EFFECTIVENESS OF CAPACITY BUILDING PROGRAMME ON KNOWLEDGE AND PRACTICE OF AMNICOT AMONG STAFF NURSES

\mathbf{BY}

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A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

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DECLARATION

I hereby declare that the present dissertation entitled "Effectiveness of

Capacity Building Programme on Knowledge and Practice of Amnicot among

Staff Nurses at Selected Hospital Chennai" is the outcome of the original research

work undertaken and carried out by me under the guidance of Dr. Latha Venkatesan,

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I also declare that the material of this has not found in any way, the basis for the

award of any degree or diploma in this university or any other university.

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"Feeling gratitude and not expressing it, is like wrapping a present and not giving it"

-William Arthur

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SYNOPSIS

"A Pre Experimental Study to Assess the Effectiveness of Capacity Building Programme on Knowledge and Practice of Amnicot among Staff Nurses at Selected Hospital Chennai"

OBJECTIVES OF THE STUDY

- To assess the level of knowledge and practice of amnicot among staff nurses in the selected hospital.
- 2. To assess the effectiveness of the capacity building programme for staff nurses on amnicot by comparing pretest and posttest knowledge and practice.
- 3. To assess the level of satisfaction on the capacity building programme for staff nurses on knowledge and practice of amnicot.
- 4. To find out the association between the selected variables and pretest and posttest knowledge and practice of capacity building programme of amnicot among staff nurses.

The conceptual framework of the study was developed on the basis of Ottawa Adaptation Theory. The variables of the study were knowledge and practice of staff nurses on amnicot as dependent variables and capacity building programme of amnicot as independent variables, were formulated.

An extensive review of literature and guidance by experts formed the foundation to the development of structured knowledge questionnaires and intervention on capacity building programme. A pre experimental one group pretest and posttest research design was used to achieve the objectives of the study. The present study was conducted in the Apollo Cradle Hospital, Chennai, with the sample size of 30 staff nurses, selected through purposive sampling technique and written consent was obtained from the staff nurses.

Pretest assessment was done with predetermined tools. Knowledge and practice were assessed using structured questionnaire and an observational check list respectively. The intervention of capacity building programme of amnicot was carried out for 30 staff nurses. It was done by using lecturer cum discussion and demonstration method for 2 hours which was followed by redemonstration. Posttest assessment was done with the same questionnaire and a checklist for the staff nurses at the interval of 1 week after intervention. Then the level of satisfaction of staff nurses was assessed using rating scale. The data obtained were analyzed using Descriptive and Inferential statistics.

Major Findings of the study were

- ➤ Majority of the staff nurses were below 25 years (93.33%) and all of them were Females (100%). Their designation was staff nurse (100 %). Most of the staff nurses had less than 1 year of work experience (66.67%) in labour room and have not received previous information regarding amnicot (66.67%).
- Most of the staff nurses had moderate knowledge (60%) and (23.33%) had inadequate knowledge about amnicot. After intervention majority of the staff nurses had adequate knowledge (63.33%) and others (20%) had moderate knowledge.
- ➤ Mean and standard deviation of posttest knowledge scores was high (M=20.3, SD=3.81) when compared to the pretest (M= 12.46, SD=4.08). The differences were found statically significant at p< 0.001. This can be attributed to the effectiveness of

- the knowledge and practice of amnicot among staff nurses. Hence the null hypothesis Ho1 "There will be no significant difference between Pretest and Posttest level of Knowledge and Practice of amnicot among staff nurses" was rejected.
- In pretest 23.33% of their practice was good and 16.66% had very good practice whereas in posttest 43.33% of their practice was good followed by excellent practice (30%) and very good practice (20%).
- ➤ Mean and standard deviation of posttest practice scores were high (M=14.13, SD=4.32) when compared to the pretest practice scores (M = 8.6, SD= 5.03). The differences were found to be statically significant at p< 0.001. Hence the null hypothesis Ho1 "There will be no significant difference between pre and post test level of knowledge and practice of amnicot among staff nurses" was rejected.
- ➤ Majority of the staff nurses (93.33%) were highly satisfied with the researcher, (90%) on the capacity building programme and (93.33%) on effectiveness of amnicot.
- The study finding revealed that, there was no significant association between the selected background characteristics with the pre test and post level of knowledge on amnicot among staff nurses. Hence the null hypothesis Ho2 "There will be no significant association between the selected variables and level of knowledge in pretest and posttest among staff nurses" was retained and.
- The study finding revealed that, there was no significant association between the selected background characteristics with the pre test and post level of practice of amnicot among staff nurses. Hence the null hypothesis Ho3 "There will be no significant association between the selected variables and level of practice in pretest and posttest among staff nurses" was retained.

Recommendations

- > The study can be conducted with larger samples to generalize the results.
- > The study can be replicated in different settings.
- > Same study can be conducted among nursing student.
- > A comparative study can be conducted between private and government settings.

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CHAPTER I

INTRODUCTION

BACKGROUND OF STUDY

"Knowledge is a treasure, but practice is the key to its"

Lao Tzu

Labour, also known as parturition, is the act or process of bearing or bringing forth offspring. The mother's body is prepared for birth by hormones produced by the pituitary gland, ovary and the placenta. The total gestation period from fertilization to birth is normally about 38 weeks (birth usually occurring 40 weeks after the last menstrual period). The normal process of childbirth takes several hours and has three stages. The first stage starts with a series of involuntary contractions of the muscular walls of the uterus and the gradual dilation of the cervix. The active phase of the first stage starts when the cervix is dilated more than about 4 cm in diameter and when the contractions become stronger and regular.

The head (or the buttocks in a breech birth) of the baby is pushed against the cervix, which gradually dilates until is fully dilated 10 cm diameter. Simultaneously the amniotic sac bursts and the amniotic fluid escapes (also known as rupture of membranes or breaking the water). In stage two, starting when the cervix is fully dilated, strong contractions of the uterus and active pushing by the mother expels the baby out through the vagina, which during this stage of labour, is called a birth canal as this passage contains a baby, and the baby is born with the umbilical cord attached. In stage three, which begins after the birth of the baby, further contractions expel the placenta, amniotic sac, and the remaining portion of the umbilical cord usually within a few minutes.

Induction is the process of starting labour by uterine stimulation. It should be used when it is thought that the baby will be safer delivered than it is in utero. If needs to be clearly distinguished from augmentation of labour. This is the enhancement of uterine contractions once labour has started.

The process of induction of labour can vary depending on the condition of the cervix. There is a scoring system, known as the Bishop score which is used as a scoring system to assess the cervix. The cervix is said to be unfavourable for induction of labour if the Bishop's score is 6 or less. These women will need to undergo cervical ripening which can be done by means of a prostaglandin based gel or controlled release or a transcervical Foley catheter.

Oxytocin is the hormone that stimulates the contraction of the uterus. Synthetic forms of oxytocin (Oxytocin; Syntocinon) are available and these can be administered intravenously to induce labour. This is typically an infusion where a certain dose of the medication is delivered over a period of time.

Artificial rupture of membranes (ARM) refers to the surgical rupture of the membranes that surround the baby (the amnion and chorion). This can be performed to induce labour when the bishop's score is 6 or more. Some women, especially those who have had babies previously, go on to develop contractions spontaneously. Alternatively this method is commonly used in combination with oxytocin.

There are four main reasons for performing an amniotomy:-

To induce labour or augmentation of the uterine contraction. This is the most common reason for an amniotomy. The amniotic fluid is rich in a hormone called prostaglandin, and the bathing of the cervix by this fluid increases the strength and

frequency of uterine contractions. Sometimes, if all of the criteria for rupture are met, amniotomy is the least interventive way to get labour started or to make the labour more progressive and functional.

This was supported by a study conducted by Wetrich (1970) on the effect of amniotomy upon labour and found that Amniotomy performed at 6 cm cervical dilatation in primigravidas during normal labour in a randomized controlled study was effective in shortening of the duration of the remainder of the first stage of labour in the patients on whom amniotomy was performed compared to the control group in whom the membranes were left intact. Additional observations were made regarding the effect of caudal anaesthesia and a suggested plan for the use of amniotomy in labour is offered.

To enable the doctor or midwife to monitor the baby's heartbeat internally, a scalp electrode is placed against the baby's head and an ECG of the baby's heart beat can be directly recorded. This provides a much more reliable indication of the fetal well being than external monitoring alone. Internal fetal monitoring is often performed if there is a complication such as maternal disease, or if there is fetal distress or if the mother is being induced.

To check the colour of the fluid, if there is an apprehension of the presence of meconium (the contents of the baby's bowel), certain preparations must be made.

Suctioning must be set up and more personnel are required to be in attendance.

To avoid aspirate the contents of the amniotic fluid at the moment of birth. Most often, the amniotic sac breaks on its own accord, most often by the beginning of the second stage of labour. If it remains intact, it is sure to break with maternal pushing

efforts. But in a rare case, the baby can be born with an intact bag that must be quickly broken to facilitate breathing for the baby.

In some cases, the amniotic sac may also be broken if the mother can feel the sac bulging, and is feeling pressure in her vagina due to this.

An amnicot is a medical instrument that is used to perform an amniotomy or artificially rupture the membranes in order to induce or augment labour. It is a glove that has a pricked tip on one of the fingers. In an amniotomy procedure, the amnicot is inserted through the vagina to rupture the amniotic sac.

Amniotomy (also referred to as artificial rupture of membranes [AROM]) is the procedure by which the amniotic sac is deliberately ruptured so as to cause the release of amniotic fluid. Amniotomy is usually performed for the purpose of inducing or expediting labour or in anticipation of the placement of internal monitors (uterine pressure catheters or fetal scalp electrodes). It is typically done at the bedside in the labour and delivery suite.

Amniotomy was described almost two centuries ago and since then has been used both for the induction and augmentation of labour which are common obstetric practices. Trends have shown a rise in the induction rates over the last decade and data suggest that the rate of labour inductions is increasing faster than the rate of pregnancy complications. Recent years have seen the emergence of a variety of other methods of induction of labour but amniotomy combined with oxytocin infusion remains the most commonly used method of augmentation of labour.

Need for the study

In most pregnancies, labour will start on its own but in some situations labour may need to be started artificially. This is called 'induction' of labour. The process of induction can be different for everyone; most women will have their babies within 24 hrs, for others induction may take up to 2 to 3 days. There are a range of methods that can be used to induce your labour. Artificial rupture of membranes (ARM) refers to surgical rupture of the membranes that surrounds the baby (the amnion and chorion). This can be performed to induce labour if the bishop's score is 7 or more. Some women, especially those who have had babies previously, may go on to develop contractions spontaneously. Alternatively this method is commonly used in combination with oxytocin.

The primary aim of amniotomy is to speed up contractions and, therefore, shorten the duration of labour. The membranes are ruptured using Kocher's forceps which has a chance of injury to fetal scalp.

Amniotomy (deliberate rupture of the membranes) is simple procedures which can be used in isolation for induction of labour if the membranes are accessible, thus avoiding the need for a pharmacological intervention. However, the time interval from amniotomy to established labour may not be acceptable to clinicians and women, and in a number of cases labour may not ensue. This is one of a series of reviews of methods of cervical ripening and labour induction using a standardized methodology.

The artificial rupturing of membranes is an obstetrical intervention familiar to every physician and midwife. Within the purview of modern practice, Amnihook long crochet hook-like instrument-has been the universal standard. In the 1990s, Go Medical

Industries introduced Amnicot as an alternative. This disposable latex finger cot with a small hook on the end is placed over an already gloved index or middle finger, and then placed in the vagina and used for performing an amniotomy through the dilated cervix. The device is touted as less painful and anxiety provoking for patients and easier to use for practitioners.

Amnicot is a rubber latex finger cot with a hook attached. It can be placed over the index or middle finger of a gloved left or right hand. Rupturing the membranes becomes an easier procedure for the obstetrician or midwife and the patient. The advantage of the Amnicot is that membrane rupture can be performed utilizing just one finger, without the need for other instruments to be inserted through the cervix. Reduced cervical dilation resulting in less pain, discomfort and anxiety compared with other more obtuse amniotic perforation instruments. Increased accuracy is possible as the clinician has a greater tactile feedback and can more precisely apply the hook for membrane incision. It eliminates the need for an assistant as the user's other hand is free to stabilize the presenting part. Eliminate the need for the patient to assume the lithotomy position when the cervix is posterior. It is sterile, disposable and means Low Cost.

It is an ideal aid for performing a controlled amniotomy with less stress for the patient precise positioning of the small hook since the finger can react more flexibly than a rigid instrument.

Many studies have been conducted on amnicot. But the increasing need of modern practice for those who are taking care of delivery, which is overlooked. Therefore there is need to educate the nurses about amnicot, its importance and management of delivery so as to help them to lead a safe practice in future. Hence the

researcher has conducted this study to assess the effectiveness of amnicot on Knowledge and Practice among Staff Nurses.

Statement of problem

A Pre Experimental Study to Assess the Effectiveness of Capacity Building Programme on Knowledge and Practice of Amnicot among Staff Nurses at Selected Hospital, Chennai.

Objectives of the study

- To assess the level of knowledge and practice of amnicot among staff nurses in the selected hospital.
- 2. To assess the effectiveness of the capacity building programme for staff nurses on amnicot by comparing pretest and posttest knowledge and practice.
- To assess the level of satisfaction on the capacity building programme for staff nurses on knowledge and practice of amnicot.
- 4. To find out the association between the selected variables and pretest and posttest knowledge and practice of capacity building programme of amnicot among staff nurses.

Conceptual and Operational definitions

Effectiveness

It is defined as the degree to which something is successful in producing a desired result of success is known as effectiveness.

In this study it refers to the outcome of capacity building programme of the staff nurses on the knowledge and practice of amnicot at selected hospital.

Capacity building programme

It is a planned development of increasing knowledge, output rate, management, skill of an organization through training.

