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A Quasi Experimental Study To Assess The Effectiveness Of Self Instructional Module On Knowledge Regarding Selected Obstetrical Drugs Among Staff Nurses

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ABSTRACT

Introduction: *One aspect of care that touches nearly every obstetrical patient is the administration of medications. Nurses at bedside of laboring women should have adequate knowledge regarding obstetrical drugs to prevent drug related errors.*

Materials and methods: *A Quantitative Quasi experimental Non Randomized Control Group Research Approach and Design was used and non probability purposive sampling technique was used to select 60 staff nurses (30 in experimental and 30 in control group) from Civil Hospitals of Faridkot, Kotkapura, Bathinda and Badal. Self Administered Questionnaire had been used to assess knowledge by Structured Knowledge Questionnaire. SIM has been provided to staff nurses of experimental group only. Posttest had been conducted after 7 days for both groups.*

Results: *The findings of the study revealed that in experimental group, Mean pretest knowledge was 15.06±1.99 which increased to 27.93±2.56 after administration of SIM and was statistically significant at p<0.05 level of significance. In control group, Mean pretest knowledge was 16.06±2.27 which remain nearly same 17.16±2.42 in posttest. There was association of Total professional experience with posttest knowledge of experimental group which was statistically significant at p<0.05 level of significance.*

Conclusion: *It concludes that Self Instructional Module as an educational intervention was effective in increasing knowledge of staff nurses on obstetrical drugs.*

Key words: *Knowledge, Self Instructional Module, Staff nurses, Selected obstetrical drugs*

INTRODUCTION

Patient safety is a concern worldwide and is a significant challenge facing health care systems today. An important part of patient safety is the issue of medication administration within the health care setting that has long been the focus of scrutiny and research, because it contributes directly to patient morbidity and mortality. Medication errors are a serious public health threat, causing patient injury, death and sharply increasing health care costs. Safe administration of medication is significant to nurses, doctors, administrators, educators, patients, the public at large, and the entire healthcare system.[1]All midwives bear a great responsibility when they administer drugs, as these may act not only upon the mother but also on the foetus during pregnancy and labour and on the baby in the early days of life.[2] Midwives who care for pregnant and labouring women are faced with increasingly frequent use of pharmaceutical agents that facilitate initiation of labour (uterotropics), augmentation of labour (uterotonics)or potentially retard and delay labour (tocolytics).[3]

According to several studies, medication errors usually occur during prescription and administration stages and could be accounted for 65-87% of all medication errors.[4] Medication errors are the eighth leading cause

of death resulting in approximately 7000 deaths annually. A survey of patients during hospitalization found that about 20% were concerned about an error in their medications and 15% of them were concerned about being harmed from mistakes by nurses.[5] From 1998 to 2005, more than 1.3 million medication errors from more than 870 hospitals were reported to MEDMARX, a voluntary, anonymous medication error reporting system. Out of 4,583 obstetric medication error reports, or 4.8% of all reports submitted, the majority caused no harm and most occurred during administration. There are various obstetrical drugs that are used during pregnancy, labor and puerperium for management of pregnancy and other medical conditions. Some of these drugs include oxytocics, ergot derivatives, prostaglandins, tocolytics agents, antihypertensives, diuretics and anticonvulsants etc.[4] Oxytocics are the drugs of varying chemical nature that have the power to excite contractions of the uterine muscles. Methyl ergonovine acts directly on myometrium and excites uterine contractions which comes so frequently one after other with increasing intensity that the uterus passes into a state of spasm without any relaxation in between.[6] Valethamate bromide is a visceral antispasmodic hasten dilatation of cervix. It helps in effacement and softening of cervix during labor. Isoxsuprine hydrochloride is a chemical which when circulating in humen act as vasodilator. Magnesium is a naturally occurring mineral. It has been used in treatment of pre eclampsia and eclampsia. It probably exerts its effect by acting as a cerebral vasodilator, thereby reversing cerebral vasospasm and increasing cerebral blood flow.[6] Self Instructional Module is a learning resource that is preplanned with pre specified objectives. It can be used by learner without the presence of teacher. It is effective in increasing the knowledge level of individuals.

