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Effectiveness of comprehensive newborn care package program on knowledge and practice among primi postnatal mothers at selected hospital Odisha.

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Abstract

Background: The current infant mortality rate for India in 2020 is 29.848 deaths per 1000 live births. A package of newborn care exists in India and Primi mothers should be aware of specific vital aspects of newborn care which can have an impact on neonatal mortality and morbidity rate.
Objective: To assess the effectiveness of a comprehensive newborn care package program on knowledge and practice regarding newborn care among Primi post natal mothers.
Methodology: A pre-experimental design was conducted. A non-probability purposive sampling technique was used to select 41 Primi postnatal mothers who fulfilled the inclusion criteria. Self-structured questionnaires were used to assess the knowledge regarding newborn care and an observation checklist was used to assess the practice regarding newborn care.
Results: Descriptive and inferential statistics were used to analyze the data. Studies revealed that the majority of mothers 19(46.3%) were from the age group of 27-30 years. In pretest, the majority of mothers 28(68.29%) had inadequate knowledge, whereas in posttest 18(43.90%) mothers had adequate knowledge. In practice regarding mummification, breastfeeding and hand washing, the majority of mothers, 33(80.48%), 35(85.36%) and 39(95.12%) had adequate practice regarding newborn care respectively. In the correlation coefficient, the calculated 'r' value (0.52) shows a positive correlation between knowledge and practice at p(0.000)<0.001 level, which showed that the neonatal care package program helps in improving knowledge and practice among Primi post-natal mothers.
Conclusion: The adequate knowledge and practice showed that there was a significant improvement of knowledge and practice after administration of the neonatal care package program among Primi post natal mothers.

Keywords: Comprehensive newborn care package program, Effectiveness, Knowledge, Newborn, Practice, Primi postnatal mothers.

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Introduction

New born babies are the beginning of all things-wonder, hope, a dream of possibilities. Hence, the birth of a newborn baby is one of the most precious gifts from God and a marvelous joyful event that occurs in every woman's lifetime. The current birth rate for India is 17.592 births per 1000 people in 2020, a 1.2% decline from 2019 [1]. The current infant mortality rate for India in 2020 is 29.848 deaths per 1000 live births [2]. Odisha has recorded a massive 3,045 infant deaths during the first quarter (April-July) of the financial year 2019-20 [3].

Both primi mothers and nurses play vital roles in reducing the morbidity and mortality rate of newborn babies. It is essential to motivate and encourage primi mothers to focus on newborn care. WHO defines Essential Newborn Care (ENC) as a set of interventions and practices provided at childbirth and immediately after birth that includes thermal care, hygienic practices during childbirth, early breastfeeding, and newborn resuscitation [4]. The intervention package consists of essential newborn care practices including thermoregulation, breast feeding and prevention of infection.

A healthy newborn baby born between 38 and 42 weeks of gestation cries immediately after birth, develops independent rhythmic respiration, easily adapts to the extra uterine environment, and has an average birth weight and no congenital abnormalities [5]. A woman who is pregnant for the first time is referred to as primi gravid in medical terms [6]. Primi gravid mothers should be aware of all aspects in order to lower mortality rates and improve the newborn's health. Hypothermia occurs when the body temperature falls below normal levels. It occurs when the body's homeostatic heat regulation mechanisms fail, allowing the body to lose heat faster than it produces. The normal body temperature is about 37°C (99°F), and hypothermia occurs when the core body temperature falls below 35°C (95°F). Hypothermia is

commonly caused by prolonged exposure to cold temperatures and is managed by attempting to return the body temperature to a normal range [7].

Neonatal infections are infections contracted by a newborn baby during pregnancy or first four weeks of life (neonatal period). Neonatal infections may be transmitted from mother to infant, contracted during childbirth in the birth canal, or contracted after birth [8]. Hand hygiene refers to any form of hand cleansing. It is often used interchangeably with hand washing, which implies washing hands with plain or antimicrobial soap and water. Hand washing is recommended to be performed before touching hospital equipment and instruments, before touching neonates, and in between cleaning and caring for neonates.

