

A study to assess the effectiveness of structured teaching program on knowledge regarding immediate newborn care among staff nurses who working in maternity unit of selected hospital of Vadodara

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Abstract: Aim: Approximately 1 million neonatal deaths occur each year due to perinatal asphyxia. It is one of the leading causes of perinatal and neonatal mortality and is associated with a very high incidence of irreversible neurologic damage. To assess the existing knowledge regarding immediate newborn care among staff nurses. To reduce the rate death of newborn knowledge of staff nurses play a vital role to save a newborn life and future of nation.

Study design: Pre Experimental One Group Pretest Posttest Research Design.

Place and study duration: DHIRAJ GENERAL HOSPITAL, Piparia, Whaghodiya, Vadodara, Gujarat, India. From 3rd February 2017 to 11th February 2017.

Method and material: No probability Convenient sampling technique used in the study. Sample size was 50 Staff nurses who Working In Maternity Unit in selected hospital of vadodara. The Structured teaching program was conducted in the study. There was two tools used in the study. Those includes 1) demographic questionnaire which contain 5 item were used to collect the sample characteristics includes Age, educational qualification, residence, year of experience, source of information. And 2) Self administrated knowledge questionnaire on immediate new born care which includes 30 MCQ questions.

Result: After having pre test of the 50 staff nurses the result of pretest shows that majority 30(60%) staff nurses have moderate knowledge, 19(38%) staff nurses have inadequate knowledge and 1(2%)staff nurse has adequate knowledge. After provision of structed teaching session and arrange post test. Post test results shows that majority 50(100%) staff nurses have adequate knowledge, 0(0%) staff nurses have inadequate knowledge.

Conclusion: The nursing professional working in maternity units of hospitals play a key role in taking care of newborns for which enhancement of knowledge regarding immediate newborn care is at most important.

Key Words: Assess, Effectiveness, Structured teaching program, Knowledge, Immediate Newborn care, Staff nurses, Maternity unit.

1. INTRODUCTION

“Saving the new born, Save the Future”

First 28 days of life after birth is called as neonatal period. Normal characteristics of healthy newborn are, born between 38-42 weeks, cries immediately after birth, quickly adopts with extra uterine environment, having an average birth weight and no any congenital anomalies or disorder.¹

Each and every newborn need immediate newborn care to reduce the risk of illness and enhance their growth and development.²

Immediate newborn care include, cord cutting and clamping, Drying the baby, Immediate newborn assessment, Maintenance of airway clearance and breathing, Coding the baby temperature of newborn , Breast feeding and immunization.³

Nurses can save the life of newborn and future of country. Nurses have a chance and ability to save a life of newborn with her competence and experience. So nurses should be aware and have knowledge regarding newborn care.

2. OBJECTIVES:

- To assess the existing knowledge regarding immediate newborn care among staff nurses.
- To evaluate the effectiveness of structure teaching program on knowledge regarding immediate newborn care among staff nurses.
- To find the associate between pretest and posttest knowledge score of staff nurses with selected demographic variables.

3. HYPOTHESIS:

H₁- There will be significant difference between pre-test knowledge score and post-knowledge score among staff nurses who are working in maternity unit, regarding immediate newborn care.

H₂- There will be significant association between pre-test knowledge score with selected demographical variable.

4. LITERATURE REVIEW:

Sanjay Shinde (2015). A study was conducted to assess the knowledge regarding the newborn care among staff nurses working in Kumareshwar hospital and medical research center, Bagalcot. In pre-experimental study, a total of 50 subjects selected through simple random sampling technique. The study employed pre-experimental one group pre-test design while data was collected by structured knowledge questionnaire. It was found that majority 30 (60%) of study subjects had medium knowledge and 20, (40%) of subject had adequate knowledge regarding newborn care.⁴

