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"A Comparative Study To Assess The Effectiveness Of Demonstration Method Versus Self Instructional Module On Knowledge Regarding Glasgow Coma Scale Among 2nd semester Bsc. Nursing Students At Selected Nursing Colleges Of City".

Ms.Sneha Tadulwar

M. Sc nursing Medical Surgical Nursing.Kamalnayan Bajaj Nursing College , Chhatrapati Sambhajinagar431001-India

Dr. Supriya Chinchpure

Principal, Phd. Gynecology and Obstrics,.Kamalnayan Bajaj Nursing College , Chhatrapati Sambhajinagar431001-India

Ms. Bhagyashri Dhaytadak

Student, Kamalnayan Bajaj Nursing College , Chhatrapati Sambhajinagar-431001-India

Ms. Shraddha gaikwad

M. Sc nursing Community health Nursing.Kamalnayan Bajaj Nursing College , Chhatrapati Sambhajinagar431001-India

ABSTRACT- INTRODUCTION Glasgow Coma Scale was first published in the year 1974 at the University of Glasgow by Neurosurgery Professors Graham Teasdale and Bryan Jennett. The Glasgow Coma Scale (GCS) is being used to objectively describe the extent of impaired consciousness in all types of acute medical and trauma patients. The scale assesses patients according to three main aspects of responsiveness: eye-opening, motor, and verbal responses. Reporting each of these separately provides a clear and communicable picture of a patient's state. **STATEMENT OF THE PROBLEM** A comparative study to assess the effectiveness of demonstration method versus self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city. **OBJECTIVES OF THE STUDY**- 1.To assess the knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city. 2.To assess the effectiveness of demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city. 3.To assess the effectiveness of self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of

city. 4.To compare the effectiveness of demonstration Method vs. self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city. 5.To associate pre test knowledge score regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city with selected demographic variable. **HYPOTHESIS-H0:** There will be no significant difference between pre-test and post-test score of demonstration on knowledge regarding Glasgow coma scale among 2nd semester B. Sc nursing students. **H01:** There will be no significant difference between pre-test and post-test score of self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B. Sc nursing students. **H02:**There will be n o significancedifferencebetweendemonstrationmethodand self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B. Sc nursing students. **H03:** There will be no significant association between pre-test levels of knowledge with selected demographic variable. **METHODOLOGY** A True experimental research design was undertaken to compare the effectiveness of self instructional module vs demonstration method on knowledge regarding Glasgow coma scale among nursing students. The study was conducted among 2nd semester BSc nursing students at College of Nursing, 172 nursing students were selected by using purposive random sampling technique i.e.86ineachgroup.Pre-test was conducted to assess the knowledge on GCS using self administered questionnaire. Then the two groups were given interventions respectively. On the 8th day, post test was conducted for both groups. The data was analyzed for frequency, percentage, mean and standard deviation. Paired t test was done for finding out the effectiveness of the interventions. Independent t test

was done to compare both the interventions. **RESULTS OF THE STUDY** The result of analysis of data shows that in group-I the pre-test mean was 7.47, post test 10.79 with a the standard deviation of 2.69 and 1.65 respectively. In group-2the pre-test was 8.45 post-test was 13.76 with the standard deviation of 2.62 and 2.55 respectively .The mean difference in pre-test was 0.98 and post test was 2.97 with 't' value 1.600 and - 6.037respectively. There was statistical significant difference between the mean knowledge level of demonstration method and self instructional module in post test at p.

Keywords- Glasgow coma scale, demonstration method, self instructional module.

RESEARCH METHODOLOGY:

RESEARCH APPROACH: According to Sassaroli, (2005) Research approach is a systematic investigation to establish facts or principles or to collect the information on a subject.[41]The research approach indicates the basic procedure for conducting research. The choice and appropriate approaches depend on the purpose of study. A Quantitative research approach was used for this present study.

RESERACH DESIGN: According to Polite and Beck (2021), Research design is the Overall Plan for addressing a research question, including specifications for enhancing the study's integrity.In this study, a True experimental research design -two group pre test post test research design. Is used.

Population and Sample

POPULATION: in the present study accessible population was 2ndsemesterbsc nursing students who were present at the time of Data Collection at a selected nursing Colleges of the city and Thetargetpopulationselectedforstudywasthenursingstudentsatselectednursing colleges.

