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Knowledge and Practice of Active Managementof Third Stage of Labour among Nursing Students in Selected school of Nursing, Karaikal

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Abstract

Introduction: A collection of three components makes up Active Management of Third Stage of Labour, a preventative intervention. Active management of the third stage of labor has been endorsed by the WHO as a crucial strategy for PPH prevention. The study's objective was to evaluate nursing students at a selected school of nursing in Karaikal understanding.

Materials and Methods: Researchers used a descriptive co-relational study design with a quantitative approach, choosing 40 students using an easy sample method. Data were gathered using an observational checklist and a validated structured knowledge questionnaire. The tool underwent pre-testing and reliability analysis, and it was confirmed to be trustworthy.

Results: The findings revealed that majority of the students i.e. out of 40 students, 33 (82.5%) had average knowledge, 5 (15%) students had poor knowledge and 1 (2.5%) had good knowledge. Majority 21 (52.5%) had poor practice and 19 (47.5%) had good practice on AMTSL. Among nursing students, there was a significant association between knowledge and practice of AMTSL, indicating that practice of AMTSL improves as knowledge increases. Additionally, there was a correlation between practice and the quantity of return demonstrations presented to the supervisor.

***Conclusion*:** In order to effectively use Active Management of Third Stage of Labor, prevent post-partum hemorrhage and other obstetric complications that could endanger the women's lives, nurses and other birth attendants must be knowledgeable about this technique. The best method for lowering the maternal death rate is knowledge-based skill.

Keywords: Knowledge, Labour, Practice

Introduction

The process by which the fetus leaves the uterus is known as labor. Multiple variables are used to measure the progress of the work.[1] Four stages of labor are distinguished. The first stage lasts until the cervix has fully dilated and begins with the onset of genuine labor pains. The second stage begins with the cervix fully dilated and finishes with the fetus being expelled from the birth canal. The third stage starts after the fetus is expelled and finishes with the placenta and membranes being expelled. The fourth stage, known as the stage of early recovery, starts after the placenta and membranes have been expelled for an hour.[2]

The interval between the baby's birth and the delivery of the placenta and membranes has historically been referred to as the third stage of labor. Due to the possibility of postpartum hemorrhage (PPH), the third stage is the most dangerous for the woman. The third stage of labor normally lasts between 10 and 30 minutes; it is deemed to be protracted if the placenta does not detach within 30 minutes after childbirth. PPH is significantly more likely to occur if the third stage of labor lasts longer than 18 minutes, and it is six times more likely when it lasts longer than 30 minutes.[3]

As a preventive intervention, Active Management of Third Stage of Labor (AMTSL) consists of three parts: A uterotonic, preferably oxytocin, should be administered right after the baby is born, followed by controlled cord traction (CCT) to deliver the placenta and massage of the uterine fundus. Active management of the third stage of labor (AMTSL) has been endorsed by the WHO as a crucial strategy for PPH prevention. AMTSL has evolved into a key element of governments' global PPH mitigation initiatives[4.]

Every birth attendant must possess the information, abilities, and critical thinking necessary to actively manage the third stage of labor in addition to having access to the necessary materials and tools. International Confederation of Midwives (ICM) and International Federation of Gynecology and Obstetrics (FIGO) concur that active treatment of the third stage of labor has been shown to lower the incidence of postpartum hemorrhage (PPH).[5]

Postpartum hemorrhage, according to the World Health Organization (WHO), is defined as vaginal bleeding that exceeds 500 milliliters after childbirth. Globally, 10.5% of live deliveries result in postpartum hemorrhage. It is the main global cause of maternal death[6]. The single strategy known to prevent postpartum hemorrhage, active management of the third stage of labor, is advised for all women.6 the most frequent cause of postpartum hemorrhage and the main factor in maternal fatalities is atonic postpartum hemorrhage. The active management of the third stage of labor is one strategy that has been marketed as being useful in preventing atonics postpartum hemorrhage.[7]

