage them to participate.
- Nurse administrators should plan workshop and seminars and implement the outcome as these will update the knowledge of nurses who play a key role in assessing and managing babies with Danger Signs.

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