Effectiveness of Instructional Package on Knowledge Regarding Partograph Among Nursing Students

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Abstract— Partograph is a chart on which the salient features of labor are entered in a graphical form or it is a labor graph used to compare the progress of an individual women's labor in terms of dilatation and fetal descent with expected norms. A quasi-experimental research design (non-randomized control group design) was used to check the effectiveness of instructional package on knowledge regarding partograph among nursing students. Total 60 students (30 in experimental and 30 control group) were selected by using purposive sampling technique (non-probability sampling). Self- administered questionnaire administered to collect the data. Pre-test knowledge score of experimental 27(90.0%) and control group 30 (100%) has inadequate knowledge, 3(10.0%) of the students were having moderately adequate knowledge and 0(0.0%) of the students were having adequate knowledge regarding partograph. The post-test knowledge score of experimental group was, 0(0.0%) of the students were having Inadequate knowledge, 18(60.0%) of the students were having moderately adequate knowledge and 12(40.0%) of the students were having adequate knowledge regarding partograph. The pre-test mean± SD of the experimental group was 14.633 ± 2.5391 and 12.433 ± 2.8000 of control group. The mean± SD post-test knowledge score of experimental group was 23.633 ± 2.1413 and 9.767 ± 3.1369 of control group. The p value 0.000 and .001 of experimental and control group shows that there was a significant difference in the mean pre-test and post-test knowledge scores. Post-test result reveals that the interventional package was effective to increase knowledge regarding partograph among nursing students.

Index Terms- Instructional package, knowledge, partograph.

I. INTRODUCTION

Maternal mortality in a region is an indicator of women's reproductive health. Many women in their reproductive years die as a result of complications during and after pregnancy, childbirth, or abortion.[2] India's Ministry of Home Affairs has been using the Sample Registration System to estimate fertility and mortality, in addition to conducting Population Censuses and monitoring the implementation of the Registration of Births and Deaths Act across the nation (SRS). The SRS is the country's biggest demographic sample survey, and it uses a nationally representative sample to offer direct estimates of maternal mortality, among other things.[1] To better comprehend the country's maternal mortality status and the changes that have happened, particularly at the regional levels, states have been split into three groups: Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh & Uttarakhand, and Assam are "Empowered Action Group" (EAG) States; "Southern" States include Andhra Pradesh, Telangana, Karnataka, Kerala, and Tamil Nadu; and "Other" States comprise the other States/UTs. The fact that India's Maternal Mortality Ratio fell to 113 in 2016-18 from 122 in 2015-17 and 130 in 2014-2016 is promising.[2] In developing countries about 99% of deaths occur. While more than half of these occur due to the improper maintenance of partograph, which could have been prevented. [2] Partograph effectively prevents prolonged labor and thus reduces the risk of postpartum haemorrhage, sepsis, uterine rupture, operative interventions and improving neonatal outcomes and reducing foetal mortality and morbidity.[4] According to Lavender T., Hart A, and Smyth R.M, Partograph serves as a vital instrument for a midwife to monitor the stages of labour for early detection of difficulties in poor countries like India, where the majority of the population is from rural areas and there are no well-equipped hospitals.[3]

II. NEED FOR THE STUDY

All-round enterprises to strengthen policy intervention for maternal mortality started with the WHO Safe Motherhood Initiative in 1987 (Horton 2010). The aim was to increase awareness about the numbers of

women dying each year from complications of pregnancy and childbirth, with a target to reduce maternal morbidity and mortality by 50% by the year 2000 (Magon 2011).[4]

There were an estimated 28, 9000 maternal deaths worldwide in 2013, a decline of 45% from 1990. Sub-Saharan Africa alone accounted for 62% (179 000) of worldwide deaths, followed by southern Asia (24%; 69 000) (World Health Organisation (WHO) 2014). The African Union Commission and United Nations Population Fund (2013) report that the lifetime risk of dying because of pregnancy- or childbirth-related complications for women in Africa was 1 in 39, while in developed countries the risk is 1 in 3800.[4]

The world's countries have come together to set a new goal of reducing maternal mortality by 2030. "Lessen the worldwide Maternal Mortality Rate to less than 70 per 100,000 births, with no nation having a maternal mortality rate more than twice the global average," says one of the Sustainable Development Goals. The state government has taken a number of steps to help pregnant women. To encourage institutional deliveries, the government has created Janani Shishu Suraksha Karyakaram (JSSK), with main advantage to give fully free and cashless services to pregnant women at government health institutions in both urban and rural area, including normal deliveries and caesarean procedures, as well as sick new born up to one year after birth.[5]

