“A STUDY TO EVALUATE THE EFFECTIVENESS OF LIVE DEMONSTRATION REGARDING THE KNOWLEDGE ON BASICS OF MECHANICAL VENTILATOR AMONG STUDENT NURSES IN A SELECTED NURSING COLLEGE AT HONAVAR, UTTARKANNADA”

BY

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Submitted to

Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka

Under Short term Research Grants for Undergraduate Students of Institutions affiliated to RGHUS for the year 2023-24

And

In Partial fulfillment of the requirements for the degree of

Bachelor of Sciences in Nursing

Under the guidance of

A. SAGAYA AROCKIA MARY

St. Ignatius Institute of Health Science,

Honavar, Uttara Kannada.

2023-24.

DECLARATION BY THE CANDIDATE

I hereby declare that this thesis titled **"A STUDY TO EVALUATE THE EFFECTIVENESS OF LIVE DEMONSTRATION REGARDING THE KNOWLEDGE ON BASICS OF MECHANICAL VENTILATOR AMONG STUDENT NURSES IN A SELECTED NURSING COLLEGE AT HONAVAR, UTTARKANNADA",** is a bonafide and genuine to carried out by MS. RESHMA JOBY under the guidance of **A. SAGAYA AROCKIA MARY**, the principal, St. Ignatius Institute of Health Sciences, Honavar.

Date: **MS. RESHMA JOBY**

Place: Honavar **III B.Sc. NURSING**

CERTIFICATE BY THE GUIDE

This is to certify that thesis titled **" A STUDY TO EVALUATE THE EFFECTIVENESS OF LIVE DEMONSTRATION REGARDING THE KNOWLEDGE ON BASICS OF MECHANICAL VENTILATOR AMONG STUDENT NURSES IN A SELECTED NURSING COLLEGE AT HONAVAR, UTTARKANNADA",** is a bonafide and genuine work to carried out by **MS. RESHMA JOBY** under short term Research Grants for Undergraduate students O Institutions affiliated to RGUHS for the year 2023-24

Date:

Place: Honavar

Signature of the guide

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Principal

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ENDORSEMENT BY THE PRINCIPAL/ HEAD OF THE INSTITUTION

This is to certify that thesis titled **" A STUDY TO EVALUATE THE EFFECTIVENESS OF LIVE DEMONSTRATION REGARDING THE KNOWLEDGE ON BASICS OF MECHANICAL VENTILATOR AMONG STUDENT NURSES IN A SELECTED NURSING COLLEGE AT HONAVAR, UTTARKANNADA"**, is a bonafide and genuine work to carried out by MS. RESHMA JOBY under short term Research Grants for Undergraduate students O Institutions affiliated to RGUHS for the year 2023-24 under the guidance of **A. SAGAYA AROCKIA MARY**, the principal, St. Ignatius Institute of Health Sciences, Honavar.

Date: **Signature of the guide**

Place: Honavar **A. Sagaya Arockia Mary**

Principal

St. Ignatius Institute of Health Sciences, Honavar.

ST. IGNATIUS INSTITUTE OF HEALTH SCIENCES, HONAVAR.
SHORT TERM RESEARCH GRANT FOR UNDERGRADUATE STUDENTS
2023-2024
FINAL REPORT

1.	**TITLE OF THE PROJECT**	**"A STUDY TO EVALUATE THE EFFECTIVENESS OF LIVE DEMONSTRATION REGARDING THE KNOWLEDGE ON BASICS OF MECHANICAL VENTILATOR AMONG STUDENT NURSES IN A SELECTED NURSING COLLEGE AT HONAVAR, UTTARKANNADA"**
2.	**RGUHS PROJECT CODE**	**UG23NUR313**
3.	**NAME OF THE STUDENT**	**MS. RESHMA JOBY**
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5.	**NAME OF THE DEPARTMENT**	**NURSING**
6.	**DATE OF COMMENCEMENT OF THE RESEARCH ACTIVITY**	**10.11.2023**
7.	**DATE OF COMPLETION**	**20.02.2024**

8.	❖ **OBJECTIVES STATED**	1. To assess the pretest knowledge regarding the basics of mechanical ventilator among student nurses. 2. To prepare and implement the live demonstration. 3. To determine the significant enhancement in the post test knowledge level regarding basics of mechanical ventilator among student nurses. 4. To find the significant association between the knowledge level of student nurses regarding the basics of mechanical ventilator with their selected demographic variables.
	❖ **OBJECTIVES ACHEIVED**	1. Assessed the pretest knowledge regarding the basics of mechanical ventilator among student nurses. 2. Prepared and implement live demonstration 3. Determined the significant enhancement in the post test knowledge level regarding basics of mechanical ventilator among student nurses. 4. Found the significant association between the knowledge levels of student nurses regarding the basics of mechanical ventilator with their selected demographic variables.

9. FIELD/ EXPERIMENTAL WORK GIVING FULL DETAILS OF RESEARCH METHOD ADOPTED

RESEARCH METHODOLOGY:

Research method is a way of systematically solving a problem. It indicates the general pattern of organizing the procedure for empirical study together with the method of obtaining valid and reliable data for problem under investigation.

An extensive review of literature was undertaken. A pre- experimental research design was used for this study. In order to accomplish the objective of this study a quantities evaluative research approach and pre experimental research design was used, a structure knowledge questionnaire consists of 30 items which was used to assess the knowledge level of mechanical ventilator. The sample 100 students from St. Ignatius institute of health sciences, Honavar, were selected. Collected data was done by self-administered knowledge questionnaire. Data analysis was done by using descriptive and inferential statistics (chi- square and paired test) and presented in the forms of tables and graphs.

RESEARCH APPROACH:

Quantitative, evaluative research approach was adopted in the present study.

RESEARCH DESIGN:

An experimental, randomized, one group pre and post-test design was adopted in the present study.

VARIABLES UNDER STUDY:

According to polite and Hunger, (1999), variables are an attribute of a person or object that varies and taken on different value within the population under study.

Independent variables: - Livedemonstration regarding the knowledge on basics of mechanical ventilator.

Dependent variables: - Knowledge level of student nurses on mechanical ventilator.

Demographic variables: -In the study the demographic variables are age, gender, course of study, year of course, experience of working with a mechanical ventilator, any of your family members were put on ventilator.

SETTING OF THE STUDY: -

According to polite &Hunger, setting is the physical location and conditioning which data collection takes place in a study. The study was conducted at St. Ignatius college of Nursing and Hospital, Honavar.

POPULATION:

The population refers to the entire set of individual or subject having common characteristics, sometimes referred to as universal. In this the population is student nurses.

Target population: -

The target population consists of the total members of a define set of student nurses from whom the data will be generalized. In the present study the target population was the student nurses studying in nursing colleges at Honavar.

Accessible population:

In the study the accessible population were the student nurses studying in St. Ignatius College of Nursing,Honavar, UttaraKannada.

SAMPLE:-

A sample is a small portion of population selected to participate in the research study. The sample for this research was the student nurses in St. Ignatius college of Nursing, Honavar.

SAMPLE SIZE: -

The sample size taken for this study consists of 100 students studying in St. Ignatius college of Nursing, Honavar.

SAMPLING TECHNIQUE: -

Sampling defines the process of selecting a group of people (or) other elements with which to conduct a study. In this study simple random sampling technique is used to select the subject (lottery method).

SAMPLING CRITERIA: -

Sample of the present study were selected based on the criteria fixed by investigators to reduce bias and errors.

Inclusion criteria:

- Student nurses studying in St. Ignatius College of Nursing.

Exclusion criteria:

- Not interested to be the part of the study
- Those students were on leave during the data collection

SELECTION AND DEVELOPMENT OF TOOL: -

Tool is a procedure or instrument used to assess the awareness by the researcher to collect data. The tools were prepared on the basis of the objectives of the study. The tool was developed after:-

- An extensive review of research and non-researchliterature
- Based on consultation with experts in the field and related field

- Based on opinion of the experts to ascertain for the clarity and appropriateness of the items of the given structured questionnaire
- Based on informal discussion with the peer group

DESCRIPTION OF THE TOOL

The tool was structuredknowledge questionnaire, consists of two section-

Section I: - It consists of sample characteristics [demographic variables (06)]

Section II: - Consists of structured knowledge questionnaire regarding basics of mechanical ventilator (30 MCQ items)

SECTION I:-This section consists of 06 items obtaining information regarding subjects age, gender, course of study, year of course, experience on mechanical ventilator, any of the family members were put on ventilator.

SECTION II: - this section consists of 30 multiple choice questions covering of introduction of mechanical ventilator, indication, various types, modes, weaning, extubation, complications, and nurses' role in mechanical ventilator. To assess the knowledge of the student nurses the maximum score of 30 and the entire questions has 4 options. They were as "1" "will be the correct answer and the other 3 will be the wrong answers each correct answer score" "1" mark and incorrect answer "0" mark.

CRITERION MEASURES: -

The multiple-choice questions were used to assess the knowledge of the student nurses regarding the basics of mechanical ventilator, the assessment of the knowledge is identified through the following scale.

KNOWLEDGE LEVEL	SCORE RANGE	PERCENTAGE
POOR	O – 10	0 –33.3%
AVERAGE	11 – 20	36.6- 66.6%
GOOD	21 – 30	70- 100%

Interpretation total:30 minimum score: 01maximum score: 30

CONTENT VALIDITY: -

To ensure the content validity of the tool, the prepared tool along with the problem statement, objectives, operational definition and hypothesis, pre – test and post – test and demonstration plan was submitted to 5 experts in the field of medical surgical nursing. Experts are requested to judge the items on the basis of their relevance clarity, feasibility, and organization, of the items included in the study based on expert's opinion some of the questions were modified and some of the questions has been deleted. Arrangement of the option was done in proper way according to the suggestions given by 5 experts. The tool was presented and finalized by the research committee of St. IgnatiusCollege of nursing.