SAMPLE: sample is a subset of a population selected to participate in a research study.**SAMPLING TECHNIQUE: I**n this study purposive sampling technique is used for selecting the samples.**SAMPLE SIZE:** The sample size taken for this study is 172.

Data and Sources of Data

SETTINGS OF THE STUDY: selected Nursing colleges of chhatrapati sambhajinagar.

Theoretical framework The conceptual framework adapted for the study is based on Modified General System Theory by J W Kenny. According to modified general system theory, it is a science of wholeness and its purpose is to unite scientific thinking across disciplines and which provides frame work for analysing the whole of any system. The system has a specific purpose or goal and uses a process to achieve the goal. The system theory can be resolved into an aggregation of feedback circuit such as input, throughput and output. [18]**Input** It is the process which consists of varying types and amount of matter, material or human energy, information received from the environment.In the present study input refers to

the 2nd semester bsc nursing students of age 17 and 18 years of selected nursing colleges of the city (the participants of the study) comprising with their demographic features including Age, gender, previous knowledge,previous percentage considered inputs.**Throughput** It is the process whereby the system transforms, creates and organizes for its ready use. Inthisstudythroughputreferstodemonstrationmethodversusselfinstructional module on knowledge regarding Glasgow coma scale among BSc nursing students.

Output It is an energy,information or material that is transformed into the new environment. In this present study output includes the level of knowledge regarding Glasgow coma scale among 2nd semester BSc nursing students i.e.poor,average,adequate.

Feedback Information of environment responses to the system's output.So,the information was acquired could be feedback to the system which could help in maintenance and improvement of the system In this present study feedback can be measured by the output. Feedback includes communication of the findings regarding the level of knowledge regarding Glasgow coma scale

Statistical tools and econometric models

DEVELOPMENT OF RESEARCH TOOL According to Polite and Beck (2009), the tool acts as a instrument to assess and collect the data from the respondent of the study.[49]The tool was used for gathering relevant data was structured knowledge questionnaire to assess the knowledge regarding Glasgow coma scale among 2nd semester bsc nursing students. **PREPRATION OF TOOL.** The following steps were carried out in preparing the tool
are:1)Literature review. 2)Validity of tool. 3)Pre-Testing. 4)Reliability

DESCRIPTION OF THE TOOL: After considering the suggestion and modification of the tool by the experts; the final tool consists of two parts structured questionnaire.

RESULTS AND DISCUSSION

This chapter deals with analysis and interpretation of the data collected from 172 samples who were 2ndsemester bsc nursing students.The present study has been taken up to assess the effectiveness of demonstration method versus self instructional module on knowledge Glasgow coma scale among 2ndsemester bsc nursing students at selected nursing colleges of the city. Analysis and interpretation are based on the objectives of the study.

The data was analyzed and presented in the following section:

Section I: Frequency and percentage distribution of socio demographic variables.

Section II: (A)assess the effectiveness of demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.**(B)** assess the effectiveness of self instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc.Nursing students at selected nursing colleges of city. **SectionIII:** assess the effectiveness of pretest and post-test Demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section IV: assess the effectiveness of pretest and post-test self-instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section V: Compare the effectiveness of pretest and posttest demonstration Method vs. self- instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section VI: Associate pretest knowledge score regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city with selected demographic variable.

SECTION A- This section deals with percentage wise distribution of 2nd semester BSc nursing students with regards to their demographic characteristics. A random sample of 172 subjects was drawn from the study population, who were from selected nursing colleges of the city. The data obtained to describe the sample characteristics including age, gender, previous knowledge, previous percentage respectively.

TABLE4.1:FREQUENCYANDPERCENTAGEWISEDISTRIBUTIONOF NURSING STUDENTS ACCORDING TO THEIR DEMOGRAPHIC CHARACTERISTICS.

