

A evaluatory study to findout influence of self-made informatic booklet on knowledge and attitude of obstetrics practioner regarding selected obstetrics emergencies and their management of complications in third stage labour in Dr.kamlesh Tandon hospital and IVF center Agra (U. P)

Mrs. Sudha Swamy¹, Dr. Vikas Choudhary²

¹Ph. D. SCHOLAR, Madhya Pradesh Medical Science University, Jabalpur

²Professor cum Ph. D. Supervisor, College of Nursing, Teerthanker Mahaveer University, Moradabad

Received:- 02 Augsut 2022/ Revised:- 09 August 2022/ Accepted: 17 August 2022/ Published: 31-08-2022

Copyright @ 2021 International Multispeciality Journal of Health

This is an Open-Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted

Non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract—

Problem Statement

To Evaluate the influence of self-made informatics booklet on knowledge and attitude of obstetric practioner regarding selected obstetric emergencies and their management of complication in third stage of labour, Dr.kamlesh tendon hospital,Agra (U.P)

Objectives

1. *To assess the existing level of knowledge and attitude of obstetric practioner regarding selected obstetric emergencies and their management of complication in third stage of labour among nursing officers.*
2. *To find co-relation between the knowledge and attitude score of selected obstetric practioner and their management of complication in third stage of labour with selected demographic variable.*

Research Hypothesis

HA1- *There will be significant difference in knowledge and attitude score of obstetric practioner with regard to obstetric emergencies and their management of complication in third stage of labour.*

H01- *There will be no significant difference in knowledge and attitude score of obstetric practioner with regard to obstetric emergencies and their management of complication in third stage of labour.*

HA3: *There will be significant co- relation between knowledge and attitude score among obstetric practioner with regard to obstetric emergencies and their management of complication in third stage of labour.*

H03: *There will be significant co- relation between knowledge and attitude score among obstetric practioner with regard to obstetric emergencies and their management of complication in third stage of labour.*

I. INTRODUCTION

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. Under the National Rural Health Mission, the Government of India has taken several steps to improve maternal health. Three key efforts include encouraging delivery in institutions through monetary incentives from the Janani Suraksha Yojana program, supporting emergency obstetric care development, and training auxiliary nurse-midwives (ANMs) and nurses to gain competencies as SBAs. The National Rural Health Mission approach also includes the Reproductive and Child Health II program, which promises investments in emergency obstetric care provision, including training doctors in emergency skills, upgrading ANM skills, ensuring blood storage points in every district, and upgrading community health centers to meet national standards. It also supports demand-side financing to spur

utilization of services through incentives for assisted home deliveries, institutional deliveries, and caesarean sections PPH is one of the few obstetric complications for which an effective preventive intervention is available. The active management of the third stage of labor (AMTSL) is a package of interventions including administration of a uterotonic drug immediately following delivery, controlled cord traction, and fundal massage following delivery of the placenta. There may be changes to AMTSL policy and guidance in the near future, given recent research regarding controlled cord traction and the dynamic state of evidence regarding the full package of interventions. However, the World Health Organization (WHO) currently recommends AMTSL for PPH prevention in the presence of an SBA. There are nursing responsibilities that can significantly reduce the incidence of PPH; however, these duties were not carried out appropriately at the project site labor units. For example, routine inspection of the vagina and perineum to identify a genital laceration is essential because a sphincter laceration may go unnoticed by the obstetrician and may lead to PPH. Observation should include monitoring blood pressure and pulse, fundal tone and position, and vaginal blood loss every 15 minutes (Leduc et al., 2009). Blood loss is typically assessed by weighing all perineal pads hourly and evaluating the lochia for clotting. The labor and delivery nurses claimed they are performing these important roles; however, their actions have been insufficient in preventing PPH.