RELIABILITY OF TOOL:

The reliability of the tool was texted by using KarlPearson's correlation coefficient formula. Hence the 'r' value was found to be 0.82, it shows the tool found to be reliable.

PILOT STUDY:

According to Treece (1986) a pilot study is a small preliminary investigation of the same general character as the major study, clarity of language in tool and finding the plan for analysis. A pre- test was conducted on 26.01.24 for student nurses, among 10% (10) of the total sample and the live demonstration on basics of mechanical ventilator was implemented followed by pre- test assessment. After 7days the post-test also was conducted on 01.02.2024. The average time taken by each student nurses to attend the question are and give the answer was about 2 hours. After pilot study the tool was found to be feasible and acceptable. The pilot study schedule is as follows

Pre- test and intervention			**Post test**		
Date	No of sample	Duration	Date	No of sample	Duration
26.01 2024	10	2 hours	01.02.2024	10	1 hours

DATA COLLECTION PROCESS(MAIN STUDY):

Data collection is precise, systematic method of gathering information relevant to the research. To conduct the main study at St. Ignatius hospital, Honnavar, a formal written permission was obtained from concerned authorities before data collection from principal of the institution. Data collection period was from. The procedure was the same as in the same as in the pilot study valid and reliable structured knowledge question are was used for data collection. Self- introduction and establishing rapport with the subjects that is 100 student nurses. Explained the important of research study, the confidentiality of their responses was assured and consent was obtained from each participant.

The process used for data collection was as follows,

- The research investigator introduced and explained the purpose of the study to the student nurses.
- The written consent was obtained from the subjects.
- The structured knowledge questionnaire was used to assess the knowledge regarding the mechanical ventilator
- The participants were thanked for their cooperation
- Data collected and the raw data was prepared for data analysis process

Data collection process is scheduled as following

PRE- TEST				INTERVENTION			
Date	**Sample**	**Time**	**Area**	**Date**	**Sample**	**Time**	**Area**
03.02.2024	20	10-12am	St. Ignatius Institute Of Health Sciences	05.02.2024	20	11-12pm	St. Ignatius Hospital, Honavar
03.02.2024	20	03-05pm		05.02.2024	20	02- 03pm	
04.03.2024	20	10-12am		05.02.2024	20	04-05pm	
04.02.2024	20	03-05pm		06.02.2024	20	10-11am	
05.02.2024	20	10-12am		06.02.2024	20	03- 04pm	

POST- TEST			
Date	**Sample**	**Time**	**Area**
10.02.2024	20	10-12pm	St. Ignatius Institute Of Health Sciences
10.02.2024	20	03-05pm	
11.02.2024	20	10-12am	
11.02.2024	20	03-05pm	
12.02.2024	20	10-12am	

PLAN FOR DATA ANALYSIS:

Analysis of data was planned on the basis of objective and hypothesis. The data plan to be analysed by using both descriptive and inferential statistics and the following plan for analysis would be worked out.

Descriptive statistics

- Demographic data was analysed in terms of frequency and percentage
- The knowledge level of student nurses on mechanical ventilator was analyzed with Mean, median percentage and standard deviation.
- "Z"- test was used to find thedifference between population and sample mean.
- Chi – square test (x^2) is used to find the significant association between the selected demographic variables and knowledge level regarding mechanical ventilator

Ethical consideration

- Permission was obtained from research and Institutional Ethical Committee (IEC) of SIIHS, Honavar.
- Due permission from authorities of selected research setting was sought and obtained
- Informed written consent was taken from the participants
- Anonymity of the study participants was ensured

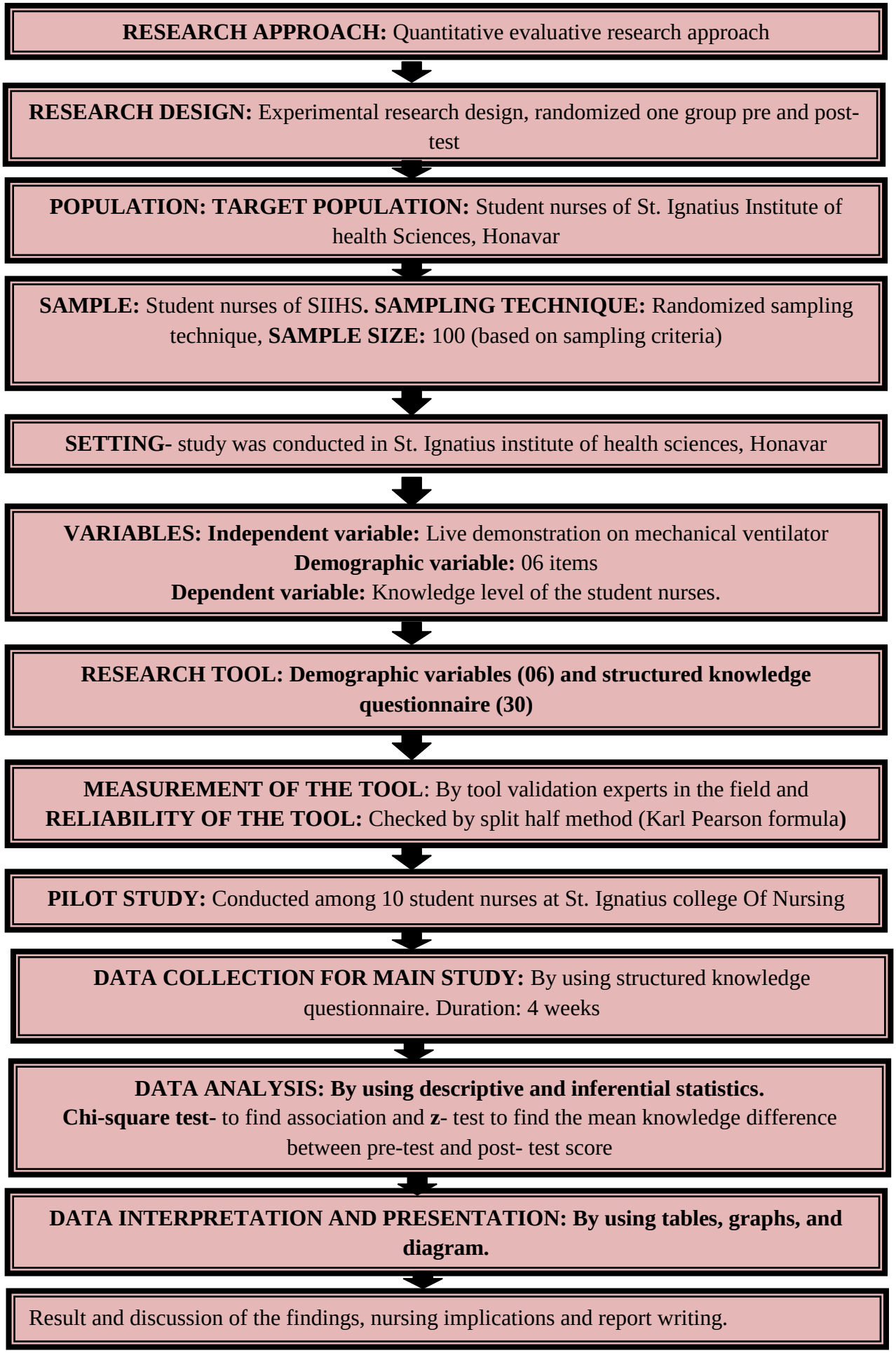

Figure No: 1. SCHEMATIC DIAGRAM OF RESEARCH METHODOLOGY

DATA ANALYSIS AND INTERPRETATION

Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance and implications of the findings. It is an important and exciting step in the process of research. Statistical method is a method for rendering quantitative information meaningful and intangible. This enables the research to summaries, organize, evaluate, interpret, and communicate numeric information (polite and Hungler, 1999)

This section presents the analysis send interpretation data collected from 100 Students' nurses of St. Ignatius Institute of Health Sciences. A study to evaluate the effectiveness of live demonstration regarding the knowledge on basics of mechanical ventilator among student nurses in a selected nursing college at Honavar, Uttarkannada. The data collected were organized, tabulated, analysed and interpreted by means of inferential and statistical formula and prescribed in tabled and graphs. The data collection was done based on the research objectives.

OBJECTIVES:

1. To assess the pre- test knowledge regarding the basics of mechanical ventilator among student nurses
2. To prepare and implement the live demonstration
3. To determine the significant enhancement in the post- test knowledge level regarding basics of mechanical ventilator among student nurses
4. To find the significant association between the knowledge level of student nurses regarding the basics of mechanical ventilator with their selected demographic variables.

HYPOTHESES:

- H_0: there is no difference between the pre- test and post- test knowledge score.
- $H_{1:}$ there is significant enhancement in the post test knowledge score.
- $H_{2:}$ there is significant association between the pre- test knowledge score and selected demographic variables.

ORGANISATION AND PRESENTATION OF DATA:

The data collected is organized and presented under the following heading:

- **SECTION I**:Frequency and percentage distribution of student nurses according to their demographic variables.
- **SECTION II:**Findings of overall pre and post-test knowledgeof student nurses of St. Ignatius college of Nursing, Honavar.
- **SECTION III:**Findings of mean difference between the pre and posttest knowledge score.
- **SECTION IV:**findings of Z test showing effectiveness of the educational session by comparing pre- and post- test level of student nurses of St. Ignatius college of nursing, Honavar regarding mechanical ventilator.
- **SECTION V:**Findings of Chi-Square test showing the association between the pre-test knowledge level of student nurses of St. Ignatius college of nursing, Honavar, regarding mechanical ventilator with their demographic variables.