In this study it refers to the empowering of the staff nurses regarding the knowledge and practice of amnicot by lecture cum demonstration and the staff nurses redemonstrated the technique to use the amnicot.

Staff nurse

It is defined as a registered staff nurse working in the selected hospital.

In this study registered staff nurses females who have completed either B.Sc (N) or G.N.M (N) and working in selected hospital.

Knowledge

The facts, information and practice acquired through experience and education.

In this study knowledge refers to the understanding of amnicot among staff nurses as measured by knowledge questionnaires.

Practice

The process of performing or doing something in a specific manner.

In this study the staff nurses were assessed by re-demonstration of amnicot with the help of a checklist developed by the researcher.

Amnicot

Amnicot is a rubber/latex finger cot with an attached hook. It is easy to use and makes rupturing the membranes a safe and simple procedure for the obstetrician or midwife

Assumptions

The assumptions in this study are

- Amnicot may reduce the injury to the fetal scalp compared to Kocher's forceps.
- Amnicot is easy to practice in an emergency situation.
- ➤ Rupture of membrane using amnicot may have useful to for the examination of the colour of amniotic fluid.
- > Staff nurses may develop knowledge and practice of amnicot during labour.

Null hypotheses

H01: There will be no significant difference between pre and post level of knowledge and practice of amnicot among staff nurses.

Ho2: There will be no significant association between the selected variables and level of knowledge in pretest and posttest among staff nurses.

Ho3: There will be no significant association between the selected variables and level of practice in pretest and posttest among staff nurses.

Delimitation

- > The study was limited to the staff nurses working in the selected hospital
- ➤ The study was limited to 6 weeks

Conceptual frame work of the study

The conceptual framework for a particular study is the abstract, logical structure that enables the researcher to link the findings to nursing's body of knowledge. It is developed from the existing theory and helps in identifying and defining the concept of interests and proposing relationships among them. The model gives a direction for planning research design, data collection and interpretation of findings.

The conceptual framework of the present study is based on Ottawa Model of Research Use Graham, I. D., & Logan. J(2004). Innovations in knowledge help transfer the continuity of care. The researcher has adopted this model for assessing the knowledge and practice of staff nurses upon amnicot.

Graham, I. D., & Logan. J theory described as an effective change across multiple settings and organizations can be challenging. This six-step approach was developed in the context of continuity of care innovations. The method uses the Ottawa Model of Research Use, a knowledge translation model, to guide the process of transferring research to practice.

The Ottawa Model of Research Use follows a six-step approach to guide the implementation of an innovation. According to this theory, nursing practice consists of 6 steps which include.

Step I- Set the Stage

Step II- Specify the Innovation

Step III- Assess the Innovation, Potential Adopters and the Environment for Barriers and Facilitators

Step IV- Select and Monitor the Knowledge Translation Strategies

Step V- Monitor Innovation Adoption

Step VI- Evaluate Outcomes of the Innovation

Step I- Set the Stage

Determine the available resources that can be used for innovation implementation.

The researcher identified the need to develop the new practice relating new technologies useful for the staff nurses and doctors to prevent complications, increase satisfaction and improve the overall outcome. Here the researcher used amnicot as an innovation implementation and assessed the knowledge and practice of staff nurses regarding amnicot.

Step II- Specify the Innovation

Clearly articulate what the innovation is and what the implementation involves.

In this study the researcher implemented the amnicot for easy to practice rupture of membrane for the parturition with indication for the induction of labour.

Step III- Assess the Innovation, Potential Adopters and the Environment for Barriers and Facilitators

Identify ways to overcome any barriers to implementation.

The researcher provided practice to staff nurses in the hospital setting to assess the knowledge and practice to find out the barriers in practice.

Step IV-Select and Monitor the Knowledge Translation Strategies

Based on the situational assessment, select appropriate strategies and interventions to increase awareness of the innovation and understanding of the innovation, and provide skills or training for adopters to be able to carry out the innovation.

In this study the researcher developed a structured educational intervention which includes lecture cum demonstration for empowering the practice of the staff nurses using amnicot to carry out the innovation in the day to day practice.

Step V- Monitor Innovation Adoption

Assess the knowledge translation strategies applied have been sufficient for effective innovation adoption, or if the knowledge translation strategies need to be changed or additional strategies are required.

The researcher monitored the practice with check list to assess the effectiveness of capacity building programme of amnicot.

Step VI-Evaluate Outcomes of the Innovation

Evaluate the impact of the innovation on clients/patients, practitioners and systems to determine the effectiveness of the innovation.

The researcher evaluating the posttest practice of amnicot among staff nurses.

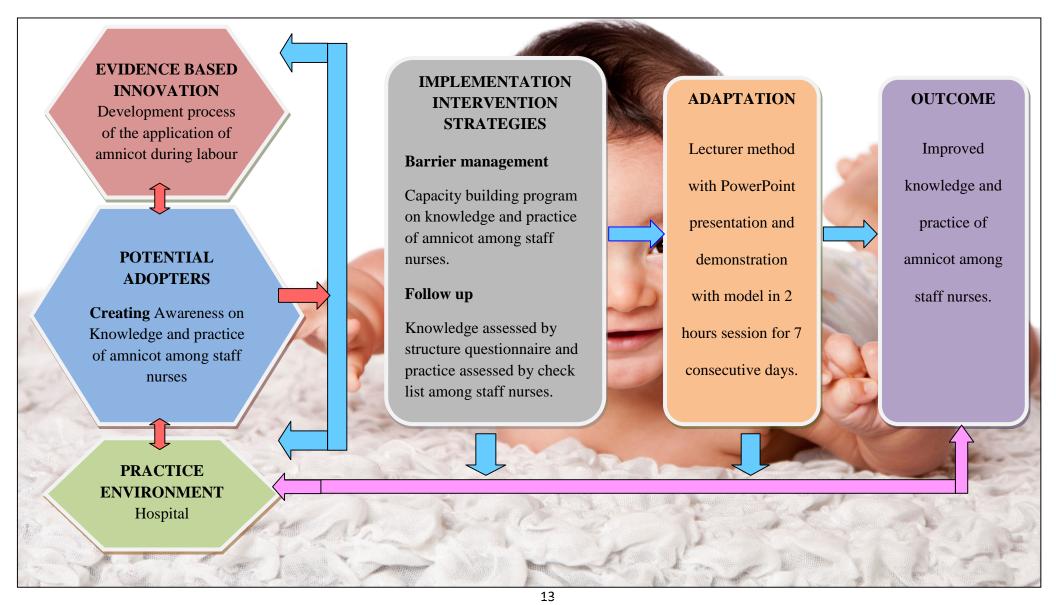


Fig 1: Conceptual Framework Based on Modified Ottawa Model (2004)

Projected Outcome

The projected outcome will enhance the knowledge and practice of amnicot

among staff nurses.

Summary

This chapter has dealt with the background of the study, need for the study,

statement of the problem, objectives of the study, assumptions, operational definitions,

null hypothesis, inclusion criteria and exclusion criteria delimitations and conceptual

frame work of the study.

Organization of the report

Further aspects of the study are presented in the following chapters.

Chapter II: Review of literature

Chapter III: Research methodology which includes research approach, research

design, research setting, population, sampling, sampling criteria and development of

analysis and research instrument.

Chapter IV: Analysis and interpretation of data is presented in terms of descriptive

and inferential statistics.

Chapter V: Discussion.

Chapter VI: Summary, conclusion, implications, recommendations and limitations

are presented

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CHAPTER-II

REVIEW OF LITERATURE

"A great literature is chiefly the product of inquiring minds in revolt against the immovable certainties of nation"

-Mecken

Review of literature helps the researcher to build on the existing work he or she should understand what is already known as topic (Polit and Beck, 2014).

Review of literature helps to plan and conduct the study in a systematic manner. Review of literature is the task of reviewing literature which involves the identification, selection, critical analysis and reporting of existing information on the topic of interest. It provides the basis for locating the data, new ideas that need to be included in the present study. It helps the researcher to find the accurate data that could be used for supporting the present findings and drawing conclusions. For the present study, the researcher reviewed the related literature and organized under the broad headings.

- > Amniotomy and its effects
- > Various instruments used for amniotomy
- > Aminihook verses amnicot
- > Amniotomy and its effects

Stewart et al. (1982) have conducted a study on the early rupture of membrane Sixty-eight patients (32 multigravidae, 36 primigravidae) with intact membranes were admitted in early spontaneous labour. Patients were randomly allocated to two groups: group I had an immediate amniotomy and group II were allowed to retain their membranes intact until full dilatation. Early amniotomy significantly shortened the

duration of labour and reduced the need for augmentation and instrumental delivery. There were no differences between the two groups in fetal outcome as measured by Apgar scores, umbilical arterial and venous blood pH, neonatal jaundice or admission to the special-care baby unit. Fetal heart-rate recordings obtained in group I by applying a fetal electrode after amniotomy were of quality superior to those obtained in group II by ultrasound and were more suitable for interpretation Normal and 'suspicious' tracings occurred equally in the two groups. In this study, results suggested some benefits from early amniotomy and no adverse effects on the fetus.

In the year 1992 Barret, J.F et al. have conducted a study on Amniotomy in labour versus the intention to leave membranes intact until the second stage. The objective of this study is to compare by randomized prospective clinical trial the outcome of labours which are managed with the intention to leave the membranes intact, compared with the practice of elective artificial rupture of the membranes (ARM) in early established labour. 178 of the 183 women (97%) in the artificial rupture of the membranes group had their membranes ruptured in early labour, and 83 (46%) of the 179 women allocated to non-intervention had artificial rupture of the membranes performed at some stage. A significant decrease in the duration of labour (mean 8.3, SD 4.1 hours vs mean 9.7, SD 4.8 hours, n = 156; P = 0.05) was found amongst primigravidae allocated to artificial rupture of membrane when compared to non intervention. The duration of the second stage of labour was unaffected. In the artificial rupture of the membranes group, the epidural rate was higher and labour was more often complicated by CTG abnormalities. There were no differences in the method of

delivery, fetal condition at birth (cord blood lactate, Apgar score) or postpartum pyrexia between the artificial rupture of the membranes and non-intervention groups.

Retrospective study was conducted by Janes, R (2001) on the assessment of the safety and efficacy of amniotomy induction of labour for women at or past term with a healthy pregnancy and a favourable cervix Retrospective chart review of nine cases involving amniotrophy induction managed by the author since 1991, combined with a literature search for randomized controlled clinical trials of the use of amniotomy induction. All nine women delivered within fourteen hours of amniotomy. The only serious complication was in group B streptococcal septicaemia in one newborn that developed four hours after birth. No randomized controlled clinical trials was found examined the use of amniotomy alone in a rural setting to induce women at or past term with a healthy pregnancy and a favourable cervix. However, studies of women from secondary care institutions at or past term with a favourable cervix, induced for a variety of reasons, demonstrate that amniotomy is both safe and effective. In appropriately selected women, the use of amniotomy induction in a rural maternity unit is both safe and effective.

Cooley, S.M et al. (2010) have conducted a study on the effect of amniotomy as a means of induction of labour. In total, 26,670 women delivered in the National Maternity Hospital during the study period. Of these 4,928 women required induction of labour and 72.8% of these (n = 3,586) underwent amniotomy only for the induction of labour. The conclusions of this study Amniotomy is a simple, safe and effective method of induction of labour as the result.

Faris et al. (2011) conducted a study on the Impact of Early Versus Late Amniotomy on Duration of Labour, Maternal and Neonatal Outcomes in Iraqi Primigravida with Spontaneous Labour. The conclusion, of this study is that early amniotomy significantly decreases the total duration of labour compared to late amniotomy.

A cross sectional study was conducted by Ghani, Tetal. (2013)This study was conducted with the aim and objectives to evaluate cases in terms of indication, determine the amniotomy delivery interval, analyze the outcome of the amniotomy in labour, find out cases that needed for intervention during the process and detect any maternal and fetal complication that may arise as a result of amniotomy. 110 cases in Sir Sallimullah Medical College and Mitford Hospital over a period of one year from December'1999 to December'2000 were under taken. Out of 110 patients, 58 were multigravida and 52 were primigravida and their mean age was 25.3 years. Amniotomy was done on these patients with mean cervical dilatation of 3.9 cm. Amniotomy alone was done in 88 cases the mean amniotomy delivery interval was 4 hours 54 minutes and 90(81.8%) patients delivered normally; 89.1% babies were healthy. Amniotomy cannot be used in remote areas of our country. Though it may shorten labor by augmentation and may contribute in reducing maternal morbidity and mortality, there is the potential risk of cord prolapsed, abruption placenta, and risk of infection. So it can be done only in institutions under proper supervision.

In the year 2013 Majeed, N et al. have conducted a study on the Comparison of Artificial Rupture of Membranes with Intact Membrane in Labouring Multigravidae In this interventional study, 100 women with uncomplicated term pregnancy and spontaneous onset of labour were divided in two groups. All the patients were in active labour with Bishop score 5-6 and intact membranes. Fifty women underwent amniotomy (group A) while fifty did not have amniotomy (group B). The duration of labour was noted in hours and categorized as more than 6 hrs and less than 6 hrs in both groups. Apgar scores of babies were noted at 5 minutes of delivery and categorized as up to 6/10 or more than 6/10 in both groups.