Due to constant advances in field of drug therapy, the daily appearance of new drugs or new indications, side effects of existing drugs are challenges to both students and practioner. Updating the knowledge about drugs help to decrease the errors in drug administration and indepth knowledge in the field of drugs help the nurse midwives and doctors to safeguard their patients. So, Self Instructional module on obstetrical drugs developed to bring considerable changes in knowledge of staff nurses which in turn improve quality of care and recovery of patients.

MATERIALS AND METHODS

A Quantitative Quasi Experimental and Non Randomized Control Group Research Approach And Design was used to conduct the study on effectiveness of Self Instructional Module on knowledge regarding selected obstetrical drugs among staff nurses working in maternity wards of selected civil hospitals of Malwa region, Punjab. Socio demographic variables Age (years), Gender, Religion, Professional qualification, Habitat, Total professional experience (years), Total experience in OBG unit (years), Any exposure to inservice education programme on obstetrical drugs and Source of knowledge upgradation were used. The study was conducted in four Civil Hospitals of Malwa region, Punjab- Civil Hospital, Faridkot and Kotkapura for the experimental group and Civil Hospital, Bathinda and Badal for the control group. Non probability purposive sampling technique was used to select 60 staff nurses,30 for experimental and 30 for control group. Data was collected by using structured knowledge questionnaire.

Inclusion criteria include staff nurses who were willing to participate and were present at time of data collection. Exclusion criteria includes staff nurses who were not willing to participate and on leave during data collection.

Ethical clearance was obtained from the Research and Ethical committee of State Institute of Nursing and Paramedical Sciences, Badal and Baba Farid University of Health Sciences, Faridkot and the concerned authorities of college and selected Civil Hospitals of Malwa region, Punjab. The informed consent from the candidates willing to participate in the study was also taken. Routine of maternity wards and protocols of hospital were not disturbed.

Data was collected by taking pretest of both experimental and control group on different days to assess their knowledge regarding selected obstetrical drugs by self administered questionnaire. After the pretest, Self

Instructional Module on selected obstetrical drugs: Pitocin,Methergin, Epidosin, Duvadilin and Magnesium sulphate was given to experimental group and asked to keep the SIM with them for 7 days and read it thoroughly. The post-test was taken from both experimental and control group after 7 days of pretest. After that effectiveness of self instructional module was checked by comparing results of experimental and control group. Data was analyzed by using both descriptive and inferential statistics i.e. mean, standard deviation, chi square, "t" test and ANOVA.

RESULTS

The socio demographic profile of 60 staff nurses who were enrolled in study is summarized in table number 1 below. The data was described with the help of percentage.

Table-1: Frequency and Percentage distribution of staff nurses according to their demographic variables among experimental and control group.

N=60

S. No	Demographic variables	Experimental group (n=30)		Control group (n=30)		df	Chi sqaue value
		f	%	f	%		
1.	Age (years):						
	≤ 25	0	00.00	0	00.00		
	26-30	20	66.66	21	70	2	0.1013^{NS}
	31-35	3	10	3	10		
	≥ 35	7	23.33	6	20		
2.	Gender:						
	Male	0	00.00	0	00.00	--	--
	Female	30	100	30	100		
3.	Religion:						
	Sikh	26	86.66	24	80	1	0.48^{NS}
	Hindu	4	13.33	6	20		
4.	Professional qualification:						
	GNM	17	56.66	19	63.33		
	BSc. Nursing	5	16.66	5	16.66	3	2.111^{NS}
	Post basic Nursing	6	20	6	20		
	M.Sc. Nursing	2	6.66	0	00.00		
5.	Habitat:						
	Rural	13	43.33	14	46.66	1	0.0673^{NS}
	Urban	17	56.66	16	53.33		
6.	Total professional experience (years):						
	≤ 1	2	6.66	2	6.66		
	2-4	11	36.66	12	40	3	0.087^{NS}
	5-7	5	16.66	5	16.66		
	≥8	12	40	11	36.66		
7.	Total experience in OBG units (years):						
	≤ 1	10	33.33	9	30		
	2-4	9	30	10	33.33	3	0.2913^{NS}
	5-7	4	13.33	5	16.66		
	≥8	7	23.33	6	20		
8.	Any exposure to inservice education programme on obstetrical drugs:						
	Yes	3	10	2	6.66	1	0.2182^{NS}
	No	27	90	28	93.33		
9.	Source of knowledge upgradation:						
	Books/journals/magazines and literature on OBG drugs	16	53.33	15	50	1	0.0667^{NS}
	Colleagues/health workers/peer group	14	46.66	15	50		

