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# To assess the knowledge and self-reported practices regarding immediate newborn care among the staff nurses from birthing units of selected hospitals of Pune city

## Yumkham Nungshithoi Devi, Pravina Mahadalkar and Rajee Varghese

**Abstract**
An estimated 2 million newborn deaths occur on their first day of life each year among children in the neonatal period. Current evidence-based interventions or quality care can prevent a large proportion of deaths of newborn baby at birth.
The aim of the study was to assess knowledge & to determine the quality of care provided by the nursing personnel in selected aspects of care to the newborn babies from birth to one hours of age in the labour room, labour OT/ Gynaec OT.
**Material and methods:** Quantitative approach and non-experimental exploratory research design was adopted for the study. Non probability purposive sampling was used to select 100 staff nurses working in birthing units.
**Results and conclusions:** The findings of study shows that maximum numbers of staff nurses (97%) were female and among them 42% were belongs to 26-30years of age. 54% of staff nurses were completed General Nurse Midwife course. About 98% of staff nurses were provided immediate newborn care independently during period of data collection. Maximum number of the staff nurses (58%) had 3-4 years of experience in birthing units but majority of the staff nurses 83% were not exposed to any other additional courses of immediate newborn care. Considering the knowledge and self-reported practices regarding the immediate newborn care 72% of the staff nurses had average knowledge with score (6-10) and 98% of the staff nurses had good self-reported practices with scores (14-20).
**Conclusion:** However staff nurses are key person at the bedside during delivery, so staff nurses need to have adequate knowledge and skill regarding immediate newborn care which will show positive results in bringing down neonatal morbidity and mortality rate.

**Keywords:** Assess, knowledge, self-reported practices, immediate newborn care, Staff nurses, birthing units, Hospitals

## 1. Introduction
The newborn is a unique, fragile being that experiences the transition from a comfortable uterine environment to a threatening external environment. And immediate newborn care is defined as the early management of newborn in the delivery room or in the nursery, few minutes or soon after birth [1].
Newborns undergo profound physiologic changes at the moment of birth, as they are released from warm, snug, dark liquid-filled environment that has met all of their basic needs, into a chilly, unbounded, and brightly lit, gravity based outside world [2].
Directly after birth there should be attention to the condition of the newborn. The World Health Organisation (WHO) states that such attention is an integral part of care in normal birth. Immediate care involves:
- Drying the baby with warm towels or cloths,
- Ensuring that the airway is clear, removing mucus and other material from the mouth, nose and throat with a suction pump.
- Taking measures to maintain body temperature
- Clamping and cutting the umbilical cord with sterile instruments

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- A few drops of silver nitrate solution or an antibiotic is usually placed into the eyes to prevent infection from any harmful organisms that the baby may have had contact with during delivery (e.g. maternal, STDs).
- Vitamin K is also administered to prevent haemorrhagic disease of the newborn. The baby's overall condition is recorded at 1 minute and at 5 minutes after birth using the APGAR Scale.
- Putting the baby to the breast as early as possible. Early suckling/breast-feeding should be encouraged, within the first hour after birth.

## 2. Methodology
Quantitative research approach with non experimental research design was adopted. The study was conducted on 100 staff nurses from birthing units in selected hospital of Pune city by using non probability purposive sampling technique. The data were collected by using self-administered questionnaire and checklist. Content validity of the tool was established by suggestion of 19 experts. Tool was found to be reliable which is calculated by using Karl Pearson correlation coefficient formula (r=0.98 and r=0.9). Ethical consideration: Formal administrative approval was obtained from selected hospitals of Pune city and obtained written inform consent from the participants.

## 3. Finding
**Section I:** Analysis of the data related to demographic variables of the Samples under study.

**Table 1:** Frequency and percentage distribution of the samples (staff nurses from birthing units) based on their Demographic characteristics, n=100

| Sr. no | Demographic variable | Freq | % |
|---|---|---|---|
| 1 | Age | | |
| | 20-25 years | 21 | 21% |
| | 26-30 years | 42 | 42% |
| | 31-35 years | 30 | 30% |
| | 36 above | 7 | 7% |
| 2 | Gender | | |
| | Female | 97 | 97% |
| | Male | 3 | 3% |
| 3 | Professional Qualification | | |
| | ANM | 43 | 43% |
| | BSC | 3 | 3% |
| | GNM | 54 | 54% |
| 4 | Have you provided immediate newborn care after vaginal delivery/ caesarean section independently | | |
| | Yes | 98 | 98% |
| | No | 2 | 2% |
| 5 | Years of experience in Labour Room/ Labour OT/ Gynaec OT | | |
| | 1 -2 years | 26 | 26% |
| | 3-4 years | 58 | 58% |
| | 5-6 years | 16 | 16% |
| 6 | Have you undergone any additional courses | | |
| | None | 83 | 83% |
| | ENC | 2 | 2% |
| | NRP | 15 | 15% |

The data presented in Table 1 shows that maximum number of the staff nurses (42%) are belongs to 26-30 years of age group.
Majority of staff nurses (97%) were female.