A retrospective cohort study was conducted by Cooney, L.G et al. (2014) on the association between early artificial amniotomy and chorioamnionitis in nulliparous induction of labour to investigate whether early artificial rupture of the membrane amniotomy (AROM) less than 4 cm in nulliparous women admitted for induction of labour was associated with an increased rate of chorioamnionitis and cesarean section or a decreased time to vaginal delivery. This study was performed on nulliparous women with a term, singleton gestation and intact membranes who presented for induction of labour (January 2008 to December 2011). An observation of this study among 1567 women was 25.4% underwent early artificial rupture of membrane. Overall, the prevalence of chorioamnionitis was 12.4%, the rate of cesarean section was 32.2%, and the time from 4cm cervical dilation to vaginal delivery was 413min. Compared to women without artificial rupture of membrane less than 4cm, early artificial rupture of membrane did not affect overall chorioamnionitis rates (10.2 versus 13.2%, p=0.12 but it was associated with an increased cesarean section rate (40.2) versus 29.5%, p< 0.001). However, among those who delivered vaginally, artificial rupture of membrane less than 4cm decreased the rate of chorioamnionitis (8.4 versus

14.6%, p=0.01), which persisted when controlling for potential confounders (or 0.55, 95% CI 0.33–0.92), and decreased the time from 4cm dilation to vaginal delivery (329 versus 472min,) p>0.001. The conclusion of this study was the suggestion that early artificial rupture of membrane is not associated with any increased rate of clinical chorioamnionitis.

Saadia, Z (2014) has conducted A descriptive cross sectional study on Amniotomy in rates and indicators for amniotomy during labour between primigravidas and multigravida. In this study there was no primigravidas participants with ruptured membranes whereas slightly more than half of the gravida2 and above participants (n = 88) had ruptured membranes. The conclusion of this study was that although artificial rupture of membrane is a commonly performed procedure during labour, there is not much difference between its indications between primigravidas and gravida2 and above. The only significant by different indication was antepartum hemorrhage which was higher in gravida2 and above. Amniotomy was also performed without any clear indication in 26.4% of primigravida and 9.4% of gravida2 and above. Considering the artificial rupture of membrane as obstetric intervention, efforts should be taken up to reduce its rates. There is a need for arranging normal labour workshops to revise the indications and to review the rates after these workshops to reduce the rates of artificial rupture of membrane.

Various instruments used for amniotomy

Levy, Ret al. (2002)have conducted a study on a randomized comparison of early versus late amniotomy following cervical ripening with a Foley catheter

Inflated Foley catheters have gained popularity as mechanical device for ripening of the cervix in patients with unfavourable cervix. It has been suggested that the use of an extra-amniotic catheter balloon has the advantages of simplicity, low cost, reversibility, and absence of systemic or serious side effects over the use of medical methods of cervical ripening. On the other hand, extra-amniotic catheter balloon has been found to be associated with an increase in caesarean section rate compared with spontaneously labouring women. A total of 211 women had ripening of the cervix with a Foley catheter. Of these, 80 women were assigned to early amniotomy and 88 to the late amniotomy group. Thirty-three women were excluded before randomization (Twenty-six women developed regular contraction as documented by three contractions per 10 minutes, and in seven the Foley catheter was not expelled by 24 hours). Ten women were excluded from the study after randomization (two women because fetal presentation changed during the ripening period, in three participants cervical dilatation was either less than 3cm or greater than 5cm, and in five the presenting part floated above the pelvic inlet which precluded safe amniotomy). The conclusion of this study is that amniotomy should be postponed in women who undergo ripening of the cervix with a Foley catheter until the woman is in active labour. This management may result in the reduction of the caesarean section rate due to dystocia in these women.

Koyama, S et al. (2011) have conducted a study on the Amnioscope Strikes Back as a Useful Device for Pinhole Amniotomy in the Management of Polyhydramnios when considering uterine dysfunction caused by overstretched uterine muscles, active artificial amniotomy for more efficient labour seems to be a preferred obstetric management, but the potential adverse complications cause hesitation in

obstetricians hesitate to perform this procedure. A new strategy is required in such a challenging situation the recently performed pinhole artificial amniotomy using an amnioscope in four women with polyhydramnios, not only to accelerate of labor but also to effect a more slow and safe reduction in amniotic fluid volume. There was no complication seen using this procedure, and all women had vaginal delivery without postpartum haemorrhage and neonatal asphyxia. Pinhole artificial amniotomy using an amnioscope may be more convenient and safer than conventional artificial amniotomy. The significance of the amnioscope has been practically nil in modern obstetric management. In this pilot clinical study, a new value for the amnioscope was identified as a promising device for safer amniotomy in women with polyhydramnios. In all cases, pinhole artificial amniotomy using an amnioscope was successfully performed without any problems. There were no deliveries complicated by prolonged labour or postpartum haemorrhage. The blood gas of umbilical artery testing showed good neonatal condition at birth.

Aminihook verses amnicot

A comparative study on Amnihook versus amnicot for amniotomy in labour was conducted by Harris, M and Cooper (1993). In this study, of 100 women in established labour, investigation was done on two devices currently used for amniotomy, the Amnihook, a long rigid instrument and the Amnicot, a finger stall with a plastic hook on the end. No overall difference was found in operator ease of use or maternal discomfort. There were significantly fewer babies with long scratches p = 0.02, Odds ratio 0.19 (95% CI 0.05 to 0.68) and the mean scratch length was almost halved in the Amnicot group (p < 0.05, 95% CI for difference between means 0.653 to 6.71). The

findings of this research demonstrate the theoretical advantage of a reduction in fetal scalp trauma using a flexible device of amnicot for amniotomy.

Summary

This chapter has dealt with the review of literature related to the problem stated. It has helped the researcher to understand the impact of problem under study. It has also enabled the researcher to design the study, develop the tools and plan the data collection procedure and to analyze the data. All the literatures presented here were from primary source.

CHAPTER III

RESEARCH METHODOLOGY

The methodology of any research study is defined as the way the information is gathered in order to answer the research question or analyze the research problem.

It enables the researcher to prepare a blue print for the research undertaken. It involves a systematic procedure by which the researcher could a start from the initial identification of the problem to find its conclusion.

This study was conducted to assess the effectiveness of capacity building programme of staff nurses of amnicot upon knowledge and practice in selected hospital. This chapter deals with the different steps undertaken by the researcher for the study. It involves the research approach, setting, population, samples, sampling technique, selection of tool, content validity, reliability, pilot study, data collection procedure and data analysis.

Research Approach

Research approach is the most significant part of any research. An experimental research is an extensively applied for the research and involves finding out how well of programme and the practice of policy are working (Polit Beck 2013).

Its goal is to assess or evaluate the successes of the programme .An experimental approach was considered for the accomplishment of the objective of this study. The research wanted to assess the capacity building programme of amnicot. The experimental research approach has been used in this study.

Research Design

A research design incorporates the most important methodology design that research work has in conducting a research study (Polit, Beck 2014).

A pre experimental research design was adopted for conducting this study

 $O1 \quad x \quad O2$

O1-Pretest to assess the level of knowledge and practice among staff nurses

O2-Posttest to assess the level of knowledge and practice among staff nurses

X- Capacity building programme of amnicot among staff nurses for knowledge and practice.

Capacity building programme of amnicot

A capacity building programme of staff nurses of amnicot for knowledge and practice. This helps the staff nurses to gain adequate knowledge and practice of amnicot.

In this study, it refers to a planned educational and intervention, and includes

- > Definition of induction of labour
- ➤ Indication of amniotomy
- Contra indication of amniotomy
- > Definition of amnicot
- Purposes of amnicot
- Advantages
- Disadvantages
- > Equipments needs

- > Instruction before use
- > Procedure
- > Effects of amniotomy

This programme was administered for two hours comprising one hour of teaching followed by one hour of demonstration and redemonstration on amniotomy with the use of amnicot for the staff nurses by the researcher at the auditorium in Apollo Cradle Hospital, Chennai.

Variables

A variable is an attribute that varies, taking on different values (Polit Beck 2014).

Dependent variables

The variables hypothesized and dependent on or caused by an independent variable is a dependent variable.

In this study, knowledge and practice of the staff nurses of amnicot were dependent variables.

Independent variables

A variable that is believed to cause or influence dependent variables is called independent variables.

In this study, capacity building programme of the staff nurses of amnicot was the independent variables.

Attribute variables

A variable that distinguishes the relationship between the independent and dependent variables that require control either in the research design or attribute variables.

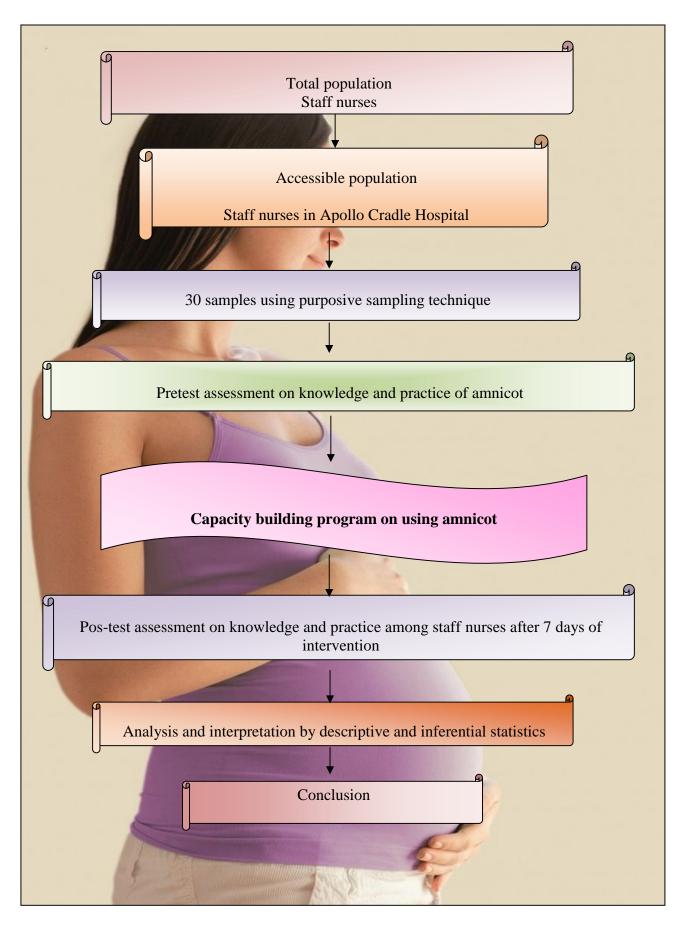
Background characteristics such as age, gender, religion, educational status, designation, working area, years of experience, experience in labor room, previous knowledge regarding amnicot were the attributes in this study.

Research setting

According to Polit Beck (2014), setting is the physical location and condition in which data collection in a study takes place in a study.

This study was conducted in the Apollo Cradle Hospital, Greams Road, in Chennai. The Apollo Cradle Hospital is situated at Shafee Mohammed Road which is 15 km away from Apollo College of Nursing. The total staff nurse strength is 65. The hospital has all the facilities required for labour.

The setting was chosen on the basis of feasibility in terms of availability and accessibility to adequate sample and cooperation of concerned authorities.



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Fig 2.Schematic Representation of the Research Study

Population

Polit (2014) stated that the population is the entire aggregation of cases which meet designed set criteria. In this study the target population comprises of staff nurses.

Target Population

The target population is the group of population that the researcher aims to study and for whom the study finding will be generalized. In this research work population comprises all the staff nurses who satisfy the criteria.

Accessible Population

The accessible population is the population that the researcher finds in the study area. The accessible populations in this study were the staff nurses working labour room, Operation theatre, Post-operative ward, postnatal ward and NICU who satisfy the inclusion criteria in selected hospital, Chennai.

Sample

Polit Beck (2014) states that a sample consists of the subset of the units that comprise the population for the study the Sample consists of staff nurses who met the inclusion criteria in the selected hospital at Chennai.

Sampling Technique

Purposive sampling technique was used in this study to select the staff nurses.

Sample Size

A total of 30 staff nurses working in Apollo Cradle Hospital ware selected for this study.

Sampling Criteria

Inclusion Criteria

- > Staff nurses who were working in the labour room, OT, NICU and post operative ward and post natal ward at the selected hospital
- > Available at the time of data collection
- ➤ Willing to participate

Exclusion Criteria

Those who were not willing to participate in the study.

Selection & development of study instruments

The data collection tools were selected through an extensive review of literature and in consultation with experts and with the opinion of faculty members. The following instruments were used in this study.

- ➤ Background characteristics proforma
- ➤ Knowledge assessment questionnaire
- > Check list to assess the practice of amnicot
- Rating scale to assess the level of satisfaction on capacity building programme

Background characteristics proforma of staff nurses

The background characteristics performs consists of age, gender, education status, designation, working area, years of experience, experience in labour room, previous knowledge regarding amnicot.

Knowledge assessment questionnaires

It consists of 25 MCQ items with 4 options 1 right answer and 3 distracters. Each right answer is scored 1 wrong answer is scored 0 respectively. Thus total obtained score is 0-25. Obtained score is converted into percentage and interpreted as follows.

| Score | Percentage | Levels of knowledge |
|-------|------------|-------------------------------|
| >18 | 75-100% | Adequate knowledge |
| 12-18 | 50-74% | Moderately adequate knowledge |
| <12 | Below 50 | Inadequate knowledge |

Observational Check list to assess the practice of amnicot

It consists of 20 items, with options such as done and not done, and scored as 1 and 0 respectively. Thus total obtainable score is 0 - 20. Obtained score is converted into percentage and interpreted as follows.

| Score | Percentage | Level of practice |
|---------|------------|-------------------|
| 17 - 20 | 80-100% | Excellent |
| 13 - 16 | 60-80% | Very good |
| 9 - 12 | 40-60% | Good |
| 5 - 8 | 20-40% | Average |
| 1 – 4 | <20 % | Poor |

Rating scale to assess the level of satisfaction regarding capacity building programme.

It was developed by the researcher for assessing the level of satisfaction of practice of the staff nurses of amnicot. This scale consists of 10 items on satisfaction of the study participants regarding the various aspects of amnicot rated on four point scale with score. The satisfaction score was classified as follows, Highly satisfied - 4, Satisfied -3, Dissatisfied -2, Highly dissatisfied -1. Thus the total obtainable score was 10-40. The obtained score was converted in to percentage and is interpreted as follows.

