ASSESSMENT OF THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS IN CHENNAI

Dissertation submitted to

THE TAMILNADU DR.M.G.R.MEDICALUNIVERSITY

CHENNAI-600 032

In partial fulfillment of the requirement for the degree of

MASTER OF SCIENCE IN NURSING

OCTOBER – 2017

ASSESSMENT OF THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS IN CHENNAI

SIGNATURE OF THE EXTERNAL EXAMINER

SIGNATURE OF THE INTERNAL EXAMINER

ASSESSMENT OF THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS IN CHENNAI

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A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS IN CHENNAI

ABSTRACT

INTRODUCTION

Oxytocics are the drugs that have the power to excite contractions of the uterine muscles. Among a large number of drugs belonging to this group, oxytocin is the important one and is extensively used in clinical practice. The midwife is recognized as a responsible and accountable professional who works in partnership with pregnant women to give the necessary support, care and advice during pregnancy, labor and the postpartum period. The goal of labor induction is to stimulate uterine contractions before the spontaneous onset of labour, resulting in vaginal delivery. Inappropriate administration of oxytocin may result in hyper-stimulation of the uterus, which can lead to uterine rupture, foetal asphyxia, and/or foetal demise. Intramuscular (IM) oxytocin injection during the first and second stages of labor can be dangerous because dosing cannot be adjusted in response to the strength of uterine contractions, increasing risks of uterine rupture and harm to the foetus. Midwife being an active member of the care team plays a vital role in identifying the changes that occur while the mother is on oxytocin. Since knowledge is a contributing factor for practice, the investigator wanted to do a study to assess the relationship between knowledge and practice on use of oxytocin among nurses working in selected maternity hospitals in Chennai.

STATEMENT OF THE PROBLEM

A study to assess the knowledge and practice on use of oxytocin among nurses working in selected hospitals in Chennai.

OBJECTIVES OF THE STUDY

- To assess the knowledge and practice on use of oxytocin.
- To correlate the knowledge and practice on use of oxytocin.
- To associate the knowledge and practice on use of oxytocin with the demographic variables like age, qualification, total years of experience & inservice education on oxytocin drug.

HYPOTHESIS

- H_1: There is a significant relationship between knowledge and practice on use of oxytocin among nurses at selected hospitals.
- H_2: There is a significant association between knowledge and practice on use of oxytocin among nurses with the demographic variables age, qualification, total years of experience, inservice education on oxytocin drug.

METHODOLOGY

The research approach was evaluative in nature. Descriptive design was used. The study was conducted among 120 staff nurses' who fulfilled the inclusion criteria. The samples for the study were selected from CSI Kalyani Hospital and Dr.Kamatchi Memorial Hospital in Chennai. Non probability convenient sampling technique was used to select samples from each setting. Structured questionnaire and Rating scale was used to collect the data.

RESULTS

There was a statistically significant high positive correlation ($r=0.984$; $p< 0.001$) found between knowledge and practice on use of oxytocin among the staff nurses'. The assessment of the overall knowledge showed that majority (46.7%) of the staff nurses had below average level of knowledge on use of oxytocin. The assessment of the overall

practice showed that majority (45.00%) of the nurses' had poor practice on use of oxytocin. There was a statistically significant association between the knowledge and practice with the demographic variables such as age, religion and income, total years of working experience and inservice education at $p < 0.001$. There was a statistically significant association between the knowledge and practice with the demographic variables such as total years of working experience in maternity unit, at $p < 0.05$.

CONCLUSION

Majority of the staff nurses had below average level of knowledge and poor level of practice on use of oxytocin. There was a statistically significant high positive correlation between knowledge and practice among the staff nurses. It is mandatory that nurses should possess adequate knowledge & practice on use of oxytocin. Hence the nurses need inservice education on use of oxytocin.

CHAPTER I

INTRODUCTION

God has created the world with wonderful things. Among all the wonderful things, the greatest is the birth process. The birth of a baby is a very memorable experience for a mother.

Safe childbirth is the responsibility of the maternity nurse by promoting and preserving the health of the mother and foetus. There are various drugs that are used during the pregnancy cycle. A group of drugs called “oxytocics” are commonly administered to expectants mothers for the management of abortions, post-dated pregnancy, labor and puerperium

Oxytocics are the drugs of varying chemical nature that have the power to excite contractions of the uterine muscles. Among a large number of drugs belonging to this group, oxytocin is the important one and is extensively used in clinical practice. The midwife should have thorough knowledge of the indications, action, and side effects of these drugs as well as the nursing considerations related to each of them in order to plan and implement effective nursing process.

The midwife is recognized as a responsible and accountable professional who works in partnership with pregnant women to give the necessary support, care and advice during pregnancy, labor and the postpartum period. This care includes preventive measure, the promotion of normal birth, the detection of complications in mother and baby, accessing of medical or other appropriate assistant and the carrying out of emergency measures. Oxytocin is one of the most commonly used drugs in obstetrical practice, but it is also the drug associated with the most preventable adverse events in

child birth. The goal of labor induction is to stimulate uterine contractions before the spontaneous onset of labour, resulting in vaginal delivery.

Oxytocin is the drug of choice for postpartum hemorrhage prevention but feasibility of use is limited in many settings because oxytocin is only available in injectable form and requires refrigeration. Recent calls to expand access to oxytocin for postpartum hemorrhage prevention have been accompanied by concerns that the drug would also be used inappropriately for induction and augmentation of labour. Inappropriate administration may result in hyper stimulation of the uterus, which can lead to uterine rupture, fetal asphyxia, and/or fetal demise. Intramuscular (IM) oxytocin injection during the first and second stages of labor can be dangerous because dosing cannot be adjusted in response to the strength of uterine contractions, increasing risks of uterine rupture and harm to the foetus

Midwives who care for laboring women are faced with an increasingly frequent use of pharmaceutical agents that facilitate initiation of labor (uterotopins) and augment labor (uterotonics). The choice of the drug, administration- side effects, and complications, uses, contraindication varies. All midwives bear a great responsibility when they administer drugs, as these may act not only upon the mother but also on the fetus during labor and on the baby in the early days of life. Midwife being an active member of the care team plays a vital role in identifying the changes of use of oxytocin.

BACKGROUND OF THE STUDY

India has the highest annual number of maternal deaths of any country. As obstetric hemorrhage is the leading cause of maternal death and complication in India, it leads to use of uetrotonics among nurses and without adequate monitoring causes complication.

Oxytocin is a neuro hormone that originates in the hypothalamus and is secreted by the posterior lobe of the pituitary gland. Synthetic oxytocin is the most commonly used drug for the induction of labor in viable pregnancies which is given through the IV route. It is used exclusively to stimulate the pregnant uterus because it allows precise measurement of the amount of medication being administered and rapid discontinuation of drug when side effect occurs. Traditionally, it has been held that oxytocin reaches a steady level within 15 to 20 minutes of beginning the infusion or increasing dosage. Recent studies show that approximately 40 minutes are required for any particular dose of oxytocin to reach plasma concentration (Satin.A. J & Yeomans E.R., 2010).

Oxytocin is a drug used for induction of labor when there is failure of cervical dilatation and fetal descent with spontaneous uterine contraction which needs close monitoring to prevent complications such as foetal respiratory distress due to severe uterine contraction and uterine rupture. Also, it needs close monitoring to assess the progress of labor and to detect signs of failure of induction if present early.

Studies on knowledge on use of oxytocin among staff nurses showed that 30.5% had low level of knowledge (Desalgen & Murugan, R, 2014), 71.5% had inadequate knowledge (Bhuvan. K.C, Devendra, S & Gayawali, S 2014), 50% had low level of knowledge (Vijayan, A. 2012) and 100 % had adequate knowledge on administration dosage and route and observation but had inadequate knowledge regarding the definite mode of action and its uses (Eldosh.R.J, 2015).

Studies on practice on use of oxytocin among staff nurses showed that 56.1% of staff nurses had unsafe practices (Bhuvan. K.C, Devendra, S & Gayawali, S 2014).

Misuse of oxytocin causes perinatal mortality and morbidity that is increasing day by day. The maternal mortality ratio is estimated to be between 230 and 254 deaths per 100,000 live births. While this represents a significant decline from previous

decades, India has the largest number of maternal deaths in the world, between 50,000 and 63,000 annually. Obstetric hemorrhage contributes to about 37% of maternal deaths in India, (WHO Statistics 1990 – 2015). Nurses at the bedside of the laboring women make oxytocin titration decision based on their nursing assessment. Those decisions are based on a sound knowledge of pharmacological properties of oxytocin, physiology of uterine contraction, response of women and foetus to contraction. Misuse of labour-inducing medication such as oxytocin has been identified as contributing to maternal and neonatal mortality. Use of labour-inducing medication by insufficiently trained cadres of healthcare workers is prevalent. The stakes are high, with unregulated usage of such medication resulting in severe consequences for mother and child (Safieh, S 2014).

NEED FOR THE STUDY

For labour and delivery, normal uterine function is necessary. Many measures aid in promoting the normal uterine function. Among those measures, obstetric drugs play a vital role. Certain selected obstetric drugs like oxytocin are used in obstetric practice. Anticipated outcomes of uterine stimulants are either to prepare the cervix for childbirth, induce or stimulate uterine contractions to produce safe delivery of a newborn, encourage complete spontaneous or induced abortion, eliminate blood clots or other debris from the uterus, and decrease or stop hemorrhage following childbirth.

An article in American Journal of Maternal Child Nursing addresses the importance of the nursing role in the management of oxytocin during induction/augmentation of labor. It highlights that nurses at the bedside of laboring women should have knowledge as to how to make oxytocin titration decisions, sound knowledge of the pharmacologic properties of oxytocin, the physiology of uterine contractions, and the response of the women and foetus to contractions. In addition

nurses must be aware of the standards and guidelines of care that govern their actions during induction/ augmentation.

Nurses are primarily involved in the administration of medications across settings. Obstetric nursing is the specialty dealing with the care of a woman and her offspring during pregnancy, childbirth and puerperium. Nurses especially the obstetric nurses, should check the dose, route and expiry date of the drug carefully because it will affect both the mother and foetus. Therefore, thorough understanding of the dose, indications, contraindications, route of administration, and side effects of drugs will increase the odds of a positive outcome for both mother and foetus.

Nurses especially the midwife, should be very vigilant while administering the oxytocin and follow it up with complete monitoring as, it can be detrimental to two lives both the mother & foetus. The researcher while working in hospitals found that nurses generally were willing to work in other wards except maternity unit as they were not confident about the usage of various medicine & procedures in their area. The researcher felt that thorough understanding of the dose, indications contraindication, route of administrations and side effects of oxytocin will increase the odds of a positive outcome for both mother and foetus and will motivate nurses to work confidently in maternity units. Since knowledge is a contributing factor for practice, the investigator wanted to do a study to assess the relationship between knowledge and practice on use of oxytocin among nurses working in selected hospitals in Chennai.

STATEMENT OF THE PROBLEM

A study to assess the knowledge and practice on use of oxytocin among nurses working in selected hospitals in Chennai

OBJECTIVES OF THE STUDY

- To assess the knowledge and practice on use of oxytocin.
- To correlate the knowledge and practice on use of oxytocin.
- To associate the knowledge and practice on use of oxytocin with the demographic variables like age, qualification, total years of experience & inservice education on oxytocin drug.

OPERATIONAL DEFINITIONS

ASSESS

It is the act of gathering information regarding use of oxytocin using structured questionnaire and rating scale and analyzing the data using statistical methods.

KNOWLEDGE

It refers to the correct responses obtained from the staff nurses regarding the use of oxytocin, like preparation of oxytocin infusion, side effects, indication, contraindication, complication, mode of action and monitoring of mothers & fetus which is measured by a structured knowledge questionnaire.

PRACTICE

It refers to specific intentional actions performed by staff nurses in the process of administration of oxytocin which is assessed using rating scale.

OXYTOCIN

It refers to the drug used to increase production of prostaglandins, cervical softening and stimulate uterine contractions.

NURSES

It refers to registered staffs who are qualified in DGNM, BSc Nursing and P.B.BSc Nursing, MSc Nursing and trained in nursing working at the selected hospitals.

HYPOTHESIS

H_1: There will be a significant relationship between knowledge and practice on use of oxytocin among nurses at selected hospitals.

H_2: There will be a significant association between knowledge and practice on use of oxytocin among nurses with the demographic variables such as age, qualification, total years of experience and inservice education.

ASSSUMPTION

- Nurses working in the Maternity hospitals have above average knowledge on use of oxytocin.
- Nurses working in the Maternity hospitals have good practice on use of oxytocin.
- Maximum working experience in maternity unit and current area of working will influence the knowledge of the nurses.
- Maximum working experience in maternity unit and current area of working will influence the practice of the nurses.

DELIMITATION

The study is delimited to a period of four weeks of data collection at selected hospitals.

PROJECTED OUTCOME

- The study will help to assess the knowledge and practice on use of oxytocin drug among nurses.
- The study will help to identify the influence of demographic variables on the knowledge on use of oxytocin drug among nurses.

- The study will help to identify the influence of demographic variables on the practice on use of oxytocin drug among nurses.

CONCEPTUAL FRAMEWORK

Conceptual frame work refers to a frame work of preposition for conducting research. A frame work is simply the structure of the research ideas or concepts and how it is put together. So, the conceptual frame work is a set of coherent ideas or concepts organized in a manner that makes an investigator easy to communicate with others. Miles and Huberman (1994) defined a framework as a visual or written product, one that explains, either schematically or in narrative form the key factors, concepts or variables and the presumed relationship among them. Here the conceptual frame work is developed based on Rosentocks (1974) & Maiman's (1975) Health Belief Model which is adopted with modification. This model addresses the relationship between a person's belief and behaviour

The Model consists of three aspects

1. Individual perception
    - Perceived susceptibility
    - Perceived severity
2. Modifying factor
    - Perceived threat
    - Cues to action
3. Likelihood of action
    - Perceived benefits
    - Perceived barriers

1. Individual perception

In Health Belief Model system, individual perception is identified as the belief that a person has about his behaviors and the outcomes. In this study the individual perception is on nurses knowledge and practice. Individual perception is classified as perceived susceptibility and perceived severity.

- **Perceived susceptibility**

In Health Belief system, perceived susceptibility is identified as individual's opinion about the chances of getting a condition.

In this study, perceived susceptibility refers to the nurse's knowledge and practice related to use of oxytocin. It includes monitoring the pre administration, during administration and post administration of oxytocin, adverse effects, dosage, how to manage the symptoms (fetal distress) and complications (uterine rupture).

- **Perceived severity**

In Health Belief System, perceived severity refers to the subjective assessment of the severity of a health problem and its potential consequences. Perceived seriousness encompasses beliefs. In this study, perceived severity refers to the complications that will arise due to lack of knowledge and poor practice on use of oxytocin.

2. Modifying Factors

In the Health Belief Model the modifying factors are an individual's personal factors that predict whether the new behavior will be adopted (or) not.

