“A STUDY TO EVALUATE THE EFFECTIVENESS OF DEMONSTRATION ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPE WITH A VIEW TO PREVENT SPREAD OF INFECTION AMONG HOUSE KEEPING STAFFS IN SELECTED HOSPITALS AT HONAVAR ,UTTARAKANNADA .”

By

Ms. Vijaya Shibar

Submitted to

Rajiv Gandhi university of health science, Bangalore, Karnataka.

Under short term Research Grands for Undergraduate Students of Institutions affiliated to RGUHS for the year 2021– 22.
and
in Partial fulfilment of the requirements for the degree of

Bachelor of Science in Nursing.

Under the guidance of

A. Susai Mari

St. Ignatius Institute of Health Sciences,

Honavar, Uttara Kannada.

2022.

DECLARATION BY THE CANDIDATE

I hereby declare that this thesis titled **"A STUDY TO EVALUATE THE EFFECTIVENESS OF DEMONSTRATION ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPE WITH A VIEW TO PREVENT SPREAD OF INFECTION AMONG HOUSE KEEPING STAFFS IN SELECTED HOSPITAL AT HONAVAR, UTTARAKANNADA."** is a bonafide and genuine work to carried out by I **Ms.Vijaya Shibar** under the guidance of **A. Susai Mari**, the Associate professor, St. Ignatius Institute of Health Sciences, Honavar.

Date: **Ms. Vijaya Shibar**

Place: **Final year B.Sc. Nursing**

CERTIFICATE BY THE GUIDE

This is to certify that thesis **"A STUDY TO EVALUATE THE EFFECTIVENESS OF DEMONSTRATION ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPE WITH A VIEW TO PREVENT SPREAD OF INFECTION AMONG HOUSE KEEPING STAFFS IN SELECTED HOSPITAL AT HONAVAR ,UTTARAKANNADA."**is a bonafide research work done by

Ms. Vijaya Shibar under Short term Research Grands for Undergraduate Students of Institutions affiliated to RGUHS for the year 2021– 22.

Date :

Place: Honavar.

Signature of the guide

A. Susai Mari
Associate professor
Department of MHN
St. Ignatius Institute of Health Sciences,
Honavar.

ENDORSEMENT BY THE PRINCIPAL /HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled **"A STUDY TO EVALUATE THE EFFECTIVENESS OF DEMONSTRATION ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPE WITH A VIEW TO PREVENT SPREAD OF INFECTION AMONG HOUSE KEEPING STAFFS IN SELECTED HOSPITAL AT HONAVAR ,UTTARAKANNADA''**

is a bonafide research work done by **Ms. Vijaya Shibar** under Short term Research Grands for Undergraduate Students of Institutions affiliated to RGUHS for the year 2021– 22 under the guidance of **A. Susai Mari**. Associate professor, St. Ignatius Institute of Health Sciences, Honavar.

Date :

Place: Honavar.

Signature of the principal

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

2021-2022

FINAL REPORT

1.	**TITLE OF THE PROJECT**	**"A STUDY TO EVALUATE THE EFFECTIVENESS OF DEMONSTRATION ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPE WITH A VIEW TO PREVENT SPREAD OF INFECTION AMONG HOUSE KEEPING STAFFS IN SELECTED HOSPITALS AT HONAVAR ,UTTARAKANNADA ."**
2.	**RGUHS PROJECT CODE**	**UG21NUR247**
3.	**NAME OF THE STUDENT**	**Ms. VIJAYA SHIBAR**
	E-MAIL ID:	**Sison04@gmail.com**
	MOBILE NUMBER:	**7760925504**
4.	**NAME OF THE GUIDE**	**SR.SUSAI MARI**
	DESIGNATION	**Asso.professor**
	EMAIL ID	**susaisra@gmail.com**
	MOBILE NUMBER	**9916529004**
5.	**NAME OF THE DEPARTMENT**	**NURSING**
6.	**DATE OF COMMENCEMENT OF THE RESEARCH ACTIVITY**	**2/1/22**
7.	**DATE OF COMPLETION**	**25/4/21**
8.	❖ **OBJECTIVES STATED**	**The objectives of the study are;** 1. To assess the pre and post-test knowledge level of housekeeping staffs regarding donning and doffing of PPE. 2. To determine the significant enhancement in the post-test knowledge level of housekeeping staffs

		regarding donning and doffing of PPE. 3. To find the significant association between the pre-test knowledge level of housekeeping staffs regarding donning and doffing of PPE with their selected demographic variables.
	❖ **OBJECTIVES ACHIEVED**	1. The pre and post-test knowledge level of housekeeping staffs regarding donning and doffing of PPE is assessed. 2. Determined the significant enhancement in the post-test knowledge level of housekeeping staffs regarding donning and doffing of PPE. 3. Found the significant association between the pre-test knowledge level of housekeeping staffs regarding donning and doffing of PPE with their selected demographic variables