Asia Suliman Mohamed Ahmed (M.S.C Nursing) (2015). A study was conducted to assess the knowledge and practice of nurses midwives regarding immediate healthy new born care in Khartoum and Khartoum north teaching hospital (labour room). Method used for study was cross sectional (observational). Sample size was 50 nurses. The study show that 92.5% from the group under the study did training course in immediate care of the new born .About the steps of immediate new born care 45% known five steps, 14% only knew three steps and 20% known two steps .About when start immediate care of new born 5% say before birth, 40% during birth and 55% say after birth. Concerning the practice observational checklist show that the application of universal precaution very poor (wear sterile gloves 37.5%, wear sterile gown 25% and mask 60%).⁵

Ayiasi RM et al (Nov 2011). A study was conducted to assess the knowledge regarding newborn care among health care workers (nursing assistant, general nurse or midwife). A cross-sectional study was conducted. Sample size was 183 nurses. 183 health workers were interviewed: general nurses (39.3%), midwives (21.9%) and nursing assistants (38.8%). Respectively, 53.6%, 46.5%, 7.1% and 56.3% were considered to have adequate knowledge in prenatal care, newborn care, management of neonatal infections and identifying/stabilizing LBW babies. Being a general nurse was significantly associated with having adequate knowledge in identifying and stabilizing LBW babies ($p < 0.001$) compared to being a nursing assistant. Level of care being hospital/health center level IV was not significantly associated with having adequate knowledge in prenatal or newborn care with reference to health centers of level III/II.⁶

5. MATERIALS:

5.1 TOOL FOR DATA COLLECTION

TOOL-1 –Demographic questionnaire-

Five item were used to collect the sample characteristics includes Age, educational qualification, residence, year of experience, source of information.

TOOL-2: Self administrated knowledge questionnaire on immediate new born care.

5.2 DEVELOPMENT AND DESCRIPTION OF THE TOOL

The tool used for research study was structured knowledge questionnaire which was prepared after an extensive review of literature and discussion with the experts, to assess the effectiveness of structured teaching programme on the knowledge regarding immediate new born care among staff nurse.

5.3 DESCRIPTION OF THE TOOL

The structured knowledge questionnaire consists of 2 sections covering the following areas.

SECTION A

This section consists of ten items seeking information on demographic data which include age in year, educational qualification, residence, year of experience, source of information.

SECTION B

Self administered knowledge questionnaire was used to assess the knowledge regarding immediate new born care among staff nurse. The total number of questions were 30.

5.4 SCORING KEY

Each correct answer was given a score of one and wrong answer scores of zero. The maximum score was 30 and the minimum score was zero.

5.5 DEVELOPMENT OF STRUCTURED TEACHING PROGRAMME (STP)

After extensive review of literature structure teaching program immediate new born care was developed. The steps adopted in the development of STP were-

Preparation of the 1st draft of the teaching program – The content and lesson plan of the planned teaching program was prepared after reviewing available research and non-research literature. The area covered in the structured teaching program was as follows;

- Cord cutting and clamping
- Drying the baby
- Immediate new born assessment
- Maintenance of airway clearance and breathing
- Coding the baby
- Providing warmth or maintaining body temperature of new born
- Breastfeeding
- immunization

Validity of content and lesson plan –The content and lesson plan were validated by guide. The response was summarized.

Preparation of the final draft of content and lesson plan- Final draft of the content and lesson plan were developed incorporating the suggestion given by guide.

5.6 PROCEDURE FOR DATA COLLECTION

The investigator obtained formal approval from selected hospital of Vadodara district. The investigator selected 50 samples by using nonprobability convenient sampling technique. After a brief self-introduction the investigators explain the purpose of the study and obtain consent from them. On the first day(3rd Feb 2017 and 4th Feb 2017) pretest was conducted. All the five investigators had been divided in different ward (Labor room, NICU, PICU, ANC, PNC, Pediatric ward) for collecting demographic data and structured knowledge questionnaire on immediate newborn care. On 3rd Feb 2017, pretest on 46 sample was conducted and structured teaching session was conducted in group. On 4th Feb 2017, pretest on 4 sample was conducted and structured teaching session was conducted in group. The time required was 30-40 minutes.