SECTION- I

Table no- 1: shows the frequency and percentage distribution of student nurses of St. Ignatius College of nursing, Honavar according to their demographic variables.

n=100

SI. NO	DEMOGRAPHIC VARIABLES	FREQUENCY (n)	PERCENTAGE (%)
1.	**Age in years** a. 18-20 years b. 21-23 years c. 24-26 years d. 27-29 years	 65 32 3 0	 65% 32% 3%
2.	**Gender** a. Male b. Female	 3 97	 50% 50%
3.	**Course of study** a. B.Sc. (N) b. GNM c. PBBSc	 50 50	 50% 50%
4.	**Year of course** a. I PBBSc b. II PBBSc c. III B.Sc. d. III GNM	 0 0 50 50	 50% 50%
5.	**Do you have experience of working with a mechanical ventilator** a. Yes b. No	 7 93	 7% 93%
6.	**Any of your family members were put on ventilator** a. Yes b. No	 17 83	 17% 83%

Table no I-Shows the demographic information of student nurses of St. Ignatius college of nursing Honavar who participated in the present study age in years, gender, course of study, year of course, experience of working with a mechanical ventilator, family members were put on ventilator.

Table No- 1.1shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing according to their age.

n=100

AGE IN YEAR	FREQUENCY	PERCENTAGE
a. 18-20 years	65	65%
b. 21-23 years	32	32%
c. 24-26 years	3	3%
d. 27-29 years	0	0%

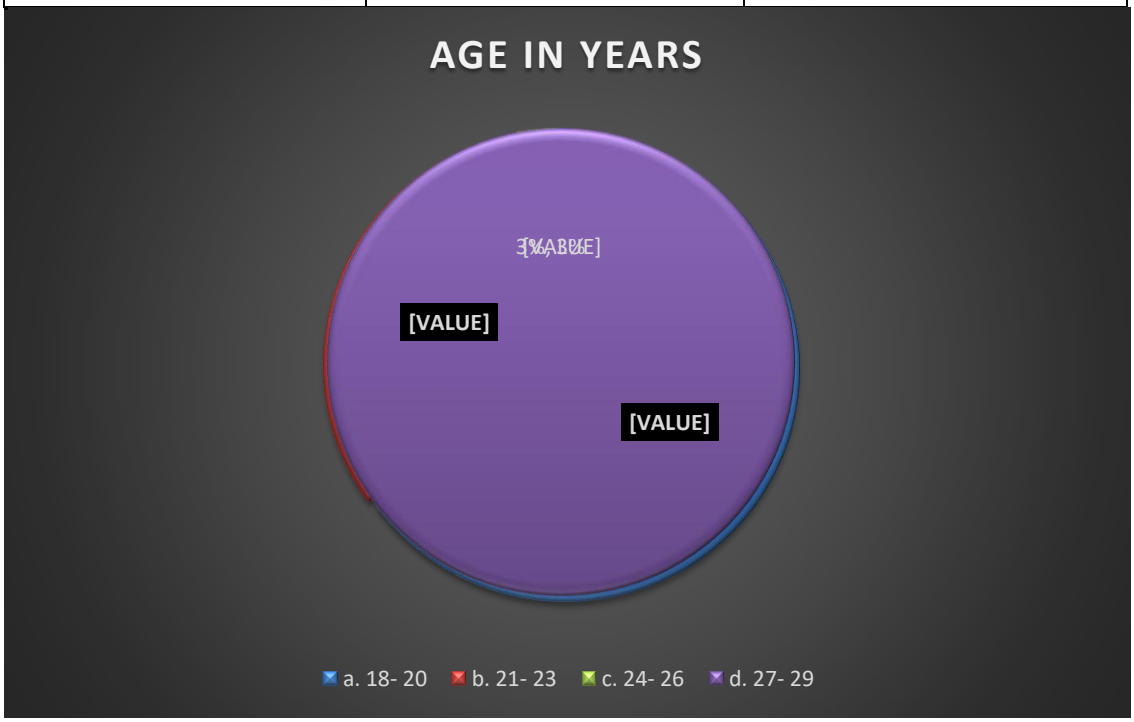

Figure no- 2.1: pie diagram shows the percentage distribution of subjects according to age of the student nurses of St. Ignatius college of nursing, Honavar.

Table 1.1 (fig- 2.1) depicts according to age of the student nurses of St. Ignatius college of nursing, Honavar, the maximum number of subjects belongs to 18-20 years 65 (65%) , 32 (32%) belongs to 21- 23 years, 3(3%) belongs to 24- 26 years, 0 (0%) belongs to 27- 29 years.

Table no- 1.2 shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar according to their gender

n=100

AGE	FREQUENCY	PERCENTAGE
a. Male	3	3%
b. Female	97	97%

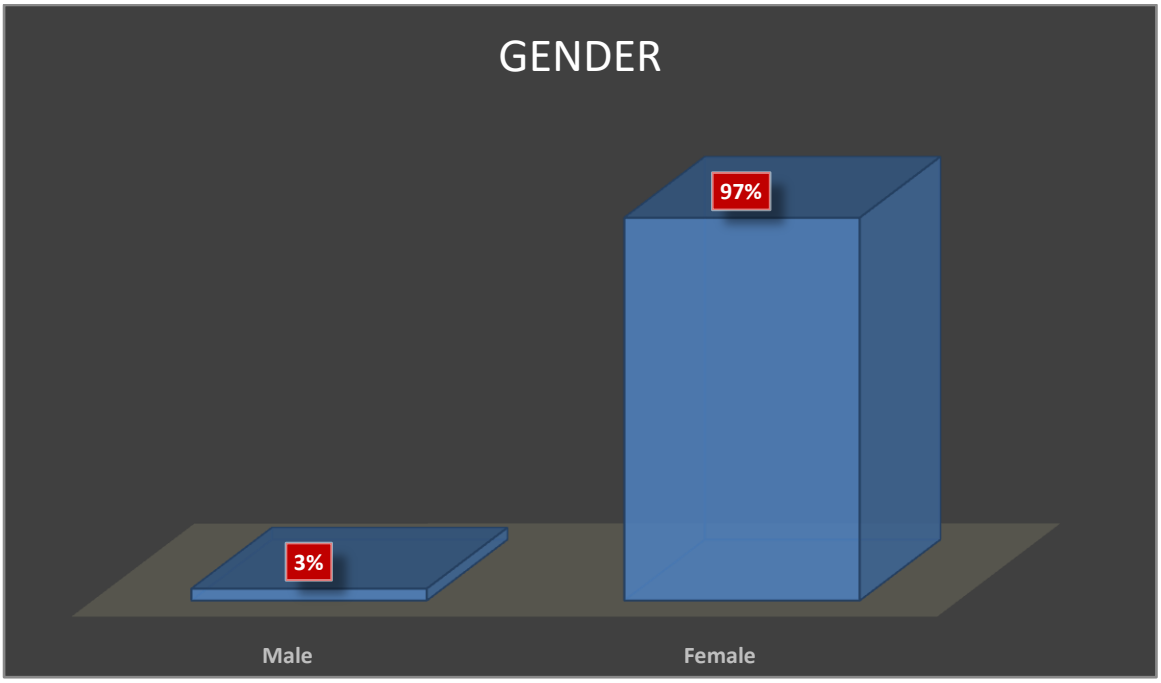

Figure no- 2.2: pie diagram shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing according to their gender.

Table 1.2 (fig 2.2) depicts according to gender of the student nurses of St. Ignatius college of nursing, Honavar, the 97% subjects are female and 3% subjects are male

Table no. 1.3: - shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar according to their course of study.

n=100

COURSE OF STUDY	FREQUENCY	PERCENTAGE
a. B.Sc.	50	50%
b. GNM	50	50%
c. PBBSC	0	0%

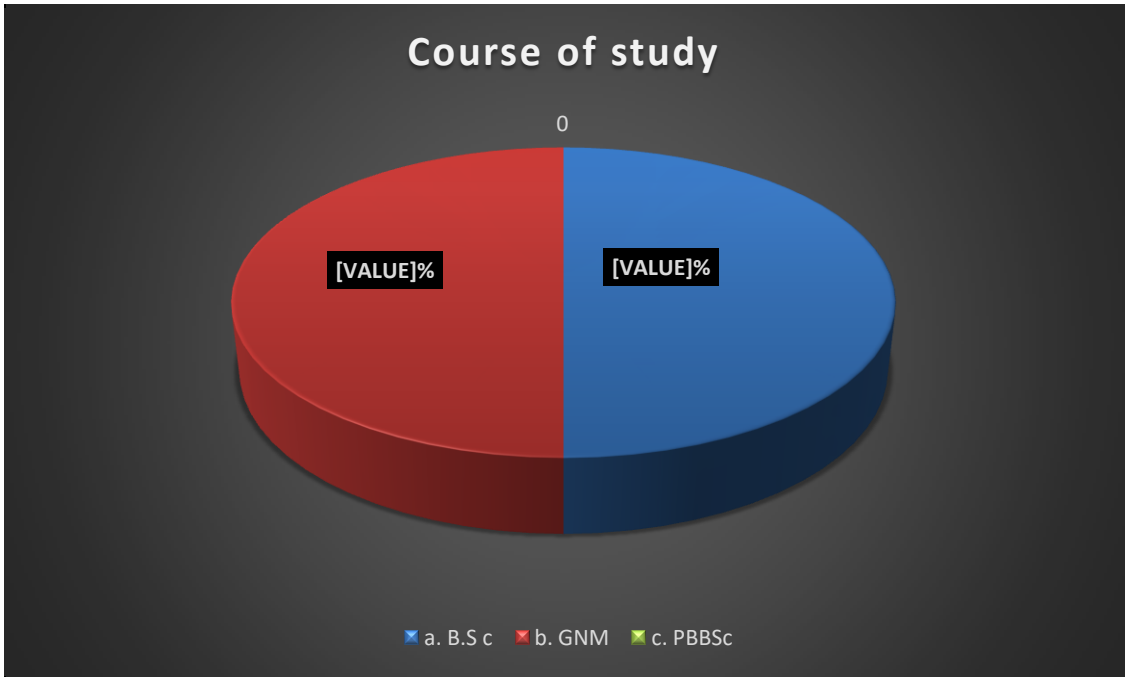

Figure no- 2.3: pie diagram shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar, according to their course of study.