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

METHODOLOGY:

This work is to evaluate the effectiveness of demonstration on "A study to evaluate the effectiveness of demonstration on donning and doffing of PPE among house keeping staff to prevent spread of infection with view to develop demonstration ". Which include description of research approach, research design, study setting, variables, target population, sample and sample size, sampling technique, sampling criteria, developmental and description of tools, data collection method and plan for data analysis.

RESEARCH APPROACH:

Research approaches are plans and the procedure for research. A quantitative evaluative research approach was adopted for the study. As enable the investigator to effectiveness of demonstration on knowledge regarding donning and doffing of PPE among house keeping staffs to prevent infection with view to develop demonstration".

RESEARCH DESIGN:

Keeping In view the objective of the study, the research design selected for the present study is Pre-experimental, Nonrandomized one group pre and post-test was adopted for the Study as it enables to determine the effectiveness of demonstration on donning and doffing of PPE among house keeping staff.

VARIABLES UNDER STUDY:

According to **Polit & Hungler, (1999), variables** are an attribute of a person or object that variable and taken on different value within the population under study.

- **Independent variable:** demonstration on donning and doffing of personal protective equipment..
- **Dependent variable:** Knowledge level of house keeping staffs.
- **Demographic variable:** In the study, the demographic variables are Age in years, Gender Religion, Educational status, Income per month, Marital status, Area of Residence Area of work Year of working experience, previous knowledge on donning and doffing PPE, Type of family.

SETTING OF THE STUDY:

According to Polit & Hungler Setting is the physical location and condition in which data collection takes place in a study. The study will be conducted at St. Ignatius Hospital Honavar, UttaraKannada.

POPULATION:

The population refers to the entire set of individual or subjects having common characteristics, sometimes referred to as universal. In this study the population is housekeeping staffs.

- **Target population**:

The target population consist of the total members of a define set of housekeeping staffs from whom the data will be generalized. In the present study the target population was all housekeeping staffs in selected hospitals at Honavar, UttaraKannada.

- **Accessible population**:

In the study the accessible population was housekeeping staffs working in St. Ignatius Hospital, Honavar, UttaraKannada.

SAMPLE:

A sample is a small portion of population selected to participate in the research study. The sample for this research is housekeeping staffs in St. Ignatius Hospital, Honavar, UttaraKannada.

SAMPLE SIZE:

The Sample size taken for this study is consisted of 30 housekeeping staffs in St. Ignatius Hospital, Honavar, UttaraKannada.

SAMPLING TECHNIQUE:

Sampling defines the process of selecting a group of people (or) other elements with which to conduct a study. In this study Purposive sampling, Non-randomized sampling procedure where the subject selected, in part of whole, at the purposive of researcher, or entitle using the most conveniently available people as a study participant.

SAMPLING CRITERIA:

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

Inclusion criteria:

- Both male and female housekeeping staffs are included.
- Housekeeping staffs who are available at the time of study.

- Housekeeping staffs who are willing to participate for the study.

Exclusion criteria:

- Housekeeping staffs who are illiterates

SELECTION & DEVELOPMENT OF TOOL:

Tool is a procedure or instrument used to assess awareness by the research to collect data. The tool was developed after:

- An extensive review of literatures
- Based on consultation with experts in the field and related field.
- Based on opinion of the expert to ascertain for the clarity and appropriateness of the items of given structured questionnaire.
- Based on informal discussion with peer group.
- Prepared in English then translated into kannada.

DESCRIPTION OF THE TOOL:

The tool used was structured knowledge questionnaire.

Self- structured questionnaire consists of two sections-

- **Section I:** It consists of sample characteristics
- **Section II:** structured Knowledge questionnaire regarding donning and doffing of personal protective equipments (PPE).

SECTION-I: This section consists of 10 demographic variables like Age of in years, Gender , Religion, Education status, Area of Residence ,Area of work , Year of experience, previous knowledge on donning and doffing of PPE, do they wear PPE while handling patients and biomedical wastes and specific the PPE they wear.