II. MATERIALS & METHODS

The researcher adopted a quantitative research approach where one group pre-test, post-test pre-experimental research design was used. A total 40 obstetric practioner were chosen through non-probability purposive sampling technique. These samples underwent inclusion sample criteria. The samples were collected from selected hospital of Moradabad utter Pradesh. The tools in the study include demographic variable, 40 items -structured knowledge questionnaire and lekerts scale for attitude questionnaire followed by self – made informatics booklet. The main study is carried out to observe

impact of self-Structured module on knowledge regarding obstetric emergencies of complication and their management of third stage of labour among nursing officers was observed. Further, it was followed by general system theory model and health belief model for competency.

2.1 Research Approach

Quantitative research approach

2.2 Research Design

Experimental design research

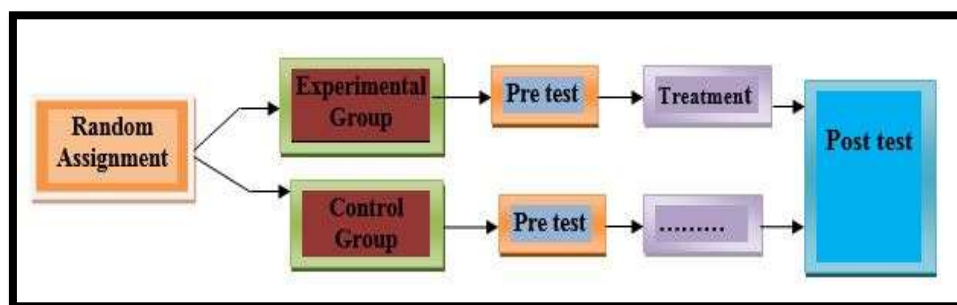


FIGURE 1: Schematic representation of one group pre-test, post-test experimental RESEARCH DESIGN

2.3 Research Setting

A formal permission to conduct the pilot study was obtained from Dr.kamlesh tendon hospital and IVF center,Agra. The data for pilot study was collected from obstetric practioner. A total of 40 (N=40.samples were selected as per the purposive sampling technique.

2.4 Target Population

The target population for this study was obstetric practioner working in hospital of Dr.kamlesh tendon hospital and IVF center,Agra (u.p)

2.5 Accessible Population

The accessible population for this study was the obstetric practioner of selected hospital of Dr.kamlesh tendon hospital and IVF center,Agra (u.p)

2.6 Sample

obstetric practioner working in selected hospital

2.6.1 Sampling Technique

Non-probability Purposive Sampling technique

2.6.2 Sample Size

40

2.6.3 Independent Variable

self –made informatic booklet regarding obstetric emergencies management in complication of third stage management

2.6.4 Dependent Variable

In this study, dependent variables are;

- 1) Knowledge of obstetric practioner regarding obstetric emergencies management in complication of third stage management.
- 2) Attitude obstetric practioner regarding obstetric emergencies management in complication of third stage management.

2.7 Socio-Demographic Variables:

Socio-demographic variables are the Characteristics and attributes of the study objects that may interfere with the findings of the study are the socio-demographic variables. In the present study the Socio demographic variable include Age, Gender, Religion ,Education, Exposure during clinical postings,sources of information regarding obstetric emergencies management in complication of third stage management.

2.8 General System Theory Model

A conceptual framework for the present study is based on general system theory with input, process, output and feedback. It serves as a model for viewing people as an interacting with the environment. The theory was developed by IFIED Ludwig Von Bertalanffy in 1968.

He felt that need for a single theory to guide research in several disciplines since he saw striking parallels between them. His hunch was that if multiple disciplines focused their research and theory development efforts, they would be able to identify laws and principles which would apply to many systems. This would allow scholars and scientists to make sense of system characteristics such as wholeness, differentiation, order, equality, progression and others.

According to this theory, a system is a group of elements that interact with one another in order to achieve the goal. An individual is system because he or she receives input from the environment. Elements of the input processed it provides an output. All living systems are open. There is a continuous exchange of matter, energy and information. The system is cyclical in nature and continuous to be as long as the four parts- input, process, output and feedback- keep interacting with each other. If there are any changes in any of the parts there will be altered in all parts. Feedback within the system or from the environment provides information which helps the system to determine its effectiveness.