The pretest knowledge score was found. After that, structured knowledge questionnaire was given to them on the same day. Then after a period one week, post test was conducted for the same samples. On 10th Feb 2017 post test of 46 sample was conducted, whose pretest had conducted on 3rd Feb 2017. On 11th Feb 2017 posttest of 4 sample was conducted, whose pretest was conducted on 4th Feb 2017.

6. METHOD:

6.1 RESEARCH APPROACH

The research approach adopted for the study was evaluative approach as the researcher is going to evaluating the effectiveness of planned teaching programmed on immediate new born care.

6.2 RESEARCH DESIGN

The research design adopted for this study was one group pretest, posttest design.

6.3 VARIABLES UNDER THE STUDY

Independent variable:

In the present study the independent variable is structured teaching program on immediate new born care.

Dependent variable:

In the present study the dependent variable is knowledge of staff nurses on immediate new born care.

6.4 SELECTED DEMOGRAPHIC VARIABLE:

This consists of structured tool to assess the knowledge of staff nurse in maternity unit regarding immediate new born care.

6.5 SETTING OF THE STUDY

The study was conducted at the Dhiraj General Hospital of Waghodiya of Vadodara district.

6.6 TARGET POPULATION

For the study the population was staff nurse in working selected hospital of Vadodara district.

6.7 SAMPLE SIZE

The sample of the study was 50 staff nurse in selected hospital of Vadodara district.

6.8 SAMPLING TECHNIQUE

In this study the sampling technique was non probability convenient sampling.

6.8 SAMPLE SELECTION CRITERIA

Inclusion criteria

1. The Nurses who are willing to take part in the study.
2. Staff nurses who has completed Health Attended course, G.N.M & B.Sc. Nursing courses.

Exclusion criteria

1. Staff nurses those who are not present at the time of data collection.
2. Staff nurses those who are having previous knowledge regarding immediate new born care.

7. DISCUSSION:

The present study was undertaken to evaluate the effectiveness of STP on immediate new born care among staff nurses. Pre experimental research design with single group pretest posttest design approach was adopted in order to achieve the objectives of the study. The samples were selected using convenient sampling technique. The sample size was 50 and the data was collected from them by using a structured knowledge questionnaire before and after administration of STP.

8. ANALYSIS:

The data is 27analysed and presented under the following sections:

SECTION A: Description of Sample Characteristics

Baseline data containing sample characteristics would be 27analysed using frequency and percentage.

SECTION B: Assessment of Pretest Knowledge Score of staff nurses

SECTION C: Analysis of Effectiveness structured Teaching Program staff nurses Students Regarding immediate newborn care.

SECTION D: Association of demographic variable with pre-test knowledge score of staff nurses.

SECTION A: DESCRIPTION OF SAMPLE CHARACTERISTICS

This section deals with the description of the demographic characteristics of the staff nurses and has been presented in the form of frequency and percentage.

In this section demographic profile of the respondents have been displaced to show the frequency distribution of the various attributes of demographic variables, with the help of SPSS version 20.0 frequency, percentage and cumulative percentage have been calculated and the outcomes are presented in table number 3.

Despite the majority 27(54%)staff nurses responds belongs to the age group of <25 years of age while in the age group of 25-30 years 17(34%) staff nurses responds belongs to this category and 30-35 years 3(6%)staff nurses responds and above 35 years 3(6%)staff nurses respondents observed in this particular study.(Figure no.2)

The finding related to educational qualification of the staff nurses shows that higher response of the educational qualification ANM were18(36%)staff nurses, GNM were 14(28%)staff nurses, and B.Sc. were 10(20%)staff nurses and health attendant were 8(16%)staff nurses.(Figure no.3)

The present study depicts that 34(68.00%) staff nurses was having 1 to 3 years of experience, where 10 (20.00%)staff nurses was having 4 to 6 years of experience, 5(10.00%)staff nurses was having more than 10 years of experience and 1(2.00%)staff nurses was having 7 to 9 years of experience.(Figure no. 4)