III. REVIEW OF LITERATURE

A quantitative study at the SGRD Hospital in Vallah, Amritsar, a tertiary care medical centre. The convenience sample approach was used to choose 40 staff nurses working in the obstetric and gynaecological unit. The knowledge of staff nurses about partograph was assessed using a self-structured questionnaire. The Frequency, Percentage, Mean, Mean percentage, Standard Deviation, and Chi square were used to gather and analyse the data. According to the findings, 57.5 percent of staff nurses had average knowledge, 25% of staff nurses had strong knowledge, and 17.5 percent of staff nurses had bad understanding of Partograph.[6]

A descriptive research study was done to assess the knowledge on partograph among B.Sc. Nursing fourth year students of Bishop Benziger College of Nursing, Kollam. The study's major goal was to assess fourth-year B.Sc. Nursing students at Bishop Benziger College of Nursing in Kollam on their understanding of partograph. The study used 30 fourth-year nursing students from Bishop Benziger College of Nursing in Kollam as a sample. Descriptive statistics were used to analyse the acquired data. The majority of the samples (56.67 percent) had great knowledge, 36.67 percent had good knowledge, 6.66 percent had acceptable knowledge, and no one had low knowledge, according to the study.[7]

IV. STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of instructional package on knowledge regarding partograph among nursing students in selected nursing college of Himachal Pradesh.

V. OBJECTIVES

1. To assess the pre-test and post-test knowledge score regarding partograph among nursing students of experimental and control group.
2. To evaluate the effectiveness of instructional package on knowledge regarding partograph among nursing students of experimental group.
3. To compare the post-test knowledge score regarding partograph among nursing students of experimental and control group
4. To find out the association between the pre-test knowledge score regarding partograph of experimental and control group with selected socio-demographic variables.

VI. RESEARCH METHODOLOGY

A quantitative research technique was adopted for the present study. A quasi-experimental research design (non-randomized control group design) was appropriate for the present study. Research settings: The study conducted in:- Akal College of Nursing, Baru Sahib, District Sirmour, Himachal Pradesh (control group) Maa Hateshwari College of Nursing, District-Mandi, Himachal Pradesh (experimental group). Total 60 samples were selected for the present

study. It divided in to 2 groups, 30 in experimental group and 30 in control group. Sample size was calculated on the basis of previous study (A Quasi Experimental Study To Evaluate The Effectiveness Of Structured Teaching Programme On Partograph Among Nurses In Selected Maternity Units Of Bangalore). Purposive sampling technique (non-probability sampling) was adopted for the present study.

Data Collection Tool: Tool 1 Section A (8 items): Socio demographic data sheet

It includes: Age in years, religion, type of family, residence, clinical experience in OBG department, family monthly income (in rupees)/month, did you studied about partograph, if yes, then mention the source of information about partograph.

Tool 2 Section B (30 items): Self-structured knowledge questionnaire on partograph

It includes: Introduction, definition, aim, objective, functions, types, components, advantages of partograph, how to fill partograph and do's and don'ts. The permission from the Principal of Akal College of Nursing, Eternal University, Baru Sahib and from the Principal of Maa Hateshwari College of Nursing, Mandi, Himachal Pradesh. After that data collected from 60 participants. Informed written consent was taken from the samples after giving explanation about the purpose of the study. Data was collected through online mode (Google form) by sending link on their contact number.

VII. ANALYSIS

DESCRIPTION OF THE SOCIO DEMOGRAPHIC VARIABLES OF THE STUDY PARTICIPANTS

Table no. 4.1.1: Frequency and Percentage Distribution of Socio-Demographic Variables of the Study Participants

n=60

Sr. No.	Socio-demographic variables	Experimental group n_1=30 f(%)	Control group n_2=30 f(%)
1	Age in years a) 17-20 b) 21-24 c) 25-28 d) >28	7(23.3%) 23(76.6%) 0 (0.0%) 0 (0.0%)	2(6.7%) 28(93.3%) 0 (0.0%) 0 (0.0%)
2	Religion a) Hindu b) Muslim c) Sikh d) Christian e) Other	29(96.7%) 1(3.3%) 0 (0.0%) 0 (0.0%) 0 (0.0%)	24(80.0%) 2(6.7%) 2(6.7%) 2(6.7%) 0 (0.0%)
3	Type of family a) Nuclear family b) Joint family c) Extended family	22(73.3%) 8(26.7%) 0 (0.0%)	25(83.3%) 5(16.7%) 0 (0.0%)
4	Residence a) Rural b) Urban	24(80.0%) 6(20.0%)	12(40.0%) 18(60.0%)
5	Clinical experience in OBG department a) No experience	30(100.0%)	30(100.0%)