Unacceptably high maternal death rates exist. Every day, difficulties associated with pregnancy or childbirth claim the lives of almost 830 women worldwide. An estimated 3,03,000 women perished during and after pregnancy and delivery in 2015. Nearly all of these fatalities took place in low-resource areas, and the majority of them could have been avoided.[8]

An evaluation of the standard labor procedures was conducted in a teaching hospital in Egypt, where postpartum hemorrhage is the main cause of maternal death. 176 healthy newborns were really seen. Postpartum women were interviewed, and study results were distributed to healthcare professionals. 15% of the women who were observed correctly completed third-stage active management. Giving uterotonic medications after placental birth (65%) and not performing cord traction (49%), were the two most frequent variations for the remaining 85%. In the majority of the deliveries we saw, the prophylactic effect that actively controlling the third stage can provide against postpartum hemorrhage was lost. Given that postpartum hemorrhage accounts for a large portion of maternal deaths in Egypt, barriers to implementing measures that have been proved to minimize hemorrhage should be investigated.[9]

In order to determine the level of service provided in the active management of the third stage of labor at Maternity Hospital, Thapathali, Kathmandu, Nepal, a prospective single blind study was carried out. 325 women who were in labor were chosen at random. When the women were seen to bear down at the second stage, loading of the oxytocin was done appropriately right away in 99.5% of the cases. The oxytocin doses were varied from the recommended 10 units in 5.8% of cases. In 81.9% of the instances, the chance of a second pregnancy had not been ruled out prior to the injection of 10 units of IM oxytocin. Furthermore, the study showed that, in 56% of the cases, controlled cord traction was used without first verifying uterine contractions. The research found that raising the bar for active.[10]

Objectives

The objectives of the study were:

1. To assess the knowledge and practice on active management of third stage of labour among nursingstudents.
2. To find the correlation between the knowledge and practice of active management of third stage of labour among nursing students.
3. To find the association between knowledge and practice with selected variables.
4. To develop and distribute an informational booklet on AMTSL.

Material and Methods

The researchers used a descriptive correlation strategy with a quantitative survey technique. In order to choose the samples, 40 GNM. nursing students from Karaikal School of nursing were chosen using a non-probability convenient selection technique. Tools were created, delivered to specialists for evaluation, and corrected as necessary. For both tools, reliability testing and pretesting were conducted. First, a checklist for observations was utilized to evaluate the samples' usage of active management of the third stage of labor. After that, the samples were given a self-reported structured knowledge questionnaire to gauge their level of knowledge. After receiving approval from the institutional ethical committee and the participants' signed agreement, data collection was carried out. The SPSS version was used for the data analysis. [16.]

Results

Data collected from 40 nursing students of selected School of Nursing. Shows that majority 37 (92.5%)students are in the age group 21-23 years and 26 (65%) are Hindu by religion. 40 (100%) students hadnot attended any workshop related to normal labor. 17 (42.5%) students had conducted 2 return demonstrations.Majority 15 (37.5%) students had conducted 3 normal vaginal deliveries till date (Table 1).

Table 1.Area wise knowledge on frequency and percentagedistribution of AMTSL among nursing students (n=40)