In this study, it refers to staff nurses' age, educational status, total years of experience and experience in maternity wards which will be influencing the knowledge and practice on use of oxytocin.

- **Perceived threat**

In Health Belief System, perceived threat is identified when a person realizes that they may be personally vulnerable to this particular disease.

In this study, it refers to the staff nurses level of knowledge and practice on use of oxytocin which may be lack of confidence and fear of staff nurses leading to poor practice.

- **Cues to action**

In Health Belief Model, cues to action are identified as anything that triggers a decision to change behavior.

In this study cues to action refers to the nurses level of knowledge and practice course. Nurses have to be provided with continuing nursing education programme, inservice education programme to achieve the adequate knowledge and practice.

Likelihood of Action

In Health Belief Model, likelihood of action, after becoming aware of the potential for developing a disease if behavior does not change, it is important to weigh out the benefits and the barriers to taking action and determine if it is worth it. The Likelihood of action is classified as perceived benefits and perceived barriers and likelihood recommendation.

- **Perceived benefits**

Perceived benefits refer to an individual's assessment of the value or efficacy of engaging in a health-promoting behavior to decrease risk of disease.

In this study perceived benefits refers to nurses having adequate knowledge and good practice on use oxytocin which leads to decrease in maternal morbidity and mortality.

- **Perceived barriers**

Perceived barriers refer to an individual's assessment of the obstacles to behavior change. Even if an individual perceives a health condition as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent engagement in the health-promoting behavior.

In this study perceived barriers refers to nurses having average and below average knowledge, not attending the inservice education programme and moderate and poor practice.

MODIFIED HEALTH BELIEF MODEL ROSENSTOCK'S (1974) & MAIMAN'S (1975)

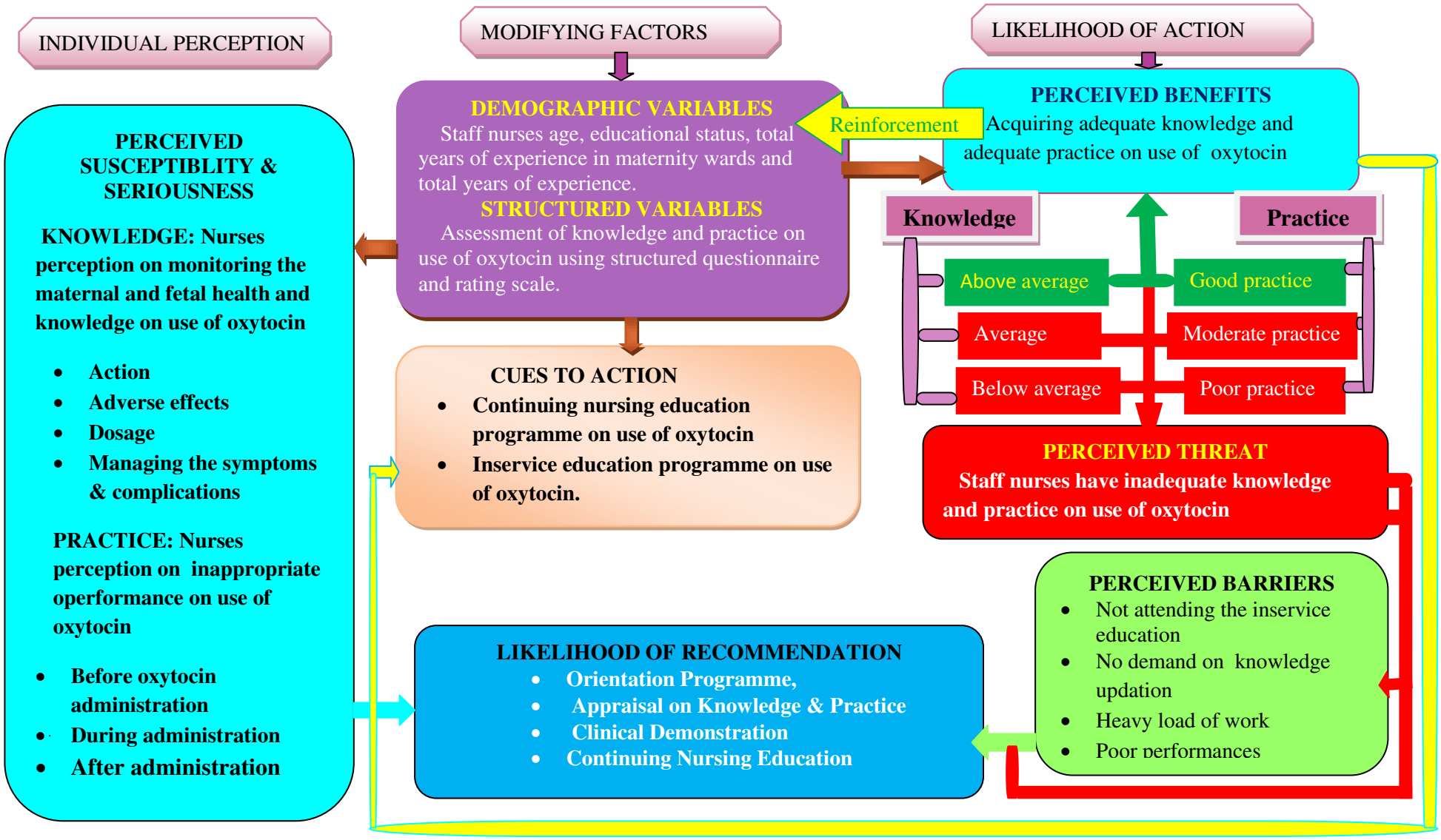

FIGURE NO 1: Conceptual frame work based on Modified Health Belief Model Rosenstocks (1974) & Maiman's (1975).

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is an essential component of research study as it provides a broad understanding of the research problem. A review of related literature involves the systematic identification, location, scrutiny and summary of written materials that contain information on research problem (Polit and Hungler, 1998). Keeping this in mind, the investigator studied and analyzed the accessible sources and gained in- depth knowledge from the related studies to assess the knowledge and practice on use of oxytocin among the staff nurses.

I. Studies related to oxytocin and its complication

II. Studies related to knowledge on use of oxytocin

III. Studies related to practice on use of oxytocin

I. STUDIES RELATED TO OXYTOCIN AND ITS COMPLICATION

Rosie & Rukeya (2014) conducted a descriptive study to assess the labour outcome and its relation to mismanagement of oxytocin. Random sampling was used and 60 labour cases were selected. Data was collected using check list. The findings revealed 68.5% of adverse foetal outcome and complication was associated with injudicious use of oxytocin.

Nova & Scotia (2012) conducted a study to assess the complication of use of oxytocin for induction of labor. The group reviewed 74 cases over a period of one month. Non probability convenient sampling technique was used and data was obtained by observational method. The study findings showed that the use of oxytocin could lead to difficulties in detecting abnormal fetal heart beats (30%) and a lack maternal

monitoring (45.6%). The study concluded that the risk for complication is for both the mother and the fetus/child.

Oxytocin is probably the most commonly used drug to induce labour as it is a safe medication. Practices report that it can cause the uterus to become over stimulated or hemorrhagic. Infants might suffer an abnormally slow heart rate or a lack of oxygen, which could lead to further serious complications or even death (Gregory et al. 2013 & Kurth & Haussmann 2011).

II. STUDIES RELATED TO KNOWLEDGE ON USE OF OXYTOCIN

Ahla, H, Fatihah, S & Norziyana, I (2015) conducted a study to assess the knowledge of nurses midwives regarding nursing care of a women receiving oxytocin drug during labour. 250 staff nurses were selected from maternity hospital, Ribat. Data was collected using interview schedule. This study results showed that 32.3% of staff nurses had adequate knowledge in the pretest and 95.4% of staff nurses had adequate knowledge in the post test regarding nursing care of women receiving oxytocin during labour.

Haleena & Prathap, V (2013) conducted a retrospective study to assess the knowledge and practice regarding oxytocin induction and quality of delivery care among 136 staff nurses, randomly selected working in labor ward. The study findings concluded that 61.6% of staff nurses had inadequate knowledge.

Huda, A & Iqbal, M. (2013) conducted a study to assess the knowledge of staff nurses regarding oxytocin administration during labor at Maternity hospitals in Al-Kut-City among 70 staff nurses. The study findings concluded that 62.9% staff nurses had inadequate knowledge. There was no statistically significant association with the demographic variables.

Nityanand, D & Ellie, M (2013) conducted a qualitative research study to assess the knowledge and practice related to use of uterotonic drugs during childbirth in Karnataka, India. Random sampling was used and 180 staff nurses were selected. The study findings concluded that 58.1% of staff nurses had inadequate knowledge related to use of uterotonics drugs during child birth and 52.6% of staff nurses had poor practice.

Ali, H & Ameer, A (2012) conducted a cross sectional study related to knowledge and practice on oxytocin administration techniques among 200 staff nurses working in Maternity hospitals in Al-Hillah City. Knowledge was assessed using structured questionnaire and practice was assessed using check list. The result showed that 56.1% of the staff nurses were having inadequate knowledge and 55.9% of the staff nurses were having poor practice.

Karthik, Reepak & Uvaraj (2012) conducted a study to assess the knowledge regarding safe administration of oxytocin among staff nurses working in intrapartum nursing unit. Randomly 120 staff nurses were selected. Data was collected by observational method. The study findings concluded that 70% of staff nurses had inadequate knowledge related safe administration of oxytocin.

Mohan M (2011) conducted a descriptive study to assess the knowledge of staff nurses on oxytocin induction on mothers during the first stage of labour. among 30 staff nurses. Time series design one group pre test and post- test design was used. The study findings concluded that pre test knowledge was 57.96% and the post – test knowledge score was 95.43%.

III. STUDIES RELATED TO PRACTICE ON USE OF OXYTOCIN

Darrow, S. J. D & Jonathan (2015) conducted a study to assess the knowledge and practice of staff nurses on use of obstetrical drugs. Random sampling technique was used and 200 staff nurses were selected. Data was collected using structured

questionnaire for knowledge and rating scale for practice by self report. The study results showed that 56.4% of nurses could not calculate medications correctly and 90% had problems in suggesting the need for regular self-testing of medication calculation skills.

Chowqui & Reddy, R (2014) conducted a cross sectional study to assess the knowledge and practice on induction with oxytocin intranatally among 60 staff nurses in Guragon. Data was collected using structured questionnaire and rating scale by self report. The study results showed that 62.9% of staff nurses had inadequate knowledge and 66.8% of staff nurses had poor practice regarding induction with oxytocin intranatally.

Hariati, J (2013) conducted a study to assess the knowledge and practice of administering oxytocics during delivery among staff nurses, in Mangalore. Non Probability convenient sampling technique was used and 150 staff nurses were selected as samples. Data was collected using structured questionnaire and rating scale. The study results showed that 72.9% of the staff nurses had inadequate knowledge and 66.2% of the staff nurses had poor practice regarding administration of oxytocics during delivery.

Mohammed & Noorjahan (2012) conducted a study to assess the practice and attitude of labor related oxytocin induction among staff nurses in South Africa. Random sampling technique was used and 300 staff nurses were selected. Data was collected using semi structured questionnaire. The study results showed that 72.9% of the staff nurses had improper practice related oxytocin induction in the maternity unit.

Iswinlal (2011) conducted a study to evaluate the difficulties encountered by midwives in oxytocin administration. Random sampling technique was used and 60 samples were selected. Data was collected using structured questionnaire. The study findings showed that 84.9% of the midwives experience difficulty during oxytocin administration. The reason stated was lack of oxytocin administration protocol.

CHAPTER III

METHODOLOGY

A study was undertaken to assess the knowledge and practice on use of oxytocin among nurses working in selected hospitals in Chennai.

This chapter on methodology deals with the description of research approach, design, study setting, population, sample, criteria for sample selection, sample size, sampling technique, data collection tool, validity of tool, reliability, pilot study, data collection procedure and plan for data analysis.

SCHEMATIC REPRESENTATION

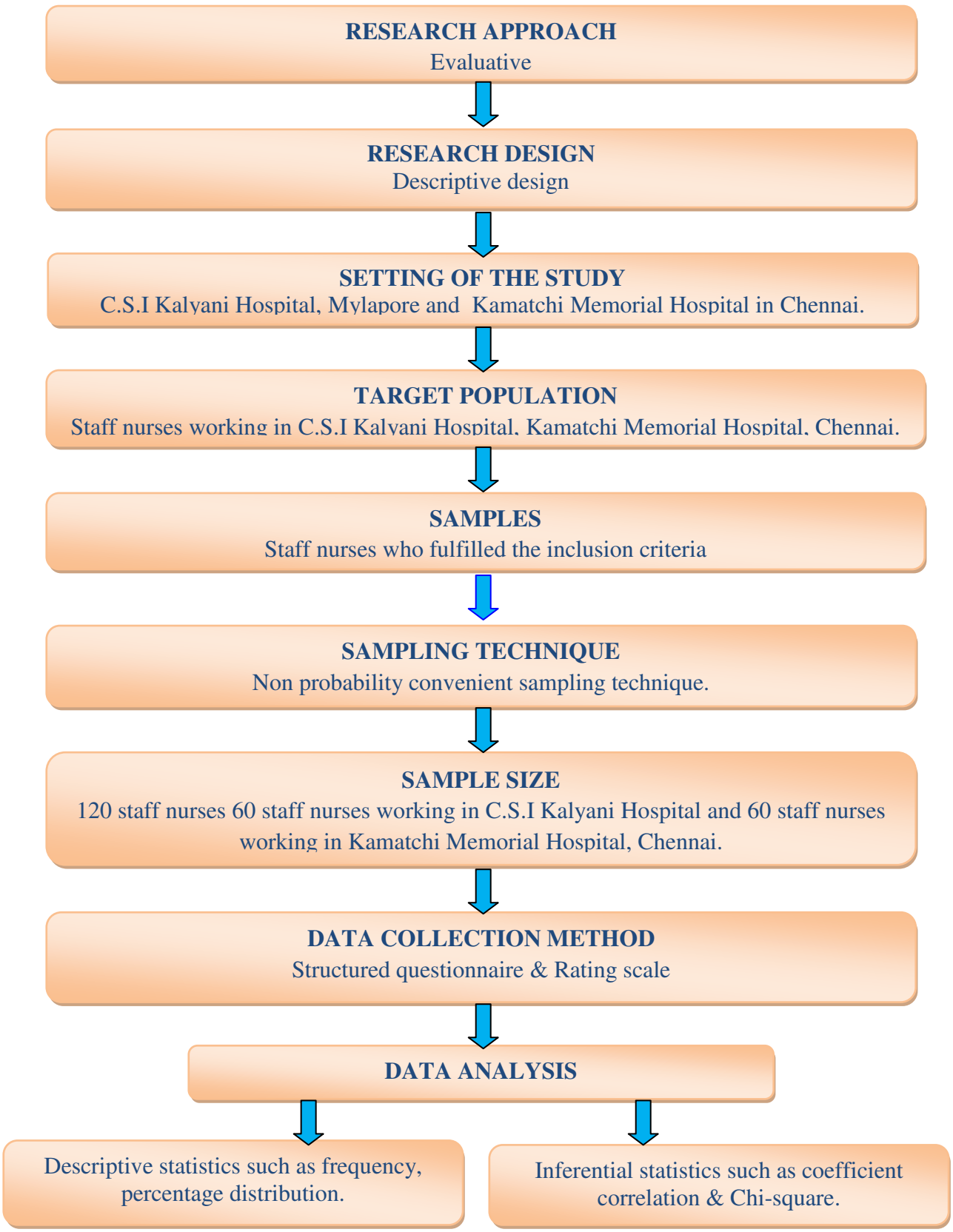

Figure 2: Schematic representation of the study

RESEARCH APPROACH

The research approach was evaluative in nature.