Sr. No.	Socio-demographic variables	Experimental group n$_1$=30 f(%)	Control group n$_2$=30 f(%)
	b) 1 month	0 (0.0%)	0 (0.0%)
	c) 1-2 months	0 (0.0%)	0 (0.0%)
	d) > 2 months	0 (0.0%)	0 (0.0%)
6	Family monthly income (in rupees)/month a) ≤ 10,000 b) 10,001 – 15,000 c) 15,001 – 20,000 d) ≥ 20,001	3(10.0%) 9(30.0%) 6(20.0%) 12(40.0%)	4(13.3%) 3(10.0%) 4(13.3%) 19(63.3%)
7	Did you studied about partograph a) Yes b) No	27(90.0%) 3(10.0%)	30(100.0%) 0 (0.0%)
8	If yes, then mention the Source of information Books and Journals Workshop and conference Teacher and Health workers Internet and Mass media	13(43.3%) 12(40.0%) 5(16.7%) 0 (0.0%)	17(56.7%) 13(43.3%) 0 (0.0%) 0 (0.0%)

PRE-TEST AND POST-TEST KNOWLEDGE SCORE REGARDING PARTOGRAPH AMONG NURSING STUDENTS OF EXPERIMENTAL AND CONTROL GROUP

Table no. 4.1.2: Frequency and percentage distribution of Pre-test and post-test knowledge score of experimental and control group.

n=60

Sr. No.	Category score	Pre-test		Post- Test	
		Experimental Group n$_1$=30 f(%)	Control group n$_2$=30 f(%)	Experimental Group n$_1$=30 f(%)	Control group n$_2$=30 f(%)
1	Inadequate knowledge (<18)	27(90.0%)	30(100.0%)	0(0.0%)	30(100.0%)
2	Moderately adequate knowledge (18-23)	3(10.0%)	0(0.0%)	18(60.0%)	0 (0.0%)
3	Adequate knowledge (24-30)	0(0.0%)	0(0.0%)	12(40.0%)	0 (0.0%)

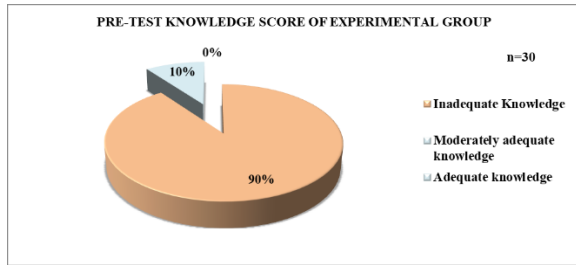Maximum score = 30 Minimum score = 0

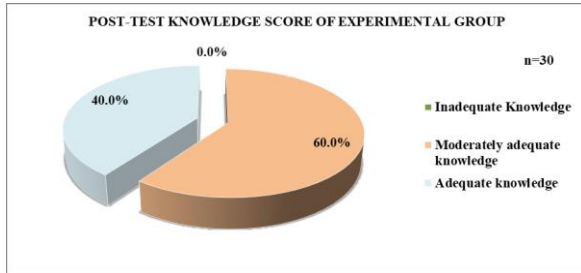Figure 4.1: Pie chart was showing Pre-test knowledge score of experimental group.

Figure 4.2: Pie chart was showing Post-test knowledge score of experimental group.
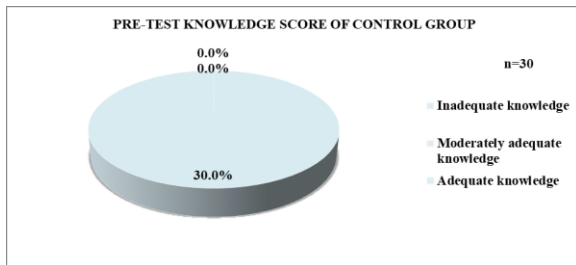

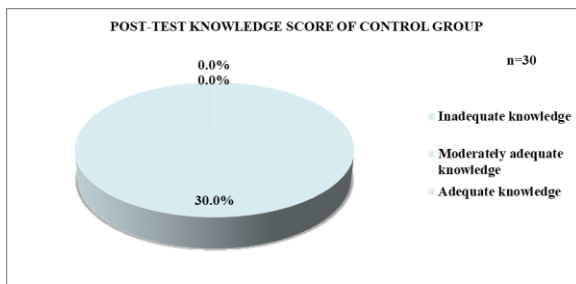Figure 4.3: Pie chart was showing Pre-test knowledge score of control group.