2.8.1 Input

In the general system's theory input is the term for movement of matter, energy or information from the environment. In the present study the inputs are the structured knowledge questionnaire & perception checklist (perception scale) on catheter related obstetric emergencies management of complication..

2.8.2 Process

The processes used by the system to convert raw materials or energy from the environment into products that are used either by the system itself or the environment. Process for the present study carried out in phase as detailed below.

Phase – I: Investigator applied the structured knowledge questionnaire & Attitude checklist on obstetric emergencies management of complication and identified the level of knowledge & Attitude level among nursing officers. Applied posttest 5 days later by using the same questionnaire& Attitude checklist.

2.8.3 Output

It refers to energy matter or information disposed by the system as a result of its process. In the present study it refers to the level of knowledge & level of Attitude among nursing officers and the effectiveness of self –made informatic booklet on obstetric emergencies management of complication in assessing the nursing officers performance with a difference in scores from conventional method of evaluation.

2.8.4 Feedback

It is the process that enables a system to regulate itself and provides information about the system output and its feedback as input. In the present study, the feedback can be initiated after estimating output when there is a low score in the nursing officers knowledge& Attitude. They may be placed once again in the circuit to improve their knowledge & Attitude.

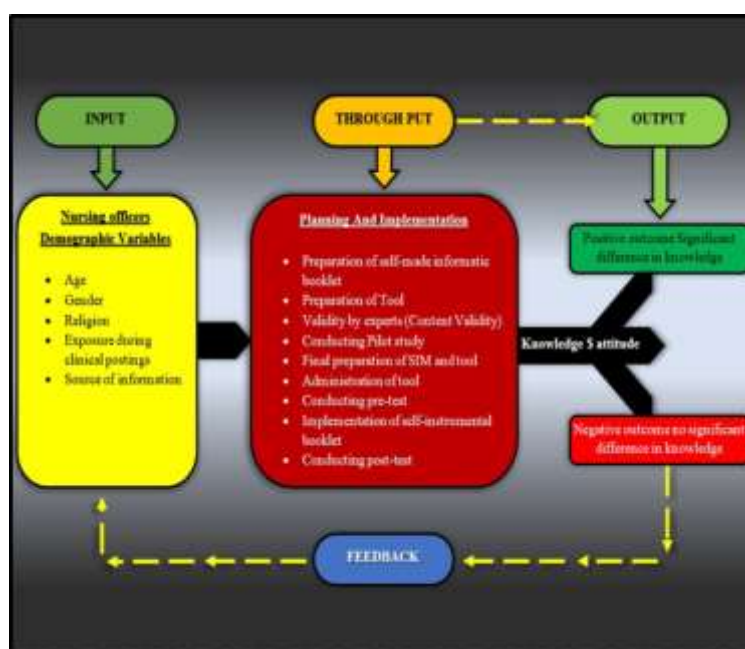


FIGURE 2: General system theory

III. RESULT

		Age	Gender	Religion	Exposure of clinical posting	Sources of information
N	Valid	40	40	40	40	40
	Missing	27	27	27	27	27
Mean		2.4250	1.6250	1.8750	.6000	2.4750
Std. Error of Mean		.15968	.07752	.16866	.07845	.13862
Median		2.0000	2.0000	1.5000	1.0000	2.0000
Mode		2.00	2.00	1.00	1.00	2.00
Std. Deviation		1.00989	.49029	1.06669	.49614	.87669
Variance		1.020	.240	1.138	.246	.769
Skewness		.137	-.537	.928	-.424	.320
Std. Error of Skewness		.374	.374	.374	.374	.374
Range		3.00	1.00	3.00	1.00	3.00
Minimum		1.00	1.00	1.00	0.00	1.00
Sum		97.00	65.00	75.00	24.00	99.00