Level of satisfaction

| Score | Percentage | level of satisfaction |
|---------|--------------|-----------------------|
| 31–40 | < 76 – 100 % | highly satisfied |
| 21 – 30 | 50 – 75 | Satisfied |
| 11 – 20 | 25 – 49 | Dissatisfied |
| 1 – 10 | 1 – 24 | highly dissatisfied |

Psychometric Properties of the study Instruments

Validity of study instruments

Content validity is the degree to which an instrument measures what it is supposed to measure. Content validity is the sampling adequacy of the content being measured. (Polit and Beck, 2014).

The content validity of the tool for this research was obtained by getting opinion from experts in the field of Medicine and Nursing. The experts have suggested some

specific modifications in the objectives and rating scale. Such modifications and suggestions were incorporated in the final version of the tool.

Reliability of study instruments

Reliability is the degree of consistency or dependability with which an instrument measures the attribute it intended for measurement (Polit and Beck, 2014).

Karl Pearson's 'r' was computed for finding out the reliability. r=0.6 is noted in both structure questionnaires and practice observational check list and rating scale for level of satisfaction among staff nurses.

Intervention Protocol

Informed consent was obtained from the staff nurses after a detailed explanation of the capacity building programme. Knowledge and practice were assessed by using a structured questionnaires and observational check list. Followed by a teaching session and demonstration on practice of amnicot was given to the 30 staff nurses. It was done by using lecturer cum discussion and demonstration method for 2 hours which was followed by redemonstration. Posttest assessment was done at intervals of 1 week of intervention with the same tools. The level of satisfaction of staff nurses was then assessed using a rating scale.

Pilot Study

According to Polit and Beck (2012), a Pilot study is a miniature or some part of the actual study, in which the instruments are administered to the subjects drawn from the population. It is a small scale version or a trial run, done in the preparation for the major study. The purpose is to find out the feasibility and practicability of the study design.

A Pilot study was conducted in Apollo First med Hospital among 10 staff nurses. The nurses were chosen using purposive sampling method. Data was collected using structure questionnaires and a check list. Study was found to be feasible and no modifications were required in tools or design.

Protection of human rights

- Ethical clearance was obtained from ethics committee of Apollo Hospital Chennai,
- ➤ Permission was obtained from the principal, Apollo College of nursing.
- ➤ Written consent was obtained from the staff nurses who were included in the study. Confidentiality of the data was maintained throughout the study.

Data Collection Procedure

Data collection is the precise, systematic gathering of information relevant to the research purpose. The researcher presented the proposal to the ethics committee, Apollo Hospitals and got ethical clearance to proceed with the study. After obtaining proper permission from concerned authorities, the researcher collected the data from staff nurses Apollo Cradle Hospital, Chennai. The observation time schedule was from 2.00 p.m to 4.00 p.m and the data collection period was from November 15 to December 15, 2016.

A group of 30 staff nurses was selected by purposive sampling method, each day by 5 to 7 members based on the availability and consent was obtained from the

staff nurses. The baseline data was collected through the background characteristics proforma.

Pretest assessment was done with predetermined tools. Knowledge and practice were assessed using structured questionnaires and an observational check list respectively. After conducting pretest, capacity building programme of amnicot was carried out for 30 staff nurses. It was done by using lecturer cum discussion and demonstration method for 2 hours which was followed by redemonstration. Posttest assessment was done with the same questionnaire and a checklist for the staff nurses at the interval of 1 week after intervention. Then the level of satisfaction of staff nurses was assessed using rating scale.

Problems Faced during Data Collection

The problems faced during the data collection were.

- Inadequate time for staff nurses to participate in the study.
- Follow up was difficult because of shift duty to staff nurses.

Plan for Data Analysis

Data analysis is the systematic organization, synthesis of research data, and testing of null hypothesis by using the obtained data (Polit and Beck, 2014). Analysis and interpretation of the data were carried out by using descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, median and standard deviation was used to describe the demographic variables of staff nurses, knowledge and practice score.

Inferential statistics like paired 't' test were used for assessment of the effectiveness of capacity building programme on knowledge and practice of amnicot among staff nurses. Chi square test was used for assessing the association between the outcome of knowledge and practice and the selected demographic variables of Staff Nurses.

Summary

This chapter deals with the selection of the research approach, research design, setting, population, sample, sampling technique, sampling criteria, selection and development of study instruments, validity, reliability of the study, pilot study, data collection procedure, problem faced during data collection and plan for data analysis.

CHAPTER - IV

ANALYSIS AND INTERPRETATION

Data analysis is conducted to reduce, organize and provide a meaning to the data. The results obtained from data analysis require interpretation to be meaningful. Interpretation of data involves examination of the results obtained from analysis of data, forming conclusions, considering the implications for nursing, exploring the significance of the findings and suggesting further studies (Burns & Groove, 2007).

Data was collected from 30 staff nurses who are working at Apollo Cradle Hospital, Chennai, to assess the effectiveness of capacity building programme on the knowledge and practice of amnicot among staff nurses. Analysis of the data was done after the entire data was transferred to the master coding sheet. The data were analyzed, tabulated and interpreted using appropriate descriptive and inferential statistics.

Organization of Findings

The findings of the study have been organized and are presented under the following headings.

- Frequency and Percentage Distribution of Background Characteristics of Staff Nurses.
- ➤ Frequency and Percentage Distribution of Level of Knowledge in Pretest and Posttest of Amnicot among Staff Nurses.
- Comparison of Mean and Standard Deviation of Knowledge between Pretest and Posttest of Amnicot among Staff Nurses.

- ➤ Frequency and Percentage Distribution of level of Practice in Pretest and Post test of amnicot among Staff Nurses.
- Comparison of Mean and Standard Deviation of Practice between Pretest and Posttest of Amnicot among Staff Nurses.
- ➤ Frequency and Percentage Distribution on Level of Satisfaction Regarding Capacity Building Programme of Amnicot among Staff Nurses.
- ➤ Association between Selected variables of Staff Nurses in the Pretest and Post test Level of knowledge on Amnicot.
- ➤ Association between Selected variables of Staff Nurses in the Pretest and Post test Level of Practice of Amnicot.

Table.1

Frequency and Percentage Distribution of Background Characteristics of Staff
Nurses

| Background characteristics | f | % |
|----------------------------|----|-------|
| Age in years | | |
| <25 | 28 | 93.33 |
| 25 – 35 | 2 | 6.67 |
| >36 | - | - |
| Designation | | |
| Staff nurse | 30 | 100 |
| In charge nurse | - | - |
| Head nurse | - | - |
| Nursing superintendent | - | - |
| Years of experience | | |
| <1 year | 20 | 66.67 |
| 1- 5 years | 10 | 33.33 |
| >5 years | - | - |
| Experience in labour room | | |
| <1 years | 17 | 56.67 |
| 1- 5 years | 1 | 3.33 |
| > years | - | - |
| Nil | 12 | 40 |

| Previous information | | |
|-----------------------|----|-------|
| regarding amnicot | | |
| Yes | 10 | 33.33 |
| No | 20 | 66.67 |
| If yes :- | | |
| Source of information | | |
| Books | 2 | 13.33 |
| Advertisement | - | - |
| Journals | - | - |
| Clinical experience | 8 | 26.67 |
| Experts | - | - |
| Others:- specify | - | - |

The data seen in Table1 reveals that a majority of the staff nurses were below 25 years (93.33%) and all of them were Females (100%). Their designation was staff nurse (100%). Most of the staff nurses had less than 1 year of work experience (66.67%) in labour room and have not received previous information regarding amnicot (66.67%).

Figure 3 shows that majority of the staff nurses (86.67%) were qualified up to B.Sc. Nursing.

Figure 4 presents that 56.67% of them working in Labour room and 26.67% worked in Special ward.

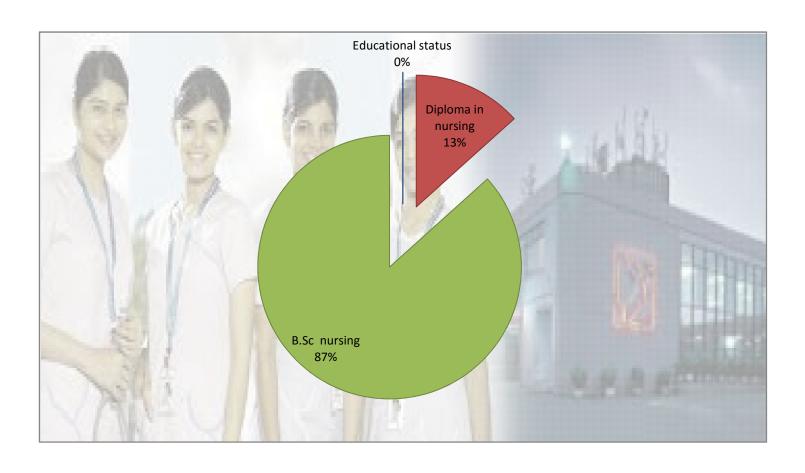


Fig 3. Percentage Distribution of Education status among Staff Nurses

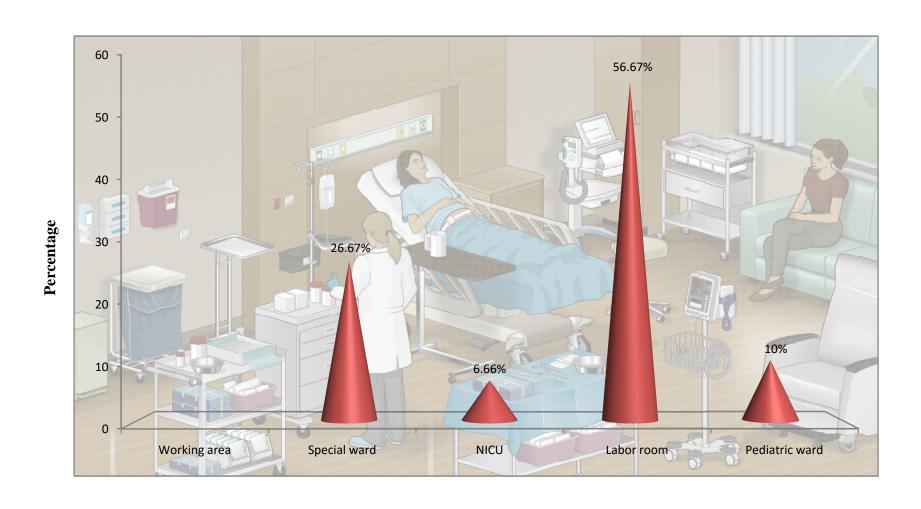


Fig 4.Percentage Distribution of Working area of Staff Nurses

Table.2

Frequency and Percentage Distribution of Level of Knowledge in Pretest and Posttest of

Amnicot among Staff Nurses

| Level of knowledge | Pr | e test | Post test | | |
|----------------------|----|--------|-----------|-------|--|
| • | f | % | f | % | |
| Adequate knowledge | 5 | 16.66 | 19 | 63.33 | |
| (75 – 100%) | | | | | |
| Moderately knowledge | 18 | 60 | 6 | 20 | |
| (50 -74%) | | | | | |
| Inadequate knowledge | 7 | 23.33 | - | - | |
| (Below 50%) | | | | | |

The above table shows that, most of the staff nurses had moderate knowledge (60%) and (23.33%) had inadequate knowledge on amnicot. After intervention majority of the staff nurses had adequate knowledge (63.33%) and others (20%) had moderate knowledge.

Comparison of Mean and Standard Deviation of Knowledge between Pretest and Posttest of Amnicot among Staff Nurses

| Knowledge | Mean | SD | Mean difference | t- value |
|-----------|-------|------|--------------------|----------|
| Pre test | 12.46 | 4.08 | 7.84 | 7.76*** |
| Post test | 20.3 | 3.81 | 7.0.1 | 7.70 |

^{***} p <0.001

Table: 3

Table 3 denotes that mean and standard deviation of posttest knowledge scores was high (M=20.3, SD=3.81) when compared to the pretest (M= 12.46, SD=4.08). The differences were found statically significant at p< 0.001. This can be attributed to the effectiveness of the knowledge and practice of amnicot among staff nurses. Hence the null hypothesis Ho1 "There will be no significant difference between Pretest and Posttest level of Knowledge and Practice of amnicot among staff nurses" was rejected.

Table .4

Frequency and Percentage Distribution of Level of Practice in Pretest and Post test of

Amnicot among Staff Nurses

| | Excellent | | Very good | | Good | | Average | | Poor | |
|------------|-----------|------|-----------|-------|------|-------|---------|-------|------|----------|
| Assessment | f | % | f | % | f | % | f | % | f | % |
| Pretest | 1 | 3.33 | 5 | 16.66 | 7 | 23.33 | 11 | 36.66 | 6 | 20 |
| Posttest | 9 | 30 | 6 | 20 | 13 | 43.33 | 2 | 6.66 | - | - |

Table 4 depicts that, in pretest (23.33%) of their practice was good followed by very good practice (16.66%) whereas in posttest (43.33%) of their practice was good followed by excellent practice (30%) and very good practice (20%).

Table: 5

Comparison of Mean and Standard Deviation of Practice between Pretest and Posttest of Amnicot among Staff Nurses

| Practice | Mean | SD | Mean difference | t- value |
|-----------|-------|------|--------------------|----------|
| Pre test | 8.6 | 5.03 | 5.53 | 4.5*** |
| Post test | 14.13 | 4.32 | | |

^{* **}p <0.001

Table 5 reveals that, the mean and standard deviation of posttest practice scores were high (M=14.13, SD=4.32) when compared to the pretest practice scores (M = 8.6, SD= 5.03). The differences were found to be statically significant at p< 0.001. Hence the null hypothesis Ho1 "There will be no significant difference between pre and post test level of knowledge and practice of amnicot among staff nurses" was rejected.