RESEARCH DESIGN

A descriptive design was chosen for the study.

MAJOR VARIABLES OF THE STUDY

The major variables of the study were knowledge and practice on use of oxytocin.

RESEARCH SETTING

The study was conducted in CSI Kalyani Hospital and Dr.Kamatchi Memorial Hospital in Chennai.

POPULATION

Population for the study was all the staff nurses working in C.S.I. Kalyani Hospital and Dr. Kamatchi Memorial Hospital in Chennai.

SAMPLE

The staff nurses who fulfilled the inclusion criteria were selected as the sample for this study.

SAMPLING CRITERIA

INCLUSION CRITERIA

1) Staff nurses who were available during data collection period.
2) Staff nurses with Diploma or P. B BSc or BSc or MSc qualification.

3) Staff nurses who were willing to participate.

EXCLUSIONCRITERIA

1) Staff nurses who were not directly involved in the antenatal, intranatal, postnatal and post operative care.

2) Samples of pilot study were excluded.

SAMPLE SIZE

From the population, a sample of 120 staff nurses was selected. A total of 60 samples from each setting were included in the study.

SAMPLING TECHNIQUE

Non Probability convenient sampling technique was used to select the samples.

TOOL FOR DATA COLLECTION

The tool in this study was based on the information gathered from the review of literature, objectives of the study and the personal and professional experience of the investigator. It consists of three parts.

PART – I

It consists of the demographic variables of the staff nurses which include age, religion, income per month, educational qualification, experience (Total and in maternity center) current area of working and inservice education.

PART – II

It consists of the structured questionnaire to assess the knowledge regarding dosage, side effect, monitoring the drug while administrating, precaution taken before

administering the drug and effect on the mother & foetus, observations during the administration among staff nurses working in the selected maternity centers.

SCORING AND INTERPRETATION

There are multiple right options in each question. One mark will be awarded for each right answer chosen and '0' for the wrong answer.

Percentage was calculated for knowledge.

The percentage was calculated as follows

$$\text{Percentage} = \frac{\text{Obtained score}}{\text{Total score}} \times 100 .$$

Based on the percentage, the samples were graded as follows:

GRADE	**LEVELS**
>75%	Above Average
50-75%	Average
<50%	Below Average

PART-III

A 3 point rating scale (Always, Sometimes, Never) was used to assess the nurses practice through self report. It consists of 15 items and each item was scored as

SCORING AND INTERPRETATION

Scale	**Scores**
Never	1
Sometimes	2
Always	3

The percentage was calculated as follows:

$$\text{Percentage} = \frac{\text{Obtained score}}{\text{Total score}} \times 100$$

Based on the percentage, the sample will be graded as follows:

GRADE	LEVELS
>75%	Good practice
50-75%	Moderate practice
<50%	Poor practice

VALIDITY OF THE TOOL

The tool was validated by five experts, two Obstetrician and three Obstetrics and Gynecological Nursing experts.

RELIABILITY OF THE TOOL

The reliability of the tool was calculated by Test- Re- test method. The reliability pearson' correlation coefficient values are 0.77 for knowledge scale, 0.76 for practice scale.

HUMAN RIGHTS AND ETHICAL CONSIDERATION

The study was approved by the ethical committee constituted by the college. Permission was obtained from Dr. Kamatchi Memorial Hospital, Pallikaranai and C.S.I Kalyani Hospital, Mylapore to conduct the study. Informed consent was obtained from the study participants.

PILOT STUDY

The pilot study was conducted from 13.07.2016to 19.07.2016 at Pankajam Maternity Hospital in Chennai. After obtaining approval from the research committee in the college, permission was obtained from the concerned authority to conduct the study. Samples who fulfilled the inclusion criteria were selected using non probability convenient sampling technique. The demographic data and the knowledge was assessed using structured questionnaire and practice was assessed using three point rating scale. It took approximately 40 minutes to collect data from each sample.

PILOT STUDY RECOMMENDATION

There were no practical difficulties experienced in the sample selection. The tool was feasible and the main study was carried out without any modification of pilot study.

DATA COLLECTION METHOD

The data for the main study was collected after obtaining permission from the concerned authority to conduct the study. Informed consent was obtained from the samples. After self-introduction, rapport was established with the samples, brief introduction about the study was given. Data was obtained from the staff nurses by self-reporting. The demographic data and the knowledge was assessed using structured questionnaire and practice was assessed using three point rating scale. It took 40 minutes to collect data from each sample.

DATA ANALYSIS

Data analysis was done using descriptive and inferential statistics.

DESCRIPTIVE STATISTICS

- Frequency and percentage distribution was used to describe the demographic variables.
- Frequency and percentage distribution was used to describe the knowledge and practice on use of oxytocin among staff nurses.

INFERNTIAL STATISTICS

- Coefficient of correlation was used to assess the relationship between the knowledge and practice among staff nurses.
- The chi – square test was used to associate the knowledge and practice on use of oxytocin with the demographic variables.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

Data analysis and interpretation is the core step in the research process. The importance of analysis and interpretation of the collected data is to systematically organize, classify and summarize it so that the results can be interpreted to give all the results that trigged the research. In this chapter a detailed analysis of the collected data has been done as per the objectives stated earlier. The data obtained were classified and was presented under the following sections

SECTION I: Frequency and percentage distribution of the staff nurses based on the demographic variables.

SECTION II: Assessment of the knowledge on use of oxytocin.

SECTION III: Assessment of the practice on use of oxytocin.

SECTION IV: Correlation between knowledge and practice on use of oxytocin among staff nurses.

SECTION V: Association of knowledge on use of oxytocin with demographic variables.

SECTION VI: Association of practice on use of oxytocin with demographic variables.

SECTION I

FREQUENCY AND PERCENTAGE DISTRIBUTION OF THE STAFF NURSES BASED ON THE DEMOGRAPHIC VARIABLES.

Table 1.1: Frequency and Percentage distribution of the staff nurses based on the demographic variables such as age in years, religion and income per month.

N = 120

S.No.	Demographic variables	F	(%)
1	**Age**		
	a) 21-30 years	80	66.6
	b) 31-40 years	24	20.0
	c) 41-50 years	8	6.7
	d) >50 years	8	6.7
2	**Religion**		
	a) Hindu	53	44.2
	b) Christian	65	54.2
	c) Muslim	1	0.8
	d) Jain	1	0.8
3	**Income per month**		
	a) < Rs10,000\	68	56.7
	b) 10,000 - 20,000	36	30.0
	c) 20,000-30,000	7	5.8
	d) >30,000	9	7.5

Table 1.1 shows that majority (66.6%) of the staff nurses were in the age group of 21 -30 years. Majority (54.2%) of staff nurses were Christians. Majority (56.7%) of the staff nurses monthly income was less than Rs.10,000.

Table 1.2: Frequency and Percentage distribution of the staff nurses based on the demographic variables such as educational status, total working experience, experience in Maternity unit.

N = 120

S.No.	Demographic variables	F	(%)
4	**Educational status**		
	a) D.G.N.M	75	62.5
	b) B.Sc. Nursing	26	21.7
	c) P.B.B.Sc Nursing	10	8.3
	d) M.Sc. Nursing	9	7.5
5	**Total working experience**		
	a) < 1 year	50	41.7
	b) 1-5 years	51	42.4
	c) 6-10 years	8	6.7
	d) >10 years	11	9.2
6	**Experience in Maternity unit**		
	a) < 1year	60	50.0
	b) 1-3 years	22	18.3
	c) 4-6 years	22	18.3
	d) >6 years	16	13.4

Table 1.2 shows that majority (62.5%) of the staff nurses were with D.G.N.M qualification. Majority (42.4%) of the staff nurses have a total working experience of 1-5 years. Majority (50%) of the staff nurses were having less than 1 year of working experience in maternity unit.

Table 1.3: Frequency and Percentage distribution of the staff nurses based on the demographic variables such as the maximum working experience in maternity unit, current area of working and inservice education on use of oxytocin.

N = 120

S.No.	Demographic variables	F	(%)
7	**Maximum working experience in maternity unit**		
	a) Antenatal wards	63	52.5
	b) Postnatal wards	36	30.0
	c) Labour room	6	5.0
	d) Operation theatre	7	5.8
	e) Other wards	8	6.7
8	**Current area of working**		
	a) Antenatal wards	25	20.8
	b) Postnatal wards	56	46.7
	c) Labour room	19	15.8
	d) Operation theatre	12	10.0
	e) Other wards	8	6.7
	Inservice education on use of oxytocin		
9	**a)** Attended	102	85.0
	b) Not attended	18	15.0

Table 1.3 shows that majority (52.5%) of the staff nurses had maximum working experience in the antenatal wards. Majority (46.7%) of the staff nurses were currently working in postnatal ward. Majority (85%) of staff nurses had attended inservice education on use of oxytocin.

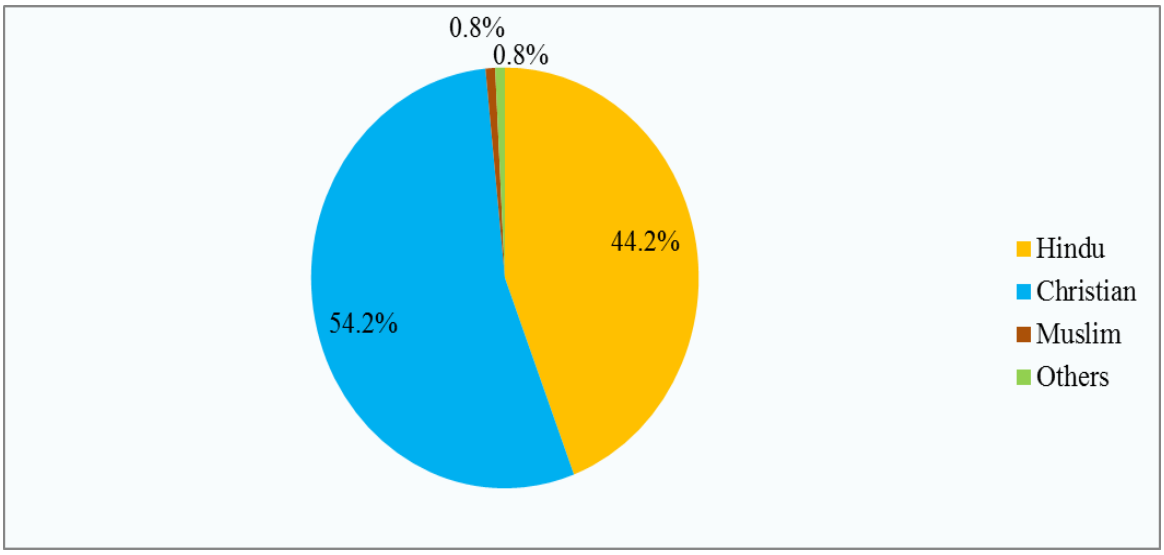

Figure 3: Percentage distribution of the staff nurses based on the religion

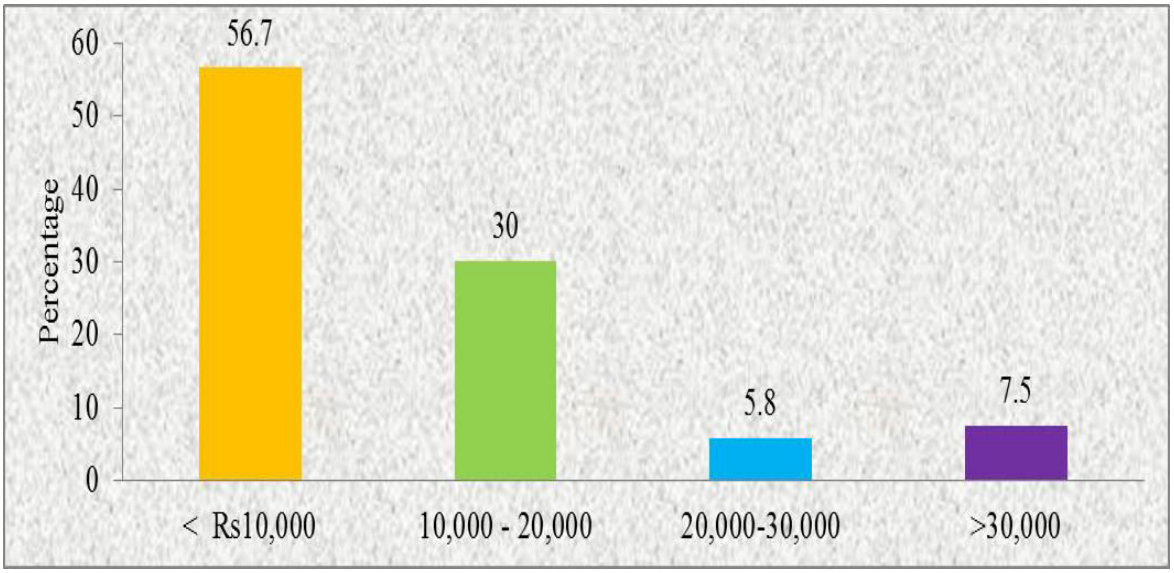

Figure 4: Percentage distribution of the staff nurses based on the monthly income

