"A study to evaluate the effectiveness of planned teaching programmeon infant CPR among 3rd year B.ScNursingStudents in selected college of nursing ,Kolkata."

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ABSTRACT: Introduction: *Evaluative study was undertaken to evaluate the effectiveness of planned teaching programme on infant CPR .The purpose of the study was to develop a planned teaching programme on infant CPR for improving knowledge and practice among 3rd Year B.Sc Nursing students there by promoting the standard of infants care through risk minimization and prompt management while cardiac arrest . The conceptual framework for the study was based on modified J.W.Kenny's open system model (sources J. Kenny system model ,WHO SEARO technical publication1985* ***)Material and Methods:*** *One group pre test pos test pre experimental design and non probability convenience samplining technique was adopted for the study .Validation of the PTP along with the tools were to given seven experts . The reliability co rrelation co efficient was found 0.85 of structured knowledge questionnaire and 0.83 for observation checklist .The main study was conducted at B.M.Birla College of Nursing among thirty six 3rd year B.Sc nursing students .* ***Result:****The study finding showed that mean pre test knowledge score was 15.83 and the mean post test knowledge score was 24.75. The mean pre test practice score was 15.58 and the mean pre test practice score was 25.41 . In the t test ,obtained 't' value of knowledge and practice was (50.41) and (19.89) respectively which higher than the table value (2.04) , at 0.05 level of significance and 35 degree of freedom .There were significant positive co rrelation between knowledge and practice (r=0.95) at < 0.05 level of significance and 35 degree of freedom .There were significant knowledge and practice gain among third year B.Sc nursing students after attaining the PTP on infant CPR . The study also showed that there was no association of students knowledge with their age but students knowledge was associated with exposure to mass media . Students practice is not associated with age and exposure to mass media .* ***conclusion :*** *So it could be concluded that the PTP was found effective to improve knowledge and practice . The findings showed that there was significantly increase of knowledgeand practice of B.SC 3rdyear Nursing students on Infant CPR and PTP was found as an effective methods of teaching .*

Key Words: *Cardiac-arrest, Infant-CPR ,knowledge ,PTP ,Practice ,System model.*

INTRODUCTION

'Today's children are tomorrow's citizen and healthy citizen make up a wealthy nation.'--John F. Kennedy

We have dream for making wealthy nation and this motto will be fulfilled if children become balanced of physical,mental, spiritual combination and consistency . So,professional nurse and society have a big responsibility to develop healthy citizen and wealthy nation . In a hospital predominantly nurse takes the responsibility to maintain health of the sick infants . The fundamental responsibility of a nurse is to provide promotive ,preventive ,curative and rehabilitative care to an individual ,families and groups in community .The nurse who is working in a general ward ,critical care unit often encounter a situation where a patients life is in danger. Nurses are the health care personnel who always remain with their patient and recognize early the threat of life risk. Often standard care of children are not adequate due to lack of various knowledge , wrong practices and lack of resources . Usually student nurse are the future nurse and client's health is largely depends on this future caregiver . Development of knowledge and practices among the student nurses is important for maintaining standard care through appropriate management of cardiac arrest by team approach [1]

Current infant population of the world is 1.8 billion out of 7.2 billion of total world population and in India, current infant population is 0.31 billion out of 1.27 total population . Infants (0-1 year) constitute 2.9% of the total population in India. Although the chances of survival of infants has improved 50% in the last twenty years. About 40% of total infants mortality occurs in the first year of life mainly due to respiratory failure and cardiac failure, which could be manageable by effective cardio-pulmonary

resuscitation[1].With the infant population growth rate at 0.39%, India is predicted to have more than 0.38 billion infant by the end of 2030 .[2]