Table: 6

Frequency and Percentage Distribution on Level of Satisfaction Regarding Capacity
Building Programme of Amnicot among Staff Nurses.

| | Highly | | Sat | Satisfied | | Dissatisfied | | Highly | |
|-----------------------------|--------|-------|-----|-----------|---|--------------|---|--------------|--|
| | Satis | fied | | | | | | Dissatisfied | |
| Compounds | f | % | f | % | f | % | f | % | |
| Researcher | 28 | 93.33 | 2 | 6.67 | - | - | - | - | |
| Capacity building programme | 27 | 90.00 | 3 | 10.00 | • | - | - | - | |
| Effectiveness of Amnicot | 28 | 93.33 | 2 | 6.67 | • | - | - | - | |

It can be inferred from Table 8 that, majority of the staff nurses were highly satisfied with the researcher (93.33%), the capacity building programme (90%) and effectiveness of amnicot (93.33%).

Table: 7

Association between Selected variables of Staff Nurses in the Pretest and Post test Level of knowledge on Amnicot

| | Pre test | | | Pos | 2 | |
|--|--------------|---------------|--------------|--------------|---------------|--------------|
| Selected Variables | Upto mean | Above mean | 2 | Upto mean | Above mean | 2 |
| Educational Status | | | | | | |
| Diploma in nursing | 1 | 3 | | 1 | 3 | |
| B.Sc Nursing | 19 | 7 | 3.60 df=1 | 10 | 16 | 0.27 df=1 |
| Working Area | | | | | | |
| Maternity | 11 | 6 | | 6 | 11 | |
| Others | 9 | 4 | 0.06 df=1 | 5 | 8 | 0.03 df=1 |
| Years of experience | | | | | | |
| <1 year | 13 | 7 | | 7 | 13 | 0.07 |
| >1 years | 7 | 3 | 0.07df=1 | 4 | 6 | df=1 |
| Experience in labour room | | | | | | |
| Experienced | 11 | 6 | 0.06 | 11 | 6 | |
| Inexperienced | 9 | 4 | df=1 | 8 | 5 | 0.03df=1 |
| Previous information regarding amnicot | | | | | | |
| Yes | 7 | 3 | | 3 | 7 | |
| No | 13 | 7 | 0.07 df=1 | 8 | 12 | 0.28 df=1 |

It could be inferred from Table 7 that, there was no significant association between the selected variables with the pre test and post level of knowledge on amnicot. Hence the null hypothesis Ho2 "There will be no significant association between the selected variables and level of knowledge in pretest and posttest among staff nurses" was retained.

Table: 8

Association between Selected variables of Staff Nurses in the Pretest and Post test Level of Practice of Amnicot

| | Pre | test | | Post | 2 | |
|---------------------------|------|-------|------|------|-------|------|
| Selected variables | Upto | Above | 2 | Upto | Above | |
| | mean | mean | | mean | mean | |
| Educational Status | | | | | | |
| Diploma in nursing | 3 | 1 | 0.02 | 1 | 3 | 0.87 |
| B.Sc Nursing | 17 | 10 | df=1 | 13 | 13 | df=1 |
| Working Area | | | | | | |
| Maternity | 9 | 7 | 0.74 | 9 | 8 | 0.62 |
| Others | 10 | 4 | df=1 | 5 | 8 | df=1 |
| Years of experience | | | | | | |
| <1 year | 12 | 8 | 0.28 | 9 | 11 | 0.06 |
| >1 years | 7 | 3 | df=1 | 5 | 5 | df=1 |
| Experience in labour | | | | | | |
| room | | | | | | |
| Experienced | 11 | 6 | 0.03 | 10 | 7 | 2.32 |
| Inexperienced | 8 | 5 | df=1 | 4 | 9 | df=1 |
| Previous information | | | | | | |
| regarding amnicot | | | | | | |
| Yes | 8 | 2 | 1.79 | 3 | 7 | 1.67 |
| No | 11 | 9 | df=1 | 11 | 9 | df=1 |

It could be inferred from Table 8 that, there was no significant association between the selected variables with the pre test and post level of practice of amnicot among staff nurses. Hence the null hypothesis Ho3 "There will be no significant association between the selected variables and level of practice in pretest and posttest among staff nurses" was retained.

Summary

This chapter has dealt with the analysis and interpretation of the data obtained by the researcher. The analysis of the results showed that knowledge and practice were better in the post test when compared to the pre test scores. This can be credited to the effectiveness of capacity building programme on knowledge and practice of amnicot among staff nurses.

CHAPTER V

DISCUSSION

The study was carried out using a pre experimental research design upon 30 staff nurses at Apollo Cradle Hospital, Chennai. The level of knowledge and practice was assessed using structured questionnaires for staff nurses. Pre test assessment was done with predetermined tools. Knowledge and practice were assessed using structured questionnaire and an observational check list respectively. After conducting pretest, intervention of capacity building programme of amnicot was carried out for 30 staff nurses. It was done by using lecturer cum discussion and demonstration method for 2 hours which was followed by redemonstration. Post test assessment was done with the same questionnaire and a checklist for the staff nurses at the interval of 1 week after intervention. Then the level of satisfaction of staff nurses was assessed using rating scale.

Objectives of the Study

- To assess the level of knowledge and practice of amnicot among staff nurses in the selected hospital.
- 2. To assess the effectiveness of the capacity building programme for staff nurses on amnicot by comparing pretest and posttest knowledge and practice among staff nurses.
- To assess the level of satisfaction on the capacity building programme for staff nurses on knowledge and practice of amnicot.
- 4. To find out the association between the selected variables and pretest and posttest knowledge and practice of capacity building programme of amnicot among staff nurses.

The discussion is presented under the following headings

- ➤ Background Characteristics of staff nurses.
- ➤ Effectiveness of capacity building programme on knowledge and practice of amnicot among staff nurses.
- Level of satisfaction regarding capacity building programme among the staff nurses.
- Association between the selected variables of staff nurses and the level of knowledge and practice in pre test and post test.

Background Characteristics of staff nurses

Study finding revealed that, majority of the staff nurses were below 25 years (93.33%) and all of them were Females (100%). Most of the staff nurses were qualified up to B.Sc Nursing (86.67%) and their designation was staff nurse (100%). Most of the staff nurses had less than 1 year of work experience (66.67%) in labour room and had not received any prior information regarding amnicot (66.67%).

As most of the staff nurses were not aware of the amnicot. It is mandatory for the staff nurses to update their knowledge and practice on the clinical area through unit training programme.

The first objective of the study was to assess the level of knowledge and practice of amnicot among staff nurses in the selected hospital.

Study finding revealed that, most of the staff nurses had moderate knowledge (60%) and less than half (23.33%) had inadequate knowledge on amnicot. After intervention majority of the staff nurses had adequate knowledge (63.33%) and others (20%) had moderate knowledge.

Thus the researcher concluded that the level of knowledge and practice has increased as most of the staff nurses are interested to gain knowledge and practice regarding the recent advancement in their working area.

The Second Objective was to assess the effectiveness of the capacity building programme for staff nurses of amnicot by comparing pretest knowledge and practice with posttest knowledge and practice.

The difference in the mean and standard deviation of posttest knowledge scores was high (M=20.3, SD=3.81) when compared to the pretest (M= 12.46, SD=4.08). The differences were found statically significant at p< 0.001. This can be attributed to the effectiveness of the knowledge and practice of amnicot among staff nurses. Hence the null hypothesis Ho1 "There will be no significant difference between Pretest and Posttest level of Knowledge and Practice of amnicot among staff nurses" was rejected.

The mean and standard deviation of posttest practice scores were high (M=14.13, SD=4.32) when compared to the pretest practice scores (M = 8.6, SD= 5.03). The differences were found statically significant at p< 0.001. Hence the null hypothesis Ho1 "There will be no significant difference between pre and post test level of knowledge and practice of amnicot among staff nurses" was rejected.

Black.T et al. (2014) conducted a study on Promoting Evidence-Based Practice through a Research Training Programme for Point-of-Care Clinicians. The purpose of this study was to evaluate the effect of a research training programme on clinicians' knowledge, attitudes, and practices related to research and evidence-based practice (EBP). EBP has been shown to improve patient care and outcomes. Innovative approaches are needed to overcome individual and organizational barriers to EBP. Mixed-methods design was used to evaluate a research training intervention with point-of-care clinicians in a Canadian urban health organization. Participants completed the Knowledge, Attitudes, and Practice Survey over 3 time points. Focus groups and interviews were also conducted. Results of this study statistically significant improvement in research knowledge and ability was demonstrated. Participants and administrators identified benefits of the training programme, including the impact on EBP. The study concluded providing research training opportunities to point-of-care clinicians is a promising strategy for healthcare organizations seeking to promote EBP, empower clinicians, and showcase excellence in clinical research.

Third Objective of the study was to assess the level of satisfaction on the capacity Building programme of amnicot among staff nurses

While making a plan for any intervention, it is important to consider the participants satisfaction, to ensure their cooperation and to continue the intervention even after completion of the study. Satisfaction arises from a person when therapy is balanced between the study participants choice and professional responsibility and high level of satisfaction can be obtained by the participants. A majority of the staff nurses were highly satisfied with the researcher (93.33%), the capacity building programme (90%) and effectiveness of amnicot (93.33%).

The fourth objectives of the study was to find out the association between the selected variables and pretest and posttest knowledge and practice of capacity building programme of amnicot among staff nurses

The study finding revealed that, there was no significant association between the selected variables with the pretest and posttest level of knowledge on amnicot among staff nurses and

The study finding revealed that, there was no significant association between the selected variables with the pretest and posttest level of practice of amnicot among staff nurses.

The researcher says that there was no restriction to apply for particular variables rather the capacity building programme of amnicot can be conducted for all the staff nurses for their up dation of knowledge and practice in obstetrics.

Summary

This chapter deals with the objectives of the study, the major findings of the selected variables of staff nurses, level of knowledge and practice before and after administration of capacity building programme of amnicot, mean and standard deviation of knowledge level before and after the capacity building programme of amnicot.

CHAPTER-VI

SUMMARY, CONCLUSION, IMPLICATIONS AND

RECOMMENDATIONS

Summary

The major objective of the study is to assess the Effectiveness of Capacity building Programme on Knowledge and practice of amnicot among staff nurses.

Objectives of the Study

- > To assess the level of knowledge and practice of amnicot among staff nurses in the selected hospital.
- > To assess the effectiveness of the capacity building programme for staff nurses on amnicot by comparing pretest and posttest knowledge and practice among staff nurses.
- > To assess the level of satisfaction on the capacity building programme for staff nurses on knowledge and practice of amnicot.
- > To find out the association between the selected variables and pretest and posttest knowledge and practice of capacity building programme of amnicot among staff nurses.

Null Hypotheses

The null hypotheses stated are:

Ho1: There will be no significant difference between pre and post level of knowledge and practice of amnicot among staff nurses.

Ho2: There will be no significant association between the selected variables and level of knowledge in pretest and posttest among staff nurses.

Ho3: There will be no significant association between the selected variables and level of practice in pretest and posttest among staff nurses.

Pre experimental research design was used for this study. It was conducted at Apollo Cradle Hospital among 30 staff nurses who were selected through purposive sampling technique. The capacity building programme of amnicot was administered for the staff nurses. Pre test was conducted using predetermined tools such as background characteristic proforma, structures questionnaires and check list. After the 7th day of intervention post test was conducted using same structures questionnaires, check list. And level of satisfaction was assessed using rating scale. Data collection was done for the main study after the pilot study. The collected data was analyzed using descriptive and inferential statistics.

Major findings of the study

Background characteristics of the staff nurses.

Majority of the staff nurses were below 25 years (93.33%) and all of them were Females (100%). Their designation was staff nurse (100%). Most of the staff nurses had less than 1 year of work experience (66.67%) in labour room and have not received previous information regarding amnicot (66.67%).

Level of knowledge on amnicot among staff nurses.

Nurses play a vital role in the promotion of health, prevention and treatment of illness. So this study was conducted among the staff nurses for determining the knowledge and practice of amnicot. Study finding revealed that, most of the staff nurses had moderate knowledge (60%)

and less than half (23.33%) had inadequate knowledge on amnicot. After intervention majority of the staff nurses had adequate knowledge (63.33%) and others (20%) had moderate knowledge.

Effectiveness of capacity building programme on knowledge and practice of amnicot among staff nurses

Mean and standard deviation of posttest knowledge scores was high (M=20.3, SD=3.81) when compared to the pretest (M= 12.46, SD=4.08). The differences were found statically significant at p< 0.001. This can be attributed to the effectiveness of the knowledge and practice of amnicot among staff nurses. Hence the null hypothesis Ho1 "There will be no significant difference between Pretest and Posttest level of Knowledge and Practice of amnicot among staff nurses" was rejected.

Mean and standard deviation of posttest practice scores were high (M=14.13, SD=4.32) when compared to the pretest practice scores (M=8.6, SD=5.03). The differences were found to be statically significant at p< 0.001. Hence the null hypothesis Ho1 "There will be no significant difference between pre and post test level of knowledge and practice of amnicot among staff nurses" was rejected.

Level of practice of amnicot among staff nurses

The study finding revealed that, in pretest (23.33%) of their practice was good followed by very good practice (16.66%) where us in post (43.33%) of their practice was good followed by excellent practice (30%) and very good practice (20%).

Level of satisfaction on capacity building programme of amnicot

A majority of the staff nurses were highly satisfied with the researcher (93.33%), the capacity building programme (90%) and effectiveness of amnicot (93.33%).

Association between the selected variables and pretest and post test knowledge and practice of capacity building programme of amnicot among staff nurses

The study finding revealed that, there was no significant association between the selected variables with the pre test and post level of knowledge on amnicot among staff nurses. Hence the null hypothesis Ho2 "There will be no significant association between the selected variables and level of knowledge in pretest and posttest among staff nurses" was retained and

The study finding revealed that, there was no significant association between the selected variables with the pre test and post level of practice of amnicot among staff nurses. Hence the null hypothesis Ho3 "There will be no significant association between the selected variables and level of practice in pretest and posttest among staff nurses" was retained.