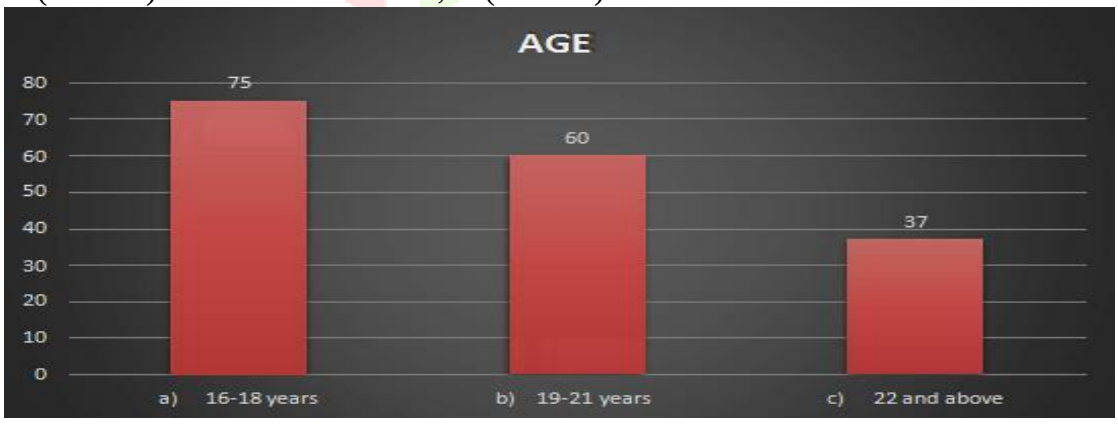
n=172

VARIABLES		FREQUENCY	PERCENTAGE
1. AGE	a)16-18years	75	43.60%
	b)19-21years	60	34.88%
	c)22andabove	37	21.51%
2. GENDER	a)Male	95	55.23%
	b)Female	77	44.76%
3. PREVIOUS KNOWLEDGE	a)Yes	42	24.41%
	b)No	130	75.58%
4. PREVIOUS PERCENTAGE	a)60-70%	26	15.11%
	b)71-80%	64	37.20%
	c)81-90%	37	21.51%
	d)90%andabove	45	26.16%

Table no.4.1. shows the percentage distribution of demographic variables of participants in both the group.

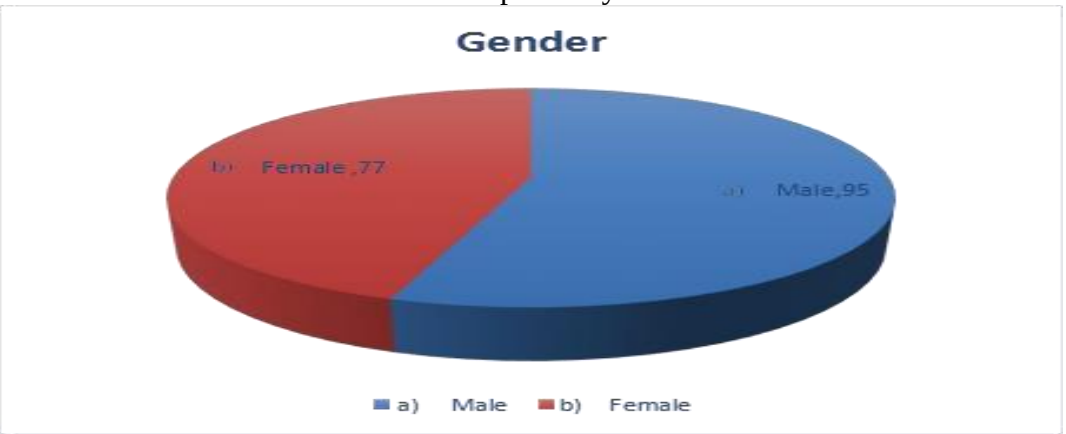
With regard to age

- Distribution of 2nd semester BSc nursing students by age indicates that 75(43.60%) of them belongs to the age of 16-18 yrs, 60(34.88%) of them belongs to the age of 19-21yrs and 37(21.51%)of them belongs to the age of 22and above yrs.
- Distribution of 2nd semester BSc nursing students according to their gender male 95(55%) and female 77(44.76%)
- Distribution of 2nd semester BSc nursing students according to their previous knowledge 42(24.42%) have previous knowledge, 130(75.58%) not have previous knowledge.
- Distribution of 2nd semester BSc nursing students accourding to their previous percentage 64(37.20%) students have 71-80%, 45(26.16%) students have 90% and above,
37(21.51%) studentshave 81-90%, 26(15.11%)studentshave60-70%.