It is observed from the present study that majority 36(72.00%)staff nurses belonged to the urban area, 14(28.00%)staff nurses were belonged to the rural area.(Figure no.5)

It is found in the present study that 34 (68.00%)staff nurses got information from books, 9(18.00%)staff nurses got information from Poster, 5 (10.00%)staff nurses got information from television and 2(4%) staff nurses got the information from others about immediate newborn care.(Figure no.6)

SECTION B: ASSESSMENT OF PRETEST KNOWLEDGE SCORE OF STAFF NURSES

Mean of pretest knowledge score is 16.08, Mean % of pretest knowledge score is 53.6 and Standard deviation of pretest score is 3.53. Table no.4.

Category wise distribution of existing knowledge of staff nurses regarding immediate newborn care is presented in table no.5.

Majority 30(60%) staff nurses have moderate knowledge, 19(38%) staff nurses have inadequate knowledge and 1(2%)staff nurse has adequate knowledge.(Figure no.7)

Description of overall Post-test knowledge score

Category wise distribution of knowledge of staff nurses regarding immediate newborn care after structured teaching program is presented in table no 6.

Majority 50(100%) staff nurse have adequate knowledge, 0(0%) staff nurses have inadequate knowledge and 0(%)staff nurse has moderate knowledge. (Figure no.8)

SECTION C: ANALYSIS OF EFFECTIVENESS PLANNED TEACHING PROGRAM

H₁- There will be significant difference between pre-test knowledge score and post-knowledge score among staff nurses who are working in maternity unit, regarding immediate newborn care.

Difference between pretest and posttest knowledge can be assessed by comparison of pretest and posttest knowledge score of staff nurses which is described in table no 7 and figure no 9.

SECTION D:ASSOCIATION OF DEMOGRAPHIC VARIABLE WITH THE LEVEL OF PRE-TEST KNOWLEDGE SCORE OF DIPLOMA INTERNSHIP NURSING STUDENTS.

Association of Demographic Variable with the Level of Pre-Test Knowledge Score of Staff Nurses are described in table no.8.

7. FINDINGS:

The findings are discussed under the following sections:

SECTION: A Description of Sample Characteristic

Baseline data containing sample characteristics would be analysed using frequency and percentage.

SECTION: B Assessment of Pre Test Knowledge Score of staff nurses

Analysis of existing knowledge of staff nurses students regarding immediate newborn care.

SECTION: C Analysis of Effectiveness structured Teaching Program staff nurses Students Regarding immediate newborn care.

Comparison of pre-test and post-test knowledge scores of staff nurses regarding immediate newborn care.

SECTION: D Association of demographic variable with the level of pre-test knowledge score of staff nurses.

SECTION: A Description of Sample Characteristic

Despite the majority 27(54%) responds belongs to the age group of <25 years of age while in the age group of 25-30 years 17(34%) responds belongs to this category and 30-35 years 03(6%) responds and above 35 years 3(6%) respondents observed in this particular study.

The finding related to educational qualification of the staff nurses how that higher response of the educational qualification ANM 18 is (36%), GNM were 14 (28%), and B.Sc. 10 (20%) and health attendant were 8 (16%).

The present study depicts that 34 (68.00%) have 1 to 3 years' experience, were 10 (20.00%) have 4 to 6 years experience , 5 staff nurse have more 10 years' experience 5 (10.00%) and 1 (2.00%) was having 7 to 9 years' experience.

It is observed from the present study that majority 36 (72.00%) belonged to the urban area, 14 (28.00%) were belonged to the rural area.

It is found in the present study that 34 (68.00%) got information from books , 9 (18.00%) got information from Poster , 5 (10.00%) got information from television and 2 (4%) got the information from others about immediate newborn care.

SECTION: B Assessment of Pre Test Knowledge Score of staff nurses

The data from the above table shows that, in pre-test staff nurses were having on average 53.6% knowledge regarding immediate newborn care and mean score was 16.08±3.53.

SECTION: C Analysis of Effectiveness structured Teaching Program staff nurses Students Regarding immediate newborn care.