Infant mortality rate means the number of deaths of infants under one year old in a given year per 1,000 live births in the same year; included is the total death rate, and deaths by sex, male and female. This rate is often used as an indicator of the level of health in a country. Current 'World Infant Mortality Rate' : **41.61 deaths/1,000 live births** (2011 est.),male: 43.52 deaths/1,000 live births (2011 est.),female: 39.55 deaths/1,000 live births (2011 est.). In India infant mortality rate :47.57 deaths/1000live births ,male : 46.18 deaths/1000 live births ,female : 49.14 deaths /1000 live births (2011 est). In spite of the availability of modern child care facilities and several governmental campaign being run to save the lives of the infants ,all the effort to reduce the escalating infant death rate in West Bengal have proved a failure .According to the figures released by sample registration system in December 2011 ,the infant mortality rate in West Bengal stands at 31 deaths for every 1,000 child births[3]

An prospective population-based cohort study conducted by Dianne L Atkins et al to determine the epidemiology and outcomes from 'Out-of-Hospital Cardiac Arrest ' in infants .The results showed that patients were in the age groups of : <1 year (infants; n=277) .The incidence of paediatric cardiac arrest was 8.04 per 100 000 a person-years and Occurred for 32% of infants versus 24% of children versus 4% of adolescents, p<0.0001. In this North American multi-site database the overall population-based incidence of non-traumatic pediatric OHCA was 8/100,000 person-years and was an order of magnitude higher among infants (73/100,000) compared with either children (4/100,000) or adolescents (6/100,000). The incidence of OHCA in infants was more than the incidence of adults. In addition, pediatric patients were more likely to survive to discharge than adults (6.4% versus 4.5%, p=0.03). Specifically, children and adolescents were twice as likely to survive to hospital discharge as infants and adults.[4]

A descriptive and exploratory study was conducted by Sardo PM et al to develop an educational practice of BLS with the sample size of 24 students of B.Sc third year Nursing Undergraduate Course in a University in the Southern region of Brazil. The results showed that BLS allows the educator to evaluate the academic learning process in several dimensions, functioning as a motivating factor for both the educator and the student, because it allows the theoretical-practical integration in an integrated learning process.[5]

A quasi-experiment study was conducted by Testa M to assess the CPR knowledge of 112 nurses via a questionnaire using valid multiple-choice questions. An observatory standard checklist was used and CPR performance on manikins was evaluated to assess psychomotor skills (before the course baseline, after the course, after 10 weeks and then 2 years after the 4 hours CPR training course). Scores were based on a scale of 1 to 20. A mean baseline score of 10.67 (SD=3.06), a mean score of 17.81 (SD=1.41) after the course, 15.26 (SD=3.17) 10 weeks after and 12.86 (SD=2.25), 2 years after the 4 hours CPR training course was noticed. Acquisition of knowledge and psychomotor skills of the nurses following a four-hour training programme was significant. However, significant deterioration in both CPR knowledge and psychomotor skills was observed 2 years after the training programme among 42 nurses. The study findings present strong evidence to support the critical role of repetitive periodic CPR training courses to ensure that nurses were competent, up to date and confident responders in the event of a cardiac arrest.[10]

PROBLEM STATEMENT:"A study to evaluate the effectiveness of planned teaching programme on infant CPR among 3rd year B.ScNursingStudents in selected college of nursing ,Kolkata."

OBJECTIVES

1.To assess the knowledge on infant CPR among 3rd Year B.Sc Nursing students as measured by structured knowledge questionnaire.

2. To assess the practice of 3rd Year B.Sc Nursing student on infant CPR as measured by Structured observation checklist .

3. To develop and validate the structured teaching programme on infant CPR of 3rd Year B.Sc Nursing students .

4. To find effectiveness of planned teaching programme in terms of gain in post test knowledge score.

5. To find effectiveness of planned teaching programme in terms of gain in post test practice score

6. To find the association between pre test knowledge level and selected variables :- Age ,exposure to mass media.

7. To find the association between pre test practice level and selected variables :-Age ,exposure to mass media .

8. To determine the relationship between knowledge and practices of 3rd Year B.Sc Nursing students on infant CPR .

HYPOTHESIS All hypothesis will be tested at 0.05 level of significance .