		Pretest knowledge of obstetric emergencies	Pre test knowledge postpartum hemorrhage	Pretest knowledge of ruptured uterus	Pretest knowledge of inversion of uterus	Pretest knowledge of third stage management	Posttest knowledge of obstetric emergencies	Post test knowledge postpartum hemorrhage	Post test knowledge of ruptured uterus	Post test knowledge of inversion of uterus	Posttest knowledge of third stage management
N	valid	40	40	40	40	40	40	40	40	40	40
	missing	27	27	27	27	27	27	27	27	27	27
mean		1.3000	7.7250	4.9250	5.8250	6.9000	1.3250	8.0250	4.8250	6.9500	9.0500
Std.error of mean		.12506	.24804	.18393	.25792	.32185	.12602	.19770	.21149	.19265	.21469
median		1.5000	8.0000	5.0000	5.5000	7.0000	2.0000	8.0000	5.0000	7.0000	9.0000
mode		2.00	7.00	5.00	5.00	7.00	2.00	8.00	5.00	7.00	10.00
Std.deviation		.79097	1.56872	1.16327	1.63123	2.03558	.79703	1.25038	1.33757	1.21845	1.35779
variance		.626	2.461	1.353	1.353	4.144	.635	1.563	1.789	1.485	1.844
Range		2.00	6.00	6.00	7.00	9.00	2.00	5.00	6.00	4.00	5.00
minimum		00	4.00	1.00	2.00	2.00	2.00	5.00	1.00	5.00	6.00
sum		52.00	309.00	197.00	233.00	276.00	53.00	321.00	193.00	278.00	362.00

		Pretest attitude of obstetric emergencies	Pre test attitude postpartum hemorrhage	Pretest attitude of ruptured uterus	Pretest attitude of inversion of uterus	Pretest attitude of third stage management	Posttest attitude of obstetric emergencies	Post test attitude postpartum hemorrhage	Post test attitude of ruptured uterus	Post test attitude of inversion of uterus	Posttest attitude of third stage management
N	valid	40	40	40	40	40	40	40	40	40	40
	missing	27	27	27	27	27	27	27	27	27	27
mean		15.3750	25.6000	11.1000	14.0500	44.1500	16.2000	28.5750	4.8250	6.9500	9.0500
Std.error of mean		.57922	.78838	.48806	.60864	1.05341	.41169	.52853	.21149	.19265	.21469
median		16.5000	25.0000	12.0000	15.0000	43.5000	16.5000	29.0000	6.0000	7.0000	9.0000
mode		18.00	25.00	13.00	15.00	41.00	18.00	28.00	6.00	7.00	10.00
Std.deviation		3.66331	4.98613	3.08678	3.84941	6.66237	2.60374	3.34271	1.33757	1.21845	1.35779
variance		13.420	24.862	9.528	14.818	44.387	6.779	1.789	1.854	1.485	1.844
Range		13.00	19.00	12.00	13.00	23.00	9.00	6.00	6.00	4.00	5.00
minimum		7.00	14.00	3.00	7.00	33.00	11.00	1.00	1.00	5.00	6.00
sum		615.00	1024.00	444.00	562.00	1766.00	648.00	200.00	223.00	278.00	362.00