Figure 4.4: Pie chart was showing Post-test knowledge score of control group.

EFFECTIVENESS OF INSTRUCTIONAL PACKAGE ON KNOWLEDGE REGARDING PARTOGRAPH AMONG NURSING STUDENTS OF EXPERIMENTAL GROUP

Table-4.1.3: Mean And Standard Deviation Of Pre-Test And Post-Test Knowledge Score Regarding Partograph Among Nursing Students Of Experimental Group.

n=60

Sr. No.	Knowledge Score	Pre-test (Mean ±SD)	Post-test (Mean ±SD)	df	"t" value	P Value
1	Experimental Group n_1=30	14.633 ± 2.5391	23.633 ± 2.1413	29	15.808	.000*
2	Control Group n_2=30	12.433 ± 2.8000	9.767 ± 3.1369	29	-3.633	.011

*Significant at the level of $p<0.05$

COMPARE THE POST-TEST KNOWLEDGE SCORE REGARDING PARTOGRAPH AMONG NURSING STUDENTS OF EXPERIMENTAL AND CONTROL GROUP

Table-4.1.4: Compare the Post-Test Knowledge Score of Experimental and Control Group.

n=60

Sr. No.	Knowledge Score	Experimental Group n_1=30	Control Group n_2=30	Mean difference	"t" Value	P Value
1	Pre-test (Mean ±SD)	2.900 ± .3051	3.000 ± .0000	-.1000	-1.795	.078
2	Post-test (Mean ±SD)	23.633 ± 2.1413	9.767 ± 3.1369	3.8667	19.997	.000*

*Significant at the level of $p<0.05$

ASSOCIATION BETWEEN THE PRE-TEST KNOWLEDGE SCORE REGARDING PARTOGRAPH OF EXPERIMENTAL AND CONTROL GROUP WITH SELECTED SOCIO-DEMOGRAPHIC VARIABLES

Table no. 4.1.5: Association between Pre-Test Knowledge Score and Selected Socio Demographic Variable In Experimental Group.

n=60

Sr. No.	Socio-demographic variables	Pre-test Knowledge score of experimental group						χ^2	df	P Value
		Inadequate Knowledge		Moderately adequate Knowledge		Adequate Knowledge				
		f	%	f	%	F	%			
1	Age in years a) 17-20 b) 21-24 c) 25-28 d) >28	6 21 0 0	20.0% 70.0% 0% 0%	1 2 0 0	3.3% 6.7% 0% 0%			.186	1	.666
2	Religion a) Hindu b) Muslim c) Sikh d) Christian e) Other	26 1 0 0 0	86.7% 3.3% 0% 0% 0%	3 0 0 0 0	10.0% 0% 0% 0% 0%			.115	1	.735
3	Type of family a) Nuclear family b) Joint family c) Extended family	20 7 0	66.7% 23.3% 0%	2 1 0	6.7% 3.3% 0%			.076	1	.783
4	Residence a) Rural b) Urban	22 5	73.3% 16.7%	2 1	6.7% 3.3%			.370	1	.543
5	Clinical experience in OBG department a) No experience b) 1 month c) 1-2 months d) > 2 months	27 0 0 0	90.0% 0% 0% 0%	3 0 0 0	10.0% 0% 0% 0%			Const.		
6	Family monthly income (in rupees)/month a) ≤ 10,000 b) 10,001 – 15,000 c) 15,001 – 20,000 d) ≥ 20,001	3 8 5 11	10.0% 26.7% 16.7% 36.7%	0 1 1 1	0.0% 3.3% 3.3% 3.3%			.679	3	.878
7	Did you studied about partograph a) Yes b) No	24 3	80.0% 10.0%	3 0	10.0% 0.0%			.370	1	.543

Sr. No.	Socio-demographic variables	Pre-test Knowledge score of experimental group						χ^2	df	P Value
		Inadequate Knowledge		Moderately adequate Knowledge		Adequate Knowledge				
		f	%	f	%	F	%			
8	If yes, then mention the Source of information							1.011	2	.603
	Books and Journals	11	36.7%	2	6.7%					
	Workshop and conference	0	0.0%	0	0.0%					
	Teacher and Health workers	11	36.7%	1	3.3%					
	Internet and Mass media	5	16.7%	0	0.0%					