- H_1: The mean post test knowledge score of B.Sc 3rd year students is significantly higher than the mean pre-test knowledge score
- H_2 : The mean post test practices score of B.Sc 3rd year students is significantly higher than the mean pre-test practices score.
- H_3: There is a significant association between the pre test knowledge level on infant CPR with that of selected variable .
- H_4: There is a significant association between the pre testpractice level on infant CPR with that of selected variable .
- H_5: There is a significant relationship between knowledge and practices of 3rd year B.Sc Nursing students on infant CPR.

MATERIAL AND METHODS: In this study suitable approach is **pre-experimental approach** . It focuses on evaluating on knowledge and practice on infant CPR through planned teaching programme via direct questioning and observation from the sample. .
Pre- experimental one group pre-test – post-test design will be used for the study.

$$\mathbf{O_1 \quad X \quad O_2}$$

O_1 – Pre-test

X – planned teaching proragmme.

O_2 – Post- test

Setting of the study: Setting for this study B.M.Birla College of Nursing, Rasopunjo ,Bhakra heart ,Near byMillitary Cum ,Kolkata -104.

Population : The population selected for the study are 3rd year B.Sc students in a selected college ,West Bengal.

Sample and Sampling technique : Total sample size was 37. Non probability convenience Sampling technique was used for the study .

Sample selection criteria :

Inclusion criteria :

1. B.Sc nursing students studying in 3rd year .
2. Willing to participate in study
3. Present in the college during data collection period .

Exclusion criteria

1. Indisposed 3rd year B.Sc Nursing student .

Development of tool for data collection

Tool -1 Demographic proforma

A two item structured demographic proforma was used to measure the back ground data includes a). Age b) . The frequency of receiving information on infant CPR through T.V, magazines ,news paper and Radio. There was no scoring for these items .

Tool-2- Structure knowledge questionnaire on infant CPR

It consisted of 26 'Multiple Choice Questions' based on blue print which covers the total content of structured teaching programme on infant CPR . All questions had three (3) alternatives responses and all items had only one correct answer . Each correct answer carried one score (1) .So the maximum score of the knowledge questionnaire was twenty six and minimum score was zero . Data collection technique was self report .

Tool-3 - Observation checklist on infant CPR

It consisted of 28 items which have two option 'YES ' and 'NO ' .Observer will put a tick mark (√) in the 'Yes' column if the participant demonstrates as per observation criteria and place a (√) mark in the 'No' column, if the participant does not demonstrate according to 'observation criteria'. Each correct behavior carries one (1) score. So the maximum score of the practice on infant CPR was twenty eight and minimum score was zero . Observation methods used for data collection technique .

Items analysis : The items of the structured knowledge questionnaire were analyzed to find out the difficulty index and discrimination index . out of 26 items ,14 items had difficulty index between 60% -70%

and 12 items have 75-80% .These all 26 items had discriminatory index between 0.1-0.4, so all items were retained .

Content Validity of tool :

The validity of tool and content was established by seeking opinion from Seven experts .The content and lesson plan with the demographic proforma ,structured knowledge questionnaire ,observation checklist on infant CPR steps along with statements of the problem, objectives ,the blue print ,answer key and criteria checklist was submitted to the expert from field of child health nursing ,medical surgical nursing ,critical care nursing and child health speciality doctors . Among seven experts ,4 were from child health ,2 from medical surgical speciality and one from critical care departments .The experts were requested to give their opinions regarding relevance ,accuracy and adequacy of the items for further modifications.

Tool –I

In demographic proforma contained 4 items . There was 71.42% agreement for items 3 and 4 ,so both the item was deleted . There was 85.76% agreement for items 1 and 2 ,so both items were retained .

Tool –II

Knowledge questionnaire contained a total item of 26 and 21 items had 100% agreement ,so all those items were retained .There were 87.7% agreement for item no 4,6,11,15 and 18 ,so these item also retained after suggested modification in term of correction of grammatical mistakes ,changes of sequence etc.