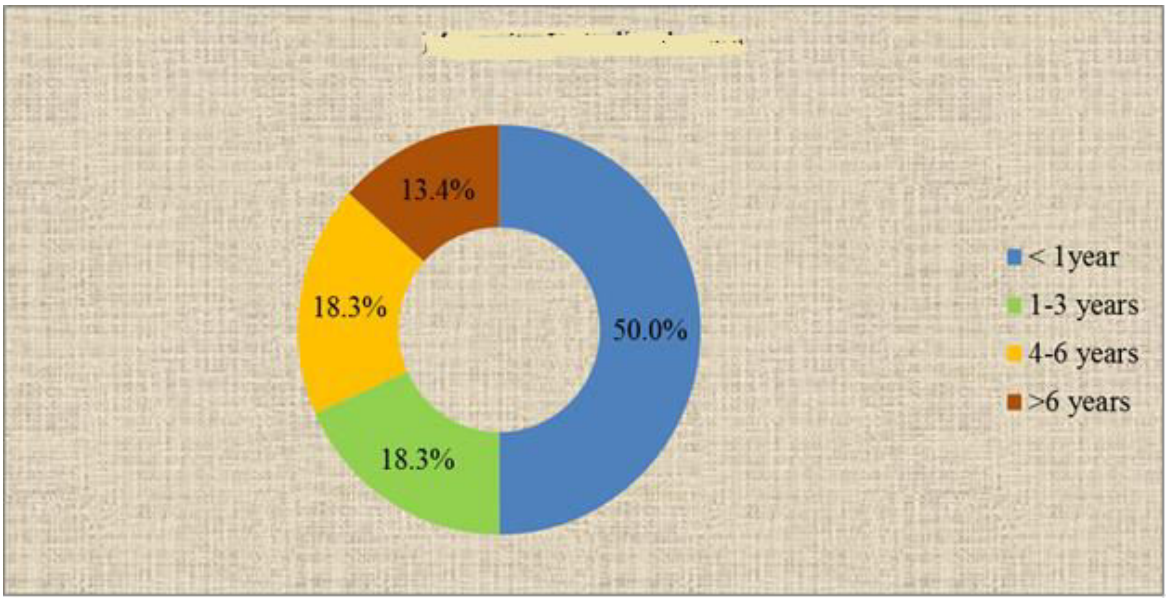

Figure 5: Percentage distribution of the staff nurses based on years of experience in maternity unit

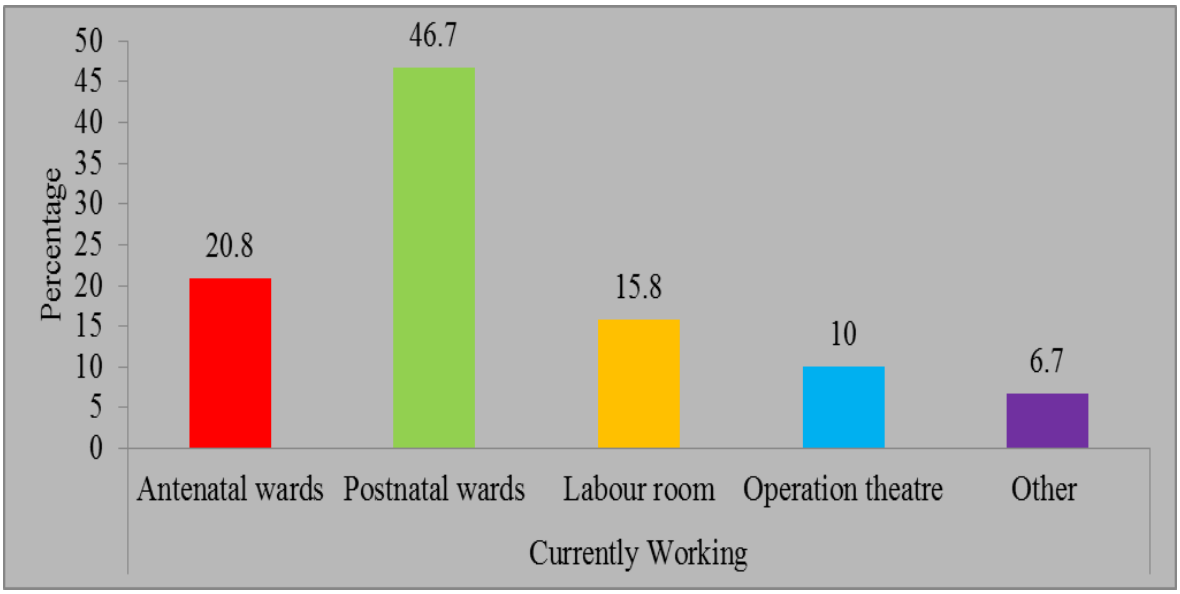

Figure 6: Percentage distribution of the staff nurses based on current area of working

SECTION II

ASSESSMENT OF THE LEVEL OF KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG STAFF NURSES

Table: 2.1 Frequency and percentage distribution of knowledge of staff nurses on use of oxytocin

N=120

S.No.	Level of knowledge	Frequency	Percentage (%)
1	Below Average	56	46.7
2	Average	42	35.0
3	Above Average	22	18.3

Table 2.1 shows that majority (46.7%) of the staff nurses had below average level of knowledge, 35% of the staff nurses had average level of knowledge and 18.3% of the staff nurses had above average level of knowledge on use of oxytocin.

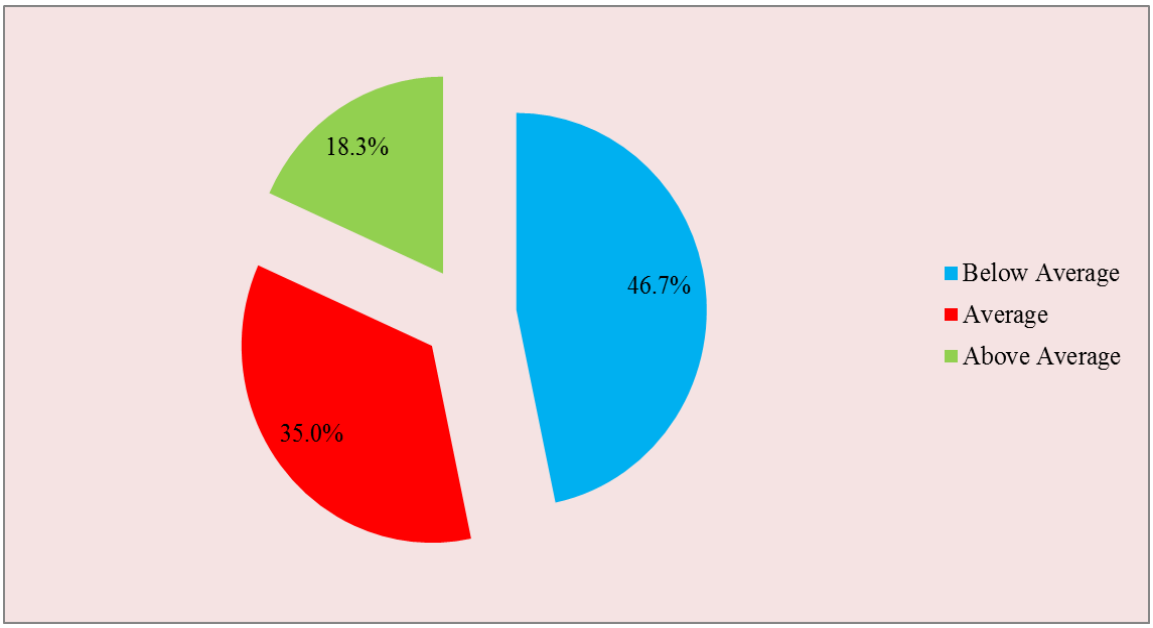

Figure 7: Percentage distribution of the staff nurses based on the knowledge on use of oxytocin.

Table 2.2: Frequency and percentage distribution of the staff nurses based practice on use of oxytocin.

N=120

S.No.	Level of practice	Frequency	Percentage(%)
1	Poor practice	54	45.0
2	Moderate practice	39	32.5
3	Good practice	27	22.5

Table 2.2 shows that majority (45%) of the staff nurses had poor practice, 32.5% of the staff nurses had moderate practice and 22.5% of the staff nurses had good practice on use of oxytocin.

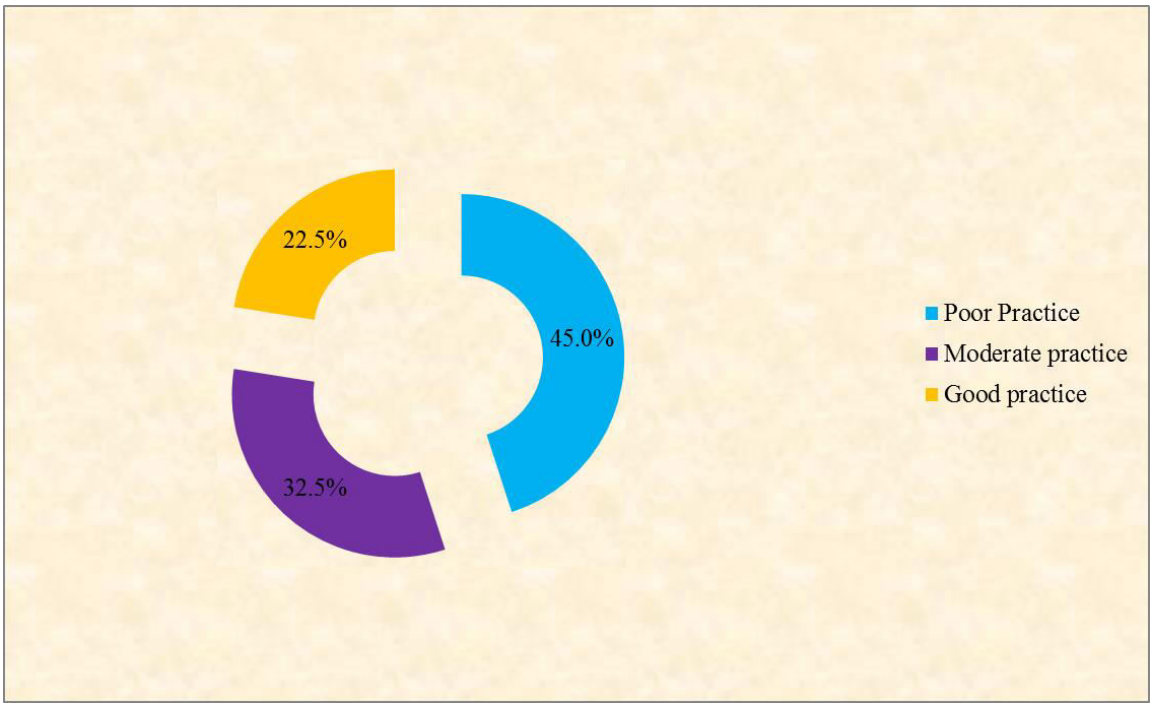

Figure 8: Percentage distribution of the staff nurses based on the practice of on use of oxytocin.

SECTION III

TABLE 3: CORRELATION BETWEEN KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG STAFF NURSES.

N= 120

Variables	**N**	**Pearson Correlation (r)**	**P Value**
Knowledge & Practice	120	0.984	0.001 ***

*p<0.05, **p<0.01 and *** p < 0.001 **S – Significant NS - Not Significant**

Table 3 shows that there was a high positive correlation between knowledge and practice among the staff nurses at $p < 0.001$ level of significance.

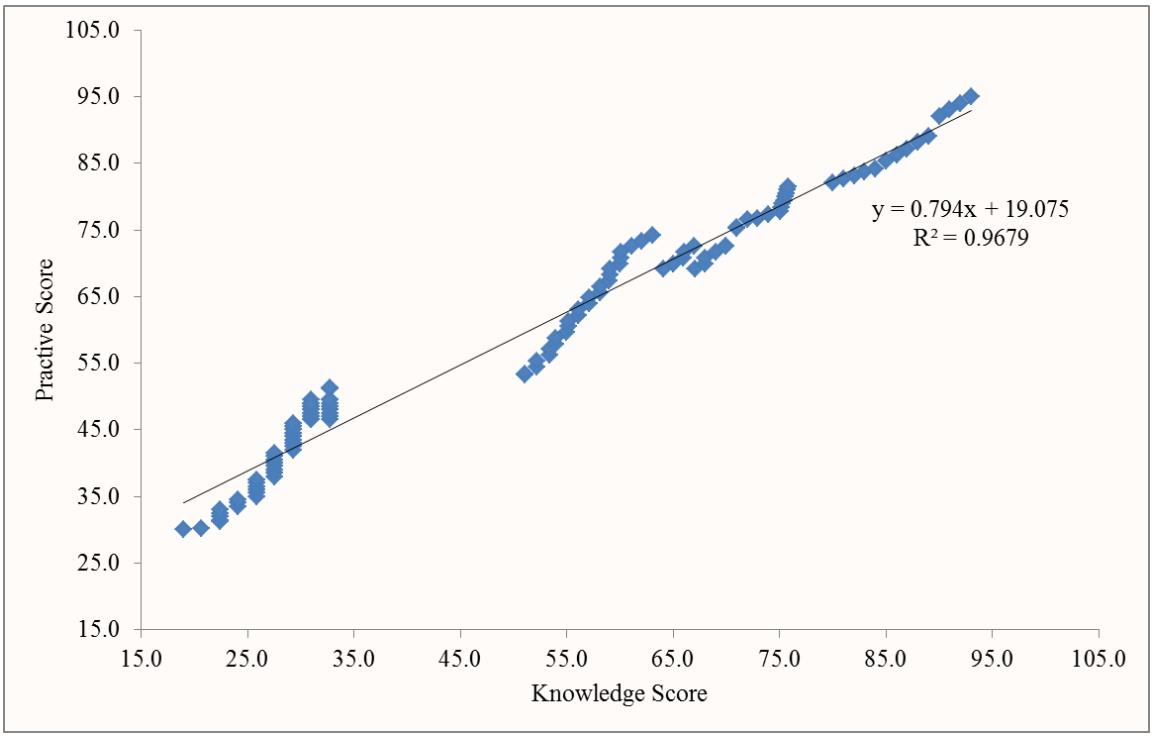

Figure 9: Correlation between knowledge and practice on use of oxytocin among staff nurses.

SECTION IV

ASSOCIATION OF KNOWLEDGE ON USE OF OXYTOCIN WITH THE DEMOGRAPHIC VARIABLES.

Table: 4.1 Association of level of knowledge on use of oxytocin drug among staff nurses with demographic variables such as age, religion and income.

N=120

S.No.	Demographic variables	Level of Knowledge						Total		Chi Square Test
		Below Average		Average		Above Average				
		N	%	N	%	N	%	N	%	
1	**Age of staff nurses**									χ^2=25.608 d.f=6 p=0.001 S***
	a) 21-30 years	25	44.6	36	85.7	19	86.4	80	66.6	
	b) 31-40 years	17	30.4	4	9.5	3	13.6	24	20	
	c) 41-50 years	8	14.3	0	0	0	0	8	6.7	
	d) >50 years	6	10.7	2	4.8	0	0	8	6.7	
2	**Religion**									χ^2=25.378 d.f=6 p=0.001 S**
	a) Hindu	12	21.4	26	61.9	15	68.2	53	44.2	
	b) Christian	43	76.8	15	35.7	7	31.8	65	54.2	
	c) Muslim	1	1.8	0	0	0	0	1	0.8	
	d) Jain	0	0	1	2.4	0	0	1	0.8	
3	**Income per month**									χ^2=19.759 d.f=6 p=0.003 S**
	a) < Rs10,000	31	55.4	24	57.1	13	59.1	68	56.7	
	b) 10,000 - 20,000	10	17.9	17	40.5	9	40.9	36	30	
	c) 20,000-30,000	7	12.5	0	0	0	0	7	5.8	
	d) >30,000	8	14.2	1	2.4	0	0	9	7.5	

*p< 0.05, **p<0.01 and *** p < 0.001 **S – Significant NS - Not Significant**

Table 4.1 shows that there was a statistically significant association between the level of knowledge on use of oxytocin among staff nurses with the age and religion at p < 0.001 and income per month at p < 0.01 level of significance.