About half of the staff nurse's 54% were non graduate.
About 98% of the staff nurses were provided immediate newborn care independently.
Majority of the staff nurses 58% have upto 3-4 years of experience in birthing units.
Maximum numbers of staff nurses 83% have not undergone any additional courses after registration for practice.
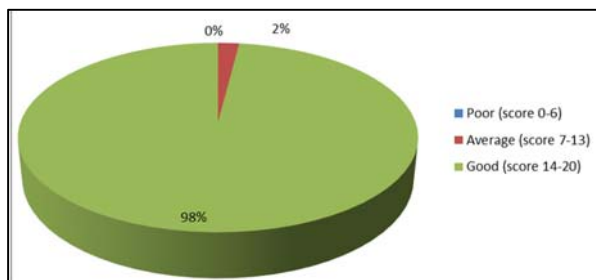
**Section II:** Analysis of data related to the knowledge of immediate newborn care among staff nurses, n=100
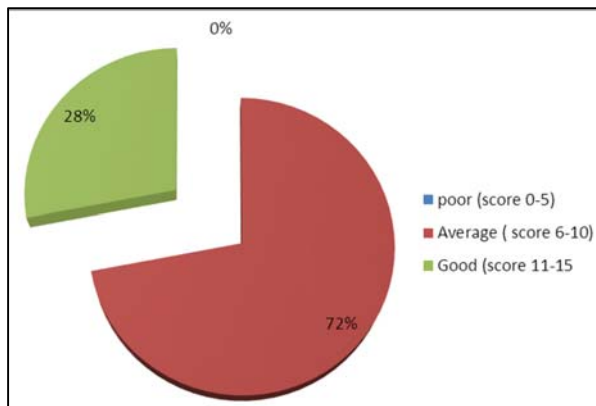


**Fig 1:** Description of samples according to knowledge of immediate newborn care among staff nurses working in birthing units.

Figure 1 shows that majority of the staff nurses 72% had average knowledge regarding immediate newborn care with score6-10.

**Section III:** Analysis of data related to the self-reported practices of immediate newborn care among staff nurses, n=100



**Fig 2:** Description of sample according to Self-reported practices of immediate newborn care among the staff nurses working in birthing units.

Figure 2 shows that maximum number of the staff nurses 98% had good self-reported practices with score 14-20.

**Section IV:** Analysis of data related to the co-relation between the knowledge and self reported practices regarding the immediate newborn care, n=100

| Statistic | Value |
|---|---|
| r | 0.3 |
| t | 3.1 |
| p-value | 0.234 |
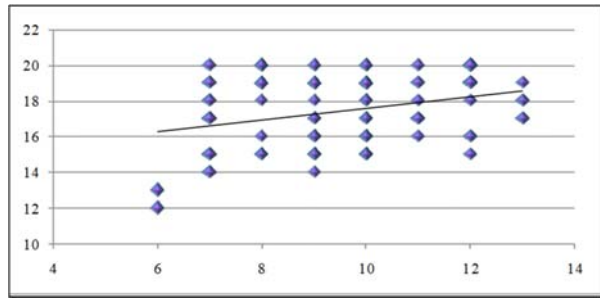
**Fig 6:** Correlation between the knowledge and self reported practices regarding the immediate newborn care

Correlation between the knowledge and self-reported practices regarding the immediate newborn care was assessed using Pearson's correlation coefficient. Pearson's correlation coefficient was found to be 0.3, which is positive which indicates that there is positive correlation between the knowledge and self-reported practices of staff nurses regarding the immediate newborn care. The significance of the correlation coefficient was tested using t-test for significance of correlation coefficient. T-value for this testing was 3.1 with 98 degrees of freedom. Corresponding p-value was 0.234 which is larger (greater than 0.05), the correlation between the knowledge and self-reported practices regarding the immediate newborn care though positive is not found to be significant.

**Section V:** Analysis of data related to association of knowledge and self-reported practices of staff nurses with the selected demographic variables Association of knowledge and self-reported practices of staff nurses with the selected demographic variables was assessed using Fisher's exact test. The summary of Fisher's exact test is tabulated below:

**Table 2:** Fisher's exact test for association of knowledge of staff nurses with the selected demographic variables, n=100

| Demographic variable | | Knowledge | | p-value |
| --- | --- | --- | --- | --- |
| | | Average | Good | |
| Age | 20-25 years | 17 | 4 | 0.472 |
| | 26-30 years | 28 | 14 | |
| | 31-35years | 23 | 7 | |
| | 36 years and above | 4 | 3 | |
| Gender | Female | 70 | 27 | 0.998 |
| | Male | 2 | 1 | |
| Qualification | ANM | 30 | 13 | 0.433 |
| | BSC | 1 | 2 | |
| | GNM | 41 | 13 | |
| Have you provided immediate newborn care after vaginal delivery/ caesarean section independently | No | 2 | 0 | 0.851 |
| | Yes | 70 | 28 | |
| Years of experience in Labor Room/ Labor OT | 1 -2 years | 18 | 8 | 0.843 |
| | 3-4 years | 41 | 17 | |
| | 5-6 years | 13 | 3 | |
| Have you undergone any additional courses | ENC | 2 | 0 | 0.299 |
| | None | 62 | 21 | |
| | NRP | 8 | 7 | |

Table 2 shows none of the demographic variable was found to have significant association with knowledge of staff nurses regarding the immediate newborn care since all the p-values are large (greater than 0.05) level of significance.