Tool –III

Observation checklist contained total items of 30 . All items had 100% agreements and two experts suggest to include a steps regarding location of infant chest compression position .So 27 items were retained and 3 items deleted out of 30 and one more items is added according to the suggestion from experts and my research guide .

Pre testing

The knowledge questionnaire was pre tested on five 3 rdyear B.sc Nursing students in Peerless College of Nursing to determine the clarity ,ambiguity and time required for completing the questionnaire . There was no difficulty for the nursing students to understand and total time taken 17 minutes (average) to complete the questionnaire .

Reliability of tool

Reliability of the tool was done by administering the questionnaire to 20 third yearB.Sc nursing students in Peerless College of Nursing , South Kolkata -94 . The reliability for of tool –II was calculated using spilt half technique followed by spearman Brown prophecy formula and the reliability coefficient was found 0.85 , so it can be interpreted that the tool –II is reliable and tool had internal consistency .

To test the reliability of tool III ,interrator method was used for checking equivalence of tool .The reliability was found 0.83 ,so it can be interpreted that the tool was reliable.

Development of planned teaching programme:

The steps followed in the development of planned teaching programme were –

- Reviewing of literature .
- Seeking suggestion from experts .
- Preparation of content and lesson plan on infant CPR .
- Establishing Validity of the content and lesson plan .
- Preparation of final content and lesson plan.

Content on Infant CPR for 3rd year B.Sc Nursing students.

- Definition of cardiac arrest and CPR.
- Causes of Cardiac arrest .
- Indication of CPR .
- Articles require for CPR.
- Steps of CPR –Basic life support.
- Assessment after CPR.
- Complications.

Validity of content and lesson plan

The drafts of the planned teachingprogramme along with sample A.V aids and criteria checklist were submitted to the same seven experts . There was 100% agreements for the formulation of objectives ,90% on content area ,85% agreements on organization of content , 100% agreements on presentation and language and 85% agreements on used articles and practicability. There were suggestions to grammatical

mistakes ,practicability and given emphasis on high quality CPR . Final draft of the content and lesson plan were developed incorporating the suggestions given by guided.

Pilot study : The pilot study conducted at Shova Rani Nursing College ,Kolkata from September 13/09/2013 to 20/09/2013 among 3rd year B.Sc nursing students on the 1st day ,followed by administration of planned teaching programme and post test on 8 th day .

Ethical implication

- Permission taken from principal of B.M.Birla College of Nursing for main study .
- Permission was taken from principal of KPC Medical College and Hospital for pilot study
- Permission was taken from principal of Peerless college of Nursing , South Kolkata -94 for reliability .
- Consent from participant
- Anonymity and confidentiality of the participant maintained by the researcher .

Plan of Data analysis

Findings will be presented in the form of tables and figures.

- Demographic data will be presented in terms of frequency, percentage, mean and standard deviation.
- Paired 't' test would be used to test the significance of difference between the mean pre test and the mean post test knowledge scores .
- Paired 't' test would be used to test the significance of difference between the mean pretest and the mean post testpractice scores
- The association between selected demographic variables and mean pre-test knowledge score and practice score regarding CPR will be determined by Chi square test.
- The relationship between knowledge and practices on infant CPR will be determined by pearson's co-rrelation co-efficient method .

RESULTS:

Section -1 Sample characteristics

This section describes the characteristics of 36 samples in term of their age and exposure to mass media . The d was summarised to describe the sample characteristics in terms of their age, exposure to mass media on infa CPR, using descriptive statistics : in frequencies and percentage .,among 36 students ,3 (8.33%) belongs to the a group of < 20 years and 33 (91.66%) belongs to the age group of 20 -22 years. Exposure to mass media among students ,12 (33.33%)were exposed to occasionally and 24 (66.66 %) students not at all exposure to mass media

Section –II Distribution of sample based on pre test and post test knowledge Score