Structured Knowledge Questionnaire	f	%
Meaning		
Stages of labour are divided into four	34	85
Third stage of labour is starts with delivery of bay and end with delivery of placenta	27	67.5
The duration of third stage of labour for both primigravidae and multigravidae is 15min	27	67.5
AMTSL abbreviation stands for activemanagement of third stage of labour	33	82.5
During AMTSL, the midwives need to,observe the women continuously	30	75
Fullness of bladder can prevent the uterus fromcontracting efficiently	24	60
AMTSL are divided into three	18	45
Uterotonic drug		
Administering prophylacticuterotonic drug immediately delivery of the baby's anterior shoulder	17	42.5
The choice of uterotonic drug administeredaccording to WHO is oxytocin	22	55
If misoprostol is used, the recommendeddose (in micrograms) is 600	03	7.5
Recommended route for misoprostol isper orally	18	45
Recommendeddose ergometrine is 0.2-0.3	21	52.5
Recommended route for ergometrine isintramuscular	16	40
If oxytocin is used, the recommended dose(in international units) is 10	22	55
Recommended route for oxytocin isintramuscular	21	52.5
The intramuscular uterotonic drug is giveninto the women's quadriceps muscle	09	22.5
Midwife has to administer uterotonic drugwithin 1minute	15	37.5
Following are true regarding misoprostol,EXCEPT drug of choice for AMTSL	22	55
Controlled cord traction		
The midwife has to clamp the umbilical in2 areas	35	87.5
Delayed cord clamping duration is 3 minutes after the delivery of the baby	05	12.5
Maintain the time duration for clamping the cord helps in preventinganaemia in the newborn		
From the baby's abdominal wall, the cord isclamped 3 to 4cm away	12	30
CCT abbreviation stands for controlled cordtraction	10	25
Midwife should ONLY perform CCT whenthere is contraction	34	85
A midwife should hold swab over the cordas it is cut	06	15

For CCT, the midwife pushes the contracteduterus upwards	17	42.5
CCT is best applied when the women are insemi recumbent position	11	27.5
Apply downwards andbackwards traction until the placenta appears in the vulva	38	95
The total duration for placental delivery is30 minutes	12	30
Recommendation for cord clampingis to wait to clamp & cut the cord until 2-3 minutes	09	22.5
The most frequently observed method ofplacental separation is central separation	15	37.5
Uterine massage		
Types of placental separation in third stageof labour are three in numbers	09	22.5
After the CCT, massage the uterus till it isfirm	18	45
Massage of abdomen before placentaldelivery leads to partial separation of placenta	23	57.5
After the delivery of the placenta, midwifeneeds to palpate the uterus every 15 minutes	05	12.5
After delivery of the placenta, the midwifeneeds to palpate the uterus till 2 hours	11	27.5
Palpation of the uterus, after the delivery of the placenta is important to make sure itis firm	14	35
Complications of third stage of labour	14	35
Complications during third stage of laborare all EXCEPT amniotic fluid embolism	33	82.5
According to WHO, Postpartum haemorrhage (PPH) defined as loss of blood ≥500 ml of b	25	62.5

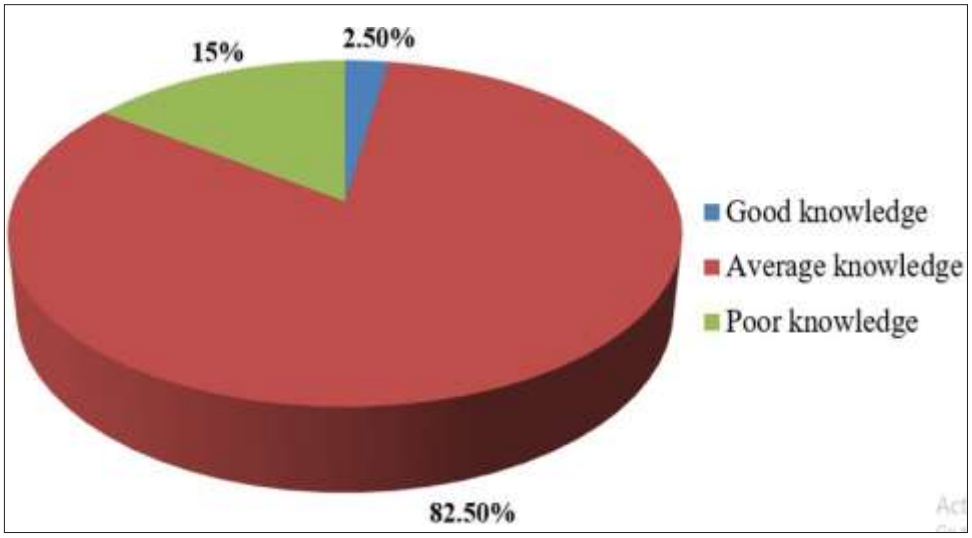

Figure 1.Pie diagram representing the level of knowledge on active management of third stage oflabour among nursing students