The data from the above table shows that in pretest, staff nurses were having on average 53.6 % knowledge regarding immediate newborn care 16.08 ±3.53 and in post-test, average 92.73% knowledge regarding immediate newborn care and mean score was 27.82±1.41.

T calculated value is 17.47 which is more than the tabulated value of 2.00 at 0.05 level of significance. So we accept H_1 and conclude that there is significant difference between pre-test and post- test knowledge score of staff nurses. It shows the very highly significant association between pre-test and post-test knowledge score regarding immediate newborn care. Hence research hypothesis H_1 is accepted.

Section D: Analysis of association of the pre-test knowledge score with selected demographic variables.

The data in the above cited table shows that the χ^2 value computed between the knowledge level of mothers regarding worm infestations, and selected socio-demographic variables.

Variables of age ($\chi^2=4.27$), Educational qualification ($\chi^2=8.70$), years of experience ($\chi^2=5.06$), residence ($\chi^2=0.47$), source of information ($\chi^2=10.78$) was found significant at 0.05 level of significance. There is no significant association between knowledge of staff nurses with selected sociodemographic variables such as Year of experience, residence, age in year, educational qualification and source of information.

8. RESULT:

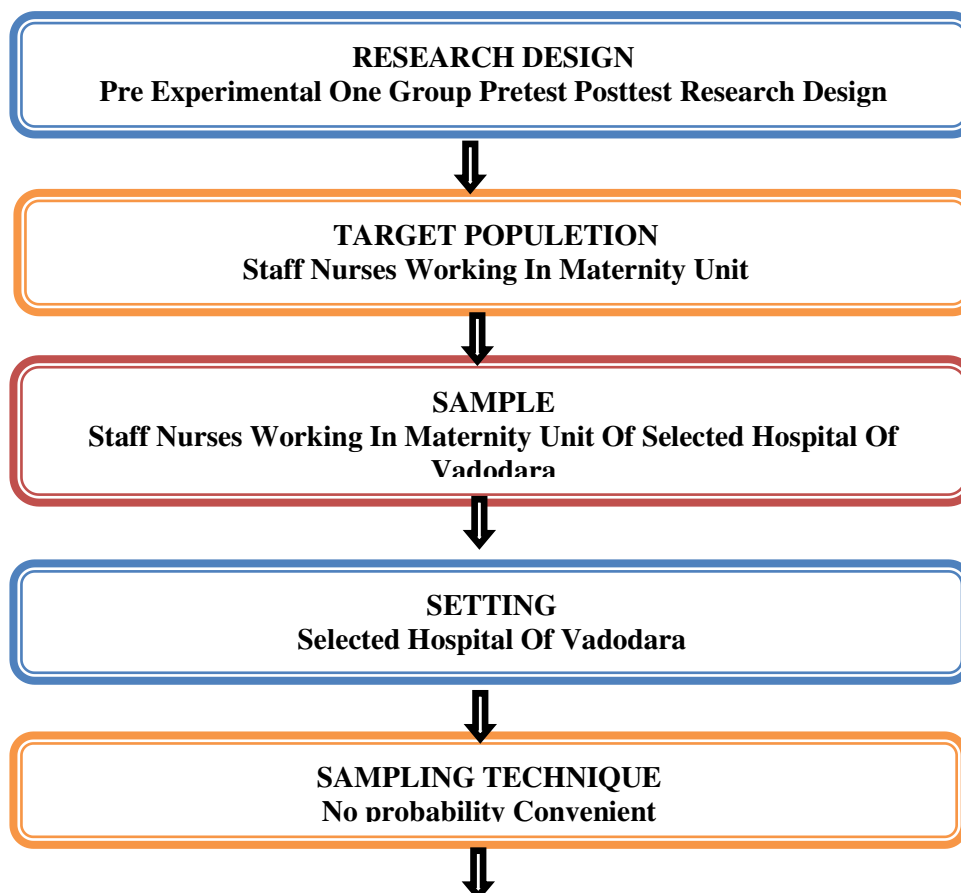
Hypothesis H_1 is accepted because the obtain t value 17.47 is greater than the table value 1.61 at 0.05 level of significance. Hence the obtain t value is significance which reflex that there is significance between pretest and posttest knowledge scores of staff nurses regarding immediate newborn care.(Table no.7)