In India, there is a collection of basic newborn practices that has been shown to reduce mortality [9]. Primi gravid mothers should be mindful of some important aspects of newborn care practices, such as mummification, breastfeeding, and hand washing, which can affect neonatal mortality and morbidity rates. We hypothesized that the intervention package would improve the knowledge and practices regarding newborn care.

Review of the Literature

Study design: A pre experimental (one group pretest and posttest design).

Study setting: District headquarters hospital, Sundargarh, Odisha.

Study subjects: Primi postnatal mothers admitted to the postnatal ward.

Sampling technique: A purposive sampling technique was used to collect information from participants.

Sample size: Information collected from a total of 41 primi postnatal mothers.

Sample criteria

Inclusion criteria:

Primi postnatal mothers in the age group of 18-35 years were admitted to postnatal wards.

Neonate with APGAR score of more than seven and were accompanied with the mother after delivery.

Primi mothers who were willing to participate.

Exclusion criteria:

Multi Para postnatal mothers.

Those mothers whose babies were admitted to SNCU.

Development of tool

Structured knowledge questionnaires were developed by having 26 closed-ended questions. It was divided into four sections: demographic variables of participant (6 items), pretest and posttest level of knowledge were assessed using structured questionnaires regarding thermoregulation (7 items), breast feeding (7 items), and prevention of infection (6 items). Responses were scored with 1 for the correct response and 0 for the incorrect one. A newborn care package program was introduced. Post-test level of practice was assessed using a structured observational checklist having 40 items. It was divided into three sections: mummification (13 items), breast feeding technique (21 items), and hand washing technique (6 items). Each correct practice was scored between 1 and 0 for incorrect practice. Tools were validated by both internal and external experts.

Data collection procedure

Data was collected after approval from Institutional Ethical Committee (IEC) wide letter no. (Ref.No.:KIIT/KIMS/IEC/253/2020). The present study was conducted from 3.09.2020-17.09.2020. Data was collected from the participants after obtaining written permission from the CDMO of Sundargarh district.

The participants were explained about the study and inform consents were taken from the participants. Knowledge was assessed by using a structured knowledge questionnaire in the pre-test. Demographic characteristics were collected by interview method. Lecture cum discussion was introduced on specific elements like; thermoregulation, breastfeeding and prevention of infection. After the discussion session, demonstrations were done on mummification, breast-feeding techniques and hand washing.

Post-test knowledge was done on the second postnatal day by using a self-structured questionnaire, and post-test level of practice was assessed during the first and second post-natal days for normal delivery mothers and second and third days for the LSCS mothers by using a structured observational checklist.

The questionnaire has four parts: demographic data, structured knowledge questionnaires and practice check list. The demographic data includes age, religion, and type of family, educational qualification, occupation, and mode of delivery. The knowledge questionnaires were formed regarding newborn care.

The total score was 20, scores range from 15 to 20, marked as adequate knowledge, 11 to 14 marked as moderate knowledge and 0 to 10 marked as inadequate knowledge. A checklist was used to assess the practice score. The total practice score was 40. Scores between 30-40 are marked as adequate practice, 21 to 29 scores marked as moderate practice and scores between 0-20 marked as inadequate practice.

Data Analysis

The data collected was analyzed and tabulated using both descriptive and inferential statistics. MS Excel was used to analyze the data and, presented in the form of a percentage and chi-square test, was applied to find out the association between various factors.

Discussion

In this study, there were a total of 41 primi mothers participated. Among them, the majority of the primi mothers, 19 (46.3%) were in the age group of 27-30 years. 18 (43.9%) belonged to a Hindu family, 21 (51.21%) were from a joint family. Mothers, 11 (26.8%) were gained Primary education, 26 (63.4%) were homeowners. A maximum of 38 mothers (92.6%) went through normal vaginal delivery.

The study was conducted to assess the effectiveness of a comprehensive newborn care package program on knowledge and practice regarding newborn care among primi postnatal mothers at a selected hospital, Sundargarh, Odisha. A quantitative approach, pre-experimental design, was adopted for this study. 41 primi postnatal mothers were selected by purposive sampling technique. Data was collected using a self-structured questionnaire and observational checklist. The findings of the study have been discussed with reference to the objectives, need for the study, related literature of the study and conceptual framework. It is presented in line with the objectives of the study.