The level of knowledge on active management of third stage of labour among 40 nursing students was assessed and found that majority 33 (82.5%) had average knowledge, 5 (15%) had poor knowledge and 1 (2.5%) had good knowledge (Figure 1).

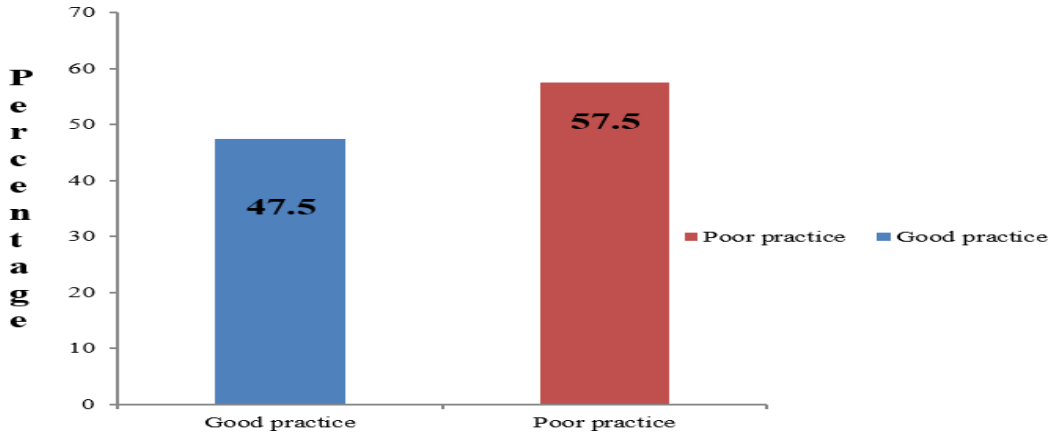

Figure 2.A Bar diagram representing observation scoresof active management of third stage of labour among nursing students

An observational checklist was used to evaluate the degree of practice of active management of the third stage of labor among 40 nursing students. The results showed that 19 (47.5%) of the sample had good knowledge, while 21 (52.5%) had poor practice (Figure 2A).

Table 2.Mean and standard deviation of knowledge score of active management of third stage of labour among nursing students

Score	Mean	Standard deviation
Knowledge	17.75	4
Practice	10.87	9.80

Table 5.Correlation between knowledge and practice of Active management of Third Stage of Labour among nursing students

Variable	Test of significance	Mean	SD Deviation	Correlation
Knowledge	Spearman's correlation	17.75	16.54	0.359
Practice		10.87	9.80	

Table 5 shows the relationship between nursing students' knowledge and practice of active management of third stage of labor. Among nursing students, there is a positive link between knowledge and practice of active management of the third stage of labor (p 0.05). Increased understanding translates to better procedures. The results of the study also demonstrate that there is no relationship between knowledge and demographic factors among nursing students. The correlation between practice and the quantity of return demonstrations shown to the supervisor.