Variables of age ($\chi^2= 4.27$), Educational qualification ($\chi^2= 8.70$), years of experience ($\chi^2= 5.06$), residence ($\chi^2= 0.474$), source of information ($\chi^2=10.78$) was found no significant at 0.05 level of significance , Thus it can be interpreted that there is a no significant association between knowledge of staff nurses with their age, educational qualification, year of experience, residence and source of information.

9. RECOMMENDATION:

A similar study can be done to assess to practice of staff nurses regarding immediate newborn care. An experimental comparative study can be conducted with control group using modified and expensing protocols on immediate newborn care. A similar study can be done on larger samples with different setting for generalization of study findings.

FIGURES



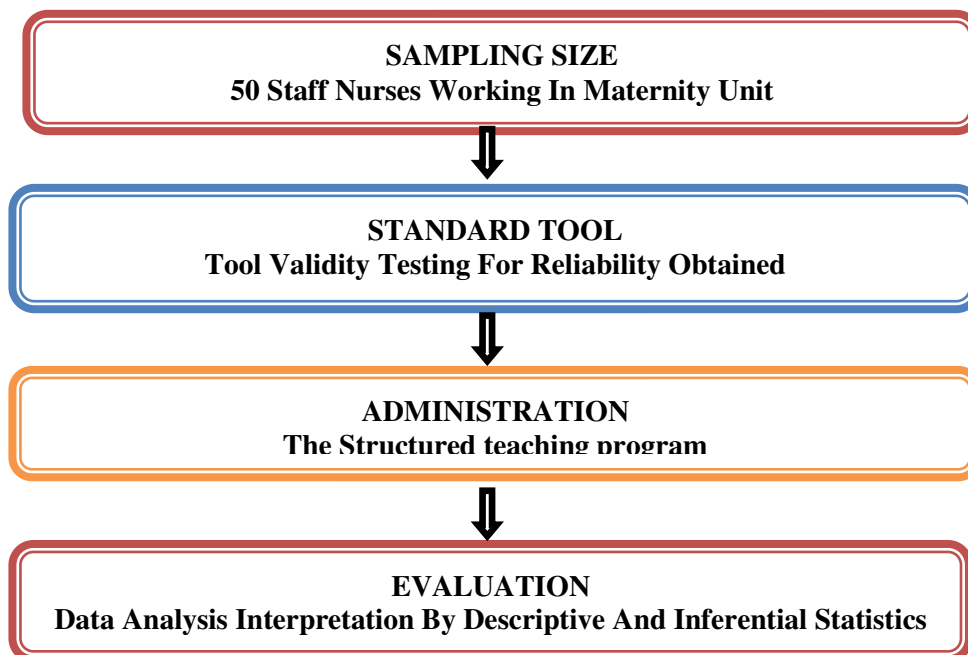


Figure No:1 Schematic diagram of research methodology.