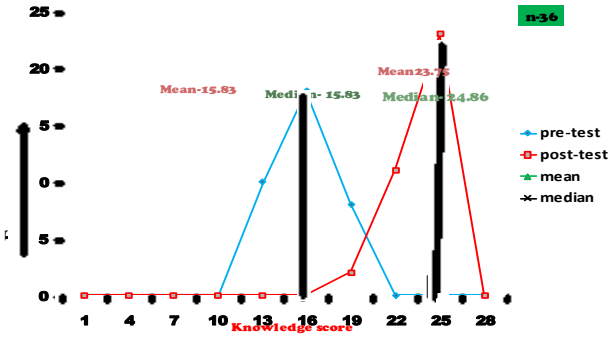

Fig-1 Frequency polygon showing pre-test and post-test knowledge scores

F.g -1 Depicts the frequency polygon of the pre test and post test knowledge scores of 36 students . In both pre test and post test frequency polygon, the mean and median lies close to each other . The figure further showed that the post test knowledge scores curve falls at the right side of the pre test knowledge scores curve indicating a higher score range during posttest compared to pre test . In the frequency curve of the pre test scores the mean lies at the same position of median which indicates the score are not skewed (0) .In the post test frequency curve the mean lies at the right side of the median indicating the scores are negatively skewed (-1.8). Thus, it can be concluded, that there was a considerable gain in knowledge scores.

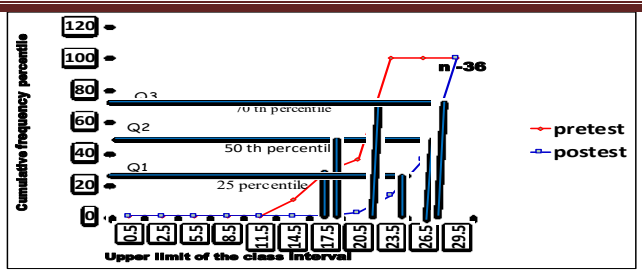

Fig no 2: Ogive showing the pre-test and post-test knowledge scores

In the above figure 2, the knowledge scores of the post test ogive lies to the right side of the pre test score ,ogive over the entire range, indicating that post test knowledge scores are consistently higher than the pre test knowledge score. The pre testandpost test knowledge scores 25th percentile Q1 were 14.2 and 22.40 respectively, 50th percentile Q2 were 15.83 and 24.15 and 75th percentile Q3 were 19.89 and 25.32 respectively. It is also seen that knowledge scores in posttest Ql, Q2 and Q3 are much higher than pretest Ql, Q2 and Q3. There is a difference between post test knowledge score and pre test knowledge score by the distance separating these lines. Thus it can be concluded that there was a considerable gain in knowledge .

Table- 1: Comparison between range ,mean ,median and standard deviation of pre test and post test knowledge score . n=36

knowledge score	Range	Mean	Median	Standard deviation
Pre test	7	15.83	15.83	2.11
Post test	7	23.75	24.86	1.78

Table - 2 Frequency distribution of pre-test and post-test practice score on infant CPR. n=36

Practice Score range	Pre-test practice Score		Post-test practice Score	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
27-29			16	44.%
24-26			13	36.%
21-23			4	11.%
18-20	6	16.66%	2	5.5%
15-17	19	52.77%	1	2.7%
12-14	11	30%		
9-11				
6-8				
3-5				
0-2				

The data presented in table 2 showed that practice score is more scattered in the post-test .

Table -3 Comparison between range ,mean ,median and standard deviation of pre-test and post-test practice score on infant CPR among 3rd year B.SC Nursing studentsn=36

Practice score	Range	Mean	Median	Standard deviation
Pre-test	7	15.58	15.60	5.08
Post - test	11	25.41	26	3.49

Data presented in table -3 showed that mean post-test practice score(25.41)**was** higher than the mean pre-test practice score **(15.58)** .The mean and median of practice score was close to each other in the pre-test as well in the post-test .Standard deviation of the pre-test and post-test practice score **was 5.08 and 3.49** respectively which indicates that the post test practice scores were less dispersed than the pre-test practice scores .