Discussion

The results of the current study show that 33 (82.5%) of the students had average knowledge of active management of the third stage of labor, 5 (15%) had poor knowledge, and 1 (2.5%) had good knowledge. Despite having the bulk of the typical knowledge (82.4%), nursing students The results of the current study, which demonstrated that most respondents have moderate knowledge of AMTSL, are corroborated by **Oyetunde MO and Nkwonta CA's** study assessment of midwives' competence in AMTSL in primary health centers in Anambra state, Nigeria.[10]

The current study's findings that 82.5% of nursing students from the sample could define the abbreviation of AMTSL were also supported by **Daef G. et al.'s** study, which examined midwives' knowledge and practice of active management of the third stage of labor in a setting with limited resources and found that 71.2% of them could define the term.[11]

According to the study's findings, 19 (47.5%) had good practice, whereas 21 (52.5%) had bad practice. In 97.5% of the instances, oxytocin—the primary component of AMTSL—was administered, while massage therapy was used in 45% of the cases. The current research, backed by **Fathima A. and Rao** MV Oxytocin, the primary component of AMTSL, was used to prevent PPH in 80% of the cases evaluated in a teaching hospital, although uterine massage was not frequently performed and documented.[12]

The results of the current study show a significant relationship between Active Management of Third Stage of Labor practice and the quantity of return demonstrations made to the supervisor, which is in contrast to the findings of the study by Devangamath BG and Raddi SA, which found a relationship between knowledge and certain demographic variables like gender and information source.[13]

Conclusion

The purpose of the current study was to evaluate nursing students' understanding and application of active management of the third stage of labor. Many students successfully rehearsed certain parts of the procedures, but fewer students successfully practiced the entire method as a whole. Teaching nursing students about AMTSL raises awareness and facilitates effective practice, which lowers the incidence of postpartum hemorrhage.

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Conflict of Interest: None

References

1. Gabbe S, Niebyl J, Galan H et al. Obstetrics: Normal and problem pregnancies. *Normal labour and delivery* 2017: 267-286.
2. Mowafi DM. *Normal Labour*, Obstetrics Simplified. 2017: 1-5.
3. Arulkumaran S. *The Active management of third stage of labor*. A comprehensive textbook of postpartum haemorrhage: An essential clinical reference for effective management. Sapiens

2012: 101-112.

4. World Health Organization. Active management of third stage of labour. Available from: https://www. who.int/reproductivehealth/publications/maternal_ perinatal_health/new-recommendations-amtsl/en/.
5. International Confederation of Midwives, International Federation of Gynaecologists and Obstetrician. Joint statement: management of the third stage of labour to prevent postpartum haemorrhage. *Journal of Midwifery and Womens Health* 2004; 49(1): 76-7.
6. Kongnyuy EJ, Broek NV. A clinical audit of the management of postpartum haemorrhage in Malawi. *The Internet Journal of Gynaecology and Obstetrics* 2007; 9(2): 873.
7. Mathai M, Gulmezoglu M, Casna RP. WHO recommendations for the prevention of postpartum haemorrhage. 2006. 18-20.
8. Alkema L, Chou D, Hogan D et al. Global, regional and national levels and trends in maternal mortality a systematic analysis by the UN maternal mortality estimation inter agency group. *Lancet* 2016; 387(10017): 462-474.
9. Upadhyay M, Sharma G, Chataut D. Active management of third stage of labor, assessment of standard of care in one of the training institute. *Nepal Journal of Obstetrics and Gynaecology* 2006; 1(2): 28-30.
10. Oyetunde MO, Nkwonta CA. Assessment of midwives' competence in active management of third stage of labour in primary health centres in Anambra State, Nigeria. *Journal of Applied Medical Sciences* 2015; 4(2): 17-29.
11. Daef G, Naidoo T, Moodley J. An audit of the knowledge and practice of the active management of the third stage of labour in a resource constrained setting. *Journal of Community and Public Health Nursing* 2017; 3(2): 200
12. Fathima A, Rao MV. An evaluation of the practice of active management of third stage of labour in a teaching hospital. *International Journal of Reproduction Contraception Obstetrics and Gynecology* 2016; 5(6):1705-1708.
13. Devangamath BG, Raddi SA. A descriptive study to assess the knowledge regarding nursing management of first stage of labour among final year GNM students of selected school of nursing, Belgaum, Karnataka. *International Journal of Science and Research* 2013; 6(14): 2199-2201