Table 1.3(fig2.3) depicts according to course of study of student nurses of St. Ignatius college of nursing, Honavar, 50% belongs to BSc(N), 50% belongs to GNM and 0% belongs to PBBSC.

Table no. 1.4: - shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar according to their year of course of study.

n=100

Year of course	FREQUENCY	PERCENTAGE
I PBBSC	0	0%
II PBBSC	0	0%
III BSC	50	50%
III GNM	50	50%

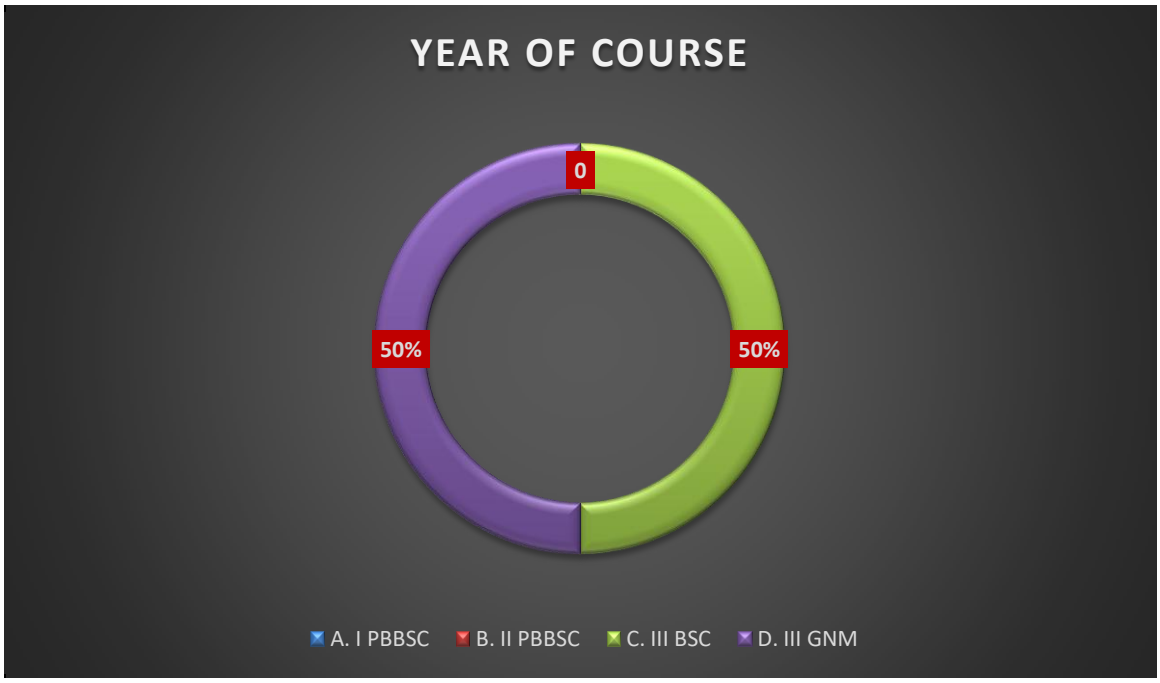

Figure no- 2.4: pie diagram shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar, according to their year of course.

Table 1.4(fig2.4) depicts according to year of course of student nurses of St. Ignatius college of nursing, Honavar, 0 % belongs to I PBBSC, 0 % belongs to III PBBSC, 50% belongs to BSc(N), 50% belongs to GNM and 0% belongs to PBBSC.

Table no. 1.5: - shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar according to their experience of Working with ventilator.

n=100

EXPERIENCE OF WORKING WITH VENTILATOR	FREQUENCY	PERCENTAGE
a. Yes	7	7%
b. No	93	93%

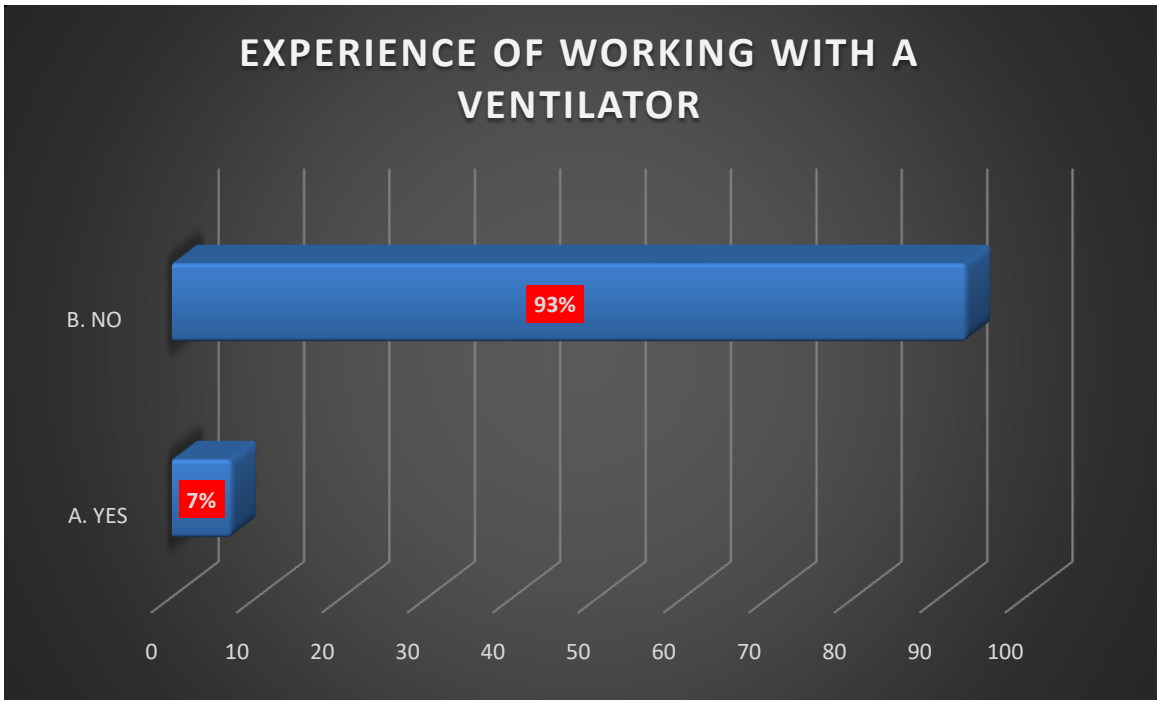

Figure no- 2.5: Bar diagram shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar, according to their experience of working with a ventilator.

Table 1.5(fig2.5) depicts according to experience of working with a ventilator of student nurses of St. Ignatius college of nursing, Honavar, 93% have no experience of working with a ventilator and 7% have experience of working with a ventilator.

Table no. 1.6: - shows the frequency and percentage distribution of student nursesof St. Ignatius college of nursing, Honavar according to their family members were put on ventilator.

n=100

FAMILY MEMBERS WERE PUT O0N VENTILATOR	FREQUENCY	PERCENTAGE
a. Yes	17	17%
b. No	83	83%

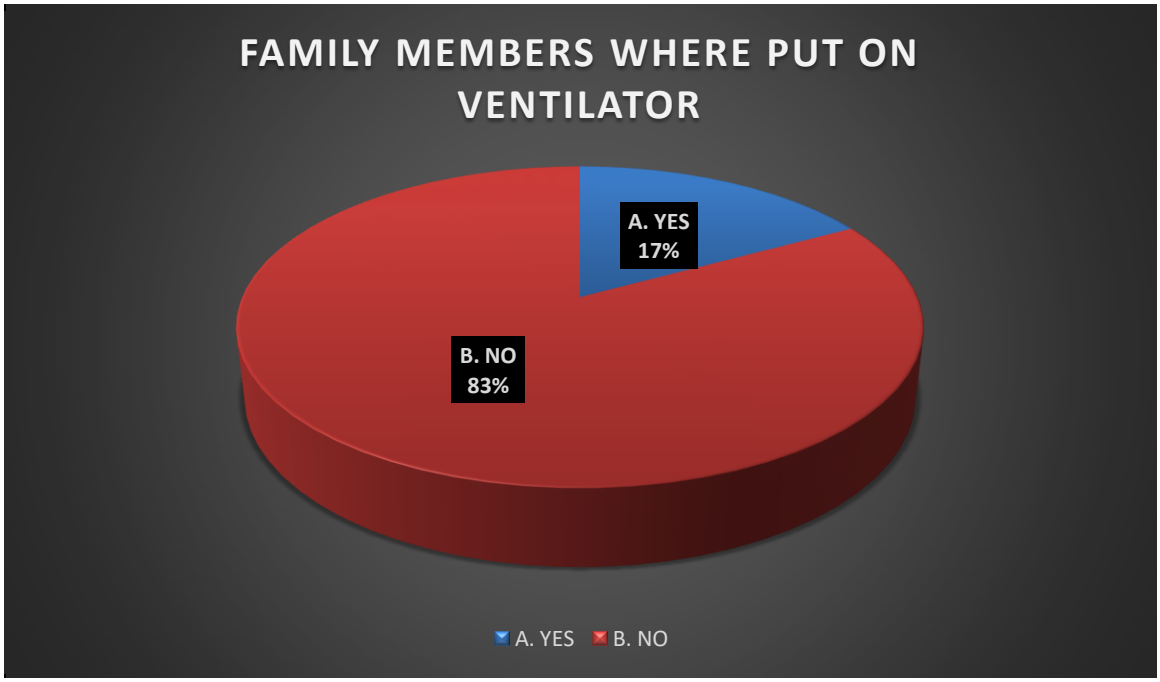

Figure no- 2.6: Pie diagram shows the frequency and percentage distribution of student nurses of St. Ignatius college of nursing, Honavar, according to their family members were put on ventilator.