Conclusion

The findings of the present study revealed that the capacity building programme of amnicot enhanced the knowledge and practice of staff nurses. It was a suitable method to educate and demonstrate the practice of amnicot. Educational interventions are necessary to improve the knowledge and practice level of staff nurses will leads to better practices with the advance technology to perform amniotomy.

Implications

The findings of the study have implications on the different branches of nursing profession i.e nursing practice, nursing education, nursing administration, nursing research by assessing the effectiveness of capacity building programme.

Nursing practice

Nurses have a major role in assessing and providing necessary care to the mother during labour. Practicing nurses should attend short term courses and update their knowledge with practice of relating to recent advancement. The staff nurses experienced an increase in the level of knowledge and practice of amnicot compared to the pre test. This proved the effectiveness for use. Hence it is essential for the staff nurses to have adequate knowledge and take initiative to educate the other staff nurses which will increase the knowledge levels regarding newer advancement. Hence the nurses must be empowered with adequate knowledge and practice.

Nursing Education

The curriculum should also emphasize the latest advancements in the technologies. Nursing education must focus on new trends that will help to enhance nursing care. The education to the student and staff nurses in the clinical area could be in the form of continuing nursing education Programme on issues and trends.

Nursing Administration

Nurse administrators have an important responsibility in organizing continuing nursing education programme and short term courses for preparing the staff nurses to get specialized knowledge in caring for labour. Nurse administrator should conduct periodical review meeting to evaluate the quality of nursing care.

Nursing Research

There is a need for extensive and intensive research to be conducted in the area. It opens a big avenue for research on comparison of new trends and modified care and its qualities, advantages, disadvantages and cost effectiveness, this will further encourage studies on the effectiveness of knowledge and practice.

Recommendations

- ➤ The study may be conducted with larger samples for generalization of the results.
- The study can be replicated in different settings.
- ➤ The same study can be conducted among nursing students.
- ➤ A comparative study can be conducted between private and government settings.

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APPENDIX - I



CO/0195/16

18.08.2016

To

The Medical Superintendent Apollo Cradle Hospital Shaffee Mohammed Road Thousands Light Chennai – 600 006.

Respected Madam,

Sub: To request permission for research study- Reg

Greetings! As a part of the curriculum requirement our 2nd year M.Sc (N) student Ms.Rajalakshmi.D has selected the following title for her research study.

"A study to assess the effectiveness of capacity building programme on Amnicot upon knowledge and practice among staff nurses at selected hospital".

So I kindly request your good selves to permit her to conduct study in your esteemed hospital.

Pernitted Nino
Racha Mino
Racha Mino

Thanking you,

Dr.LATHA VENKATESAN

PRINCIPAL

IS/ISO 9001:2000

Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095. Ph.: 044 - 2653 4387 Tele fax: 044 - 2653 4923 / 044- 2653 4386

APPENDIX - II

Institutional Ethics Committee - Clinical Studies

Reg.No.: ECR/37/Inst/TN/2013



25 Nov 2016

To, Ms. D. Rajalakshmi, First year, M.Sc. (Nursing), Department of Maternal Health Nursing, Apollo College of Nursing, Chennai.

Ref: A Pre Experimental Study to Assess the Effectiveness of Capacity Building Programme on Knowledge and Practice of Amnicot among Staff Nurses at selected Hospital.

Sub: Approval of the above referenced project and its related documents.

Dear Ms. Rajalakshmi,

The Institutional Ethics Committee-Clinical Studies has received the following document submitted by you related to the conduct of the above-referenced study -

- Project Proposal
- Consent form

The Institutional Ethics Committee-Clinical Studies reviewed and discussed the project proposal documents submitted by you at a meeting held on 22 November 2016.

The following Institutional Ethics Committee – Clinical Studies members were present at the meeting held on 22nd Nov 2016 at 3.30 PM at, Apollo Research & Innovations, Conference Hall, Room No: 19, 2nd Floor, Krishnadeep Chambers, (Apollo Hospitals, Annex No: 1), Wallace Garden, Chennai – 600006

| S. No | Name | Gender | Designation | Affiliation | Position in the committee |
|----------|-------------------------------|--------|---------------------------------------|---|---------------------------|
| 1 | Dr. Rema Menon | F | Blood Bank Transfusion Services | Apollo Hospitals, Chennai | Member Secretary |
| 2 | Dr. Pradeep Kumar | . M | Pharmacologist | Apollo Hospitals, Chennai | Pharmacologist |
| 3 | Ms. Maimoona Badsha | F | Lawyer | Independent legal Practitioner, Chennai | Lawyer |
| 4 | Mrs. Malathy Chandrasekhar | F | Home based teacher | Freelance | Layperson |
| 5 | Dr. K. Sathyamurthi | М | Asst. Professor | Madras School of Social work, Chennai | Social Scientist |

Apollo Hospitals Enterprise Limited,

21, Greams Lane, Off Greams Road, Chennai - 600 006, Tamil Nadu, India. Tel: +91-44-2829 5045 / 6641 Fax: +91-44-2829 4449

E-mail: ecapollochennai@gmail.com

Institutional Ethics Committee - Clinical Studies



Reg.No.: ECR/37/Inst/TN/2013

The Institutional Ethics Committee-Clinical Studies reviewed the proposal, its methodology and design of the study. The proposed thesis work is approved in the presented form without any modifications.

The Institutional Ethics Committee-Clinical Studies review and approval of the report is only to meet their academic requirement and will not amount to any approval of the conclusion / recommendations as conclusive, deserving adoption and implementations, in any form, in any health care institution.

The Institutional Ethics Committee-Clinical Studies is constituted and works as per ICH-GCP, ICMR and revised Schedule Y guidelines.

Regards,

Dr. Rema Menon,

Member Secretary, Institutional Ethics Committee-Clinical Studies, Apollo Hospitals,

Chennai.

Date: 25/11/2016

MEMBER SECRETARY
INSTITUTIONAL ETHICS COMMITTEE CLINICAL STUDIES
APOLLO HOSPITALS, AHEL
CHENNAI, TAMILNADU.

Apollo Hospitals Enterprise Limited,

21, Greams Lane, Off Greams Road, Chennai - 600 006, Tamil Nadu, India. Tel: +91-44-2829 5045 / 6641 Fax: +91-44-2829 4449

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APPENDIX - III



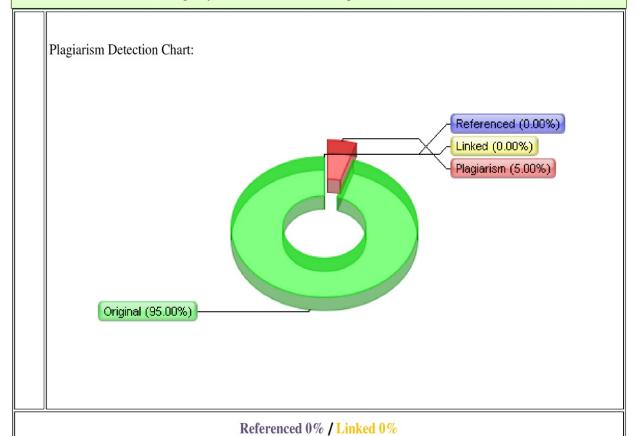
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APPENDIX- IV LETTER SEEKING PERMISSION FOR CONTENT VALIDITY

From

Ms.Rajalakshmi.D.

M.Sc. (Nursing) Second Year,

Apollo College of Nursing,

Chennai – 600 095.

To

Forwarded Through:

Dr.LathaVenkatesan,

Principal,

Apollo College of Nursing.

Sub: Requesting for opinions and suggestions of experts for establishing content validity for research tool.

Respected Madam,

Greetings!! As a part of the curriculum requirement the following research title is selected for them study.

"A pre experimental study to assess the, effectiveness of capacity building programme on knowledge and practice of amnicot among staff nurses at selected hospital Chennai".

I will be privileged to have your valuable suggestions with regards to the establishment of content validity of the research tool. I kindly request you to validate my research tool and give suggestions about the same. I would be highly obliged and remain thankful for your great help for validating my tool.

Thanking you,

Yours sincerely, Rajalakshmi.D

APPENDIX-V

CERTIFICATE FOR CONTENT VALIDITY

TO WHOMSOEVER IT MAY CONCERN

This is to certify that tools and content for the research study developed by D. Rajalakshmi II year M.Sc (Nursing) student of Apollo College of Nursing for her dissertation "A pre experimental study to assess the effectiveness of capacity building programme on Knowledge and practice of amnicot among staff nurses at selected hospital, Chennai." was validated.

Signature of the Expert

Name and Designation

APPENDIX-VI LIST OF EXPERTS FOR CONTENT VALIDITY

1. Dr. LathaVenkatesan,

M.Sc (N), M.Phil (N)., Ph.D (N)., Ph.D (HDFS)., M.B.A (HM).,

Principal and Professor in Maternity Nursing,

Apollo College of Nursing,

Chennai- 600 095.

2. Dr. Lizy Sonia. A, M.Sc., (N), Ph.D. (N).,

Vice Principal and Professor in Medical Surgical Nursing,

Apollo College of Nursing,

Chennai-600 095.

3. Dr. Gowrimeena S.,

MD (OG)., DNB (OG)., CIMP., MRCOG (UK),

Laparoscopic Surgeon, Infertility Specialist,

Consultant, Obstetrician and Gynaecologist,

Apollo speciality Hospitals, Vanagaram,

Chennai - 600 095.

4. Dr. K. Vijayalakshmi, M.Sc., (N), Ph.D.(N)., M.A (Psy).,

Professor in Psychiatric Nursing,

Apollo College of Nursing,

Chennai- 600 095.

5. Mrs. Saraswathy K., M.Sc. (N).,

Lecturer in Obstetrics and Gynaecological Nursing,

Apollo College of Nursing,

Chennai- 600 095.

6. Ms. Urmila U., M.Sc., (N).,

Lecturer in Obstetrics and Gynaecological Nursing,

Apollo College of Nursing,

Chennai- 600 095.

7. Mrs. Pandiselvi R., M.Sc., (N).,

Lecturer in Obstetrics and Gynaecological Nursing,

Apollo College of Nursing,

Chennai- 600 095.

8. Mrs. Irin Anitha M., M.Sc., (N).,

Tutor in Obstetrics and Gynaecological Nursing,

Apollo College of Nursing,

Chennai- 600 095.

APPENDIX-VII

RESEARCH PARTICIPANT CONSENT FORM

Dear participant,

I am Ms.Rajalakshmi.D M.Sc (N) student Apollo College of nursing, Chennai. As a part of my study, I have selected a research project on "A pre experimental study to assess the effectiveness of capacity building programme on Knowledge and practice of amnicot among staff nurses at selected hospital, Chennai."

I hereby seek your consent and cooperation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be obtained.

| | Signature of the researcher |
|-------|---|
| | I hereby consent to participate in the study. |
| | |
| Place | |
| Date: | Signature of the participant |

APPENDIX-VIII

CERTIFICATE FOR ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation "A Pre Experimental Study to Assess the Effectiveness of Capacity Building Programme on Knowledge and Practice of Amnicot among Staff Nurses at Apollo Cradle Hospital Chennai". By Ms. D. Rajalakshmi M.Sc (N) II year student, Apollo College of Nursing, was edited for English language appropriateness

Prof. J.L. NARASIMHAN New No.8, Second Main Road, Block B - F1, Krishna Nagar, Chromépet, Chennai-600 044, Cell: 94446 54720 4-mail: profilin@vahoo.com

Name and signature

APPENDEX-IX

Background characteristics of staff nurses

Purpose: This proforma is used to measures the demographic variables such as age, gender, education, designation, working area, year of experience, previous knowledge.

Instructions: Please answer the following questions. Circle the appropriate options. Please be frank and free in answering questions. The collected information will be kept confidential and anonymity.

| 1. | Age in years |
|-----------------------------------|--|
| 1.1 | <25 |
| 1.2 | 25-35 |
| 1.3 | >35 |
| 2. | Gender |
| 2.1 | Female |
| 3. | Educational status |
| 3.1 | Diploma in nursing |
| 3.2 | B.Sc Nursing |
| 4. | Designation |
| 4.1 | Staff nurse |
| 4.2 | Charge nurse |
| | |
| 4.3 | Nursing superintendent |
| 4.34.4 | C I |
| | |
| 4.4 | Head nurse Working area |
| 4.4 5 | Head nurse Working area special ward |

Paediatric ward

5.4

| | 6. | Years | of | Ex | perience |
|--|----|--------------|----|----|----------|
|--|----|--------------|----|----|----------|

- 6.1 <1 year
- 6.2 1-5 years
- 6.3 >5 years

7. Experience in labour room

- 7.1 <1 year
- 7.2 1-5 years
- 7.3 >5 years

8. Have you received previous information regarding Amnicot?

8.1 Yes/No

9. If yes what is the source of information

- 9.1 Books
- 9.2 Advertisements
- 9.3 Journals
- 9.4 Clinical experience
- 9.5 Experts
- 9.6 Others Specify

APPENDIX-X

BLUE PRINT

STRUCTURED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE ON AMNICOT AMONG STAFF NURSES

| S.no | Content | Items | Total | Percentage |
|------|--------------------|-------------------------|-------|------------|
| | | | Items | |
| I | Augmentation of | 1,2,3,4,5, | 05 | 20% |
| | labour | | | |
| II | Rupture of the | 6,7,8,9,10,11,12, | 07 | 28% |
| | membrane | | | |
| III | Benefit of amnicot | 13,14,15,16,17, | 05 | 20% |
| 1V | Nurses role during | 18,19,20,21,22,23,24,25 | 08 | 32% |
| | rupture of | | | |
| | membrane | | | |

APPENDIX- XI

STRUCTURED QUESTIONNAIRE TO ASSESS THE KNOWLEDGE ON STAFF NURSES UPON AMNICOT

ANSWER KEY:-

| S.no | Key |
|------|-----|------|-----|------|-----|------|-----|------|-----|
| 1. | В | 2. | С | 3. | A | 4. | С | 5. | D |
| 6. | В | 7. | D | 8. | С | 9. | A | 10. | В |
| 11. | A | 12. | D | 13. | В | 14. | D | 15. | С |
| 16. | A | 17. | С | 18. | A | 19. | В | 20. | С |
| 21. | A | 22. | В | 23. | С | 24. | D | 25. | С |

SCORING:

| Percentage | Levels of Knowledge |
|------------|-------------------------------|
| 75 – 100 | Adequate knowledge |
| 50 – 74 | Moderately adequate knowledge |
| Below 50 | In adequate knowledge |

APPENDIX- XII

Structured Questionnaire to assess the knowledge on staff nurses upon amnicot

Purpose: This tool is designed to assess the knowledge on Staff nurses about facts of induction of labour and innovation in augmentation of labour. The information collected will be used for research purpose only and anonymity will be maintained

Instructions: There are 25 questions. Kindly read the question has got 4 options given as answer. Circle the most appropriate for each question.