Section –III Effectiveness of planned teachingprogramme on infant CPR :-This section presents the analysis and interpretation of data to describe area wise knowledge gain and effectiveness of PTP on infant CPR among 3rd year B.Sc Nursing students .

Table -4 Area wise knowledge gain of 3rd year B.Sc Nursing students on infant CPR

Sl no	Area of Knowledge Score	Maximum possible score	Pre-test mean score %	Post-test mean %	Actual Gain	Possible gain	Modified gain
1	**Area I:** Introduction with anatomy and physiology of CVS	6	60.18%	93.98%	33.48	39.82	0.84*
2	**Area II:**Definition of cardiopulmonary arrest and CPR	2	62.5%	91.66%	29.16	36.5	0.80
3	**Area III:** Causes of cardiac arrest	4	63%	92.36%	29.36	36.12	0.81
4	**Area IV:** Steps of basic life support	14	54.76%	92.46%	38.30	45.24	0.84*

The data presented in table4 showed that the knowledge gain was maximum in the area I and IV :Introduction with anatomy and physiology of CVS and comparatively less knowledge gain was in the area II : Definition of cardio-pulmonary arrest and CPR . The table also showed that knowledge gain was satisfactory in all areas.

Effectiveness of planned teaching programme on infant CPR

Table -5

Mean , mean difference, SDD ,SEMD and 't' value of pre test and post test knowledge scores of 3rd year B.Sc nursing student on infant CPR. n=36

Knowledge scores	Mean	Mean difference	Standard Difference (SD_D)	Standard Error (SE_{MD})	't'value
Pretest	15.83				
		8.52	1.018	0.169	**17.6***
Post test	23.75				

***t (35) =2.04, p< 0.05**

Data presented in table -5 depicted that the mean pre-test and post-test knowledge score was found 15.83 and 23.75 respectively .The mean post-test knowledge score was higher than the mean pre-test knowledge score .The obtained 't' value (17.6)was higher than the table value (**2.04) and it was found significant at 0.05 le**vel of significance and 35 degree of freedom. Hence, the null hypothesis is rejected and research hypothesis is retained indicating there were significant gain of knowledge score among 3 rd year B.Sc Nursing students after attaining the PTP on infant CPR .So, it could be concluded, that the PTP was found effective to improve knowledge also .

Table 6 Mean , mean difference, SD_D ,SE_{MD} and 't' value of pre test and post test practice scores of 3rd year B.Sc Nursing student on infant CPR . n=36

Practice scores	Mean	Mean difference	Standard difference (SD_D)	Standard error (SE_{MD})	't'value
Pre test	15.58				
		9.69	2.9	0.487	**19.89***
Post test	25.41				

***t (35) =2.04, p< 0.05**

Data presented in table -6 depicted that the mean pretest and posttest practice score was found 15.58 and 25.41 respectively .The mean post test practice score was higher than the mean pretest practice score. The obtained 't' value **(19.89)**was higher than the table value (**2.04.) and it was found significant at 0.05 le**vel of significance and 35 degree of freedom. Hence, the null hypothesis is rejected and research hypothesis is retained indicating there were significant gain of practice score among 3 rd year B.Sc nursing students after attaining the PTP on infant CPR .So, it could be concluded, that the PTP was found effective to improve practice .

Section –IV Association between pre-test level of knowledge on infant CPR and selected variables i.eage , exposure to mass media.

Chi-square test was computed in order to determine the significance of the association between pre-test knowledg with selected variables. To find the association between pre-test knowledge level of nurses and selected variable the null hypothesis was stated as:

H_{03} .There is no significant association between pre test knowledge and selected variables .