Table 1.6(fig2.6) depicts according to their family members were put on a ventilator of student nurses of St. Ignatiuscollege of nursing, Honavar, 83% have no family members were put on ventilator and 17% have experience of family members were put on ventilator.

SECTION – II

Finding of overall knowledge level of student nurses of St. Ignatius college of nursing, Honavar, regarding the basics of mechanical ventilator.

Table no. 2 shows the frequency and percentage distribution of overall knowledge of student nurses of St. Ignatius college of nursing, Honavar, regarding the basics of mechanical ventilator.

n=100

Knowledge level	Pre- test		Post test	
	Frequency	Percentage	Frequency	Percentage
Poor	51	51%	1	1%
Average	49	49%	22	22%
Good	0	0%	76	76%

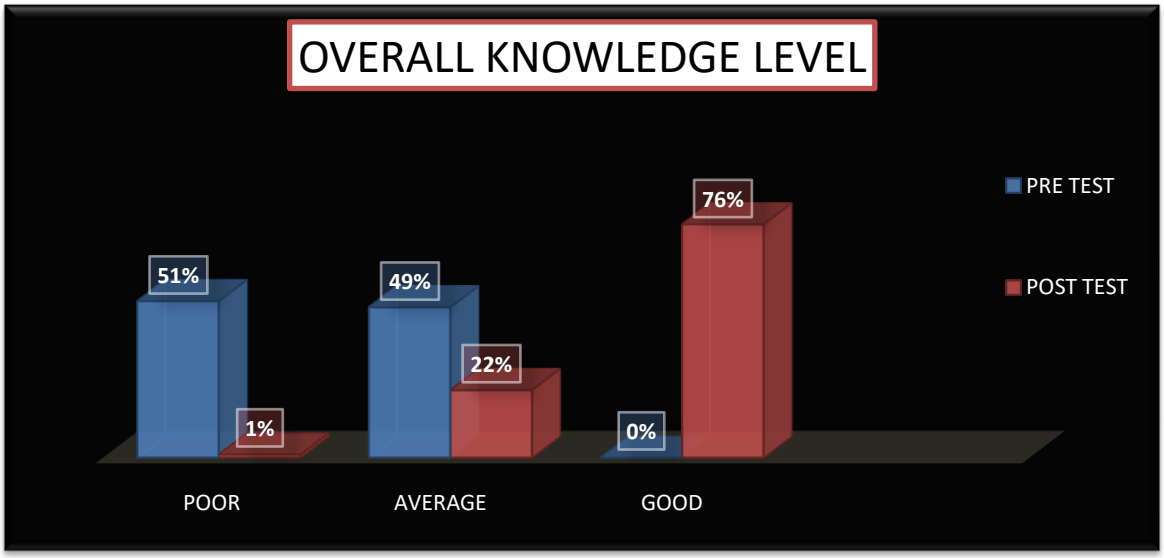

Figure No. 3: column diagram representing the pre- test and post- test knowledge score of student nurses of St. Ignatius college of nursing, Honavar.

Table no. 2(fig no.3) depict that 51(51%) of subjects have poor knowledge, 49(49%) of subjects have average knowledge and 0(0%) of subjects have good knowledge in the pre- test whereas 1(1%) of subjects have poor knowledge, 49(49%) of subjects have average knowledge and 76(76%) of subjects have good knowledge in the post test

SECTION –III

Finding the mean difference in the pre-test and post- test knowledge of student nurses of St. Ignatius college of nursing, Honavar regarding basics of mechanical ventilator.

Table No 3: shows the mean difference between the pre and posttest knowledge score.

n= 100

Knowledge level	Mean difference	Mean percentage	Standard deviation	Mean percentage difference
Pre- test	**10.53**	**10.53%**	**2.51**	**12.61(12.61%) mean score difference**
Post-test	**23.14**	**23.14%**	**4.7**	

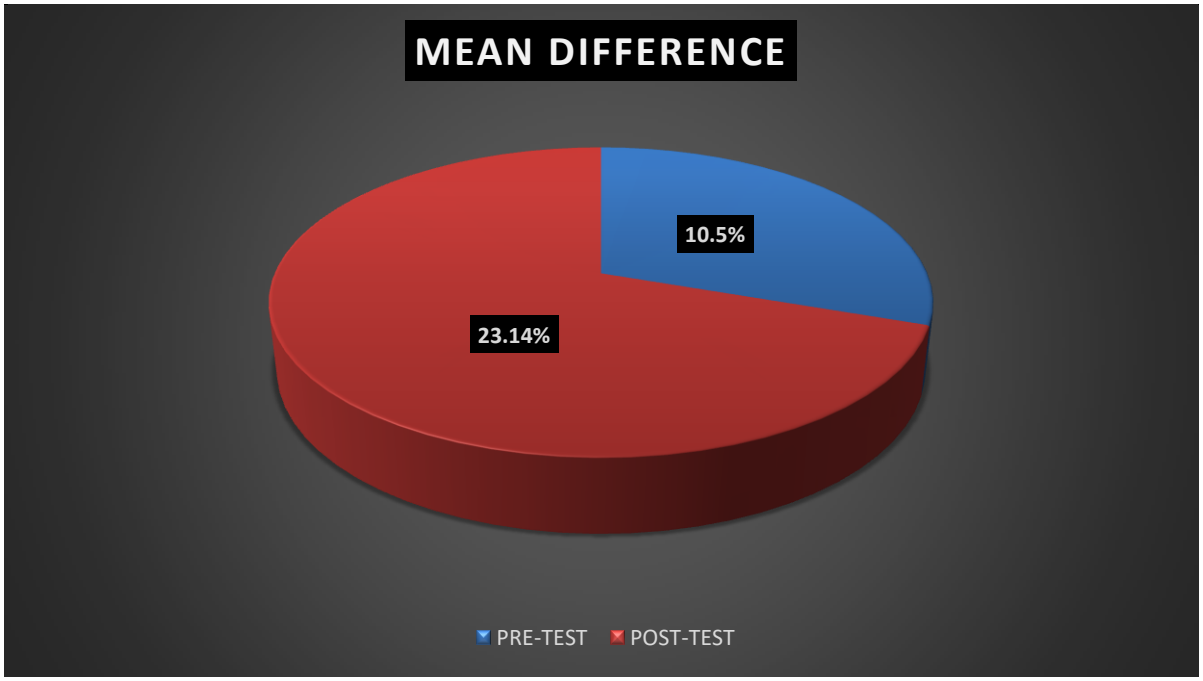

Figure No. 4: pie diagram shows the mean difference between pre-test and post-test knowledge score

Table no 3 (fig no4) shows the pre-test mean knowledge score of subject was 10.53, mean percentage was 10.53% and SD was 2.51. Whereas in post-test mean knowledge score was 23.14, mean percentage was 23.14% and SD was 4.7 and mean percentage difference was 12.61(12.61%)

SECTION –IV

Z test findings for the effectiveness of educational session on knowledge regarding mechanical ventilator.

Table No.4: Shows the Z yeastfunding the effectiveness of educational session on knowledge regarding mechanical ventilator.

n=100

Knowledge level	mean	Standard deviation	Standard error	Z test	Inference
Pre- test	10.53	2.51	0.53	41.03	P >0.05
Post- test	23.14	4.7			

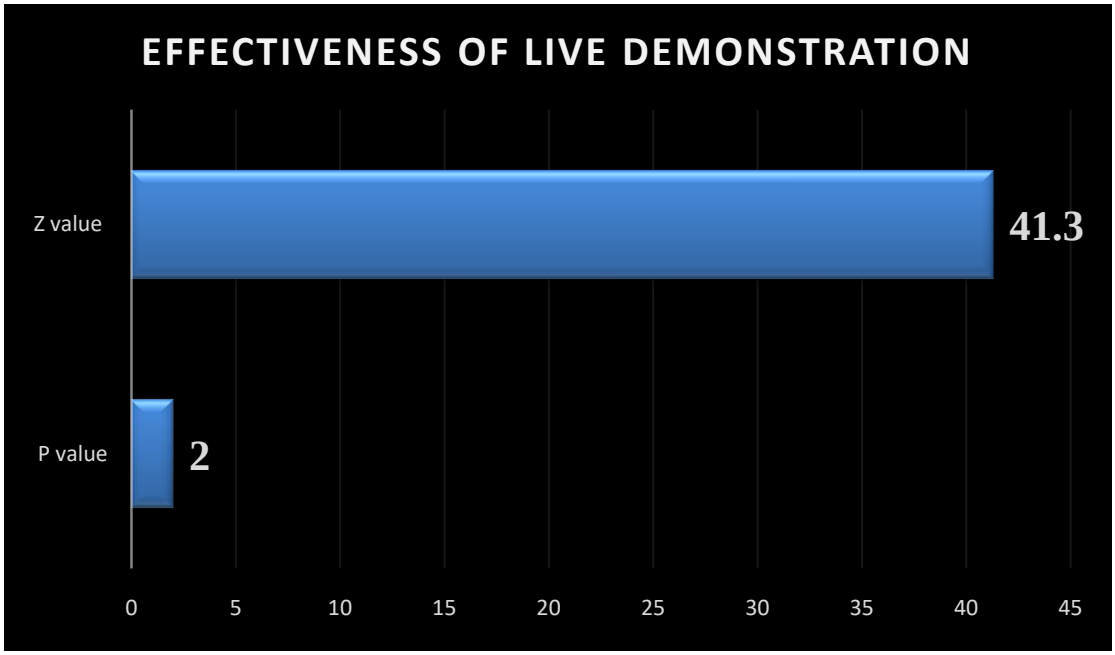

Figure no 5: bar diagram shows the effectiveness of educational session on knowledge gain after the pre and post-test.