**Table 3:** Fisher's exact test for association of self-reported practices of staff nurses with the selected demographic variables, n=100

| Demographic variable | | Self-reported practices | | p-value |
| --- | --- | --- | --- | --- |
| | | Average | Good | |
| Age | 20-25 years | 0 | 21 | 0.19 |
| | 26-30 years | 0 | 42 | |
| | 31-35 years | 2 | 28 | |
| | 36 years and above | 0 | 7 | |
| Gender | Female | 2 | 95 | 0.996 |
| | Male | 0 | 3 | |
| Qualification | ANM | 0 | 43 | 0.628 |
| | BSC | 0 | 3 | |
| | GNM | 2 | 52 | |
| Have you provided immediate newborn care after vaginal delivery/ caesarean section independently | No | 0 | 2 | 0.998 |
| | Yes | 2 | 96 | |
| Years of experience in Labour Room/ Labour OT/ Gynaec OT | 1 -2 years | 0 | 26 | 0.687 |
| | 3-4 years | 2 | 56 | |
| | 5-6 years | 0 | 16 | |
| Have you undergone any additional courses | ENC | 0 | 2 | 0.009 |
| | None | 0 | 83 | |
| | NRP | 2 | 13 | |

Table 3 shows p-value corresponding to age, gender, professional qualification, independent immediate newborn care and years of experiences is greater than 0.05 level of significance, so the above demographic variables did not have any significant association in self-reported practices. But significant association was seen of 0.009 which is less than 0.05 level of significance in between self reported practices and those staff nurses who have undergone any additional courses regarding immediate newborn care. As table 2 & 3 get the findings of no association between demographic variable with knowledge and self reported practices of staff nurses regarding immediate newborn care shows positive results by maintaining a balance between knowledge and practice of staff nurse.

## 4. Discussions of the research findings
The purpose of this study was to assess knowledge & to determine the quality of care provided by the nursing personnel in selected aspects of care to the newborn babies from birth to one hours of age in the labour room.

The findings of the study were discussed with references to the objectives and assumption stated. In this section the major findings of the present study have been discussed with the reference to the result obtained by the other researcher.

The findings of the study is also supported by the research conducted by Sanjay Shinde, Department of nursing, college of health sciences on Dec 31, 2015 which shows that nurses have an around average of knowledge and quality of practice regarding total score of knowledge of birth preparation, initiating attachment and breast feeding, While much still needs to be done to improve the quality of maternal and newborn care regarding responding to mothers questions, examining baby and mothers before discharge. A combination of factors in this study, inhibit the provision of quality care such as educational levels and lack of training courses that nurses received: Study, displaying the need for protocols in labour room, and post natal ward. There is no data available regarding the infection arising from the lack of care immediately after the delivery, since mothers get discharged within few hours after delivery.

Conducted a need assessment analysis on knowledge and practice of neonatal care among health care providers in the public sector of Pakistan. The nurses knowledge was good with 30% scoring more than 70% and 50% were able to demonstrate steps of immediate newborn care. The study revealed that training of health worker is very vital to address the gaps and to develop continuing education modules.

D Acharya *et al* conduct a research on knowledge of maternal and newborn care among primary level health workers in kapilvastu district of Nepal to identify knowledge of maternal and newborn care among primary level health workers in kapilvastu district of Nepal. Respondents were selected using simple random sampling method. For collecting the data, enumerators visited health institutions for 2 months from 1(st) October to 31(st) November 2012, and structured interview schedule was used to gather the information. Findings of the study was in a total of 137 primary level health workers, more than half were senior auxiliary health workers/health assistant. Health workers having correct knowledge on contents of MNC were-registration, major components of antenatal care, danger signs of pregnancy, five cleans, postnatal health problems, majority to health action to newborn care, newborn bath and meaning of exclusive breastfeeding. There was a statistical association between designations of health workers.

## 5. Conclusion
As per the findings of present study and other supportive literature shows that staff nurses had good practices on immediate newborn care but though the staff nurses had average knowledge regarding immediate newborn care, so all the staff nurses could improve their knowledge and practices regarding immediate newborn care if the institute or the hospital conduct a continued in-service education or workshop related to immediate newborn care to work on for improving the neonatal health.

## 6. Recommendation
1. The study can be done on larger sample of all over India by random choice of an area. This would provide invaluable evidence in the area of practice.
2. The study can be done with the involvement of all health professionals in conduction of immediate newborn care.
3. An observational study can be done to assess the knowledge and practice of the staff nurses and other health professionals included in immediate newborn care.
4. Longitudinal study can be performing to evaluate knowledge and practice of staff nurses regarding immediate newborn care.
5. An experimental study can be done to assess effectiveness of experiment on knowledge and practice of the staff nurses regarding immediate newborn care.

## 7. Acknowledgement

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