NS-Non Significant

It shows that in experimental group 66% of staff nurses were from age group 26-30 years and all were females. Majority 86.6% were from sikh religion and 56.6% were with GNM qualification. 56.6% staff nurses were from urban area and maximum 40% having total professional experience of ≥8 years. 33.3%were having ≤1 year total experience in OBG units. Maximum 90% staff nurses had no exposure to any inservice education programme and source of knowledge upgradation for 53.3% nurses was books/journals/magazines and literature on OBG drugs.

In control group, maximum 70% of staff nurses were from age group 26-30 years and all were females.80% staff nurses were from sikh religion and 63.3% with GNM qualification. 53.3% were from urban area and 36.6% having total professional experience of 2-4 years. 33.3% staff nurses were having 2-4 years total experience in OBG units. 93.3% staff nurses had no exposure to any inservice education programme and source of knowledge upgradation was equal from books/journals/magazines and literature on OBG drugs and colleagues/health workers/peer group.

Study findings showed that in experimental group, maximum staff nurses were having average pretest level of knowledge but in post test maximum staff nurses had excellent knowledge. But in control group, maximum staff nurses were having good pretest knowledge which remains at same level in post test.

Table-2: Frequency and Percentage distribution of pretest and posttest level of knowledge among staff nurses in experimental and control group.

N=60

Level of knowledge	**Score**	**Experimental group (n=30)**				**Control group (n=30)**			
		Pretest		Posttest		Pretest		Posttest	
		n	%	n	%	N	%	N	%
~~**Excellent**~~	~~25-30~~	~~0~~	~~00.00~~	~~27~~	~~90~~	~~0~~	~~00.00~~	~~0~~	~~00.00~~
Good	16-24	11	36.67	3	10	16	53.33	25	83.33
Average	8-15	19	63.33	0	00.00	14	46.67	5	16.67
Poor	0-7	0	00.00	0	00.00	0	00.00	0	00.00

Maximum score-30 Minimum score-0

Table-3: shows comparison of pretest and post test knowledge regarding selected obstetrical drugs among staff nurses in experimental and control group.

N=60

Group	**Knowledge score**						**df**	**'t' value**
	Pretest			Posttest				
	n	Mean	SD	n	Mean	SD		
Experimental	30	15.06	1.99	30	27.93	2.56	29	21.7047^{*}
Control	30	16.06	2.27	30	17.16	2.42	29	1.8137^{NS}
	df	't'		df	't'			
	58	1.8094^{NS}		58	16.7367^{*}			

Maximum score-30 * Significant at p<0.05

Minimum score-0 NS- Non significant

In experimental group, mean pretest knowledge score was 15.06 and mean post test knowledge score was 27.93 which was statistically significant at 0.05 level of significance. In control group, mean pretest knowledge was 16.06 and post test knowledge was 17.16 which was non significant at 0.05 level. The

difference between mean pretest and post test knowledge score of samples in experimental group as compared to control group was statistically significant at p<0.05 level of significance. Which proved the hypothesis that Self Instructional Module had impact on knowledge of staff nurses regarding obstetrical drugs. The difference between mean pretest knowledge score of experimental and control group was non significant at p<0.05 level of significance.

In variables, total professional experience had impact on knowledge of staff nurses regarding obstetrical drugs as the mean posttest knowledge score of samples in experimental group was highest in samples having professional experience of 5-7 years (29.40) followed by samples having experience of 2-4 years, ≥8 years and ≤ 1 year (28.63, 27.25, 24.50) respectively. The mean posttest knowledge was statistically significant at p<0.05 level of significance as calculated by ANOVA test.