Table No.4 (fig no. 5) depict that the pre-test mean knowledge score of subject is 10.53, SD is2.51, whereas in post- test mean knowledge score is 23.1, SD is 4.7. The calculated Z test value is 41.3 (P>0.05) greater the table value 2.0 at 0.05 level of significance

SECTION- V

Table No.5: shows the chi-square test value so association between demographic variables and level of knowledge regarding mechanical ventilator.

SI. no	Demographic variables	Pre-test knowledge score			Chi square		df	Inference
		P	A	G	P	X^2		
1	Age in years				12.59	0.986	6	P >0.05 S *
	a. 18-20	35	29	0				
	b. 21- 23	15	18	0				
	c. 24- 26	2	1	0				
	d. 27- 29	0	0	0				
2	Gender				5.99	4.6	2	P >0.05 S *
	a. Male	3	0	0				
	b. Female	47	50	0				
3	Course of study				9.49	0.64	4	P >0.05 S *
	a. B.Sc.	23	27	0				
	b. GNM	27	23	0				
	c. PBBSc	0	0	0				
4	Year of course				12.59	0.64	6	P >0.05 S *
	a. I PBBSc	0	0	0				
	b. II PBBSc	0	0	0				
	c. III BSc	23	27	0				
	d. III GNM	27	23	0				
5	Experience of working on ventilator							P >0.05 S *
	a. Yes	1	6	0				
	b. No	50	43	0				
6	Family members were put on ventilator							P >0.05 S *
	a. Yes	8	9	0				
	b. No	42	41	0				

S * = significant

Table No.5 shows the chi square test value of association between the demographic variable and the level of knowledge regarding mechanical ventilator.

Table No.5.1: shows the chi-square test value of association between the pre-test knowledge regarding mechanical ventilator and age in year.

SI. no	Demographic variables	Pre-test knowledge score			Chi square		df	Inference
		P	A	G	P	X^2		
1	Age in years				12.59	0.986	6	P >0.05 S *
	a. 18-20	35	29	0				
	b. 21- 23	15	18	0				
	c. 24- 26	2	1	0				
	d. 27- 29	0	0	0				

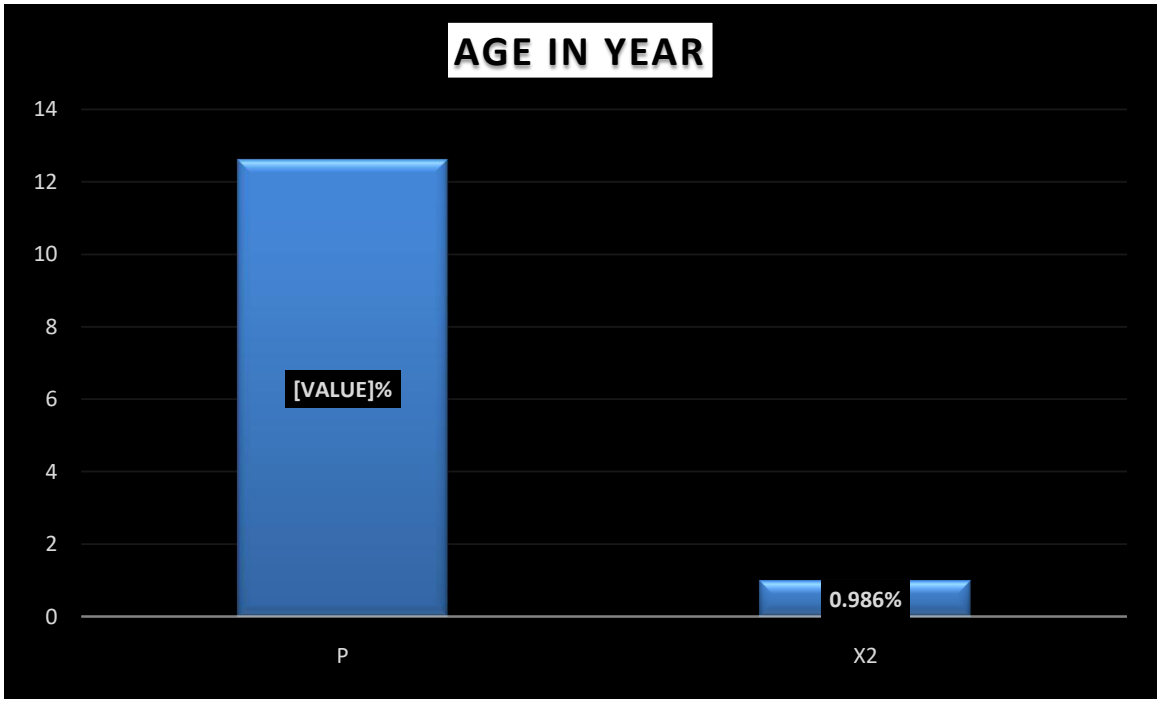

Figure No.6.1: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator.

Table No.5.1: depict that the association between pre-test knowledge regarding mechanical ventilator and age in year. Hence the chi square vale (0.986) is lesser than the P value (p=12.59) at 0.05 level of significance (df_6=0. 986 > 12.59) it is concluded that there is significant relationship between age in year and with the knowledge level of student nurses.

Table no.5.2: shows the chi-square test value of association between the pre-test knowledge regarding mechanical ventilator and gender.

n=100

Demographic variables	Pre-test knowledge score			Chi square		df	Inference
	P	A	G	P	X^2		
Gender							
c. Male	3	0	0	5.99	4.6	2	P >0.05 S *
d. Female	47	50	0				

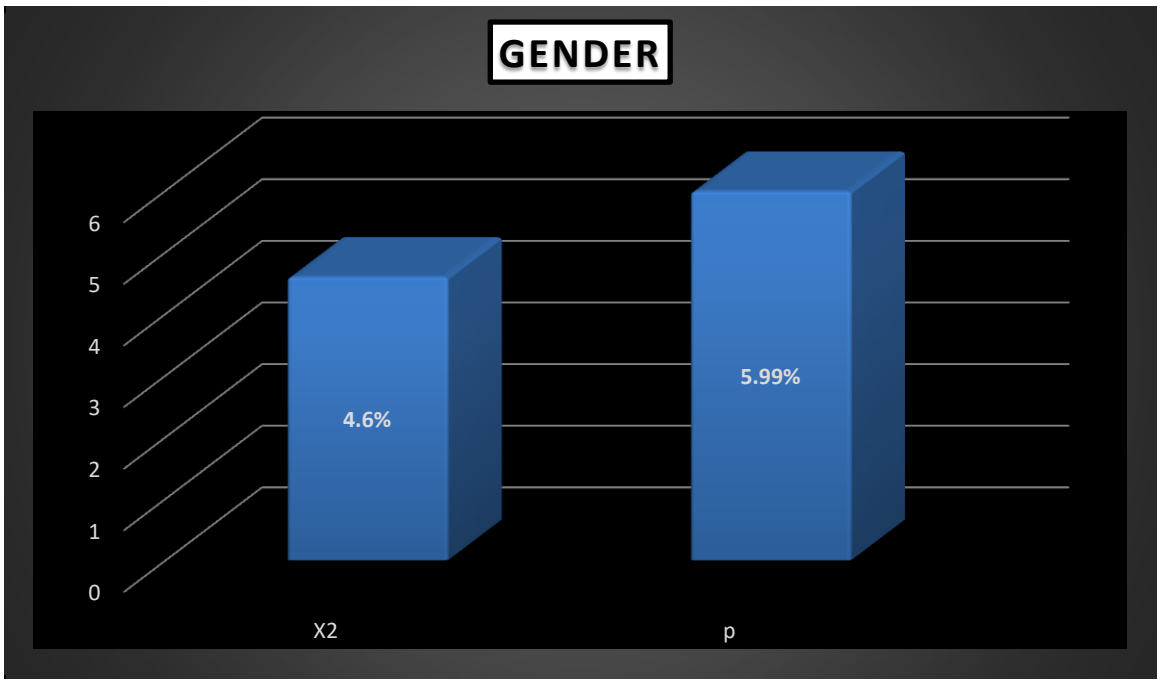

Figure No.6.2: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator and gender.

Table No.5.1: depict that the association between pre-test knowledge regarding mechanical ventilator and gender. Hence the chi square vale (4.6) is lesser than the P value (p=5.99) at 0.05 level of significance (df_2=. 4.6 > 5.99) it is concluded that there is significant relationship between gender and with the knowledge level of student nurses.

Table no.5.3: shows the chi-square test value of association between the pre- test knowledge regarding mechanical ventilator and course of study.