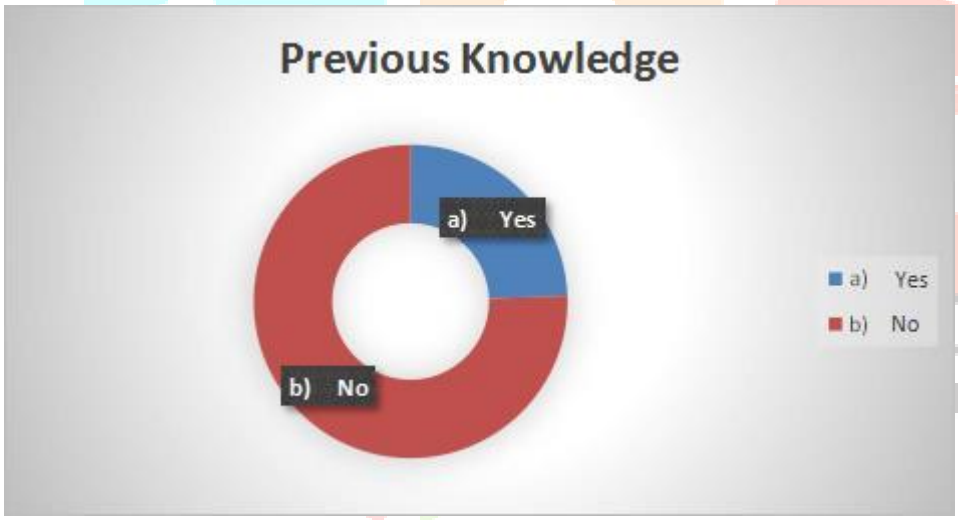
GRAPH4.1:FREQUENCYANDPERCENTAGEWISEDISTRIBUTIONOF NURSING STUDENTS ACCORDING TO THEIR AGE(YEARS)

The above Graph 4.1 shows percentage wise distribution of nursing students according to their age (yrs) i.e., 43.60% of nursing studentswereof16-18 years of age, 34.88% of them wereof19-21 years of age and 21.51% of them were 22 and above respectively.



GRAPH4.2:FREQUENCYANDPERCENTAGEWISEDISTRIBUTIONOF NURSING STUDENTS ACCORDING TO THEIR GENDER

The above graph 4.2 shows the percentage wise distribution of nursing students According to their gender i.e.,55.23%of nursing students were male and 44.76%were female



GRAPH 4.3: FREQUENCY AND PERCENTAGE WISE DISTRIBUTION OF NURSING STUDENTS ACCORDING TO THEIR PREVIOUS KNOWLEDGE

The above graph 4.3 shows the percentage wise distribution of nursing students According to their previous knowledge i.e., 24.41% of nursing students were have previousknowledge regarding Glasgow coma scale, 75.58% of nursing students not haveknowledge regarding Glasgow coma scale.

GRAPH 4.4: FREQUENCY AND PERCENTAGE WISE DISTRIBUTION OF NURSING STUDENTS ACCORDING TO PREVIOUS PERCENTAGE

Theabovegraph4.4showsthefrequencyandpercentagewisedistributionofnursing students According to their previous percentage i.e., 64(37.20%) students have 71-80%, 45(26.16%)studentshave90%and above,37(21.51%)studentshave81-90%,26(15.11%)
Students have 60-70

Section II: assess the effectiveness of demonstration method and Self-structured module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

This section deals with the assessment of level of knowledge regarding Glasgow comascale among2nd semesterBScnursingstudentsfromselectednursingcollegesofthecity.The level of knowledge score is divided under following heading of poor, moderate and adequate.

VARIABLE	Demonstrationmethod				Self-structuredmodule			
	Pretest		Posttest		Pretest		Posttest	
	F	%	F	%	F	%	F	%
Poorknowledge(0-6)	4	4.65	11	12.79	5	5.81	2	2.32
Moderate knowledge (7-12)	38	44.18	10	11.62	36	41.86	10	11.62
Adequate knowledge (13-19)	44	51.16	65	75.58	45	52.32	74	86.04

Table no. 4.2 Assess the effectiveness of demonstration method and Self-structured module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