Scoring: Appropriate answer for each question will carry one mark. There is no negative marking for wrong answer; the overall score will be interpreted as Adequate (75 - 100) Moderately adequate (50 - 74), Inadequate (860 - 50)

AUGMENTATION OF LABOR

- 1. What is meant by augmentation?
 - a. Initiation of uterine contraction
 - b. Stimulation of inadequate uterine contraction
 - c. Reducing pain level
 - d. Providing comfort to mother
- 2. What is meant by induction of labour?
 - a. Stimulation of inadequate uterine contraction
 - b. Reducing pain level
 - c. Initiation of uterine contraction
 - d. Maintaining partograph

| 4. | What an | re the conventional methods used in induction of labour? |
|---------------|-----------------------------|---|
| | a. | Medical method |
| | b. | Surgical methods |
| | c. | Stripping method |
| | d. | Combine method A and B |
| 5. | What is | the contemporary method in induction of labour? |
| | a. | Amnihook |
| | b. | Kochers hemostatic forceps |
| | c. | Amnicot |
| | d. | Kiwi |
| | | |
| RUP | FURE C | OF MEMBRANE |
| RUP 6. | | amniotomy? |
| | What is | |
| | What is | amniotomy? |
| | What is a. b. | amniotomy? Premature rupture of membrane |
| | What is a. b. c. | amniotomy? Premature rupture of membrane Artificial rupture of membrane |
| | What is a. b. c. d. | amniotomy? Premature rupture of membrane Artificial rupture of membrane Bulging of membrane |
| 6. | What is a. b. c. d. Which | amniotomy? Premature rupture of membrane Artificial rupture of membrane Bulging of membrane Opening of Caul membrane |
| 6. | What is a. b. c. d. Which a | amniotomy? Premature rupture of membrane Artificial rupture of membrane Bulging of membrane Opening of Caul membrane one is the following indication for amniotomy? |

3. What is the expected Bishop score during induction of labor?

a. >6

b. >8

c. <6

d. <8

| c. Umbilical cord porlaps |
|---|
| d. Post maturity |
| 8. What type of forceps is used during amniotomy? |
| a. Multiple toothed forceps |
| b. Babcock forceps |
| c. Kochers hemostatic forceps |
| d. Wrigleys forceps |
| 9. Which is the following disadvantage of using kochers artery forceps? |
| a. Fetal skull injury |
| b. Lowering of the blood pressure |
| c. Uterine hyper stimulation |
| d. Water intoxication |
| 10. What is Amnicot? |
| a. A finger stall with a plastic hook on the end |
| b. Plastic hook |
| c. Rubber tube |
| d. Thin metal hook |
| 11. What is the expected cervical dilation during amniotomy by using amnicot? |
| a. One centimeter |
| b. Two centimeter |
| c. Three centimeter |
| d. Four centimeter |
| 12. Who is authorized to use amnicot for midwifery Procedure? |
| a. Midwifery only |
| b. Physician only |
| |

- c. Dais only
- d. Obstetrician, midwife or physician

BENEFITS OF AMNICOT

- 13. How many times can we use amnicot?
 - a. Re usable
 - b. Single use.
 - c. 2 times
 - d. Maximum 3 times
- 14. How many assistant needed for using amnicot?
 - a. Two assistant
 - b. One assistant
 - c. One or two assistant
 - d. An assistant is not required
- 15. What is correct application of amnicot during Amniotomy?
 - a. Amnicot over the end of the ring finger of a gloved hand
 - b. Amnicot over the two finger of a gloved hand
 - c. Amnicot over the end of the middle or index finger of a gloved left or right hand.
 - d. Amnicot over the thumb finger of a gloved hand
- 16. What are the advantages of using amnicot?
 - a. Reduction in fetal scalp trauma and less pain to the mother
 - b. Reduction of pain on fetal scalps and preventing moulding
 - c. Prevent of moulding and reduction of fetal scalp trauma
 - d. Prevention of PPH and less pain to the mother

| 17. What is | s the correct position used for amniotomy procedure with amnicot? |
|-------------|---|
| a. | Lithotomy position |
| b. | Trendelenburg position |
| c. | Dorsal recumbent position |
| d. | Supine position |
| NURSES RO | LE DURING RUPTURE OF THE MEMBRANE BY USING AMNICOT |
| 18. What is | s the predetermine factor to be assessed before amniotomy? |
| a. | The presenting fetal part should be determined to be well applied to the cervix |
| b. | Uterine contraction |
| c. | FHR only |
| d. | Position of mother |
| 19. What c | autions to be followed when using amnicot? |
| a. | Selective amniotomy |
| b. | Do not scratch excessively |
| c. | Check for amniotic fluid |
| d. | Urine analysis |
| 20. What is | s the interval time for pre vaginal examination recommended by the WHO? |
| a. | 2 hours interval |
| b. | 3 hours interval |
| c. | 4 hours interval |
| d. | 5 hours interval |
| 21. What is | s the determining factor to be assessed after amniotomy? |
| a. | FHR |
| b. | Squatting position |

| c. Intake and output chart |
|---|
| d. Vital sign |
| 22. What position should maintain after rupture of membrane? |
| a. Supine position |
| b. Left lateral |
| c. Right lateral position |
| d. Lithotomy position |
| 23. Which is the main complication after rupture of membrane? |
| a. PPH |
| b.PIH |
| c. Cord prolapse |
| d. Fetal distress |
| 24. Which drugs is to be administered following amniotomy? |
| a. Prostaglandin |
| b. Mifepristone |
| c. Laminaria tent |
| d. Oxytocin |
| 25. Which step is to be followed when the cervix is not favourable after amniotomy? |
| a. Stripping the membrane |
| b. Advice the mother to bear down |
| c. Shift to operation theatre |
| d. Provide fundal pressure |
| |
| |

APPENDIX - XIII CHECK LIST BLUE PRINT FOR PRACTICE OF AMNICOT

| S.NO | CONTENT | ITEMS | TOTAL ITEMS | PERCENTAGE |
|------|------------------|-------------------------------|----------------|------------|
| 1 | Before procedure | 1,2,3,4, 5,6,7,8 | 8 | 40% |
| 2 | During procedure | 9,10,11,12, 13,14,15,16,17 | 9 | 45% |
| 3 | After procedure | 18,19,20 | 3 | 15% |
| | TOTAL | | 20 | 100% |

APPENDEX-XIV

CHECK LIST TO ASSESS THE PRACTICE OF AMNICOT

Purpose: This tool is designed to assess the practice of staff nurses about amnicot .The information collected will be used for research purpose only and anonymity will be maintained.

Scoring: It consists of 20 items. With options such as done and Not done and scores as 1 and Zero respectively. Thus total obtainable score is 0 - 20. Obtainable score is converted into percentage and interpreted as follows.

Tick the appropriate one which is given in the Colum

| S.NO | PARAMETERS | DONE | NOT DONE |
|------|--|------|----------|
| 1. | Explain the procedure and purpose to the mother | | |
| 2. | Check the chart for doctors order | | |
| 3. | Instruct the mother to empty her bowel and bladder | | |
| 4. | Provide privacy | | |
| 5. | Check the fetal heart rate, uterine contraction rate, abdominal and vaginal findings | | |
| 6. | Maintain the labour progress chart every 15 minutes and blood pressure every 2 hours | | |
| 7. | Start IV fluids in accordance with institutional policy | | |
| 8. | Help the mother to lie down in dorsal recumbent position | | |
| 9. | Wash hands using surgical asepsis | | |
| 10. | Follow strict aseptic technique | | |
| 11. | Wear sterile glove, gown and mask | | |
| 12. | Clean the perineum using aseptic technique | | |

| 13. | Lubricate the two finger of the right hand with the antiseptic cream | |
|-----|--|--|
| 14. | Hold the labia apart with thumb and index finger of left hand, Insert the lubricated finger into vagina, palm side down, pressing downwards. | |
| 15. | Examine the cervix with the finger in the vagina turned up ward | |
| | Assess the cervix for | |
| | a. Effacementb. Dilation | |
| | c. consistency | |
| | d. fore water | |
| 16. | Following strict aseptic technique introduce amnicot through vagina on index finger | |
| 17. | Slightly scratch the membrane | |
| 18. | Assess the fetal heart rate, note colour, amount of fluid, state of the cervix, station of the head, present or absent of cord prolapsed | |
| 19. | Administer prophylactic antibiotic as per order | |
| 20. | Record the time, date and findings | |

SCORING:

| S.NO | SCORE | INTERPRETATION |
|------|----------|----------------|
| 1 | 80 – 100 | Excellent |
| 2 | 60 – 79 | Very good |
| 3 | 40 – 59 | Good |
| 4 | 20 – 39 | Average |
| 5 | <20 | Poor |

APPENDEX-XV

BLUE PRINT FOR LEVEL OF SATISFACTION

OF AMNICOT

| S.NO | CONTENT | ITEM NO | TOTAL | PERCENTAGE |
|------|------------------------------|---------|-------|------------|
| 1 | Researcher | 1,2,3,4 | 4 | 40% |
| 2 | Amnicot | 5,6,7,8 | 4 | 40% |
| 3 | Effectiveness of the amnicot | 9,10 | 2 | 20% |
| | TOTAL | | | 100% |

SCORING

Highly dissatisfied - 1

Dissatisfied - 2

Satisfied - 3

Highly satisfied - 4

The total score is converted into percentage and graded as given below.

SCORING KEY:

| SCORING | INTERPREATATION |
|---------------------|-----------------|
| Highly satisfied | 76-100% |
| Satisfied | 50-75% |
| Dissatisfied | 25-49% |
| Highly dissatisfied | 1 - 24% |

APPENDEX-XVI

RATING SCALE ON THE LEVEL OF SATISFACTION OF STAFF NURSES ON KNOWLEDGE AND PRACTICE OF AMNICOT

Purpose

This rating scale is designed to assess the level of satisfaction of the sample regarding knowledge and practice of amnicot

Instruction

There are 10 items below. Kindly read the items. Response extends from Highly Satisfied, Satisfied, Dissatisfied, and Highly Dissatisfied. Put a tick mark against your answers. Describe your response freely and frankly. The response will be kept confidential and used for research purpose only.

| S. | Items | Highly | Satisfied Dissatisfied | Highly | |
|----|-------------------------------|-----------|------------------------|-------------|--------------|
| No | nems | Satisfied | Saustieu | Dissausticu | Dissatisfied |
| 1 | Explanation regarding amnicot | | | | |
| 2 | Approach of the Researcher | | | | |
| 3 | Time spend by the Researcher | | | | |
| 4 | Duration of the Programme | | | | |
| 5 | Arrangement made during the | | | | |
| | programme | | | | |
| 6 | The programme was easy to | | | | |
| | Understand | | | | |
| 7 | Uses of demonstration | | | | |
| 8 | It helps in practice | | | | |
| 9 | Given at the appropriate | | | | |
| | time | | | | |
| 10 | Easy to follow | | | | |

APPENDIX XVII

CONTENT ON CAPACITY BUILDING PROGRAME ON AMNICOT

TOPIC : CAPACITY BUILDING PROGRAME ON AMNICOT

GROUP : STAFF NURSES

DURATION : TWO HOUR

PLACE : APOLLO CRADLE HOSPITAL

METHOD OF TEACHING: LECTURE CUM DEMONSTRATION

TEACHING AIDS : POWER POINT

GENERAL OBJECTIVE

At the end of the section, the staff nurses will gain adequate knowledge on amnicot and apply the knowledge in day to day clinical practice.