Table 4.2: Association of level of knowledge on use of oxytocin among staff nurses with the demographic variables such as educational status, total experience and total years of experience in maternity unit.

N=120

S. No.	Demographic variables	Level of Knowledge						Total		Chi Square Test
		Below Average		Average		Above Average				
		N	%	N	%	N	%	N	%	
4	**Educational status**									χ^2=13.559 d.f=6 p=0.035 S*
	a) D.G.N.M	33	58.9	25	59.5	17	77.3	75	62.5	
	b) B.Sc. Nursing	8	14.3	14	33.3	4	18.2	26	21.7	
	c) P.B.B.Sc Nursing	8	14.3	2	4.8	0	0	10	8.3	
	d) M.Sc. Nursing	7	12.5	1	2.4	1	4.5	9	7.5	
5	**Total working experience**									χ^2=27.682 d.f=6 p=0.001 S***
	a) < 1 year	33	58.9	14	33.3	3	13.6	50	41.7	
	b) 1-5 years	15	26.8	20	47.6	16	72.7	51	42.4	
	c) 6-10 years	0	0	6	14.3	2	9.2	8	6.7	
	d) >10 years	8	14.3	2	4.8	1	4.5	11	9.2	
6	**Working experience in maternity unit**									χ^2=14.189 d.f=6 p=0.028 S*
	a) < 1 year	23	41.1	21	50	16	72.7	60	50	
	b) 1-3 years	10	17.9	6	14.3	6	27.3	22	18.3	
	c) 4-6 years	12	21.4	10	23.8	0	0	22	18.3	
	d) >6 years	11	19.6	5	11.9	0	0	16	13.4	

*p<0.05, **p<0.01 and ***p < 0.001 **S – Significant NS - Not Significant**

Table 4.2 shows that, there was a statistically significant association between the level of knowledge on use of oxytocin among staff nurses with the educational status, total working experience at $p < 0.05$ and working experience in maternity unit at $p < 0.001$ level of significance..

Table: 4.3 Association of level of knowledge on use of oxytocin among staff nurses with demographic variables such as the maximum working experience in maternity unit, current area of working and inservice education on use of oxytocin drug.

N=120

S. No.	Demographic variables	Level of Knowledge						Total		Chi Square Test
		Below Average		Average		Above Average				
		N	%	N	%	N	%	N	%	
7	**Maximum working experience in maternity wards**									χ^2=14.335 d.f=8 P=0.073 NS
	a) Antenatal wards	27	48.2	23	54.8	13	59.1	63	52.5	
	b) Postnatal wards	18	32.2	12	28.6	6	27.3	36	30	
	c) Labour room	4	7.1	2	4.8	0	0	6	5	
	d) Operation theatre	0	0	5	11.8	2	9.1	7	5.8	
	e) Other wards	7	12.5	0	0	1	4.5	8	6.7	
8	**Current area of working**									χ^2=14.172 d.f=8 NS
	a) Antenatal wards	14	25	6	14.3	5	22.7	25	20.8	
	b) Postnatal wards	27	48.2	16	38.1	13	59.1	56	46.7	
	c) Labour room	9	16.1	10	23.8	0	0	19	15.8	
	d) Operation theatre	2	3.6	8	19	2	9.1	12	10	
	e) ICU	4	7.1	2	4.8	2	9.1	8	6.7	
9	**Inservice Education on use of oxytocin**									χ^2=24.202 d.f=2 p=0.001 **S*** **
	a) Attended	38	67.9	42	100	22	100	102	85	
	b) Not attended	18	32.1	0	0	0	0	18	15	

*p<0.05, P<0.01** and *** p < 0.001 **S – Significant NS - Not Significant**

Table 4.3 shows that there was a statically significant association between the level of knowledge of staff nurses with inservice education on use of oxytocin at p < 0.001 and there was no statistically significant association between level of knowledge on use of oxytocin with the maximum working experience in maternity unit & current area of working.

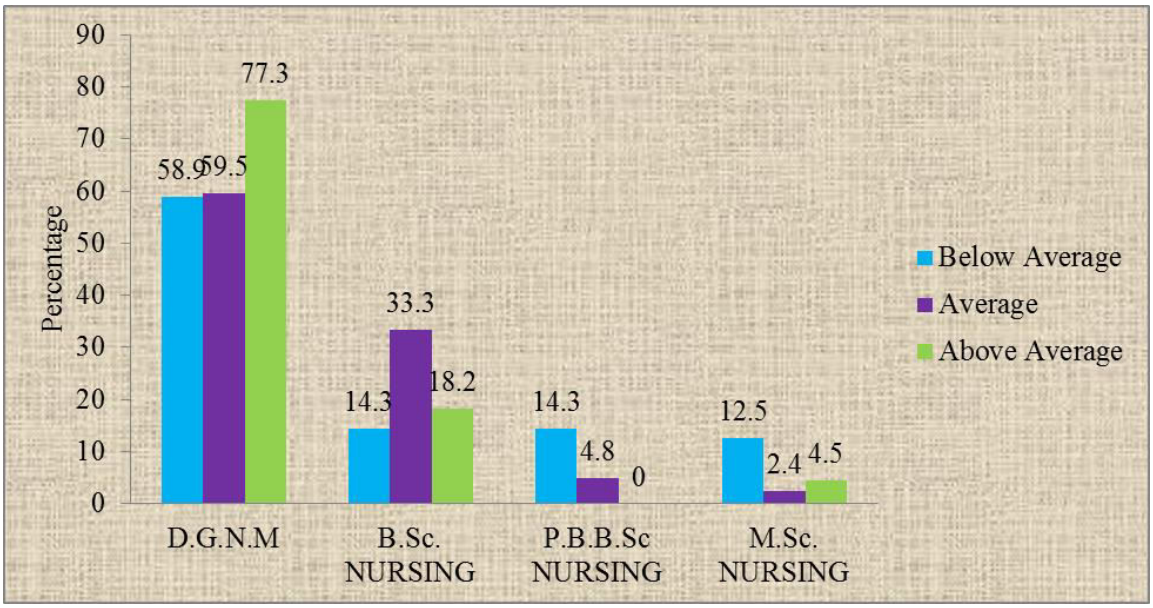

Figure 10: Association of level of knowledge on use of oxytocin with as education

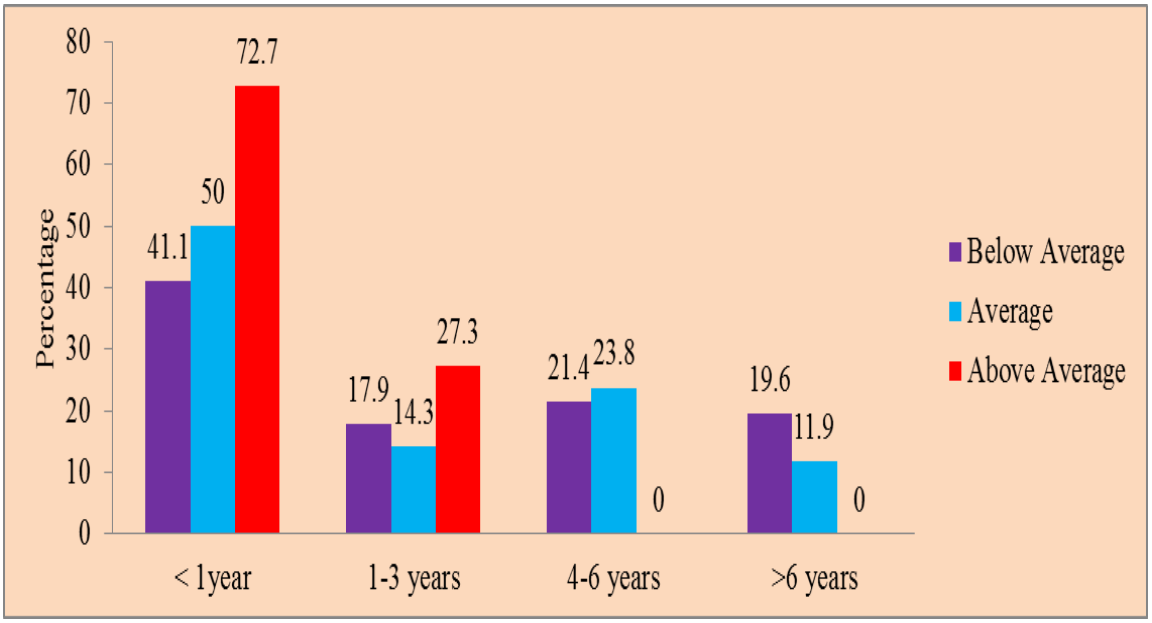

Figure 11: Association of level of knowledge on use of oxytocin among staff nurses with total years of experience in maternity unit on use of oxytocin drug.

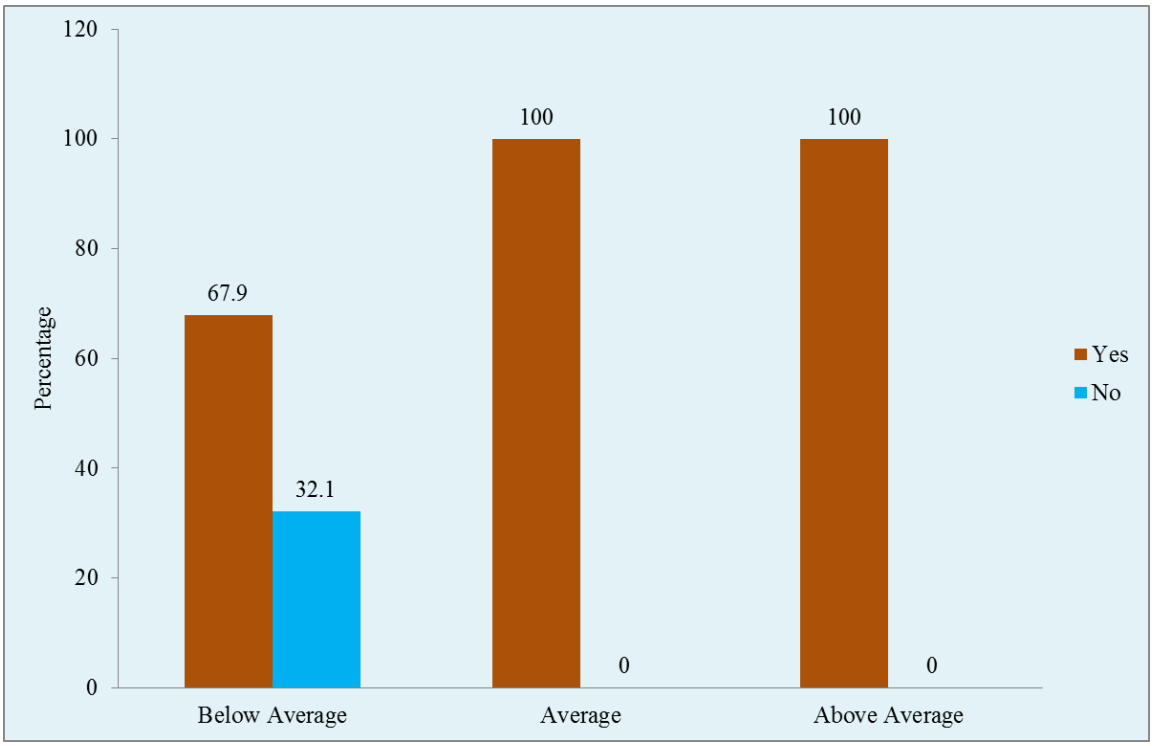

Figure 12: Association of level of knowledge on use of oxytocin with inservice education

ASSOCIATION OF PRACTICE ON USE OF OXYTOCIN WITH THE DEMOGRAPHIC VARIABLES.

Table 5.1: Association of level of practice on use of oxytocin among staff nurses with demographic variables such as age, religion and income

N=120

S. No.	Demographic variables	Level of Practice						Total		Chi Square Test
		Poor Practice		Moderate Practice		Good Practice				
		N	%	N	%	N	%	N	%	
1	**Age of staff nurses**									χ^2=26.333 d.f=6 p=0.001 S***
	a) 21-30 years	24	44.4	33	84.6	23	85.2	80	66.6	
	b) 31-40 years	17	31.5	3	7.7	4	14.8	24	20	
	c) 41-50 years	8	14.8	0	0	0	0	8	6.7	
	d) >50 years	5	9.3	3	7.7	9	0	8	6.7	
2	**Religion**									χ^2=22.877 d.f=6 p=0.001 S***
	a) Hindu	12	22.2	23	59.0	18	66.7	53	44.2	
	b) Christian	41	75.9	15	38.5	9	33.3	65	54.2	
	c) Muslim	1	1.9	0	0	0	0	1	0.8	
	d) Jain	0	0	1	2.5	0	0	1	0.8	
3	**Income per month**									χ^2=20.656 d.f=6 p=0.002 S**
	a) < Rs10,000	29	53.7	24	61.5	15	55.6	68	56.7	
	b) 10,000 - 20,000	10	18.5	14	35.9	12	44.4	36	30	
	c) 20,000-30,000	7	13	0	0	0	0	7	5.8	
	d) >30,000	8	14.8	1	2.6	0	0	9	7.5	

*p<0.05, **p<0.01 and *** p < 0.001 **S – Significant NS - Not Significant**

Table 5.1shows that there was a statistically significant association between the level of practice on use of oxytocin among staff nurses with the demographic variables such as age and religion at p < 0.001 and income per month at p< 0.01 level of significance.

Table 5.2: Association of level of practice on use of oxytocin among staff nurses with demographic variables such as educational status, total experience and experience in maternity unit on use of oxytocin

N=120

S. No.	Demographic variables	Level of Practice						Total		Chi Square Test
		Poor Practice		Moderate Practice		Good Practice				
		N	%	N	%	N	%	N	%	
4	**Educational status**									
	a) D.G.N.M	31	57.4	25	59.5	17	77.3	75	62.5	χ^2=13.461
	b) B.Sc. Nursing	8	14.8	14	33.3	4	18.2	26	21.7	d.f=6
	c) P.B.B.Sc Nursing	8	14.8	2	4.8	0	0	10	8.3	p=0.035
	d) M.Sc. Nursing	7	13	1	2.4	1	4.5	9	7.5	S*
5	**Total working experience**									χ^2=27.573
	a) < 1 year	33	58.9	14	33.3	3	13.6	50	41.7	d.f=6
	b) 1-5 years	15	26.8	20	47.6	16	72.7	51	42.4	p=0.001
	c) 6-10 years	0	0	6	14.3	2	9.2	8	6.7	S***
	d) >10 years	8	14.3	2	4.8	1	4.5	11	9.2	
6	**Experience in maternity unit**									χ^2=17.497
	a) < 1 year	23	41.1	21	50	16	72.7	60	50	d.f=6
	b) 1-3 years	10	17.9	6	14.3	6	27.3	22	18.3	p=0.008
	c) 4-6 years	12	21.4	10	23.8	0	0	22	18.3	S**
	d) >6 years	11	19.6	5	11.9	0	0	16	13.4	

*p<0.05, **p<0.01 and *** p < 0.001 **S – Significant NS - Not Significant**

Table 5.2 shows that there was a statistically significant association between level of practice on use of oxytocin among staff nurses with the educational status at $p < 0.05$, total working experience at $p < 0.001$ and years of experience in maternity unit at $p < 0.01$ level of significance.