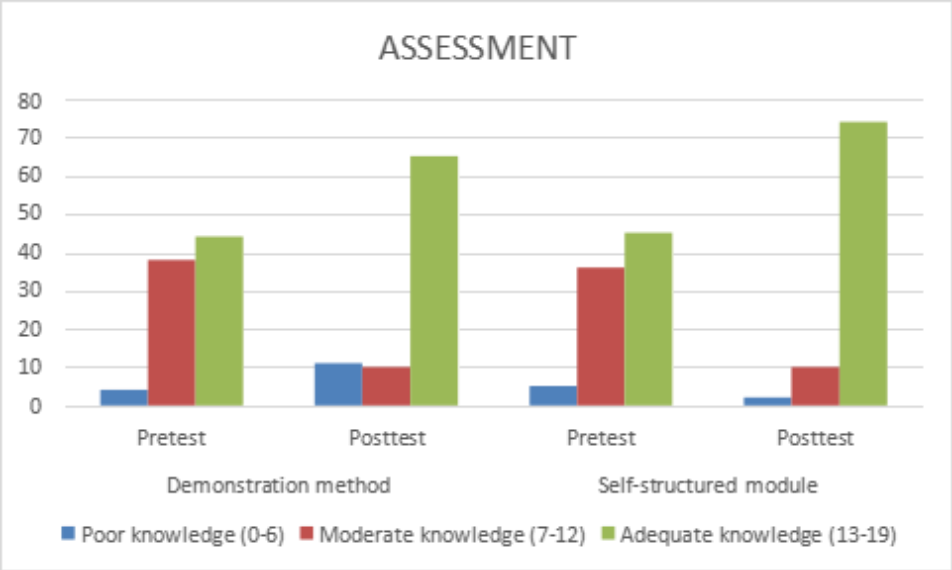
The above table shows that,

A. Demonstration method

4.65%of2nd semester BSc nursing students had poor level of knowledge score in pretest or 11.62% knowledge score in post-test, 44.18% of them had moderate level of knowledge score in pretest or 11.62% of knowledge score in post-test and 51.16% of them have adequate knowledge score in pretest or 75.58% of knowledge score in post-test.

B. Self-instructional module

5.81%of2nd semester BSc nursing students had poor level of knowledge score in pretest or 2.32% knowledge score in post-test, 41.86 % of them had moderate level of knowledge score in pretest or 11.62% of knowledge score in post-test and 52.32% of them have adequate knowledge score in pretest or 86.04% of knowledge score in post-test.



Graph No. 4.5 Assess the effectiveness of demonstration method and Self-structured module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section III: assess the effectiveness of pretest and post-test Demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

This section deals with the effectiveness of demonstration method on knowledge regarding Glasgow coma scale among 2nd semester BSc nursing students from selected nursing colleges of the city. The hypothesis is tested statistically with distribution of pretest and post- test mean and standard deviation and mean percentage knowledge score. The levels of knowledge during the pre- test and post-test are compared to prove the effectiveness of demonstration method. Significance of difference at 5% level of significance is tested with student's paired 't' test and tabulated 't' value is compared with calculated 't' value. Also, the calculated 'p' values are compared with acceptable 'p' value i.e., 0.001 statisticalsignificantdifferencebetweenthemeanknowledgelevelbeforeandafter intervention, p ishigherthan0.001,inexperimentalgroup-1byusing paired't' test.

Graph no.4.6. assess the effectiveness of pretest and post-test Demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section IV: assess the effectiveness of pretest and post-test self-instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

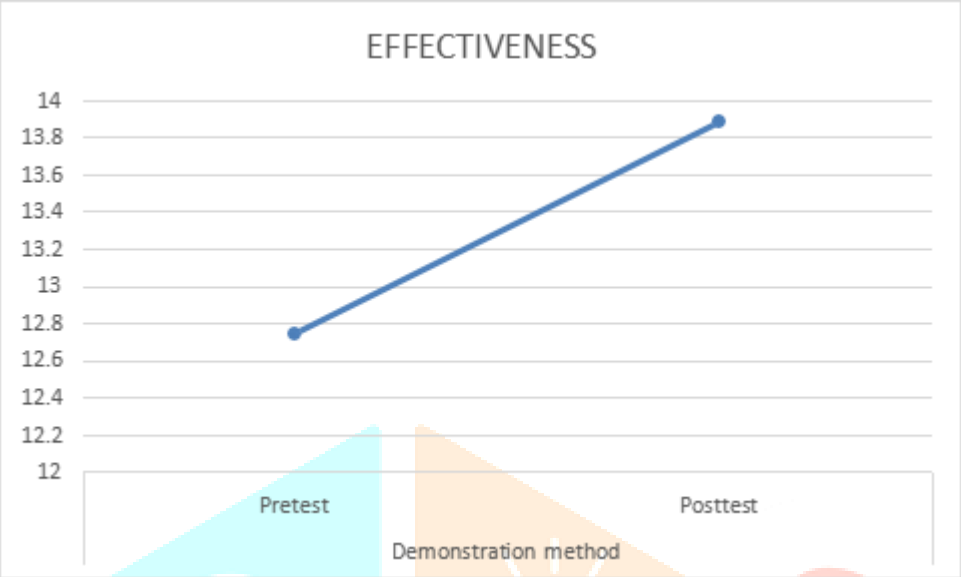
This section deals with the effectiveness of demonstration method on knowledge regarding Glasgowcomascaleamong2nd semesterBScnursingstudentsfromselected nursing colleges of the city.