OBJECTIVES

At the end of the section the staff nurses will be able to

- define Induction of labor
- define augmentation of labor
- **♣** explain the purpose of induction of labor
- **↓** list down the indication for induction of labor
- ♣ list down the contraindication for induction of labor
- explain the parameters to assess prior to induction of labor
- describe the modified bishop score

- **4** explain the method of induction of labor
- explain the artificial rupture of membrane
- describe the purpose of amniotomy
- **♣** list down indication of amniotomy
- ♣ list down the contraindication of amniotomy
- explain the types of amniotomy
- ♣ list down the disadvantage of amniotomy
- **★** explain the equipment need for amniotomy
- **4** define amnicot
- **4** describe the instruction for use of amnicot
- ♣ list down the advantages of amnicot
- **4** explain the effects of amnicot

| Specific objectives | Content | Learning activities |
|---|---|---------------------|
| define Induction of labor | DEFINITION | Listening |
| | • INDUCTION OF LABOUR (IOL) | |
| | Induction of labor means initiation of uterine contraction by any method medical ,surgical or combined method for the purpose of vaginal delivery | |
| define augmentation of labor | AUGMENTATION OF LABOUR | Listening |
| | Augmentation of labor is the process of stimulation of uterine contraction (both frequency and intensity) that are already present but found to be inadequate | |
| explain the purpose of induction of labor | PURPOSE OF INDUCTION OF LABOUR | Listening |
| | When the risks of continuation of pregnancy either to the mother or to fetus Elective induction of labor means initiation of labor at term pregnancy with acceptable medical or obstetric indication | |
| list down the indication for | INDICATION FOR INDUCTION OF LABOUR | Listening |
| induction of labor | Pre eclampsia, eclampsia (hypertensive disorders in pregnancy) Maternal medical complications | |
| | Diabetes mellitusChronic renal disease | |
| | Cholestasis of pregnancy Postmaturity | |
| | Abruption placenta | |
| | Intrauterine growth restriction (IUGR) Premature rupture of membrane | |

| | Fetus with a major congenital anomaly Intra uterine death of fetus Oligohydramnios Polyhydromnious | |
|--|--|-----------------|
| list down the contraindication for induction of labor | CONTRAINDICATIONS OF INDUCTION OF LABOUR ❖ Contracted pelvis and cephalopelvic disproportion | Asking question |
| | Malpresentation Previous classical cesarean section or hysterotomy Active genital herpes infection High risk pregnancy with fetal complication Heart disease Pelvic tumor Elderly primigravida with obstetric or medical complication Umbilical cord prolapse Cervical carcinoma | |
| explain the parameters to assess prior to induction of labor | PARAMETERS TO ASSESS PRIOR TO INDUCTION OF LABOUR MATERNAL | Listening |
| | To confirm the indication of IOL Exclude the contraindication of IOL Assess bishop score (score >6 favorable) Perform clinical pelvi metry to assess pelvic adequacy Adequate counselling about the risk, benefits and alternative of IOL with the women and the family members | |
| | FETAL | |
| | > To ensure fetal gestational age | |

| describe the modified | > To estimate > Ensure feta > Ensure feta > Confirm fe | Listening | | | | |
|--|--|-------------|--------|----------|-----|--|
| bishop score | PARAMETERS | 0 | 1 | 2 | 3 | |
| | dilation (cm) | 0 | 1-2 | 3-4 | >5 | |
| | effacement % | 0-30 | 40-50 | 60-70 | >80 | |
| | Consistency | Firm | medium | Soft | | |
| | Position | Posterior | Mid | anterior | | |
| | Station | -3 or above | -2 | -1 or 0 | +1 | |
| | Cervical length (cm) | >4 | 2-4 | 1-2 | <1 | |
| | METHOD OF IN | | | | | |
| explain the method of induction of labor | ✓ Medical med ✓ Surgical med ✓ Combined | | | | | |

| | SURGICAL METHOD OF INDUCTION OF LABOUR | Listonina |
|--|---|-----------------|
| explain the artificial rupture of membrane | ARTIFICIAL RUPTURE OF MEMBRANES | Listening |
| rupture of memorane | Artificial rupture of membranes (AROM), also known as an amniotomy , may be performed by a midwife or obstetrician to induce or accelerate labor. The membranes may be ruptured using a specialized tool, such as an Amnicot. | |
| | Amniotic fluid is able to escape from the uterus and exit the vagina. The absence of a fluid buffer between the fetus and uterus stimulates uterine contractions, which are also promoted by the rush of prostaglandins from the amniotic fluid. | |
| | PURPOSES OF AMNIOTOMY | Asking question |
| describe the purpose of amniotomy | There are four main reasons for performing an amniotomy: | |
| | 1. To induce labor or augment uterine activity. This is the most common reason for an amniotomy. The amniotic fluid is rich in a hormone called prostaglandin, and the bathing of the cervix by this fluid increases the strength and frequency of uterine contractions. | |
| | 2. To enable the doctor or midwife to monitor the baby's heartbeat internally. A scalp electrode is placed against the baby's head and an ECG of the baby's heart beat can be directly recorded. This provides a much more reliable indication of the fetal well being than external monitoring alone. Internal fetal monitoring is often performed if there is a complication such as maternal disease, or if there is fetal distress or if the mother is being induced. | |
| | 3. To check the color of the fluid. If there is a suspicion of the presence of meconium (the contents of the baby's bowel), certain preparations must be made. Suctioning must be set up and more personnel are required to be in attendance. | |
| | 4. To avoid having the baby aspirate the contents of the amniotic sac at the moment | |

| list down indication of amniotomy | of birth. Most often, the amniotic sac will break of its own accord, most often by the beginning of the second stage of labor. If it remains with an intact bag that must be quickly broken to allow the baby to breathe. INDICATION FOR AMNIOTOMY Abruptio placenta Chronic hydramnios Sever pre eclampsia, eclampsia Hastening labor | Listening |
|---|--|-----------|
| list down the contraindication of amniotomy | CONTRAINDICATIONS FOR AMNIOTOMY Malpresentation Cord palpable below or near fetal head Unstable lie Suspected villamentous insertion of umbilical cord Macrosomia Maternal AIDS Genital active herpes infection Patient refuses (relative) | Listening |
| explain the types of amniotomy | TYPES 1. SROM: spontaneous rupture of membranes. This term describes the normal, spontaneous rupture of the membranes at full term. The rupture is usually at the bottom of the uterus, over the cervix causing a gush of fluid. This gush may be quite small (such as 50ml), or it can be significantly large (200-300ml) depending upon amount of fluid in the amniotic sac, and to what extent the fetal head is plugging the hole and retaining fluid in the sac. 2. PROM: premature rupture of membranes. This term describes a rupture of the membranes that occurs before the onset of labor. | |

| | o PPROM : preterm, premature rupture of membranes. This term describes a rupture of the membranes that occurs before 37 weeks gestation. | |
|-----------------------------|--|-----------|
| | 3. AROM : artificial rupture of membranes. This term describes a rupture of the membranes by a third party, usually a midwife or obstetrician in order to induce or accelerate labor. | |
| list down the advantages of | ADVANTAGES OF AMNIOTOMY | Listening |
| amniotomy | High success rate. | |
| | Labor may be shortened by an hour. | |
| | • The procedure allows the amniotic fluid to be examined for the presence of meconium, which may be a sign of fetal distress. | |
| | The heart rate can be monitored with direct access to the baby's scalp. Lowering of the blood pressure in pre-eclampsia, eclampsia | |
| | Relief of maternal distress in poly hydramnios | |
| | Control of bleeding in APH | |
| | Relief of tension in abruptio placenta and initation of labour | |
| list down the | DISADVANTAGES OF AMNIOTOMY | Listening |
| disadvantage of | 1. The baby may turn to a breech position making birth more difficult if the | |
| amniotomy | membranes are ruptured before head engagement | |
| | 2. There is an increased risk of umbilical cord prolapse | |
| | 3. There is an increased risk of infection if there is a prolonged time between rupture and birth. | |
| explain the equipment | EQUIPMENT FOR AMNIOTOMY | Listening |
| need for amniotomy | Amnicot | |
| nece for unimoverny | Sterile gloves and lubricant. | |

- Absorbent pads and towels to be placed under the patient.
- Fetal monitor.
- Tocolytics should be available, especially if labor is being augmented.
- Equipment necessary for the clinician to observe universal blood and body fluid precautions (gloves, gown, drapes, mask, eye protection).

define amnicot

AMNICOT

Amnicot is a rubber/latex finger cot with an attached hook. It is easy to use and makes rupturing the membranes a safe and simple procedure for the obstetrician, midwife or physician.





Listening

| | | Listening | | | | | | |
|------------------------|--|-----------|--|--|--|--|--|--|
| describe the | INSTRUCTIONS FOR USE | | | | | | | |
| instruction for use of | | | | | | | | |
| amnicot | 1. Position AROM-Cot over the end of the middle or index finger of a gloved left or right hand. | | | | | | | |
| | 2. Ensure hook points toward palm of hand. | | | | | | | |
| | 3. Tip of cot needs to fit flatly and tightly against end of finger. | | | | | | | |
| | 4. Complete rolling of cot firmly to base of finger. | | | | | | | |
| | 5. Gently scratch membranes to rupture. | | | | | | | |
| | 6. Caution Do not scratch excessively! Check for amniotic fluid after one or two | | | | | | | |
| | well-applied movements of the hook. | | | | | | | |
| | AMNICOT HAS THE FOLLOWING ADVANTAGES: | | | | | | | |
| list down the | | Listening | | | | | | |
| advantages of amnicot | AMNICOT is an ideal instrument for a selective amniotomy. | | | | | | | |
| | • LESS PAIN : Only one finger is inserted through the cervix. No other instruments are required. | | | | | | | |
| | • LESS ANXIETY : The use of instruments can cause significant anxiety to patients. | | | | | | | |
| | HOOK EXACT PLACEMENT OF THE: It is possible to feel exactly where the hook is applied. | | | | | | | |
| | • AN ASSISTANT IS NOT REQUIRED: This new technique allows the operator to stabilize the presenting part with the other hand. | | | | | | | |
| | • LITHOTOMY IS NOT NECESSARY: As the finger is a flexible instrument, lithotomy is not necessary even when the cervix is posterior. | | | | | | | |
| | Specific, easy handling for obstetrician, midwife and patient | | | | | | | |
| | Specific, easy handling for obstetricial, indiwife and patient Features Easy handling; only one finger and no instrument is inserted into the cervix. | | | | | | | |
| | Precise positioning of the small hook; the finger is more flexible than a rigid instrument. | | | | | | | |
| | Sterile, disposable | | | | | | | |
| | • Low-cost | | | | | | | |

| explain the effects of amnicot | EFFECTS When the amniotic sac ruptures, production of prostaglandins increases and the cushioning between the fetus and uterus is decreased, both of which processes increase the frequency and intensity of contractions | Listening |
|--------------------------------|--|-----------|
| | SUMMARY Amniotomy is the one of surgical method of Induction of labor it is the active management of vaginal delivery. Amnicot instrument is the innovation in obstetrical nursing, the instrument used to artificial rupture of membrane. It has various advantages in Induction of labor. | |
| | CONCLUSION I hope you all are under stood my topic in-depth, apply the knowledge in day to day clinical practice | |

APPENDIX - XVIII

MASTER CODE SHEET - EXPERIMENTAL GROUP

| CNO | BASLINE VARIABLE | | | | | | | | | | GE LEVEL | PRACTIC | PRACTICE LEVEL | |
|------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|---------|----------------|--|
| S.NO | AG | GD | ED | DS | WA | YE | EL | PI | SI | PRT | POT | PRT | POT | |
| 1 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.1 | 7.6 | 8.2 | - | 5 | 12 | 4 | 18 | |
| 2 | 1.1 | 2.2 | 3.1 | 4.1 | 5.4 | 6.1 | 7.1 | 8.1 | 9.4 | 18 | 21 | 7 | 16 | |
| 3 | 1.1 | 2.2 | 3.1 | 4.1 | 5.4 | 6.2 | 7.1 | 8.1 | 9.4 | 15 | 23 | 0 | 20 | |
| 4 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.1 | 7.6 | 8.2 | - | 21 | 24 | 12 | 12 | |
| 5 | 1.2 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.1 | 9.1 | 13 | 19 | 6 | 15 | |
| 6 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.2 | 7.6 | 8.2 | - | 14 | 24 | 6 | 18 | |
| 7 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.2 | 8.1 | 9.4 | 11 | 25 | 19 | 20 | |
| 8 | 1.2 | 2.2 | 3.2 | 4.1 | 5.7 | 6.2 | 7.6 | 8.2 | - | 13 | 24 | 17 | 10 | |
| 9 | 1.1 | 2.2 | 3.2 | 4.1 | 5.7 | 6.1 | 7.6 | 8.2 | - | 15 | 21 | 6 | 17 | |
| 10 | 1.1 | 2.2 | 3.2 | 4.1 | 5.7 | 6.1 | 7.1 | 8.2 | - | 10 | 23 | 0 | 11 | |
| 11 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.1 | 7.6 | 8.2 | - | 8 | 17 | 4 | 18 | |
| 12 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.1 | 9.4 | 13 | 23 | 7 | 12 | |
| 13 | 1.1 | 2.2 | 3.2 | 4.1 | 5.2 | 6.1 | 7.6 | 8.2 | - | 13 | 22 | 6 | 19 | |
| 14 | 1.1 | 2.2 | 3.2 | 4.1 | 5.2 | 6.2 | 7.6 | 8.1 | 9.4 | 12 | 20 | 8 | 15 | |
| 15 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.1 | 9.4 | 10 | 23 | 6 | 9 | |
| 16 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.2 | 7.6 | 8.2 | - | 11 | 19 | 14 | 10 | |
| 17 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 13 | 24 | 4 | 8 | |
| 18 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.1 | 9.4 | 9 | 18 | 16 | 20 | |
| 19 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.2 | 7.6 | 8.2 | - | 7 | 10 | 12 | 16 | |
| 20 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.2 | 7.6 | 8.2 | - | 12 | 19 | 5 | 11 | |
| 21 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.2 | 7.1 | 8.1 | 9.4 | 6 | 18 | 9 | 9 | |
| 22 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 14 | 20 | 10 | 18 | |
| 23 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 18 | 19 | 7 | 6 | |
| 24 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.2 | 7.1 | 8.2 | - | 10 | 21 | 5 | 11 | |
| 25 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 19 | 23 | 11 | 10 | |
| 26 | 1.1 | 2.2 | 3.1 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 18 | 24 | 3 | 20 | |
| 27 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 10 | 17 | 15 | 12 | |
| 28 | 1.1 | 2.2 | 3.2 | 4.1 | 5.1 | 6.2 | 7.6 | 8.1 | 9.1 | 19 | 23 | 9 | 15 | |
| 29 | 1.1 | 2.2 | 3.1 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 6 | 12 | 13 | 9 | |
| 30 | 1.1 | 2.2 | 3.2 | 4.1 | 5.4 | 6.1 | 7.1 | 8.2 | - | 11 | 21 | 17 | 18 | |

APPENDIX - XIX