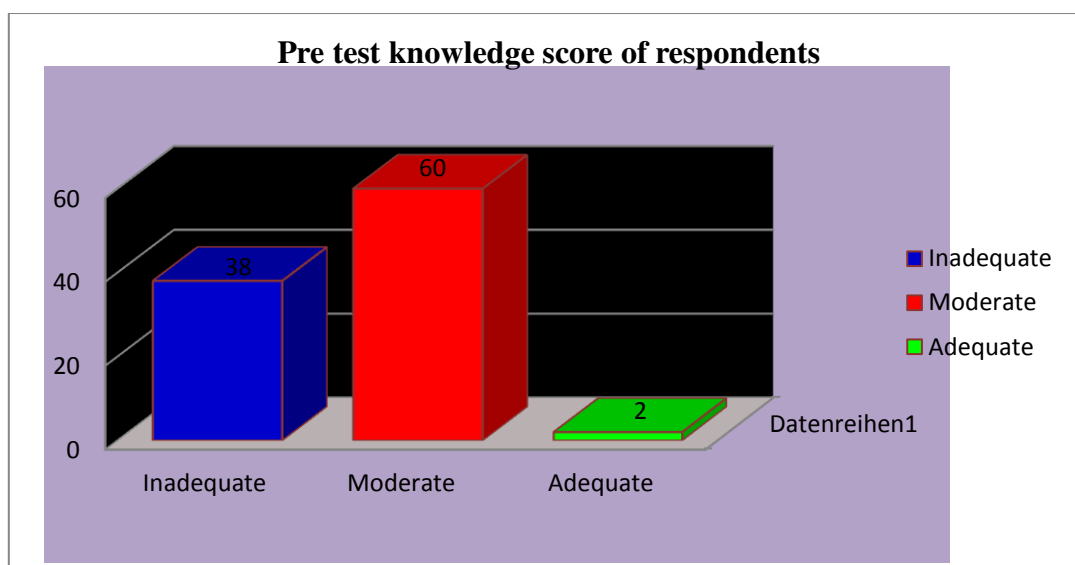


Figure No:7 Overall pre-test knowledge score.