N-86

VARIABLE	Test	Mean	Sd	T valu e	P value	Resu lt
Demonstrationmethod	**Pretest**	12.74	3.49	2.02	0.04	**S**
	Posttest	13.88	3.88			

Table no.4.3. assess the effectiveness of pretest and post-test Demonstration method on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Table no.4.3 shows that in experimental group-1 before the intervention of teaching by Demonstration method, the mean was 12.74 and standard deviation 3.49 and after the



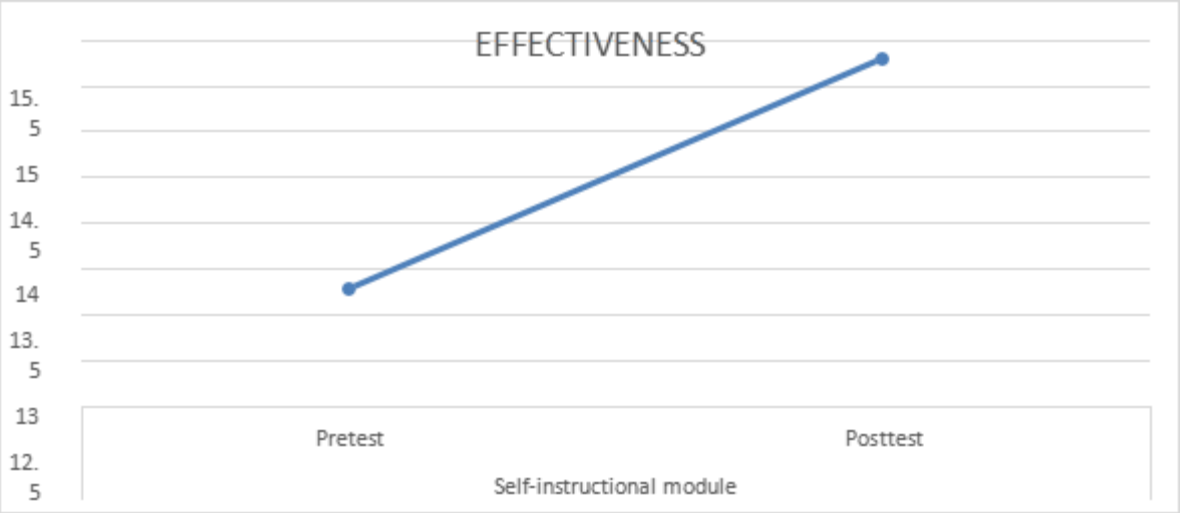
interventionthemeanwas13.88 and standard deviation3.88 with't'value2.02.There was colleges of the city. The hypothesis is tested statistically with distribution of pretest and post- test mean and standard deviation and mean percentage knowledge score. The levels of knowledge during the pre- test and post-test are compared to prove the effectiveness of self instructional module. Significance of difference at 5% level of significance is tested with student's paired 't' test and tabulated 't' value is compared with calculated 't' value is 9.48.Also,the calculated'p' values are compared with acceptable'p' value i.e.,0.0001.
N=86

VARIABLE	Test	Mean	Sd	T value	P value	Resul t
Self-instructionalmodule	**Pretest**	12.77	3.52	4.99	0.0001	**S**
	Posttes t	15.29	3.09			

Table no.4.4.assess the effectiveness of pretest and post-test self-instructional module onknowledgeregardingGlasgowcomascaleamong2ndsemesterB.Sc.Nursing students

At selected nursing colleges of city.