CORRELATION TABLE

		pre test knowledg eopostp artumhe morrahg e	pre test knowledg eobster icsemer gencies	pre test knowledg erupter ofuteru s	pre test knowledg eiversion ofuteru s	pre test knowledg eothirdst ageofma nagemen t	postkno wledgeo bsterics emergen cies	posttestk nowledg eopostp artumhe morrahg e	posttestk nowledg erupter ofuteru s	posttestk nowledg eiversion ofuteru s	posttestk nowledg eothirdst ageofma nagemen t
postpart umhemor rahage	Pearson Correlati on Sig. (2- tailed)	1	-.490	.312	.281	.433	-.542	.749	.013	.060	.043
	N	40	40	40	40	40	40	40	40	40	40
obsteric semerge ncies	Pearson Correlati on Sig. (2- tailed)	-.490	1	-.170	-.117	-.220	.899	-.474	.002	-.011	-.181
	N	40	40	40	40	40	40	40	40	40	40
rupterofu terus	Pearson Correlati on Sig. (2- tailed)	.001		.294	.471	.173	.000	.002	.988	.948	.262
	N	40	40	40	40	40	40	40	40	40	40
iversiono futerus	Pearson Correlati on Sig. (2- tailed)	.312	-.170	1	-.169	.322	-.111	.160	.618	-.292	.262
	N	40	40	40	40	40	40	40	40	40	40
thirdstag eofmana gement	Pearson Correlati on Sig. (2- tailed)	.050	.294		.296	.043	.494	.324	.000	.067	.102
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.281	-.117	-.169	1	.172	-.212	.266	-.167	.370	-.204
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.079	.471	.296		.288	.190	.097	.303	.019	.206
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.433	-.220	.322	.172	1	-.185	.454	.154	-.085	.104
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.005	.173	.043	.288		.253	.003	.344	.603	.523
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.173	.235	-.120	.058	-.356	.186	-.271	.113	-.042	.048
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.284	.145	.462	.720	.024	.252	.091	.487	.799	.770
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.047	-.105	-.116	.193	.254	-.012	.203	.028	.081	.155
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.772	.518	.477	.233	.114	.943	.209	.865	.619	.341
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.158	-.107	-.055	.019	-.015	-.045	.092	-.045	.240	-.099
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.329	.511	.736	.908	.928	.784	.571	.781	.136	.543
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.104	-.047	.230	-.239	-.062	-.047	-.096	.012	-.311	-.030
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.524	.773	.154	.137	.706	.772	.555	.943	.051	.855
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.205	-.096	.114	-.125	-.052	-.154	.157	.144	-.021	.025
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.204	.554	.484	.442	.751	.342	.335	.375	.897	.880
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.542	.899	-.111	-.212	-.185	1	-.446	.151	-.009	-.134
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.000	.000	.494	.190	.253		.004	.353	.955	.410
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.749	-.474	.160	.266	.454	-.446	1	.003	.203	.060
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.000	.002	.324	.097	.003	.004		.987	.209	.715
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.013	.002	.618	-.167	.154	.151	.003	1	-.179	.188
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.936	.988	.000	.303	.344	.353	.987		.270	.244
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.060	-.011	-.292	.370	-.085	-.009	.203	-.179	1	-.014
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.714	.948	.067	.019	.603	.955	.209	.270		.932
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.043	-.181	.262	-.204	.104	-.134	.060	.188	-.014	1
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.793	.262	.102	.206	.523	.410	.715	.244	.932	
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.124	.144	-.113	.057	-.330	.091	-.246	.099	.019	.048
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.445	.374	.486	.728	.038	.575	.126	.545	.905	.769
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.060	-.174	-.134	.235	.246	-.120	.199	-.218	.253	.146
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.712	.284	.411	.144	.126	.461	.219	.177	.116	.369
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.052	-.067	.001	.076	.049	-.020	.196	-.017	.362	-.100
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.748	.683	.996	.639	.765	.901	.226	.918	.022	.541
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	-.049	.013	.075	-.095	-.022	.054	-.073	.060	-.013	.103
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.068	.223	-.093	-.135	.161	.251	.019	-.016	-.053	-.211
	N	40	40	40	40	40	40	40	40	40	40
attitudo bsterics emergen cies	Pearson Correlati on Sig. (2- tailed)	.676	.167	.568	.407	.322	.118	.908	.924	.747	.191
	N	40	40	40	40	40	40	40	40	40	40

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed).

