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## A study to assess the knowledge regarding assessment of umbilical cord among staff nurses and nursing students in Narayana medical college and hospital, Nellore

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**Abstract**

**Background:** The umbilical cord is the baby's life to mother during pregnancy. It serves a vital role for a developing infant inside the uterus and after birth. After birth the umbilical cord is no longer needed. It will be clamped with usually a sterilized plastic clamp to heal seal of the open three blood vessels in the cord before it cut.

**Objective:** To assess the level of knowledge on assessment of umbilical cord among staff nurses and student nurses in Narayana medical college and hospital.

**Materials and Methods:** Descriptive cross sectional design and convenient sampling technique was followed which included 30 samples were used. Data was collected using structured questionnaire. Data analysis was done with SPSS.

**Results:** shows that with regard to assessment of umbilical cord among 15 staff nurse 3(20%) have inadequate knowledge, 11(73.3) have moderately adequate knowledge and 1(6.7) have adequate knowledge where as among nursing students, 9(60) have inadequate knowledge, 6(40) have moderate inadequate knowledge.

**Conclusions:** The study concluded that majority of staff nurses had moderate knowledge and majority of nursing students had inadequate knowledge regarding assessment of umbilical cord.

**Keywords:** Umbilical cord, omphalitis, tetanus neonatorum

### 1. Introduction

The birth of baby is one of life's most wonders moment. few experience can compare with this events. New born babies have amazing abilities, yet they are completely dependent on others for every aspect feeding warmth and comfort, cord care. In the first hour or two after birth most babies are in an alert wide a weak face. This offers wonder full opportunities for parents to get to know their new baby

All newborn requires essential new born care to minimize the risk of illness and maximize their growth and development. This care will also prevent many new born emergencies

The umbilical cord is the baby's life to mother during pregnancy. It serves a vital role for a developing infant inside the uterus and after birth. After birth the umbilical cord is no longer needed. It will be clamped with usually a sterilized plastic clamp to heal seal of the open three blood vessels in the cord before it cut

It is about 40 cm in length with as usual variation of 30-100 cm. Its diameter is of average 1.5 cm with variation of 1-2.5 cm.

Clamping of the umbilical cord may have been carried out during delivery of the baby if the cord was tightly around the neck, However, Opinion vary as to the most beneficial time for clamping the cord during the third stage of labor

Care should be taken to apply the clamp to the cord end nearer the baby 3-4 cm clear of the abdominal wall to avoid pinching the skin. Cleanliness of the umbilical cord is essential. Hand washing is required before and after handling the cord. No specific treatment is required although a wide variety of preparation have been used to promote easily separation. The cord clamp is removed on the third day provided the cord is dry and necrosed. The cleaning of the cord with antimicrobial solution or dry cleaning a birth and the days following birth is effective in preventing cord infection and tetanus neonatorum.

The other common infection is omphalitis due to useless hygienic practices and the incidence is less in developed countries and more in developed country. The unhygienic cord practice have implicated as the main factor responsible for the high incidence of omphalitis. So cleaning of the cord with betadine or the normal saline comparing promote the knowledge about the incidence of infection and the healthy cord among the new born babies.

The umbilical cord is developed from the connective stalk, which is bond of mesoblastic tissue stretching between the embryonic disk but as result of cephalocaudal folding of the embryo and simultaneously enlargement of the amniotic cavity, the amniotic ectodermal junction coverages on the ventral aspect of the fetus. As the amniotic cavity enlarge out of proportion to the embryo and become distended with fluid, the embryo is carried more and more in to the amniotic cavity with simultaneously elongation of the connective stalk the future umbilical cord.

According To Who in India the neonatal mortality rate is 55 death per 1000 live birth. According to 2010 studies in India it is 49.13 death per 1000 in that male include 47.7 and female 50.73 death per 1000 population. And in Andhra Pradesh 60 per 1000 live birth. So this neonate mortality rate has to come down for the new born.

According to Narayana hospital consultant episodes for flamed cord of new born requires emergencies hospital admission, In that 49% of the hospital consultant episode for female and 4% for male.

During my clinical experience, 1 found that the staff nurses and nursing students are not having sufficient knowledge about umbilical cord assessment So, I selected this problem to improve knowledge of umbilical cord assessment.

## 2. Objectives of the Study

1. To assess the level of knowledge regarding assessment of umbilical cord among staff nurses.
2. To assess the level of knowledge regarding assessment of umbilical cord among nursing students.
3. To compare the level of knowledge regarding assessment of umbilical cord between staff nurses and nursing students.
4. To find out the association between the level of knowledge regarding assessment of umbilical cord among staff nurses with their socio-demographic variables.
5. To determine the association between knowledge and assessment of umbilical cord among staff nurse with their selected socio demographic variables.