H_{04}: There is no significant association between pre test practice and selected variables

Table –7 Association of knowledge level with selected variables . n=36

Sl no	Variable	Below median (<15.83)	Above median (>15.83)	Chi square value	df	Significant at 0.05 level
1.	Age					
	a) <20 years	2	1			
	b) 20-22 years	19	14	0.102	1	Not significant
	c) 23 and above	0	0			
2.	Exposure to mass media					
	a) Daily	0	0			
	b) Occasionally	10	2			**Significant**
	c) Never	11	13	4.62	1	

$\chi^2_{(1)}$- 3.84<0.05 level significance

Data presented in the table -7 showed the result of chi test to find association between students, knowledge and selected variables :age ,exposure to mass media .The obtained chi value (0.102) is less than the table value for the variable age and knowledge . So, it can be inferred that students knowledge is not associated with age . The second variable exposure to mass media is associated with knowledge as the obtained $\chi^2_{(1)}$value (4.62) is more than the table value .

Table –8 :- Association of practice level with selected variables . n=36

Sl no	Variable	Below median (<15.60)	Above median (>15.60)	Chi square value	Df	Significant at 0.05 level
1.	Age					
	d) <20 years	2	1			
	e) 20-22 years	17	16	0.252	1	NS*
	f) 23 and above	0	0			
2.	Exposure to mass media					
	d) Daily	0	0			
	e) Occasionally	9	3			NS*
	f) Never	10	14	3.56	1	

$\chi^2_{(1)}$- 3.84<0.05 level significance ,*NS-not significant

Data presented in the table -8 showed the result of chi square test to find association between students practice and selected variables :age ,Exposure to mass media .The obtained chi value for age 0.252 and exposure to mass media was 3.56 respectively which is less than the table value.Hence, the null hypothesis is rejected and research hypothesis is retained, So it can be inferred that students practice is not associated with age and exposure to mass media .

Section –V - The relationship between Pre-test knowledge and practices score on infant CPR

In order to find the correlation between pretest knowledge and pretest practices score on infant CPR, the null hypothesis was stated as ---

H_{04}- There is no significant relations between pretest knowledge score and practice

Table -9 Co-rrelation co-efficient between pre-test knowledge and practice score .n=36

Slno	Pretestscore	Mean	Correlationcoefficient	Significance
1.	Knowledge	15.16	**r=0.9513**	Significant
2.	Practice	15.58		at p< 0.05

r= 0.325 at df (35) ,0.05 level of significance

The table-9 showed that obtain r value (0.9513) is significantly higher than table value.

DISCUSSION:

1) Assessment of knowledge and practices on infant CPR among 3rd Year B.Sc Nursing students :-

The findings of the present study indicated that the half of the participant's 18 (50%) pre test knowledge score and the more than half of the participant's 19 (52.77%) pre testpractice score were within the range of 15-17. The mean pre test knowledge score and the mean pre test practice score were 15.16 and 15.58 respectively .These findings were supported by the following study :----

A quantitative study was conducted by Silande, Optutas on assessment of knowledge and skills of registered nurses regarding cardiopulmonary resuscitation at Muhimbili National Hospital .The study employed a quantitative research methodology using a descriptive cross-sectional design. Study population was all registered nurses working in Muhimbili National Hospital. The study findings showed that, 70% of respondents reported to have undergone training on CPR during their basic nursing training , 18% of respondents reported to have in service training on CPR. Seventy percent (70%) of the respondents were not able to mention fundamental approaches of the BLS. In this study, 45 % of the respondents could only answer seven to nine cognitive questions on CPR correctly, therefore, they have moderate knowledge on CPR .On skill assessment, 217 participants (77%) demonstrated low to poor skill on performances of CPR practice. In the present study also showed that the half of the participant's 18 (50%) pre test knowledge score and the more than half of the participant's 19 (52.77%) pre test practice score were within the range of 15-17. So, it concluded, that ,both study showed that basic knowledge -practice lack on infant CPR among nurses and students nurses.[6]

2)Effectiveness of planned teaching programme in terms of gain in knowledge score and practice score.