Study analysed by Pearson formula and finding showing

Co-relation coefficient (r) pre-test of knowledge and attitude were significantly co-related to each other at the 0.05 level (2tailed)

Co-relation coefficient (r) post-test of knowledge and attitude were significantly co-related to each other at the 0.05 level (2tailed)

IV. CONCLUSION

Analytically analysis indicated that that obstetric practioner had experienced majorly improved awareness about effective management of third stage of labour after directing of self-made informatic booklet on effective management of third stage of labour as compared to preexisted awareness (pretest) about effective management of third stage of labour. Henceforth, this is clearly reflected effectiveness of self-made informatic booklet amid obstetric practioner with effective management of third stage of labour. self-made information booklet was shown to be successful programme in enhancing cognition & attitude toward effective management of third stage of labour amid chosen obstetric practioner, according to results of study. As result, statistical agreement revealed that self-made informatic booklet was favored as effective conservative programme for enhancing nursing officers' cognition and attitude toward effective management of third stage of labour.

REFERENCES

- [1] Olgac Y , Gulseren V (2018) , Active management of the third stage of labor: A brief overview of key issues , Turkish Journal Of Obstetrics And Gynaecology , Volume 15 , Issue 3 ,Page 188-192.
- [2] Smith R (2020), Management of the Third Stage of Labor , Medcape , <https://emedicine.medscape.com/article/275304-overview>
- [3] Raams T , Browne J et al (2018) , Task shifting in active management of the third stage of labor: a systematic review , BMC Pregnancy And Childbirth , Article number 18 , Issue 47 , Page number 456-457.
- [4] Sultana N , Begum F (2018) , Active Management of the Third Stage of Labour: A Brief Review and Update , Bangladesh Journal of Obstetrics and Gynecology 33(2):149-156,DOI:10.3329/bjog.v33i2.43571
- [5] Agarwal S , Singh A (2019) , Retrospective review of maternal deaths and maternal near misses due to major obstetric haemorrhage at a tertiary care centre in India, International Journal Of Reproduction, Contraception , Obstetrics And Gynaecology , Volume , 8 , Issue 8 , Page number 3431-3434.
- [6] Tasneem F (2017), Clinical study of post partum haemorrhage from a teaching hospital in Maharashtra, India, international Journal Of Reproduction , Contraception , Obstetrics And Gynaecology , volume 6 , Issue 6 , Page number 45-49.

BOOK

- [7] Abraham Suzanne (2010) "Fundamental of Obstetrics and Gynaecology" 9th edition, Mosby Elsevier Limited. Page no. 75 – 76
- [8] Agrawal Avyakt (2016) "Paediatric Drug Dose" 3rd edition Jaypee the health science publisher, New Delhi. Page no. 184
- [9] Balakrishnan Sheila (2013) "Textbook of Obstetrics" 2nd edition, Paras medical publisher, India, Hyderabad New Delhi. Page no 424.
- [10] Bobak, F.M. and Jensen , M.D.(1991). Essentials of maternity nursing (3rd ed.).St.Louis : Mosby Publication, Page number :41-49
- [11] Brunner and Suddharth's (2008) "Text book of medical surgical nursing "11th edition) volume –IIInd published by Wolters Kluwer, (India) private limited New Delhi .
- [12] Cooper, A, Margaret & Fraser, M, Daine. (2005).Myles Textbook for midwives. (14th edition).London.Elsevier, Page number 101-104
- [13] C.S. Dawn, Text book of obstetrics, New Delhi Publication , sixteenth edition, 2004, 256-265
- [14] Daftary Shirish N (2005) "Manual of Obstetrics" 2nd edition, Elsevier a division of Reed Elsevier India (p). Ltd. Page no 589 – 596
- [15] Dutta D.C. (1995) "Textbook of Obstetrics" 3rd edition, New central book agency (p) Ltd Calcutta, India. Page no. 464 – 465.
- [16] Fairley Diana Hamilton (2004) "Obstetrics and Gynaecology" 2nd edition, published by Blackwell publishing Ltd. Page no. 211 – 212.