Statistically not significant p<0.05   Const.- Constant

Table no. 4.1.6: Association between Pre-Test Knowledge Score and Selected Socio Demographic Variable in Control Group

n=60

Sr. No.	Socio-demographic variables	Pre-test Knowledge score of control group						χ^2	df	P Value
		Inadequate Knowledge		Moderately adequate Knowledge		Adequate Knowledge				
		f	%	f	%	f	%			
1	Age in years a) 17-20 b) 21-24 c) 25-28 d) > 28	2 28 0 0	6.7% 93.3% 0% 0%	0 0 0 0	0% 0% 0% 0%			Const.		
2	Religion a) Hindu b) Muslim c) Sikh d) Christian e) Other	24 2 2 2 0	80.0% 6.7% 6.7% 6.7% 0.0%	0 0 0 0 0	0% 0% 0% 0% 0%			Const.		
3	Type of family a) Nuclear family b) Joint family c) Extended family	25 5 0	83.3% 16.7% 0%	0 0 0	6.7% 3.3% 0%			Const.		
4	Residence a) Rural b) Urban	12 18	40.0% 60.0%	0 0	0% 0%			Const.		
5	Clinical experience in OBG department a) No experience b) 1 month	30 0	100.0% 0%	0 0	0% 0%			Const.		

Sr. No.	Socio-demographic variables	Pre-test Knowledge score of control group						χ^2	df	P Value
		Inadequate Knowledge		Moderately adequate Knowledge		Adequate Knowledge				
		f	%	f	%	f	%			
	c) 1-2 months	0	0%	0	0%					
	d) > 2 months	0	0%	0	0%					
6	Family monthly income (in rupees)/month a) ≤ 10,000 b) 10,001 – 15,000 c) 15,001 – 20,000 d) ≥ 20,001	4 3 4 19	13.3% 10.0% 13.3% 63.3%	0 0 0 0	0% 0% 0% 0%			Const.		
7	Did you studied about partograph a) Yes b) No	30 0	100.0% 0%	0 0	0% 0%			Const.		
8	If yes, then mention the Source of information a) Books and Journals b) Workshop and conference c) Teacher and Health workers d) Internet and Mass media	17 0 13 0	56.7% 0% 43.3% 0%	0 0 0 0	0% 0% 0% 0%			Const.		

Statistically not significant p<0.05   Const. - Constant

CONCLUSION

The present study was to evaluate the effectiveness of instructional package on knowledge regarding partograph among nursing students in selected nursing college of Himachal Pradesh. Post-test result reveals that the interventional package was effective to increase knowledge regarding partograph among nursing students. So educating the B.Sc. Nursing students regarding the partograph and thorough knowledge regarding it will help them in future so that they can use it perfectly during their clinical posting as well as in their own professional career. It was the most effective intervention and was concerned with effectiveness of interventional package on knowledge regarding partograph among nursing students.

REFERENCES

[1] Census of India Website: Office of the Registrar General & Census Commissioner, India. Censusindia.gov.in. 2021. Available from: https://censusindia.gov.in/

[2] SPECIAL BULLETIN ON MATERNAL MORTALITY IN INDIA 2016-18 [Internet]. Censusindia.gov.in. 2020. Available from: https://censusindia.gov.in/vital_statistics/SRS_Bulletins/MMR%20Bulletin%202016-18.pdf

[3] Lavender T, Hart A, Smyth RMD: Effect of partogram use on outcomes for women in spontaneous labour at term. Cochrane Database Syst Rev. 2008, 4: 1-24.

[4] World Health Organization partograph in management of labour. World Health Organization Maternal Health and Safe Motherhood Programme. Lancet. 1994 Jun 4; 343(8910):1399-404. PMID: 7910888

[5] Himachal Pradesh Government. Himachalpr.gov.in. 2021 Available from: http://himachalpr.gov.in/PressReleaseByYear.aspx?Language=1&ID=21552&Type=2&Date=10/04/2021

[6] Kaur R. A study to assess the knowledge regarding Partograph among staff nurses. Int J Pregn & Chi Birth. 2019;5(2):78–81. DOI: 10.15406/ipcb.2019.05.00151

[7] Greeshma P.V and Annal Angeline (2018) 'A study to assess the knowledge on partograph among fourth year b.sc. Nursing students in bishop benziger college of nursing, kollam', International Journal of Current Medical And Pharmaceutical Research, 04(5), pp. 3279-3281.