To find the effectiveness of PTP on infant CPR paired t test was done .The findings of the present study showed that the 't'value computed for knowledge and practice was significant , ('$t_{(35)}$ -17.6 , '$t_{(35)}$'19.89,p< 0.05). These findings were supported by the following study :----

A study was conducted by Pramila D'Souza to assess the effectiveness of Planned Teaching Programme (PTP) on Polycystic Ovarian Syndrome (PCOS) among adolescent girls in selected high schools at Mangalore. A pre-experimental one group pre-test post-test design was used for the study among 100 adolescent girls selected by convenience sampling technique. PTP was administered after the assessment of pre-intervention . Post intervention knowledge was assessed on the 7th day of the administration of PTP through the same structured knowledge questionnaire. The results of this study in general showed, the significant difference between the mean pre-test and post-test knowledge score (t =7.02, p<0.05).The significant difference was found in between all the areas. Therefore, PTP was effective in gaining knowledge of adolescent girls on PCOS which was evident in post-test knowledge score. The present study also showed that the 't'value computed for knowledge and practice was significant('$t_{(35)}$ -17.6 , '$t_{(35)}$'19.89,p< 0.05). So, this discussion from both study concluded that, planned teaching programme was effective in improving student nurses knowledge and practice on infant CPR.[7]

3)Association between pretest knowledge and practice level and selected variables.

The findings of the present study showed that there was no significant association betweenpre test knowledge and selected variables : age .There was no significant association between practice and selected variables : age and exposure to mass media . These findings were supported by the following study :----

A similar study conducted by Feirer SM to determine the effectiveness of planned teaching programme on environmental health in Udupi taluk showed the following findings , there is no association found between the pre-test knowledge and age ,education, exposure to mass media occupation. The calculated Chi-square test values were 0.08, 3.37, 0.73, 2.33, which was less than the table value (=3.841, =5.99) at 0.05 level. Thus, it is inferred that, gain in knowledge score was due to the administration of PTP. The present study also showed that there is no association between the pre-test knowledge of 3rd year B.Sc Nursing student and age .[8]

4)Relationship between knowledge and practices of 3rd Year B.Sc Nursing student .

The findings of the present study showed that there is a positive relation between knowledge and practice . The findings of the present study was supported by the following study ---

A cross-sectional study was conducted by Noman ul Haq to assess knowledge and practice among Hepatitis-B patients in Quetta, Pakistan using a pre-validated questionnaire containing 20, 7 and 8 questions for knowledge, attitude and practice, respectively. Descriptive statistics were used for elaborating patients' demographic characteristics and mean scores for knowledge, attitude and practice of Hepatitis-B patients. Inferential statistics ($p < 0.05$) were used to establish association between study variables. The mean scores for knowledge and practice were 8.48 ± 2.7 and 2.37 ± 1.0, respectively.Significant positive linear correlations was found between knowledge and practice ($r = 0.221$, $p < 0.01$) . The findings of the present study also showed that there is a positive relation between knowledge and practice **($r= 0.95$ at $df_{(35)}$,<0.05 level of significance).**Therefore ,concluded from both studies, that supported study had mild positive relationship between knowledge and practice but in the present study there was strongly relationship between knowledge and practice .[9]

Other findings : The other findings or information were observed during the study that most of the students nurses shown interest in the PTP on infant CPR by responding well and clarifying their doubts . On completion of the study, the student nurses had gained in knowledge and skill on infant CPR.

It is important for nurses to maintain knowledge and skill for performing good care of client .Infant CPR is most important topic in child health nursing to reducing infant mortality . A nurse can not give proper care without uptodate proper knowledge and skill .

The present study has implication for nursing education, nursing administration, nursing research and nursing practice

The following conclusions were drawn on the basis of the study findings :- From the above findings it was concluded that the PTP on infant CPR had resulted gain in knowledge and practice .The study findings also inferred that there was no association between pre test knowledge and selected variable .

RECOMMENDATIONS

Based on the present study, recommendations offered for future research are:

1. Study can be done in larger samples to increase validity and generalizations of findings.
2. Study can be done by using PTP on infant CPR for nursing staffs .
3. Study can be done using other video based learning programme .
4. A similar study can be replicated with a control group.
   A comparative study can be done using different setting .

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