## 3. Materials and Methods

**3.1 Sampling and data collection:** Descriptive cross sectional design, used to assess the level of knowledge regarding assessment of umbilical cord among staff nurses and student nurses in Narayana medical college hospital. Non-probability convenient sampling was used. Staff nurses and student nurses who were eligible, can understand regional language, who were available during data collection and voluntarily willing to participate in the study. Who are sick, who are on leave were excluded. Prior Permission was obtained from ethical clearance committee Participants signed an informed consent and were told they could withdraw from the study at any time for any reason.

## 3.2 Description of Tool

### 3.2.1 Part I

Deals with demographic variables include age, gender, educational qualification, source of information, attended any CNE programme.

### 3.2.2 Part II

It deals with structured questionnaire to convey the knowledge umbilical cord assessment among staff nurses and student nurses. It consists of 30 multiple choice question. Each question gives success answer as 1 score. If not answering gives 0 score.

**3.3 Score Interpretation:** The score was interpreted as follows:

Inadequate knowledge: 0-10

Moderately adequate: 11-20

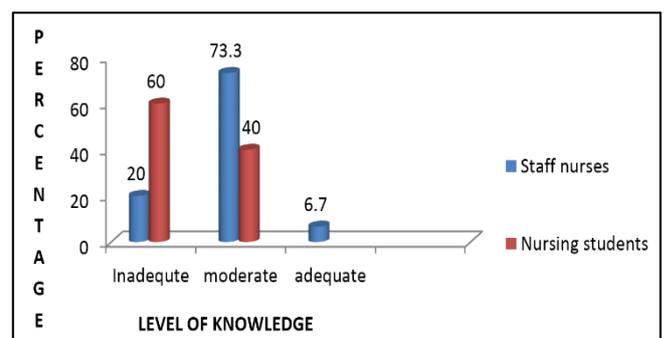
Adequate knowledge: 21-30

**4. Data analysis:** Data was analysed by using descriptive and inferential statistics. Frequency, percentage, Item analysis, mean, standard deviation and chi-square test were done.

**5. Results:** The results shows that frequency and percentage distribution with regard to age, 10(66.7%) staff nurses are between 20-22 years, 3(20%) are between 23-25 years and 2(13.3%) are between 26-28 years, regard to gender, 1(6.7%) is male and 14(93.3%) are females., regard to educational qualification, 2(13.3%) studied GNM and 13(86.7%) studied BSC nursing, regard to working experience, 10(66.7%) have <1 year experience, 3(20%) have 1-4 years of experience and 2(13.3%) have >7 years, regarding to source of information 1 (6.7%) gained from Mass media and 14(93.3%) gained from all the above and with regard to attending CNE programme, 6(40%) have attended and 9(60%) have not attended.

For nursing students with regard to age 9(60%) nursing students are 20 years, 5(33.3%) are 21 years and 1(6.7%) is 22 years, regard to educational qualification, all the 15(100%) are studying BSc (N), regard to year of course 9(60%) nursing students are studying 3<sup>rd</sup> year and 6(40%) are studying 4<sup>th</sup> year, regard to source of information 1(6.7%) gained from Newspaper, 2(13.3%) gained from books and, 12(80%) gained from all the above, regard to attending CNE Programme 1(6.67%) attended and 14(93.33%) not attended.

## 5.1 Percentage distribution of level of knowledge between staff nurses and nursing students



**Table 1:** comparison of mean and standard deviation of knowledge scores between staff nurses and nursing students. (N=30)

Category	Mean	Standard Deviation
Staff nurses	16.8	2.8
Nursing student	14.13	3.1

For staff nurses there was no significant in age, educational qualification, working experience, source of information and attending CNE and for nursing students there was no significant association between age, educational qualification year of course, source of information and attending CNE programme.

## 6. Discussion

The discussion of the present study was based on the findings obtained from the descriptive and inferential statistical analysis of collected data. It is presented in the view of the objectives of the study. The study related to level of knowledge regarding assessment of umbilical cord among staff nurses majority 11(73.33%) had moderate knowledge and among the 15 student nurses majority 9(60%) had inadequate knowledge.

With regard to association, nurses there was no significant in age, educational qualification, working experience, source of information and attending CNE and for nursing students there was no significant association between age, educational qualification year of course, source of information and attending CNE programme.

## 7. Conclusion

The study concluded that majority of staff nurses had moderate knowledge and majority of nursing students had inadequate knowledge regarding umbilical cord assessment. there was no significant in age, educational qualification, working experience, source of information and attending CNE and for nursing students there was no significant association between age, educational qualification year of course, source of information and attending CNE programme.

## 8. Recommendations

- A similar study can be conducted on large number of sample in different settings.
- A quasi experimental study can be conducted for identifying the effectiveness of structured teaching programme on assessment of umbilical cord among staff nurse and student nurse

## 9. Acknowledgement

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