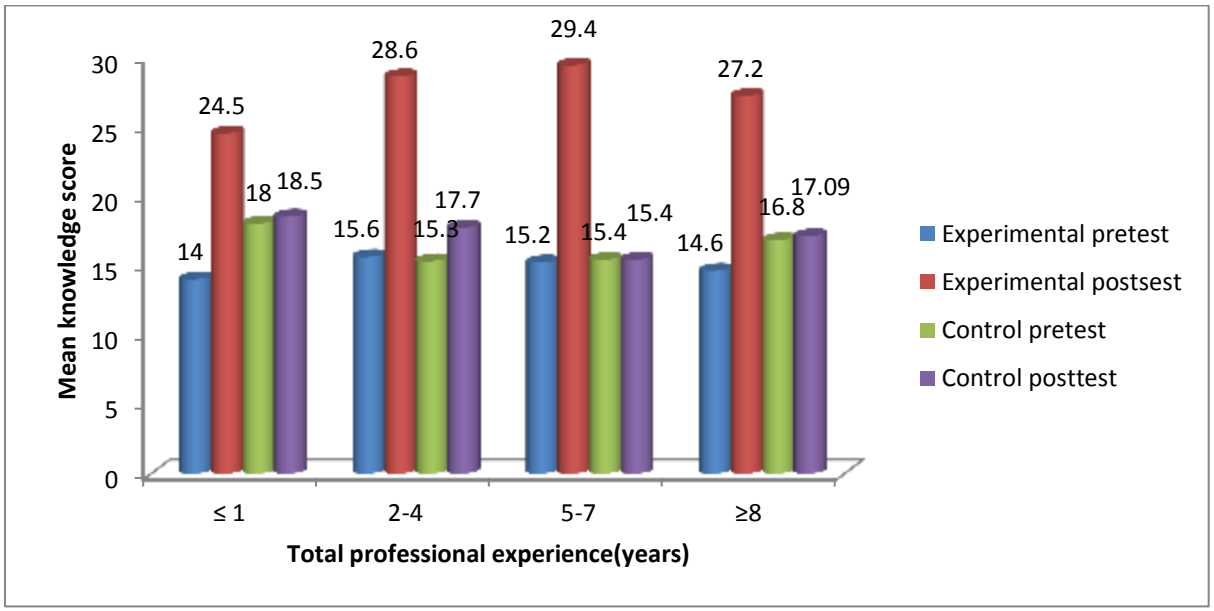

Figure-1: Association of pretest and posttest knowledge score among the staff nurses in experimental and control group according to Total professional experience.

DISCUSSION

Findings of the present study revealed that the mean pre-test knowledge was 15.06±1.99 in experimental group and 16.06±2.27 in control group. In experimental group, Maximum 19(63.33%) of staff nurses were having average and 11(36.67%) were having good pretest level of knowledge. In control group, Maximum 16(53.33%) of staff nurses were having good and 14(46.67%) staff nurses were having average pretest level of knowledge.

It is supported by a similar study conducted by Bijapurkar Manisha, Raddi Sudha A in which results showed that in pretest majority of 26 (86.6%) staff nurses had average knowledge, 2 (6.66%) had good knowledge, 1 (3.33%) had poor knowledge.[7]

In the present study Self Instructional Module was prepared on selected obstetrical drugs and provided to staff nurses in experimental group. This is supported by Teena, M Jose who investigated effectiveness of Self Instructional Module on selected Obstetric Drugs among Staff Nurses working in selected Maternal Hospitals of Mangalore.

Findings of the present study revealed that the mean post-test knowledge was found to be 27.93±2.56 in experimental group. Maximum 27(90%) of staff nurses had excellent and 3(10%) had good posttest level of knowledge after administration of Self Instructional Module. Mean posttest knowledge was 17.16±2.42 in control group and maximum 25(83.33%) staff nurses had good and 5(16.67%) staff nurses had average posttest level of knowledge.