Table 5.3: Association of level of practice on use of oxytocin among staff nurses with demographic variables such as maximum working experience in maternity unit, current area of working and inservice education

N=120

S. No.	Demographic variables	Level of Practice						Total		Chi Square Test
		Poor Practice		Moderate Practice		Good Practice				
		N	%	N	%	N	%	N	%	
7	**Maximum working experience in maternity unit**									χ^2=16.351 d.f=8 p=0.038 S*
	a) Antenatal wards	25	46.3	23	59	15	55.6	63	52.5	
	b) Postnatal wards	18	33.3	9	23.1	9	33.3	36	30	
	c) Labour room	4	7.4	2	5.1	0	0	6	5	
	d) Operation theatre	0	0	5	12.8	2	7.4	7	5.8	
	e) Other wards	7	13	0	0	1	3.7	8	6.7	
8	**Current area of working**									χ^2=16.758 d.f=8 p=0.033 S*
	a) Antenatal wards	14	25.9	6	15.4	5	18.5	25	20.8	
	b) Postnatal wards	26	48.1	14	35.9	16	59.3	56	46.7	
	c) Labour room	9	16.7	10	25.6	0	0	19	15.8	
	d) Operation theatre	1	1.9	7	17.9	4	14.8	12	10	
	e) Other wards	4	7.3	2	5.2	2	7.4	8	6.7	
9	**Inservice Education**									χ^2=25.882 d.f=2 p=0.001 S***
	a) Attended	36	66.7	39	100	22	100	102	85	
	b) Not attended	18	33.3	0	0	0	0	18	15	

*p<0.05, **p<0.01 and *** p < 0.001 **S – Significant NS - Not Significant**

Table 5.3 shows that there was a statistically significant association between level of practice on use of oxytocin among staff nurses with the maximum working experience in maternity unit & current area of working at p < 0.05 and inservice education a\t p < 0.001.

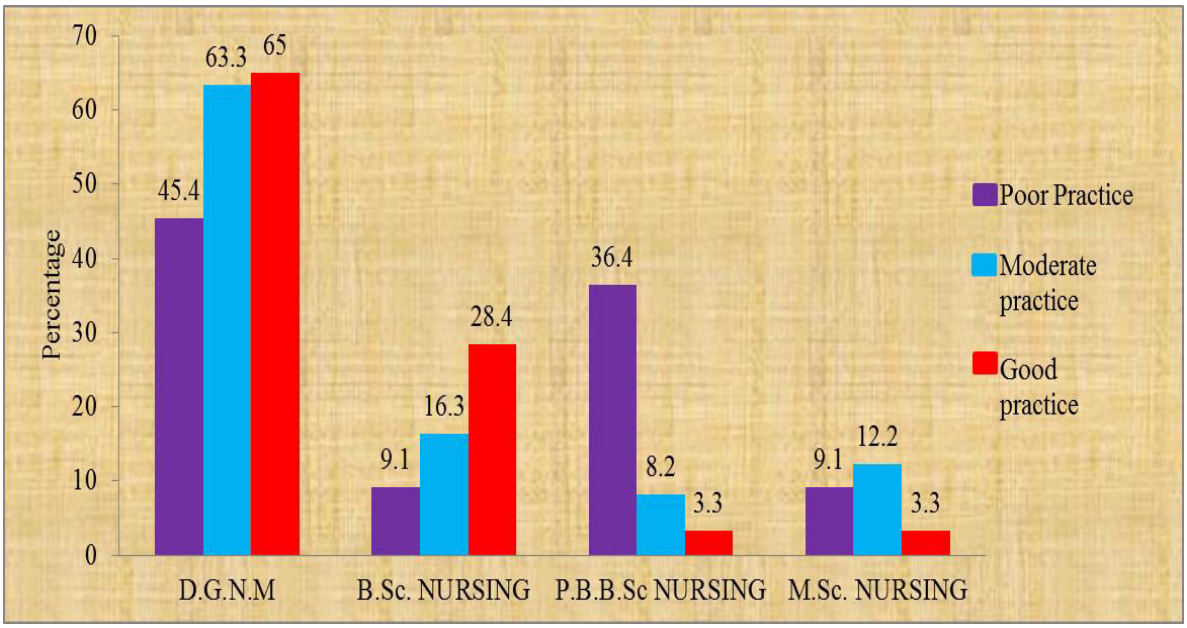

Figure 13: Association of level of practice on use of oxytocin among staff nurses with education

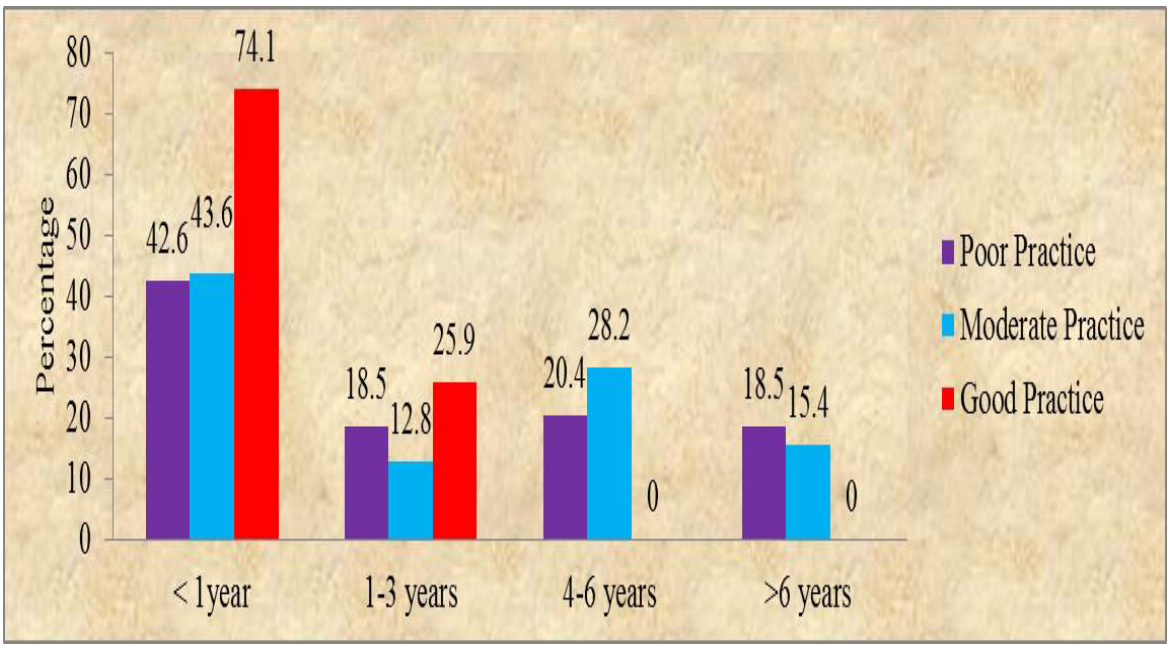

Figure 14: Association of level of practice on use of oxytocin among staff nurses with total years of experience in maternity unit

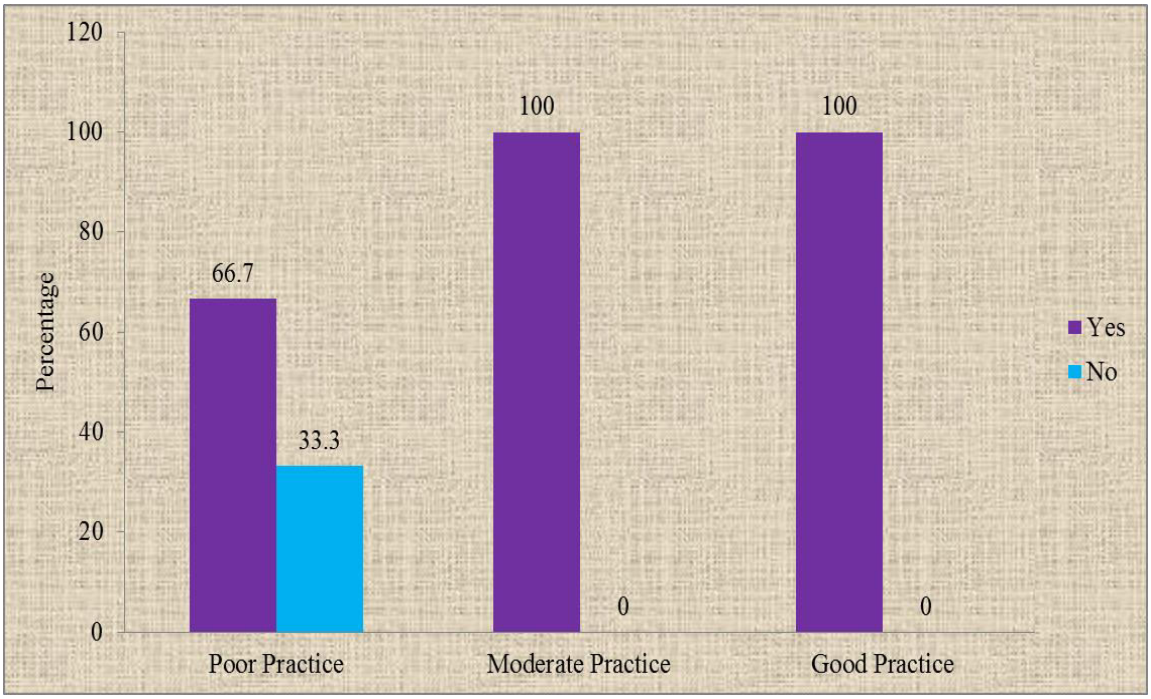

Figure 156: Association of level of practice on use of oxytocin among staff nurses with inservice education

CHAPTER V

DISCUSSION

The aim of the study was to assess the knowledge and practice on use of oxytocin among nurses working in selected Maternity Hospitals, Chennai.

A total of 120 samples were selected by nonprobability convenient sampling technique. Demographic data and knowledge was collected using structured questionnaire and practice was assessed using three point rating scale. The data was collected by self report. The collected data were tabulated and analyzed using descriptive and inferential statistics and results were interpreted. The discussion is based on the objectives specified in the study.

The significant findings of the study were as follows

In relation to demographic variables

- Majority (66.6%) of the staff nurses were in the age group of 21 -30 years.
- Majority (54.2%) of the staff nurses were Christians
- Majority (56.7%) of the staff nurses had monthly income of < 10,000.
- Majority (62.5%) of the staff nurses were with D.G.N.M qualification.
- Majority (42.4%) of the staff nurses had total working experience of 1-5years.
- Majority (50%) of the staff nurses had less than 1 year of working experience in maternity unit.
- Majority (52.5%) of staff nurses had maximum working experience in antenatal wards.
- Majority (46.7%) of the staff nurses were currently working in postnatal wards.
- Majority (85%) of the staff nurses had attended inservice education on use of oxytocin.

The findings of the study were discussed based on the objectives

1. The first objective was to assess the knowledge and practice on use of oxytocin

Level of knowledge

The study findings showed that 46.7% of the staff nurses had below average level of knowledge, 35% of the staff nurses had average level of knowledge and 18.3% of the staff nurses had above average level of knowledge on use of oxytocin (table 2.1). So, we can infer from the findings that majority of the staff nurses had below average level of knowledge.

The above findings were supported by the study conducted by Ministry at Pacific Northwest Medical Unit (2012) that evaluated the maternity staff nurses knowledge and practice on uterotonic drugs during child birth which showed that the majority (70%) of the staff nurses had inadequate knowledge.

Level of practice

The study findings showed that 45% of the staff nurses had poor level of practice and 32.5% of the staff nurses had moderate level of practice and 22.5% of the staff nurses had good level of practice on use of oxytocin (table 2.2). From the findings, we can infer that majority of the staff nurses had poor practice.

The above findings were supported by the study conducted by Al-ameen & Ali-Sadiq (2015) that assessed the practice and knowledge among staff nurses on administration of oxytocin during delivery in maternity hospitals which showed that majority (56.4%) of staff nurses had practice and poor calculation skills of the dosage of oxytocin.

Hence the assumption stated earlier that the staff nurses will have above average knowledge on use of oxytocin and good practice is not supported by the study findings.

2. **The second objective was to correlate the knowledge and practice on use of oxytocin.**

The correlation between knowledge and practice among the staff nurses revealed that there was a positive correlation existing between knowledge and practice, r=0.984 at $p < 0.001$ level of significance (table 3).

From the above findings, we can infer that the knowledge influenced the practice. Staff nurses who had below average knowledge had poor practice whereas, staff nurses with above average knowledge had good practice.

The above findings were supported by the study conducted by Huda, A & Iqbal, M (2014) who assessed the nurses knowledge and practice regarding oxytocin administration during labour which showed that there was a positive relationship between knowledge and practice at r=0.628 at $p< 0.001$ level of significance.

The hypothesis stated earlier that there is a significant relationship between knowledge and practice on use of oxytocin among nurses at selected hospitals is accepted.

3. **The third objective was to associate the knowledge and practice on use of oxytocin with the demographic variables.**

The association of knowledge on use of oxytocin with the demographic variables.

The study findings showed that there was statistically significant association between level knowledge on use of oxytocin among staff nurses with the age at $p < 0.001$ level, religion at $p < 0.001$, income $p <0.003$ level (table :4.1), educational status at $p< 0.035$, total working experience at $p< 0.001$, total working experience in maternity unit at $p< 0.028$ level (table: 4.2) and inservice education at $p< 0.001$ level (table: 4.3) and there was no statistically significant association between level knowledge on use of oxytocin

among staff nurses with the maximum working experience in maternity unit and current area of working. From the above findings, we can infer that the demographic variables had influenced the level of knowledge on use of oxytocin.

The association of practice with demographic variables.

The study findings showed that there was statistically significant association between level practice on use of oxytocin among staff nurses with the age at $p < 0.001$, religion at $p < 0.001$, income $p < 0.002$ level (table :5.1), educational status at $p < 0.036$, total working experience at $p < 0.001$, total working experience in maternity unit at $p < 0.008$ level (table: 5.2), maximum working experience in maternity unit at $p < 0.038$, current area of working at $p < 0.033$ and inservice education at $p < 0.001$ level of significance (table: 5.3) which show that the practice on use of oxytocin was influenced by the demographic variables.

The above findings are supported by the study findings that showed that there was a significant association between the knowledge and practice regarding use of oxytocin among staff nurses with the demographic variables like age, qualification, total years of experience and inservice education (Poudyal, A & Outa, S 2013 and Swapna, M. & Parvathi, M. 2014).