Table no.4.4 shows that inexperimentalgroup-2beforethe intervention of teaching by Self instructional module, the mean was 12.77 and standard deviation 3.52 and after the intervention the mean was 15.29 and standard deviation3.09 with 't' value 4.99.There was statistical significant difference between the mean knowledge level before and after



intervention, plessthan0.001,inexperimentalgroup-2 by using paired‘t’ test.

Graph 4.7: assess the effectiveness of pretest and post-test self-instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

Section V: Compare the effectiveness of pretest and post test demonstration Method vs. self- instructional module on knowledge regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city.

VARIABL E	Test	Group	Mea n	Sd	T valu e	P value	Result
Knowledge	Pretes t	Demonstration Method	12.7 4	3.49	0.04	0.96	NS
		Self-instructional Module	12.7 7	3.52			
	Postte st	Demonstration Method	13.8 8	3.88	2.63	0.0093	S
		Self-instructional Module	15.2 9	3.09			

Table no.4.5. Compare the effectiveness of pretest and posttest demonstration Method vs. self- instructional module on knowledge regarding Glasgow coma scale.

The above table shows that before intervention of teaching by demonstration method the meanwas12.74 and standard deviation3.49 and after intervention the meanwas13.88 and standarddeviationwas3.88.before intervention of teaching by self instructional module the mean was 12.77 and standard deviation 3.52 and after intervention the mean was 15.29 and standard deviation was 3.09 t value before intervention 0.04 and after intervention 2.63. p value before intervention was 0.96 and after intervention was 0.0093 there was statistical significance difference between the mean knowledge level before and after the intervention.

Section VI: Associate pretest knowledge score regarding Glasgow coma scale among 2nd semester B.Sc. Nursing students at selected nursing colleges of city with selected demographic variable.

VARIABLES		**GCS**			**Total**	**X^2 Df**	**P value**	**Result**
		Poor	**Average**	**Good**				
Age	16-18years	1	16	13	30	**X^2- 2.12 Df-4**	0.71	**NS**
	19-21years	1	12	16	29			
	22andabove	2	10	15	27			
Gender	Male	3	20	24	47	**X^2-0.73 Df-2**	0.69	NS
	Female	1	18	20	39			
Previous Knowledge	Yes	4	16	23	43	**X^2-5.03 Df-2**	0.08	NS
	No	0	22	21	43			
previous percentage	60-70%	1	9	11	21	**X^2- 10.41 Df-6**	0.10	NS
	71-80%	1	11	9	21			
	81-90%	1	4	17	22			
	90 % and Above	1	14	7	22			

The above table no. 4.6 shows, the association of knowledge score with age in years of 2nd semester BSc nursing students from selected nursing colleges of the city. The tabulated x2 value is 2.12 with (Df=4) at 5% level of significance. Also, the calculated 'p'=0.71 which was higher than the acceptable level of significance i.e., 'p'=0.05.

The association of knowledge score with gender of nursing students from selected nursing colleges of the city. The tabulated x2 values were 0.73(df=2) at 5% level of significance. Also, the calculated 'p'=0.69 which was higher than the acceptable level of significance i.e., 'p'=0.05.

The association of knowledge score with previous knowledge of nursing students from selected nursing colleges of the city. The tabulated x2 values were 5.03(df=2) 5% level of significance. Also, the calculated 'p'=0.08 which was higher than the acceptable level of significance i.e., 'p'=0.05. The association of knowledge score with previous percentage of nursing students from selected nursing colleges of the city. The tabulated x2 values were 10.41(df=6)at 5%level of significance. Also, the calculated 'p'=0.10 which was higher than the acceptable level of significance i.e., 'p'=0.05.

Hence it is interpreted that, age of 2nd semester BSc nursing students is statistically associated with their pretest knowledge score. While, gender previous knowledge and previous percentage of 2nd semester BSc nursing students is statistically not associated.

RESULT

The Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. The tabulated value for n=172-1 i.e., 171 degrees of freedom was 1.96. The calculated 't' value i.e., 9.48 are much higher than the tabulated value at 5% level of significance for overall knowledge score of adolescent girls which is statistically acceptable level of significance.

Hence, it is statistically interpreted that the self instructional module on knowledge regarding Glasgow coma scale among 2nd semester BSc nursing students was effective.

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BHAGYASHRIV.DHAYTADAK

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