It is supported by a similar study by Bijapurkar Manisha, Raddi Sudha A which showed that mean posttest level of knowledge was 38.26 and majority of staff nurses 26(86.66%) had good knowledge and 4(13.33%) had average knowledge which depicted that the level of knowledge of staff nurses increased from average to good. [7]

Findings revealed that staff nurses in experimental group had an overall gain in knowledge after administration of self instructional module. In control group, mean pretest knowledge was 16.06±2.27 and mean posttest knowledge was 17.16±2.42. Difference in pretest and posttest is statistically non significant at $p<0.05$ level. In experimental group, mean pretest knowledge was 15.06±1.99 and mean posttest knowledge was 27.93±2.56. Difference in pretest and posttest is statistically significant at $p<0.05$ level of significance. It was concluded that Self Instructional Module on selected obstetrical drugs had impact on knowledge of staff nurses regarding obstetrical drugs.

Similarly, Sabitha Sibbala revealed in a study that there was a significant change in the knowledge scores of the respondents from the pre- intervention to the post-intervention after administeration of Self Instructional Module. As pretest mean knowledge was 28.56±4.2 and posttest mean knowledge was 40.14±4.2. It concluded that the intervention was effective in increasing the knowledge of the respondents regarding selected obstetrical drugs.[8]

Findings of the present study revealed that the association of knowledge with these socio-demographic characteristics such as Age, Gender, Professional qualification, Religion, Total experience in OBG units, Exposure to any inservice education programme, Source of knowledge upgradation is found to be statistically non-significant except Total professional experience.

In present study, there is association of Total professional experience with posttest knowledge of experimental group which was found to be significant at $p<0.05$ level of significance. Similarly Bijapurkar Manisha, Raddi Sudha A study concluded that knowlegde increases with total professional experience.[7]

In present study, there is no association of Exposure to any inservice education programme with knowledge of staff nurses. It is supported by a similar study by Bijapurkar Manisha, Raddi Sudha A in which no association was found between Exposure to any inservice education programme with knowledge of staff nurses.[7]

In the present study, there is no association of Age, Professional qualification, Total experience in OBG units and Source of information with knowledge of staff nurses. This is contradicted by a study conduceted by Sabitha Sibbala, In which association of Age, Professional qualification, Total experience in OBG units and Source of information was present with knowledge of staff nurses.[8]

REFERENCES

1. Suliman Ali Al Youssif, Lobna Khamis Mohamed, Nabila Salim Mohamed. Nurses' Experiences toward Perception of Medication Administration Errors Reporting. IOSR Journal of Nursing and Health Science. 2013[cited 2014 Aug 14];1(4):56-70. Available from: URL:http:// www.iosrjournals.org
2. Bennett VR, Brown LK. Myles Textbook for midwives. 12ed. Edenburgeh: Churchill Livingstone; 1998. p.675.
3. Potter PA, Perry AG. Fundamentals of nursing: concepts, process, and practice. 4th ed. St. Louis: Mosby Yearbook; 1997.
4. Burroughs TE, Waterman AD, Gallager TH. Patients concerns about medical errors during hospitalization. Journal of Quality patient safety.2007 Jan; 33(1):5-14. Available from: URL: http://www.ncbi.nlm.nih.gov/pubmed PMID17283937
5. Schull PD. Nursing spectrum drug handbook. 9th International ed. United states:MC Graw Hill medical publishers;2009.

6. Datta Parul, Textbook of Pediatric nursing.2nd ed.New Delhi: Jaypee Brothers medical Publishers;2009. p.498-509.
7. Bijapurkar Manisha, Sudha May (2009). Effectiveness OD Self Instructional Module on the Knowledge of Obstetric Drugs among Nurses Working in Maternity wards; Journal of South Asian Federation of Obstetrics & Gynecology;May-Aug2009[online]; 1(2):60-62.
8. Sabitha Sibbala. The effectiveness of a self instructional module on selected obstetric drugs among staff nurses working in Jayanagar general hospital, Bangalore, South Karnataka.2005;14(139):159-4.