Hence the assumption stated earlier that the Maximum working experience in maternity unit and current area of working will influence the knowledge on use of oxytocin is not supported by the study findings.

Also the assumption stated earlier that the Maximum working experience in maternity unit and current area of working will influence the practice on use of oxytocin is supported by the study findings

Hence the hypothesis stated earlier that there was a statistically significant association between knowledge and practice with the demographic variables such as age, qualification, total years of experience, inservice education on oxytocin drug is accepted.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATION AND RECOMMENDATIONS

SUMMARY

Oxytocics are the drugs of varying chemical nature that have the power to excite contractions of the uterine muscles. Among a large number of drugs belonging to this group, oxytocin is an important one and is extensively used in clinical practice. The midwife should have thorough knowledge of the indications, action, and side effects of these drugs as well as the nursing considerations related to each of them in order to plan and implement effective nursing process. Inappropriate administration may result in hyper stimulation of the uterus, which can lead to uterine rupture, fetal asphyxia, and/or fetal demise. Intramuscular (IM) oxytocin injection during the first and second stages of labor can be dangerous because dosing cannot be adjusted in response to the strength of uterine contractions, increasing risks of uterine rupture and harm to the foetus.

A descriptive research design was chosen to assess the knowledge and practice on use of oxytocin among nurses. The review of literature provided the base and indepth knowledge for the development of the tool. The content validity of the tool on use of oxytocin among staff nurses was obtained from the experts and pilot study was conducted.

The study was conducted in Kamatchi Memorial Hospital, Chennai and C. S. I Kalyani Hospital in Chennai by obtaining prior permission from the head of the institutions. The study was conducted among staff nurses who fulfilled the inclusion criteria from the selected settings. A total of 120 samples were selected by using Non propability convenient sampling technique. Structured questionnaire was used to assess

the knowledge and rating scale was used to assess the practice. Instructions on answering the questions were given to the samples.

The objective of the study were

- To assess the knowledge and practice on use of oxytocin.
- To correlate the knowledge and practice on use of oxytocin.
- To associate the knowledge and practice on use of oxytocin with the demographic variables.

The hypothesis of the study was

H_1: There is a statistically significant relationship between knowledge and practice on use of oxytocin among nurses at selected hospitals.

H_2: There is a statistically significant association between knowledge and practice on use of oxytocin among nurses with the demographic variables age, qualification, total years of experience, inservice education on oxytocin drug.

The assumptions of the study were

- Nurses working in the Maternity Hospitals have average knowledge on use of oxytocin.
- Nurses working in the maternity hospitals have good practice on use of oxytocin.
- Maximum working experience in maternity unit and current area of working will influence the knowledge and practice of the nurses.

The study findings revealed that the staff nurses had below average knowledge and poor level of practice on use of oxytocin. There was a high positive correlation between knowledge and practice among the staff nurses at $p < 0.001$ level of significance.

There was a statistically significant association between knowledge on use of oxytocin among staff nurses with demographic variables like age, religion, income, educational status and total working experience, total years of experience in maternity

unit and inservice education. There was no statistically significant association found between knowledge on use of oxytocin with other demographic variables like maximum working experience in maternity unit and current area of working.

There was a statistically significant association between practice on use of oxytocin among staff nurses with demographic variables like age, religion, income, educational status, total working experience, total years of experience in maternity unit, maximum working experience in maternity unit, current area of working and inservice education.

CONCLUSION

From the results of the study, it was concluded that staff nurses had below average level of knowledge and poor level of practice on use of oxytocin. The knowledge and practice on use of oxytocin were related to each other. Knowledge on use of oxytocin was influenced by all the demographic variables other than maximum working experience in maternity unit and current area of working. It is concluded that as knowledge increases the better is the practice.

NURSING IMPLICATIONS

Some of the implications derived from the present study can be discussed in the areas of nursing services, nursing education, nursing administration and nursing research.

Nursing Administration

- The staff nurse must be provided orientation about obstetrical and gynecological drugs.

- Nurse administrator should prepare need based teaching and learning materials such as modules, protocols and booklets regarding safe administration of obstetrics emergency drugs.
- Design safe work environment conducive for patient care delivery and to reduce the occurrence of injudicious use of oxytocin.
- Encourage the staff nurses to follow calculation according to patient status to avoid over dosage.
- Encourage continuing education programme for nurses by using the different educational strategies regarding safe medication administration during antenatal and post natal and prenatal.
- Develop standard protocol/policy or guidelines regarding medication administration of oxytocin and instruct the nurses to promote the knowledge.
- Monitoring the FHR and maternal vitals before and during and after administration of oxytocin drug should be made as a routine practice.
- Establish structured preceptorship programme in medication administration to support nurses who are newly qualified or less experienced in oxytocin administration.
- Provide the booklet about oxytocin drug details like action side effects and nursing intervention, calculation.
- Appoint expert/ experienced nurse to improve novice nurses learning and professional development of knowledge and practice.

Nursing Education

- Conferences, workshops and seminars can be held for nurses to update the knowledge on use of oxytocin.

- Clinical demonstration should be conducted regarding the use of oxytocin to improve the practical competency level of nursing students.
- Nurse educators to teach the Nursing Students about the use of oxytocin drugs and maternal monitoring.

Nursing Service

- Develop and disseminate the maternal and fetal wellbeing on use of oxytocin in all hospital setting.
- Performance appraisal should be carried out periodically to evaluate knowledge and competency on use of oxytocin for safe practice.
- Medication nurse manager should educate and train the staff nurses to promote the knowledge and safe practices.
- Motivate the staff nurses to write the incident report after, during and before administering the oxytocin to promote the fetal and maternal wellbeing.
- Nurse administrator can plan, organize and conduct in-service training program and continuing nursing education about on use of oxytocin.
- Provide self report logbook for nurses administering oxytocin.
- Nurse administrator should ensure and maintain staffing pattern in antenatal, postnatal & labour room as per INC Guidelines.

Nursing Research

- Nurse researchers can do more studies on knowledge and practices on use of oxytocin among nurses.
- Nurse researcher can explore various innovative methods in promoting nurses knowledge about use on oxytocin.

- The findings should be disseminated through conferences, seminars and journal publications.
- The results can be utilized for evidenced based nursing practice.

RECOMMENDATIONS

Keeping the findings of the present study in view, the following recommendations were made

- The study can be conducted on a larger samples to generalize the findings
- The study can be conducted with multiple variables which will influence the nurses knowledge and practice.
- A study can be conducted to assess directly the practice on use of oxytocin.

LIMITATIONS

There were no limitations faced by the investigator during the study

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APPENDICES

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

FROM

Ms. S.T. Shiny,
I Year M.Sc.(Nursing),
M.A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I Post, Adyar, Chennai-600 113.

TO

The Medical Director,
Dr. Kamachi Memorial Hospital 6/13,
3rd , Cross Street,
Kasthuribai Nagar, Adyar,
Chennai-600 020,
Tamil Nadu.

THROUGH

The Principal,
M.A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I Post , Adyar , Chennai -600 113.

Respected Sir /Madam

I am Ms. S.T.Shiny, I Year M.Sc.(Nursing) student of M.A. Chidambaram College of Nursing, Voluntary Health Services, Adyar, Chennai-6000113.

As a part of the requirement in M.Sc. Nursing programme as per the Tamil Nadu Dr.M.G.R Medical University specification, I have to complete a dissertation. The topic I have selected is **"A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI"**.I am interested in conducting the study in your esteemed institution.

The period of data collection for main study is from 1.11.2016 to 28.11.2016.

I assure you Sir/Madam that my study will not interfere with the routine functioning of the institution . Kindly grant me permission to conduct the study.

Thanking you Sir/Madam anticipation for the favourable response.

Place: Chennai,

Yours faithfully,

Date : 25.7.2016.

(Ms.S.T. SHINY).

To get the Concurrence of the Concerned HOD

Forwarded

Approved

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

FROM

Ms. S.T. Shiny,
I YearM.Sc.(Nursing),
M.A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I Post, Adyar, Chennai-600113.

TO

The Medical Director,
CSI, Kalyani MultiSpeciality Hospital,
No.15, Dr. Radha Krishnan Salai,
Mylapore,
Chennai, Tamil Nadu S600 004.

THROUGH

The Principal,
M.A. Chidambaram College of Nursing,
Voluntary Health Services,
T.T.T.I Post ,Adyar , Chennai -600113.

R. Sudha

Prof. Dr. (Mrs). R. SUDHA, M.Sc (N)., Ph.D.,
PRINCIPAL
M.A. Chidambaram College of Nursing
VHS Campus, Chennai - 600 113.

Respected Sir /Madam

I am Ms.S.T.Shiny, I Year M.Sc.(Nursing) student of M.A. Chidambaram College of nursing,Voluntary Health Services, Adyar, Chennai-6000113.

As a part of the requirement in M.Sc. Nursing programme as per the Tamil Nadu Dr.M.G.R Medical University specification, I have to complete a dissertation. The topic I have selected is **"A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI''**.I am interested in conducting the Main study in your esteemed institution.

The period of data collection for main study is from 1.11.2016 to 28.11.2016.

I assure you Sir/Madam that my study will not interfere with the routine functioning of the institution . Kindly grant me permission to conduct the study.

Thanking you Sir/Madam anticipation for the favourable response.

Place: Chennai,

Yours faithfully,

Date : 28.10.2016.

NS to commence

S.T.Shiny

(Ms.S.T. SHINY).

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by S.T. SHINY, M.Sc. (Nursing) student of M.A. Chidambaram College of Nursing for the study,**"TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI''**, is validated by the under signed and she can proceed with this content for the study.

DATE : 22/7/2016

SIGNATURE

Dr. M. SUBBULAKSHMI, M.B.B.S.,M.D.(OG).,
Obstetrician & Gynaecologist
Reg. No. 34267

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by S.T. SHINY, M.Sc. (Nursing) student of M.A. Chidambaram College of Nursing for the study,**"TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI"**, is validated by the under signed and she can proceed with this content for the study.

DATE 20.07.2016.

SIGNATURE 20/7/16

MRS. V. VIJAYALAKSHMI
ASSO. PROFESSOR
SREE SASTHA COLLEGE
OF NURSING
CHEMBARAMBAKKAM
CHENNAI – 123.

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by S.T. SHINY, M.Sc. (Nursing) student of M.A. Chidambaram College of Nursing for the study, **"TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI"**, is validated by the under signed and she can proceed with this content for the study.

DATE 21/07/16.

SIGNATURE 21/7/16.

VICE-PRINCIPAL.
VENKATESWARA NURSING COLLEGE
THALAMBUR - 603 103

CERTIFICATE OF CONTENT VALIDITY

This is to certify that the content developed by S.T. SHINY, M.Sc. (Nursing) student of M.A. Chidambaram College of Nursing for the study,**"TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES WORKING IN SELECTED HOSPITALS, CHENNAI"**, is validated by the under signed and she can proceed with this content for the study.

DATE : 21.7.2016

SIGNATURE

INFORMED CONSENT FORM

I have been informed about the purposes of the study being conducted by Ms. Shiny S.T., M.Sc (Nursing) student of M.A.Chidambaram College of Nursing, Adyar, Chennai and I have no objection in participating in the study. I also give my full consent for the use of this data for the purpose of any presentation or publication.

Signature:

Name:

Date:

APPENDIX C

PART –A: TOOL TO ASSESS THE KNOWLEDGE AND PRACTICE ON USE OF OXYTOCIN AMONG NURSES.

Demographic data

1. Age of staff nurses

(a) 21-30 years

(b) 31-40 years

(c) 41-50 years

(d) >50 years

2. Religion

(a) Hindu

(b) Christian

(c) Muslim

(d) Others specify…….

3. Income per month

(a) <10,000

(b) 10,000 - 20,000

(c) 20,001 - 30,000

(d) >30,000

4. Educational status

(a) D.G.N.M

(b) B.Sc. NURSING

(c) P.B.B.Sc NURSING

(d) M.Sc. NURSING

5. Total experience

(a) < 1year

(b) 1-5 years

(c) 6-10 years

(d) >10 years

6. Total years of experience in Maternity unit/ward

(a) < 1year

(b) 1-3 years

(c) 4-6 years

(d) >6 years

7. The maximum working experience is in

(a) Antenatal wards

(b) Postnatal wards

(c) Labour room

(d) Operation theatre

(e) Other specify

8. Currently working area

(a) Antenatal wards

(b) Postnatal wards

(c) Labour room

(d) Operation theatre

(e) Other specify

9. Have you attended inservice education on use of oxytocin?

(a) Yes

(b) No

PART-B: TOOL TO ASSESS THE KNOWLEDGE ON USE OF OXYTOCIN AMONG NURSES.

Kindly put (✓) mark appropriately and leave the inappropriate options.

1. What is oxytocics?

(a) Oxytocics are drugs that relax the uterine muscle

(b) Oxytocics are drugs that block the muscular activity

(c) Oxytocics are drugs that stimulate the incordinate contraction

(d) Oxytocics are drugs that stimulate contraction of the uterine muscle

2. What are the drugs grouped as oxytocics?

(a) Oxytocin

(b) Ergot derivates.

(c) Prostaglandin

(d) Peptide

3. What is oxytocin?

(a) It is a hormone secreted from pituitary gland

(b) It is a hormone secreted from adrenal glands

(c) It is a hormone secreted from thyroid gland

(d) It is a hormone secreted from hypothalamus

4. What are the routes in which oxytocin is administered?

(a) Intramuscular

(b) Nasal spray

(c) Intravenous

(d) Subcutaneous

5. What is the available strength of oxytocin ?

(a) 15U with 500mlRL

(b) 10U with 500ml RL

(c) 5U with 500ml RL

(d) 20U with 500mlRL

6. How does oxytocin act?

(a) Stimulate decidual prostaglandin production

(b) Initiate the relaxation of uterus

(c) Mobilizes intracellular calcium

(d) Activate the contractile protein

7. What is the appropriate duration of action of oxytocin?

(a) 10mts

(b) 20mts.

(c) 15mts

(d) 25mts

8. What is the plasma half- life of oxytocin?

(a) 2-3mts

(b) 2-4mts.