Demographic variables	Pre-test knowledge score			Chi square		df	Inference
	P	A	G	P	X^2		
Course of study				9.49	0.64	4	P >0.05 S
a. B.Sc.	23	27	0				
b. GNM	27	23	0				
c. PBBSc	0	0	0				

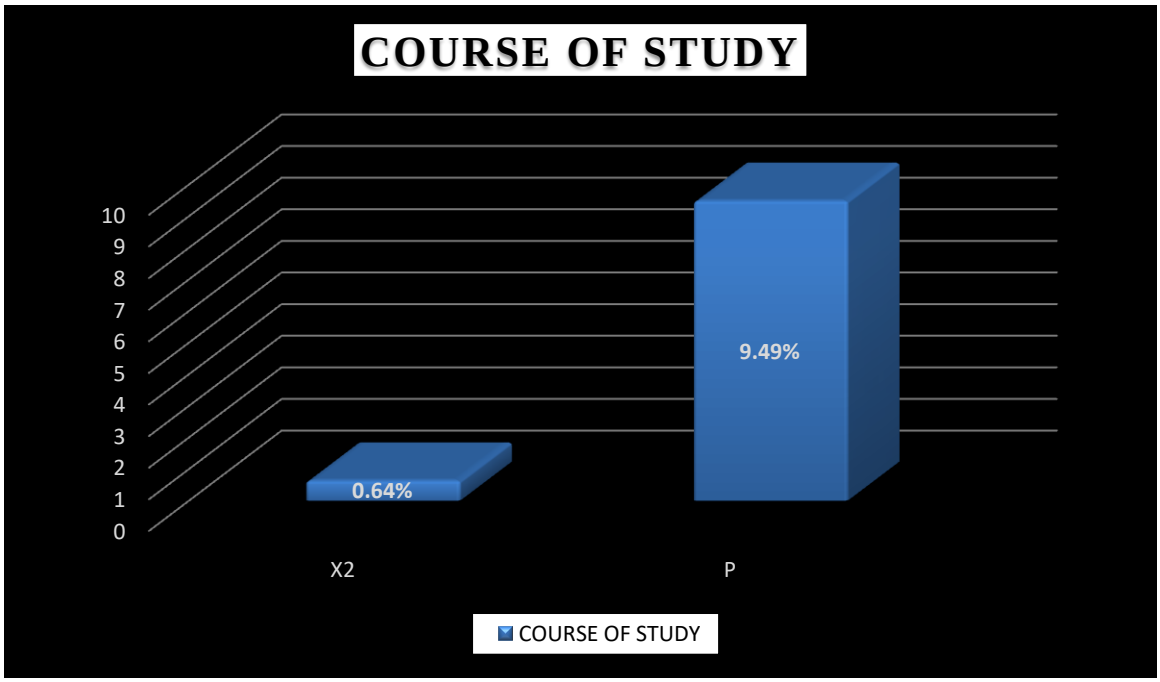

Figure No.6.3: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator and course of study.

Table No.5.3: depict that the association between pre-test knowledge regarding mechanical ventilator and course of study. Hence the chi square vale (0.64) is lesser than the P value (p=9.49) at 0.05 level of significance (df_4=.0.64 > 9.49) it is concluded that there is significant relationship between course of study and with the knowledge level of student nurses.

Table no.5.4: shows the chi-square test value of association between the pre- test knowledge regarding mechanical ventilator and year of course.

Demographic variables	Pre-test knowledge score			Chi square		df	Inference
	P	A	G	P	X^2		
Year of course				12.59	0.64	6	P >0.05 S
e. I PBBSc	0	0	0				
f. II PBBSc	0	0	0				
g. III BSc	23	27	0				
h. III GNM	27	23	0				

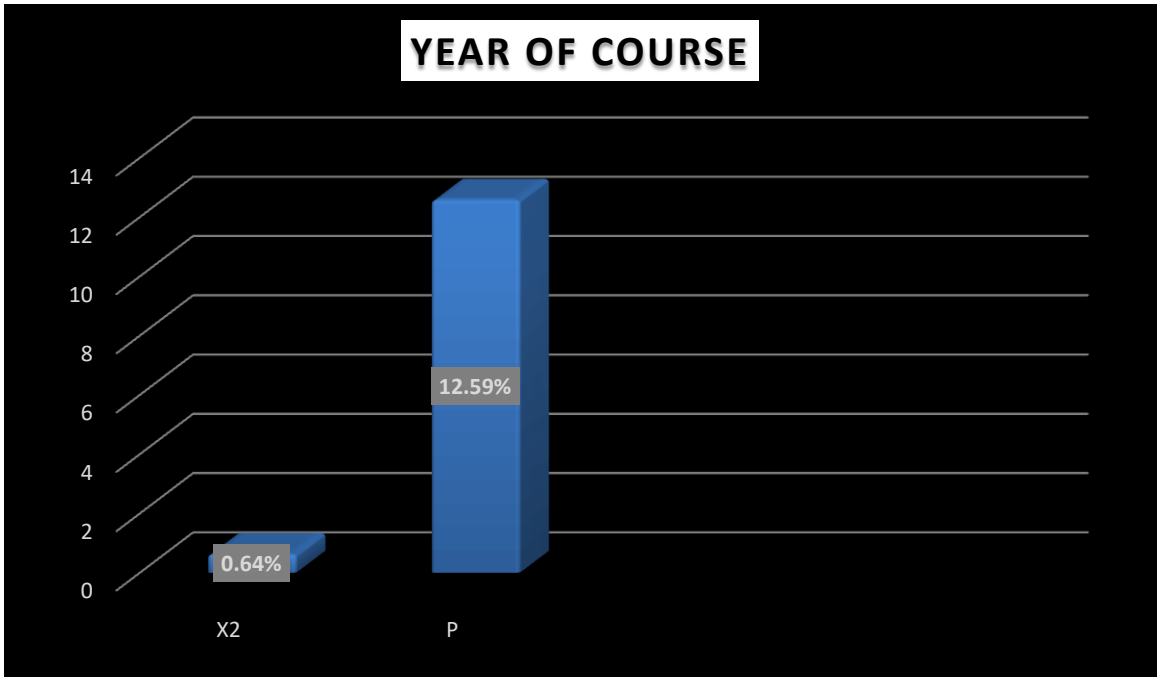

Figure No.6.4: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator and year of course.

Table No.5.4: depict that the association between pre-test knowledge regarding mechanical ventilator and year of course. Hence the chi square vale (0.64) is lesser than the P value (p=12.59) at 0.05 level of significance (df_6=.0.64 > 12.59) it is concluded that there is significant relationship between year of course and with the knowledge level of student nurses

Table no.5.5: shows the chi-square test value of association between the pre- test knowledge regarding mechanical ventilator and experience of working on ventilator.

Demographic variables	Pre-test knowledge score			Chi square		df	Inference
	P	A	G	P	X^2		
Experience of working on ventilator							
c. Yes	1	6	0				P >0.05
d. No	50	43	0	5.99	4.04	2	S

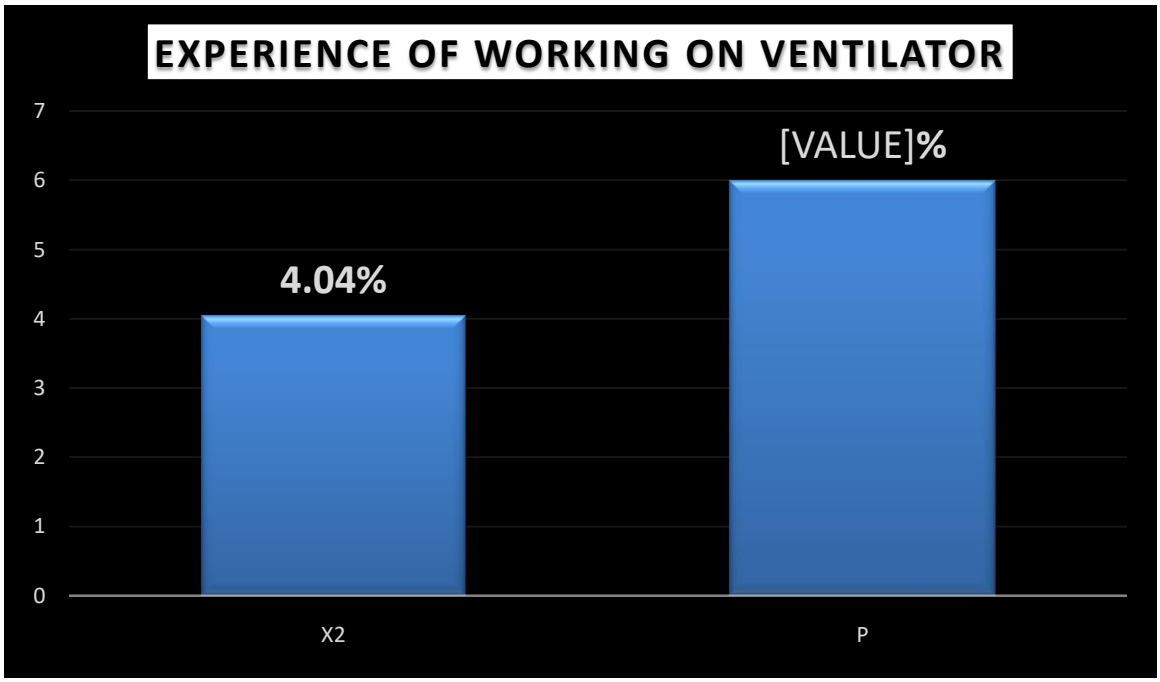

Figure No.6.5: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator and experience of working on ventilator.

Table No.5.5: depict that the association between pre-test knowledge regarding mechanical ventilator and experience of working on ventilator. Hence the chi square vale (4.04) is lesser than the P value (p=5.99) at 0.05 level of significance (df_2=.4.04 > 5.99) it is concluded that there is significant relationship between experience of working on ventilator and with the knowledge level of student nurses.

Table no.5.5: shows the chi-square test value of association between the pre- test knowledge regarding mechanical ventilator and experience of working on ventilator.