In comparison between the frequency of knowledge of pretest and posttest, the majority of mothers, 28 (68.29%) had inadequate knowledge, 12 (29.26%) mothers had moderate adequate knowledge and only 1 (2.43%) mothers had adequate knowledge regarding newborn care in the pre-test. In the post test, the majority of mothers 18 (43.9%), had adequate knowledge, 14 (34.14%) had moderately adequate knowledge, and only 9 (21.95%) mothers had inadequate knowledge regarding newborn care, which was similar to a study conducted on the effectiveness of structured teaching program on knowledge and practice of postnatal mothers regarding newborn care [10]. In practice majority of 33 (80%) mothers had adequate practice regarding mummification. The majority of mothers 35 (85.36%) had adequate practice regarding breast feeding. Maximum mothers 39 (95.12%) had adequate practice regarding hand washing, which was similar to study conducted on effectiveness of neonatal care package on knowledge and practice regarding new born care among primi gravid mothers.

The mean score in the pre-test was 0.09 with SD=3.02. The mean score of the post test was 13.95 with SD=4.08 and the mean score for practice was 34.73 with SD=5.64. The "r" value is 0.52, showing a positive correlation and is statistically significant at p (0.000)<0.01. Hence, there is significant statistical correlation between knowledge and practice. The result revealed that there was a positive correlation between post-test knowledge and practice, which shows that if knowledge level increases, their practice level also increases. In chi-square, the association had not shown any significant statistical association with a significant post-test score of knowledge level, which was similar with a study conducted on a study to assess the effectiveness of planned teaching program on knowledge and practice of postnatal mothers with regard to essential newborn care.

Conclusion

The study was focused on assessing the effectiveness of a comprehensive newborn care package program on knowledge and practice regarding newborn care among Primi postnatal mothers. On the basis of the findings of the study, it concludes that most of the mothers had adequate knowledge regarding newborn care and had adequate practice on mummification, breastfeeding, and hand washing. There was statistical significance between knowledge and practice, which found that when knowledge increases, their practice level also increases. It evidenced that the newborn care package was effective. Therefore, the study reinforces the need to organize health campaigns and teaching programs by health care teams in different settings which sensitize the primi postnatal mothers to enhance the knowledge and practice regarding newborn care, thereby reducing mortality and morbidity among newborns.

Ethical Approval

Study was approved by the institutional ethical committee, KIMS, KIIT Deemed to be university. (Ref.No.:KIIT/KIMS/IEC/253/2020).

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Conflict of Interest

The authors declare no conflicts of interest.

Authors Contribution Details

- **Kujur Minakhi:** Concept, design, literature search, protocol, data acquisition, data analysis, manuscript preparation, manuscript editing and manuscript review.
- **Das Niyati:** Concept, design, data acquisition, manuscript editing and manuscript review.
- **Sahoo Purnima:** Data acquisition, data analysis, manuscript editing and manuscript review.
- **Bhaktiswarupa S:** Literature search, data acquisition, statistical analysis, manuscript editing and manuscript review

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References

1. https://population.un.org/wup/
2. https://www.macrotrends.net/countries/IND/india/birth-rate
3. https://odishatv.in/odisha-news/shocking

4. Essential newborn care course: Clinical practice book. Geneva: World Health Organization 2010.
5. Datta P. Pediatric nursing New Delhi: Jaypee brother's medical publishers (4th edn) 2018; pp: 62.
6. Mutasem MA, Kamal Ahmed A, Mutaz Ibrahim H. Effect of multiparty on serotonin and oxytocin hormones compared to prim parity and null parity in pregnant Sudanese women. JEMDS 2019; 8(8): 478-481.
7. https://www.mayoclinic.org/diseases-conditions/hypothermia/symptoms-causes/syc-20352682
8. https://en.wikipedia.org/wiki/Neonatal_infection
9. Kesterton AJ, Cleland J. Neonatal care in rural Karnataka: Healthy and harmful practices, the potential for change. BMC Pregnancy Childbirth. 2009; 9(1): 20.
10. Lavanyauriti, Rani R. Effectiveness of structured teaching program knowledge and practice of post natal mothers regarding essential new born care. Int J Nurs Educ 2017; 9(2): 127.

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