(c) 3-4mts

(d) 3-5mts

9. What are the indications for administration of oxytocin?

(a) Failed second stage of labour

(b) Initiate the labour process

(c) control Postpartum haemorrhage

(d) Augmentation of the labor

10. What is augmentation of labour?

(a) Stimulating onset labour process

(b) Stimulating relaxation of uterus

(c) Enhancing the labour process

(d) Stimulating rupture of the membrane

11. What is induction of labour?

(a) Stimulate the relaxant

(b) Stimulate the uterine contraction during labour

(c) Stimulate the uterine contraction during pregnancy

(d) Stimulate the blockage of uterine muscles

12. What is the dosage of oxytocin used to induce labour?

(a) 1-3mIU/mts

(b) 2-3mIU/mts

(c) 1-2mIU/mts

(d) 1-4mIU/mts

13. At what interval is the oxytocin dosage increased?

(a) 1Hr

(b) ½Hr

(c) 1½Hr

(d) 2Hr

14. What is the frequency and duration of contraction to be achieved during induction of labour?

(a) 60-90 seconds and 5 contraction in 5mts

(b) 40-60 seconds and 5contraction in 10mts

(c) 50-90 seconds and 6 contraction in 5mts

(d) 60-90 seconds and 6 contraction in 10mts

15. When do we say that optimal response is achieved during induction of labour?

(a) 4contraction 50sec in10mts

(b) 5contraction 55sec in10mts

(c) 6contraction 60 sec in10mts

(d) 3contraction 45sec in10mts

16. How frequently is the mother needs to be monitored while on oxytocin?

(a) Hourly

(b) 2Hourly

(c) 3 Hourly

(d) ½ Hourly

17. While administering oxytocin what are the observations done on the mother?

(a) Monitoring contractions

(b) Monitoring the intake output

(c) Monitoring blood pressure 4thHourly.

(d) Monitoring Pulse

18. How frequently the FHR needs to be checked during oxytocin infusion?

(a) Every 30mts

(b) Continuous electronic foetal monitoring

(c) Every one hour

(d) Every 15mts

19. What is the sign of foetal distress?

(a) <1acceleration 15 beats/ minutes

(b) >2acceleration 15 beats/ minutes

(c) 2 acceleration 15 beats/ minutes

(d) No acceleration 15 beats/ minutes

20. What are the contraindication for oxytocin?

(a) Cephalopelvic disproportion

(b) Grand multipara

(c) Foetal distress

(d) Malpresentation

21. What are the adverse effect of oxytocin on the mother?

(a) Hypertension

(b) Water intoxication

(c) Hypotension

(d) Nausea

22. What are the adverse effect of oxytocin on the foetus?

(a) Neonatal jaundice

(b) Neonatal infection

(c) Foetal Hypoxia

(d) Foetal distress

23. What are the indication to stop oxytocin?

(a) Rapid pulse and Hypotension

(b) Foetal distress

(c) Post-partum haemorrhage.

(d) Contraction more than 5 within 10mts

24. Why does hyponatremia occur during oxytocin administration?

(a) Administering low dosage of oxytocin

(b) Oxytocin administered very fast

(c) Administering oxytocin intramuscular

(d) Administering high dosage of oxytocin

25. During oxytocin administration what are the condition that can lead to uterine rupture?

(a) Contracted pelvis

(b) Primigravida

(c) Prior uterine scar

(d) Polysystole

26. What are the symptom of uterine rupture?

(a) Hypotension

(b) Irregular contraction & relaxation.

(c) Abdominal guarding

(d) Sudden cessation of pain

27. What is polysystole?

(a) >4Contraction /10mts

(b) >5Contraction /10mts

(c) >6Contraction /10mts

(d) >7Contraction /10mts

28. What is to be done if uterine systole occurs during oxytocin administration?

(a) Decrease the flow rate of oxytocin

(b) Increase the flow rate of oxytocin

(c) Stop the oxytocin infusion

(d) Administer the oxytocin intra muscular

29. What is the dosage of oxytocin used for controlling Post partum haemorrhage?

(a) 20U intramuscular

(b) 15U intramuscular

(c) 5U intramuscular

(d) 10U intramuscular

30. What is the antidote for oxytocin ?

(a) Sodium chloride12mg

(b) Clopramide 0.15mg

(c) Terbutaline 0.25mg

(d) Asthalin 0.12mg

QUESTION	CORRECT OPTIONS	WRONG OPTIONS	SCORE
1	d	a, b, c	1
2	a, b, c	d	3
3	d	a, b, c	1
4	a, b, c	d	3
5	c	a, b, d	1
6	a, c, d	b	3
7	b	a, c, d	1
8	c	a, b, d	1
9	b, c, d	a	3
10	a, c	b, d	2
11	b, c	a, d	2
12	c	a, b, d	1
13	b	a, c, d	1
14	b	a, b, d	1
15	d	a, b, c	1
16	d	a, b, c	1
17	a, b, d	c	3
18	b, d	a, c	2
19	a, d	c, b	2
20	a, b, c, d	-	4
21	b, c, d	a	3
22	a, c, d	b	3
23	a, b, d	c	3
24	b, d	a, c	2
25	a, c, d	b	3
26	a, c, d	b	3
27	c	a, b, d	1
28	c	a, b, d	1
29	d	a, b, c	1
30	c	a, b, d	1
Total			58

One mark will be awarded for each right answer chosen and ‘0’ for the wrong answer.

PART-C: TOOL TO ASSESS THE PRACTICE ON USE OF OXYTOCIN AMONG NURSES.

Kindly tick the option (Always, Some time, Never) that is nearer to your practice in the column on the right

S.NO.	QUESTION	ALWAYS	SOME TIME	NEVER
ASSESSMENT BEFORE OXYTOCIN ADMINISTRATION: Maternal				
1	I check physician order on chart			
2	I check for gravid status			
3	I check for malpresentation			
4	I check the height of the mother			
5	I check for previous history of surgery (abdominal/ uterine)			
6	I check for contracted pelvis			
7	I check the old history of hypovolemic state.			
8	I check for history of cardiac disease.			
9	I check for history of bronchial asthma			
10	I check for the previous baby's birth weight			
11	I assess the status of cervix as documented			
12	I assess the presentation as documented			
13	I assess the vital parameters (blood pressure, pulse, respiration, Temperature)			
14	I check the number of uterine contraction within 10 mts			
15	I monitor the duration of contraction and intensity			
16	I place the hand on the fundus to monitor the contraction			
17	I calculate the dosage before administering oxytocin			
18	I use ringer lactate solution for oxytocin infusion			

S.NO.	QUESTION	ALWAYS	SOME TIME	NEVER
ASSESSMENT BEFORE OXYTOCIN ADMINISTRATION : Foetal assessment				
19	I check the gestational age			
20	I estimate foetal weight in the last week			
21	I check the foetal heart rate			
22	I check the variability pattern of heart rate			
23	I check the acceleration & deceleration.			
ASSESSMENT DURING ADMINISTERATION OF OXYTOCIN : Maternal				
24	I check every ½ hourly contraction.			
25	I check the duration of contraction			
26	I check the intensity of contraction			
27	I monitor the number of contraction for 10mts			
28	I increase the drip rate every ½ Hourly			
29	I double the drip rate to increase the dosage.			
30	I monitor the uterus relaxation in between contraction			
31	I adjust the oxytocin infusion rate based on contraction.			
32	I maintain the drip rate when contraction are 3 in 10mts for 45 seconds duration			
33	I reduce the drip rate when contraction are >6 in 10mts duration.			
34	I check every 2 hours vital parameters (Temperature, Blood pressure, Respiration, Pulse) till membrane rupture			
35	I assess for any sign of uterine rupture			
36	I monitor the per abdomen examination every ½ hourly for descent of the head			
37	I monitor the progress status every ½ hourly through per vaginal examination.			

S.NO.	QUESTION	ALWAYS	SOME TIME	NEVER
38	I stop the oxytocin infusion in case of uterine systole.			
39	I check the hourly urine out .			
ASSESSMENT DURING ADMINISTRATION OF OXYTOCIN: Foetal assessment				
40	I adjust oxytocin infusion based on fetal reaction.			
41	I check the foetal heart rate every 15mts during active phase at labour.			
42	I check the number of acceleration and deceleration rate with in 20mts			
43	I stop the oxytocin if the foetal heart rate <100beats/minute.			
44	I stop the oxytocin if the foetal heart rate >160beats/minute.			
45	I administer the oxygen if foetal heart rate < 100beats/minute or >160beats/minute			
46	I will inform doctor if feotal heart rate varies.			
ASSESSMENT AFTER ADMINISTRATION OF OXYTOCIN: Maternal				
47	I monitor the uterine contractility ½ hourly after stopping the oxytocin.			
48	I check ½ hourly the quantity of vaginal bleeding.			
49	I check the vital parameters Temp, pulse, respiration, blood pressure			
50	I monitor the urine output hourly			
51	I check for edema over the body			
Neonatal assessment				
52	I assess for neonatal jaundice			

A 3 point rating scale (Always, Sometimes and Never) was used to assess the nurse's practice. It consists of 52 items and each item is scored as

Scale	**Scores**
Never	1
Sometimes	2
Always	3

CERTIFICATE OF ENGLISH EDITING

This is to certify that Mrs. Shiny.S.T., II year M.Sc, (Nursing) student of M.A.Chidambaram College of Nursing, Adyar, Chennai, conducted a dissertation work on **"A study to assess the knowledge and practice on use of oxytocin among nurses working in selected hospitals in Chennai",** has been edited by me for English language appropriateness.

DATE: **SIGNATURE WITH SEAL**

USE OF

OXYTOCIN

OXYTOCICS:

Oxytocics are the drugs of varying chemical nature that have the power to excite contractions of the uterine muscles. Among a large number of drugs belonging to this groups are Oxytocin, Ergot derivatives and Prostaglandins.

OXYTOCIN:

It is naturally synthesized in the supraoptic and paraventricular nuclei of the hypothalamus.

Oxytocin has a half-life of 3-4 minutes and a duration of action of approximately 20 minutes.

MODE OF ACTION:

Oxytocin acts through receptor and voltage mediated calcium channels to initiate myometrial contractions. It stimulates amniotic and decidual prostaglandin production. Bound intracellular calcium is eventually moblized from the sarcoplasmic reticulum to activate the protein.

AVAILABLE PREPARATION / DOSAGE:

Controlled intravenous infusion (five units of oxytocin in 500ml of RL or 5% dextrose.

Calculation of the dose delivered in milliunits and its correlation with drops rate per minute			
Units of oxytocin mixed in 500ml ringer solution (1unit = 100 miliunits) (mU)	Drops per minute (15 drops= 1ml) 15 30 60		
	In terms of mU/ minute		
1	2	4	8
2	4	8	16
8	16	32	64

- Inj. oxytocin, 10unit IM gives immediately after delivery of the baby.
- Actuator (0.1 ml/spray) 50 IU/ml, if necessary can be administered after delivery.
- Termination of pregnancy (7- 28 weeks) 200mcg misoprostol can be administered through buccal route every 4^{th} hourly.

STORAGE TEMPRATURE:

Oxytocin loses its effectiveness unless preserved at the correct temperature (between 2 and 8˚C).

INDICATIONS:

Early Pregnancy:

- To accelerate abortion
- To stop bleeding

Late Pregnancy:

- To induce labour
- To rippen the cervix before induction.

Labour:

- Augmentation of labor
- Active management of third stage of labour
- Uterine inertia

Puerperium:

- To control postpartum hemorrhage.

CONTRAINDICATIONS:

- Grand multipara
- Cephalo pelvic disproportion
- History of previous abdominal/utrerine surgery
- Malpresentation
- Foetal distress
- Hypovolemic state
- Cardiac disease.

ADVERSE EFFECTS:

Maternal and foetal

- Hypertonic uterine activity
- Hypotension
- Water Intoxication
- Nausea
- Uterine rupture
- Foetal hypoxia
- Foetal distress
- Neonatal jaundice

ROUTES OF ADMINISTRATION:

- Intravenous infusion
- Intramuscular
- Buccal tablets
- Nasal spray

INDUCTION OF LABOUR:

It is defined as the initiaion of labour by artificial means prior to its spontaneous onset at viable gestational age, with the aim of achieving vaginal delivery in a pregnant woman with intact membranes.

Principles:

- The oxytocin should be started with a low dose and is escalated at an interval of 20-30 minutes when there is no response.
- When the optimal response is achieved (uterine contraction sustained for about 45 seconds and numbering 3 contractions in 10 minutes) the administration of the particular concentration in mU/per minute is to be continued.

The objective of oxytocin administration is not only to initiate effective uterine contractions but also to maintain the normal uterine pattern activity till delivery and at least 30-60 minutes after delivery.

Regulation of the drip:

- Manually, counting the drops as per minute commonly practiced.
- Oxytocin infusion pump which automatically controls the amount of fluid to be infused.

Convenient regime:

- To start with a low dose (1-2mU/min) and to escalate by 1-2mU/min at every 20 min intervals up to 8mU/min.

High dose oxytocin:

- To start 4mU/min and increased 4mU/min at every 20-30 min. interval.

- It is mainly used for augmentation of labor and in active management of labor.
- It is associated with risk of uterine hyper stimulation and fetal heart irregularities.

AUGMENTATION OF LABOUR:

It is an act of stimulating labor contractions to speed up the birthing process when labour slows down or stops, the chemical oxytocin is administered to the mother intravenously to attempt to resume labour.

ANTI DOTES OF OXYTOCIN:

Inj. Terbutaline 0.25mg.

OBSERVATION DURING OXYTOCIN INFUSION:

- Rate of flow of infusion
- Uterine contraction
- Peak intrauterine pressure
- FHR monitoring (is done by auscultation at every 15min interval or by continuous Electronic foetal monitor.
- Assessment of progress of labour (descent of the head and rate of cervical dilatation).

INDICATION FOR STOPPING THE INFUSION

- Abnormal uterine contractions
- Hyperstimulation or polysytole
- Uterine rupture.
- Foetal distress.

COMPLICATIONS:

Maternal:

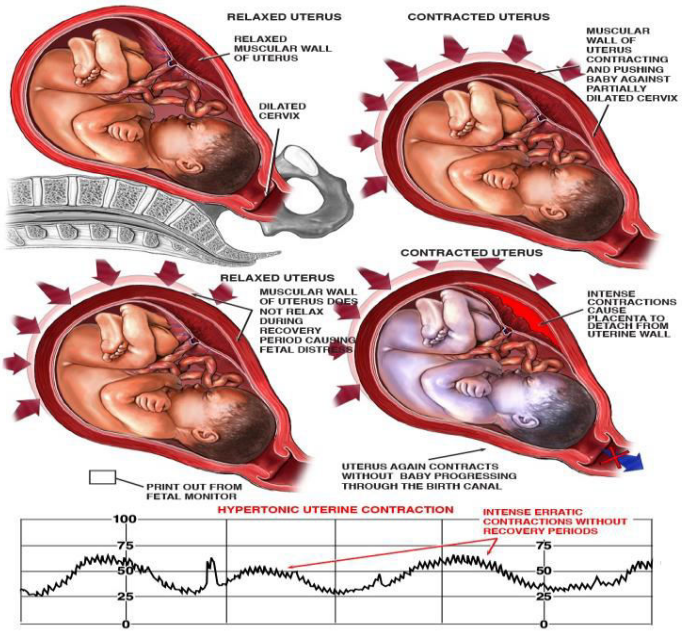
- Postpartum hemorrhage
- Subarachnoid hemorrhage
- Impaired uterine blood flow
- Pelvic hematoma

Foetal:

- Low Apgar score.
- Retinal hemorrhage
- Neonatal seizure
- Cerebral palsy
- Foetal head trauma& death

NEONATAL JAUNDICE

UTERINE CONTRACTION (Images)



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