Demographic variables	Pre-test knowledge score			Chi square		df	Inference
	P	A	G	P	X^2		
Family members were put on ventilator				5.99	0.052	2	P >0.05 S*
c. Yes	8	9	0				
d. No	42	41	0				

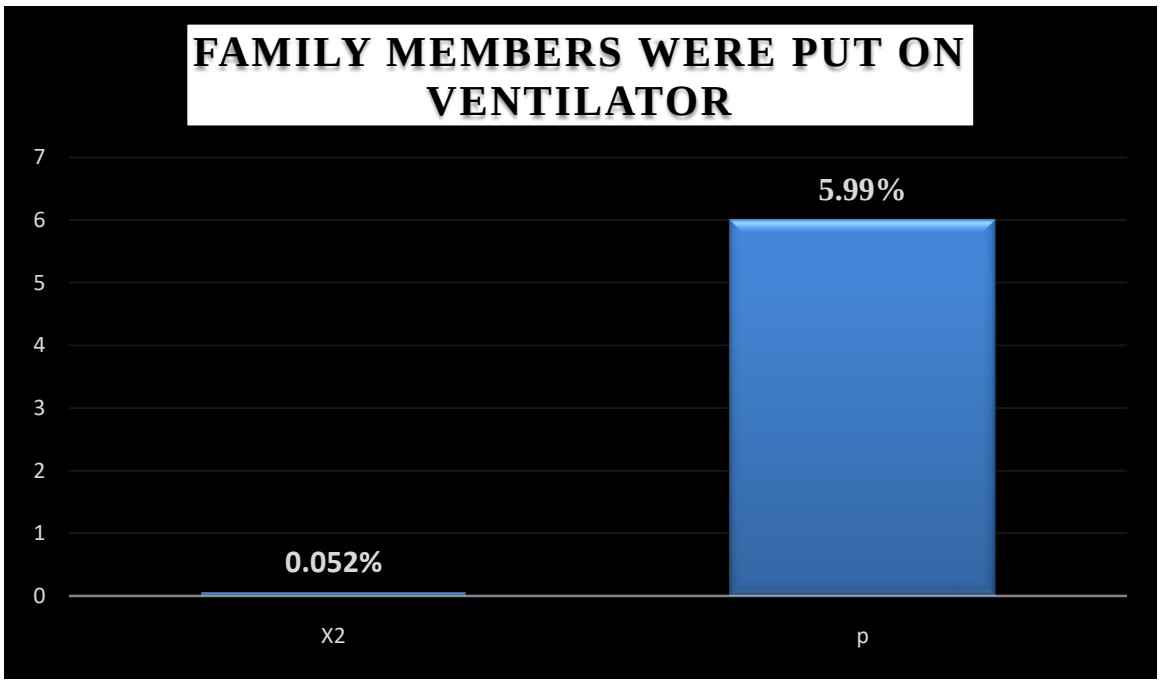

Figure No.6.6: bar diagram shows the chi square test value association between pre- test knowledge regarding mechanical ventilator and family members were put on ventilator.

Table No.5.6: depict that the association between pre-test knowledge regarding mechanical ventilator and experience of working on ventilator. Hence the chi square vale (0.052) is lesser than the P value (p=5.99) at 0.05 level of significance (df_2=.0.052 > 5.99) it is concluded that there is significant relationship between family members were put on ventilator and with the knowledge level of student nurses.

11. CONTRIBUTIONS MADE TOWARDS INCREASING THE STATE OF KNOWLEDGE LEVEL IN THE SUBJECT.

I am Ms. Reshma Joby feel privilege to educate the student nurses about the basics of mechanical ventilator and ventilator care. Through this live demonstration I could teach them the different types, modes and parameters of mechanical ventilator.

12. CONCLUSIONS SUMMARIZING THE ACHIEVEMENTS AND INDICATION OF SCOPE FOE FUTURE

The present study was indented to analyses the effectiveness of live demonstration on basics of mechanical ventilator.

SUMMARY:

The present study was to evaluate the effectiveness of live demonstration regarding the knowledge on basics of mechanical ventilator.

CONCLUSION:

Live demonstration is necessary to educate the student nurses of St. Ignatius institute of health sciences, Honavar. The study was undertaken to evaluate the effectiveness of live demonstration regarding the knowledge on basics of mechanical ventilator among student nurses in a selected nursing college at Honavar, uttarkannada. The study was conducted in a sample of 100 student nurses. Among them in pre-test, no one had good knowledge, 49(49%) of subject had average knowledge, 51 (51%) had poor knowledge in the study and posttest 76(76%) had good knowledge, 22(22%) had average knowledge and 1(1%) had poor knowledge. It shows that maximum number of subjects had good knowledge in the study after posttest. Thus live demonstration was highly effective in upgrading the knowledge of student nurses. Research hypothesis (H_1) is accepted.

RESEARCH OBJECTIVE:

1. To assess the pre and posttest knowledge level of student nurses regarding basics of mechanical ventilator
2. To prepare and implement the live demonstration.
3. To determine the significant enhancement in the post test knowledge level regarding basics of mechanical ventilator among student nurses.

4. To find the significant association between the knowledge level of student nurses regarding the basics of mechanical ventilator with their selected demographic variables

HYPOTHESIS:

- **H_0:** there will be no difference between the pre- test and post- test knowledge score.
- **H_0**: there will be significant enhancement in the post test knowledge score.
- **H_2**: there will be significant association between the pre- test knowledge score and selected demographic variables.

MAJOR FINDING OF THE STUDY:

The present study to evaluate the effectiveness of live demonstration regarding the knowledge on basics of mechanical ventilator among student nurses in a selected nursing college at Honavar, Uttarkannada. The major findings shows that evaluate effectiveness so live demonstration in improving knowledge regarding basics of mechanical ventilator among student nurses in St. Ignatius institute of health sciences at Honavar. The pretest knowledge score of subject was10.53, mean percentage was 10.53%, and SD was+-2.51. Where in the post-test mean knowledge score was 23.14, mean percentage was 23.14%, and SD was 4.7 and the mean percentage difference was 12.61%. The calculated 'Z' test value is 41.03

(P>0.05) was greater than the value of 20 at 0.05 level of significance. So that, there is an effectiveness of live demonstration regarding knowledge on basics of mechanical ventilator and the research hypothesis (H1) significant.

Third objective was to find out the association between knowledge level and demographic variables of student nurses.Hence the calculated chi square value lesser than table value (P>0.05). It shows that there is significant association with age in

years0.986 (P=12.59), gender4.6 (P=5.99), course of study o.64 (P=9.49), year of course 0.64 (P=12.59), experience of working on ventilator 4.04 (P=5.99) and family memberswere put on ventilator 0.052(P=5.99).

NURSING IMPLICATIONS:

NURSING EDUCATION:

- The nursing curriculum should consist of knowledge related to mechanical ventilator and their effective implementation.
- Student need to develop skills in preparing health teaching material in various health aspects in mechanical ventilator, newer techniques have to be used for motivating student participation. Emphasis should be made on in service education and training programs in the department to increase the knowledge of student nurses.

NURSING PRACTICES:

- Student nurses should have knowledge about mechanical ventilator
- Student Nurses should enhance their professional knowledge in order to practice wise at clinical.
- The finding of the study can be used to bring about awareness among the student nurses which will help in the improvement of handling of mechanical ventilator
- Student nurses can also plan teaching in the clinical setting even as a part of discharge teaching.

NURSING ADMINISTRATION:

- The finding of the study reveals the need to conduct an ongoing in- service education program for the student nurses who are working in the clinical settings.

NURSING RESEARCHER:

- The finding of the study can be utilized for conducting research on the knowledge regarding mechanical ventilator among student nurses
- Future investigators can be use the finding and the methodology as reference material. It highlights the area, which requires future exploration.

LIMITATIONS:

The following factors were beyond the control of the investigator:

- This study is limited to only student nurses of St. Ignatius college of Nursing.
- Purposive sampling was done which restrict the generalization of the study.
- The assessment of effect of live demonstration is limited to one post test conducted on seventh day of live demonstration.

RECOMMENDATION:

Measures which can be implemented to improve the knowledge regarding mechanical ventilator,

- A similar study can be relocated for larger samples, in different settings for making broad generalization
- The nursing school curriculum should include current and more information to update the knowledge regarding mechanical ventilator.

13.**ABSTRACT**

Background: *A mechanical ventilator is a machine that delivers a flow of gas for a certain amount of time by increasing proximal airway pressure, a process which culminates in a delivered tidal volume through using various modes of ventilation*[1]*. Mechanical ventilation involves the use of ventilator to help a patient who is unable to breathe spontaneously the most appropriate ventilator management can be performed when all the health team members are well experienced and equipped. This study aims to evaluate the effectiveness of live demonstration on basics of mechanical ventilator among student nurses.*

Objectives: *The study aimed at evaluate the effectiveness of live demonstration regarding the knowledge on basics of mechanical ventilator among student nurses in a selected nursing college at Honavar, Uttarkannada. The study focused on enhancing the knowledge level of student nurses regarding mechanical ventilator.*

Methodology: *An evaluative approach with experimental one group pre and posttest research design was adapted in this work. The sample size was 100 student nurses, were selectedbut purposive sampling technique. Data were collected by self-administration structured knowledge questionnaire with 30 multiple choice questions. Data analysed by Z test to draw out the inference by comparing the mean score difference.*

Result:*The computed Z test value showed there is significant difference in the pre (x= 10.53) and post-test (x=23.14) knowledge score (Z=41.03 at 0.05 level of*

significance). Chi square test (x^2) score reveals that there is significant association with age in years0.986 (P=12.59), gender4.6 (P=5.99), course of study o.64 (P=9.49), year of course 0.64 (P=12.59), experience of working on ventilator 4.04 (P=5.99) and family members were put on ventilator 0.052(P=5.99).

Conclusion: *The study was concluded as the live demonstration on mechanical ventilator was effective in promoting the knowledge level of student nurses.*

Recommendation: *Based on the findings the investigator recommends the future scholars to carry out many similar studies in the same field and different styles to spread the basis of mechanical ventilator.*

Keywords: mechanical ventilator, student nurses, effectiveness, knowledge and live demonstration.

Name and signature with date

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(Name of the student)

2.

(Name of the guide)

(A. SAGAYA AROCKIA MARY)

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