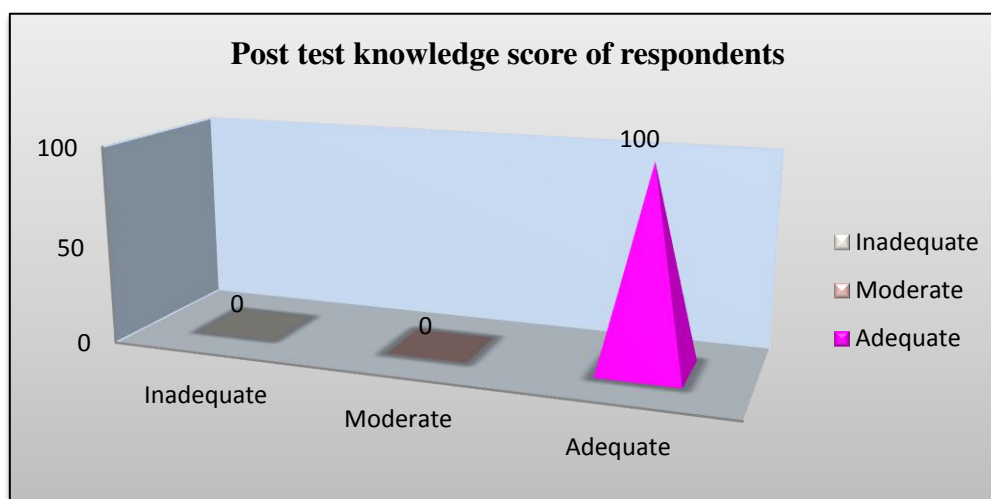


Figure No:8 Overall post-test knowledge score

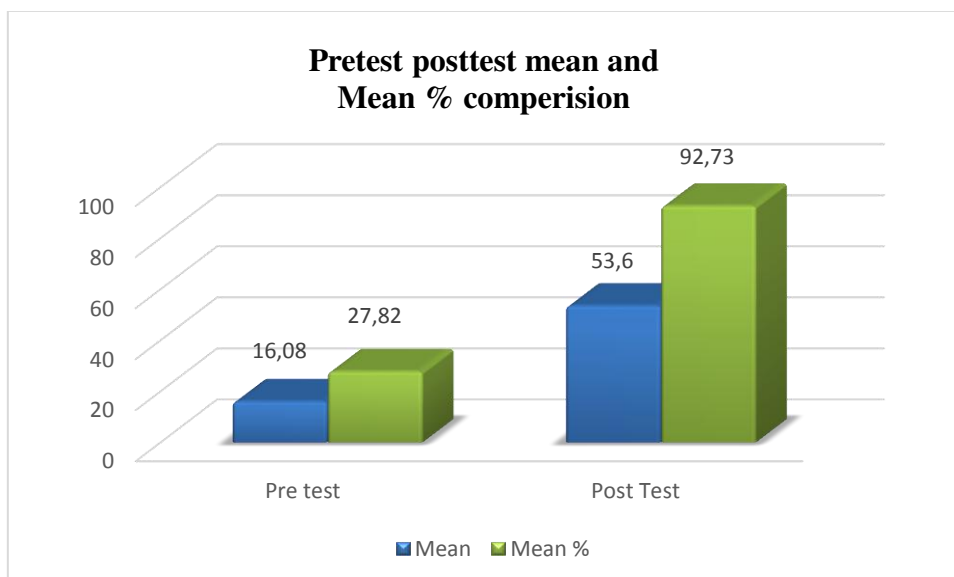


Figure No:9 Pre-test and Post-test mean and mean% comparison.

TABLES

SR.NO	CHARACTERITIC	CATEGORIES	FREQUENCY	PERCENTAGE
1	AGE IN YEAR	<25	27	54
		25 – 30	17	34
		30 – 35	3	6
		Above 35	3	6
2	EDUCATION QUALIFICATION	Health attendant	8	16
		ANM	18	36
		GNM	14	28
		B.Sc	10	20
3	EXPEIANCE YEAR	1 to 3 years	34	68
		4 to 6 years	10	20
		7 to 9 years	1	2
		Above 10 Years	5	10
		TOTAL	50	100%
4	RESIDANCE	Urban	36	72
		Rural	14	28
5	SOURCE OF INFORMATION	Books	34	68
		Poster	2	4
		Television	9	18
		Others	5	10

Table No:3 Frequency and percentage distribution of staff nurse according to their personal characteristics

(N=50)

Knowledge aspect	Mean	Mean%	SD
Pretest	16.08	53.6	3.53

Table No:4 Mean and SD of pretest knowledge score.

Pre-test Knowledge Score		
	Frequency	Percentage
Inadequate	19	38
Moderate	30	60
Adequate	1	2
TOTAL	50	100%

Table No:5 Description of overall pretest knowledge score

Post-test Knowledge Score		
	Frequency	Percentage
Inadequate	0	0
Moderate	0	0
Adequate	50	100
TOTAL	50	100%

Table No:6 Description of overall Post-test knowledge score.

N=50

Knowledge Aspects	Mean	Mean %	SD	t Value	Inference
Pre-test Score	16.08	53.6	3.53	17.47	Significant
Post-test score	27.82	92.73	1.41		

0.05 level of significance, df=49

Table No:7 Comparison of the pre-test and post-test knowledge score of staff Nurses.

(N=50)

Demographic Variable	Inadequate	Moderate	Adequate	χ^2	D.F	Inference
1. Age in year	<25	1	24	4.27	6	NS
	25 – 30	0	13			
	30 – 35	0	3			
	Above 35	0	3			
2. Education qualification	Health Attendant	0	5	8.70	6	NS
	ANM	1	15			
	GNM	0	14			
	B.Sc.	0	9			
3. Year of experience	1 to 3 years	1	31	5.06	6	NS
	4 to 6 years	0	7			
	7 to 9 years	0	1			
	Above 10 Years	0	4			
4. Residence	Urban	1	31	0.47	2	NS
	Rural	0	12			
5. Source of Information	Books	0	30	10.78	6	NS
	Poster	0	2			
	Television	0	7			
	Others	1	4			

0.05 level of significance

Table No:8 Association of Demographic Variable with the Level of Pre-Test Knowledge Score of Staff Nurses

10. CONCLUSION

The present study assessed the knowledge regarding immediate newborn care among staff nurses who working in maternity unit of selected hospital of Vadodara and found that nursing staff had inadequate knowledge regarding immediate newborn care. After the structured teaching program was given on immediate newborn care, there was significant improvement in knowledge regarding immediate newborn care of nurses regarding immediate newborn care. The study concluded that structured teaching program was effective in improving the knowledge of staff nurses regarding immediate newborn care.

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