SECTION-II: This section consist of 30 multiple choice questions with maximum score of 30and the entire question has 4 options where as one will be the correct answer and other three will be the wrong answers. Each correct answer score "1" mark and incorrect answer scores "0" mark.

CRITERIAN MEASURES

The multiple-choice question was used to assess the knowledge of house keeping staffs regarding donning and doffing of PPE and the assessment of knowledge will be identified through following scale –

Knowledge Level	Score Range	Percentage (%)
Poor	0-07	0-23.33%
Average	08-15	26.66- 50%
Good	16-22	53.33– 73.33%
Excellent	23-30	76.66– 100%

Maximum score: 30 Minimum score: 1

CONTENT VALIDITY:

To ensure the content validity of tool, the prepared tool along with problems statement, objectives, operational definition, hypothesis, self-structured booklet was submitted to 5 experts, in the field of personal protective equipments, General physician and Statistician. Expert requested to judge the items on the basis of their relevance, clarity, feasibility organization of the items included in the study. Based on expert opinion, some of the questions were modified and some of the question has been deleted, arrangement of the option was done in proper way according to the suggestions given by experts, the tool was presented and finalized by the research committee of SIIHS college of Nursing Honavar.

RELIABILITY OF TOOL :

The reliability co-efficient calculated using split half formula to determine Reliability co-efficient for structured knowledge questionnaire. The "r" was found to be r=0.84 This correlation coefficient was reliable and it is good tool for assessing the effectiveness of demonstration on Knowledge regarding donning and doffing of Personal Protective Equipments (PPE).

PILOT STUDY:

Pilot study was conducted as a trial to check the accessibility and feasibility .The pilot study was conducted in Government hospital Honavar, from 07/02/2022 To 15/02/2022. The purpose of study was explained to 05 housekeeping staffs that fill the sampling criteria, the purpose of the study was explained and confidentiality was assured to all subjects. The average time taken by each subject to attend the questionnaire and given answer was about 1 hour within a period of one week. The data analysis was done using descriptive and inferential statistics. Pilot study confirmed practicability and provide confidence to the researcher for main study. After pilot study the tool was found to be feasible and acceptable.

Pre Test and Intervention			Post Test		
Date	No of sample	Duration	Date	No of sample	Duration
07/02/22	05	1 hour	15/02/22	05	1 hour

DATA COLLECTION PROCESS:

Data collection is precise, systematic method of gathering information relevant the research to conduct the main study at St. Ignatius Hospital Honavar, UttaraKannada. A formal written permission was obtained from concerned authorities before data collection from Sarpanch. Data collection period was from 04/03/2022 To 16/03/2022. The Procedure was the same as in the pilot study valid and reliable structured knowledge questionnaire was used for data collection. Self introduction and establishing rapport with the subject 30 housekeeping staffs Explained the importance 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 herself and explained the purpose of the study to the house keeping staffs.
- The written consent was obtained from the subjects.
- The self-structured knowledge questionnaire was used to assess the Knowledge Regarding donning and doffing of personal protective equipment (PPE).
- The participants were thanked for their co-operation.
- Data collected was then tabulated and analyzed.

Data collection process is scheduled as following

S.No	Pre Test Intervention				Post Test			
	Date	**sample**	**Time**	**Area**	**Date**	**sample**	**Time**	**Area**
1.	04/03/22	09	09-12pm	St.Ignatius Hospital, Honavar	12/03/22	09	09-12pm	St.Ignatius Hospital, Honavar
2.	05/03/22	11	09-12pm		13/03/22	11	09-12pm	
3.	06/03/22	10	09-12pm		16/03/22	10	09-12pm	

PLAN FOR DATA ANALYSIS:

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

Descriptive statistics:

- Demographic data was analyzed in items of frequency and percentage.
- The knowledge and practice regarding personal protective equipment (PPE).
- . Mean, mean percentage and standard deviation was computed

Inferential statistics:

- Chi-square test is to find out association between the selected demographic variables and level of knowledge regarding personal protective equipment(PPE).
- Paired t- test used to find the mean knowledge difference between pre test and post test.

ETHICAL CONSIDERATION:

- Permission was obtained from research committee of SIIHS college of Nursing, Honavar.
- Due permission from authorities was sought and obtained.
- Informed written consent was taken from participants.
- Anonymity of the participants was ensured.

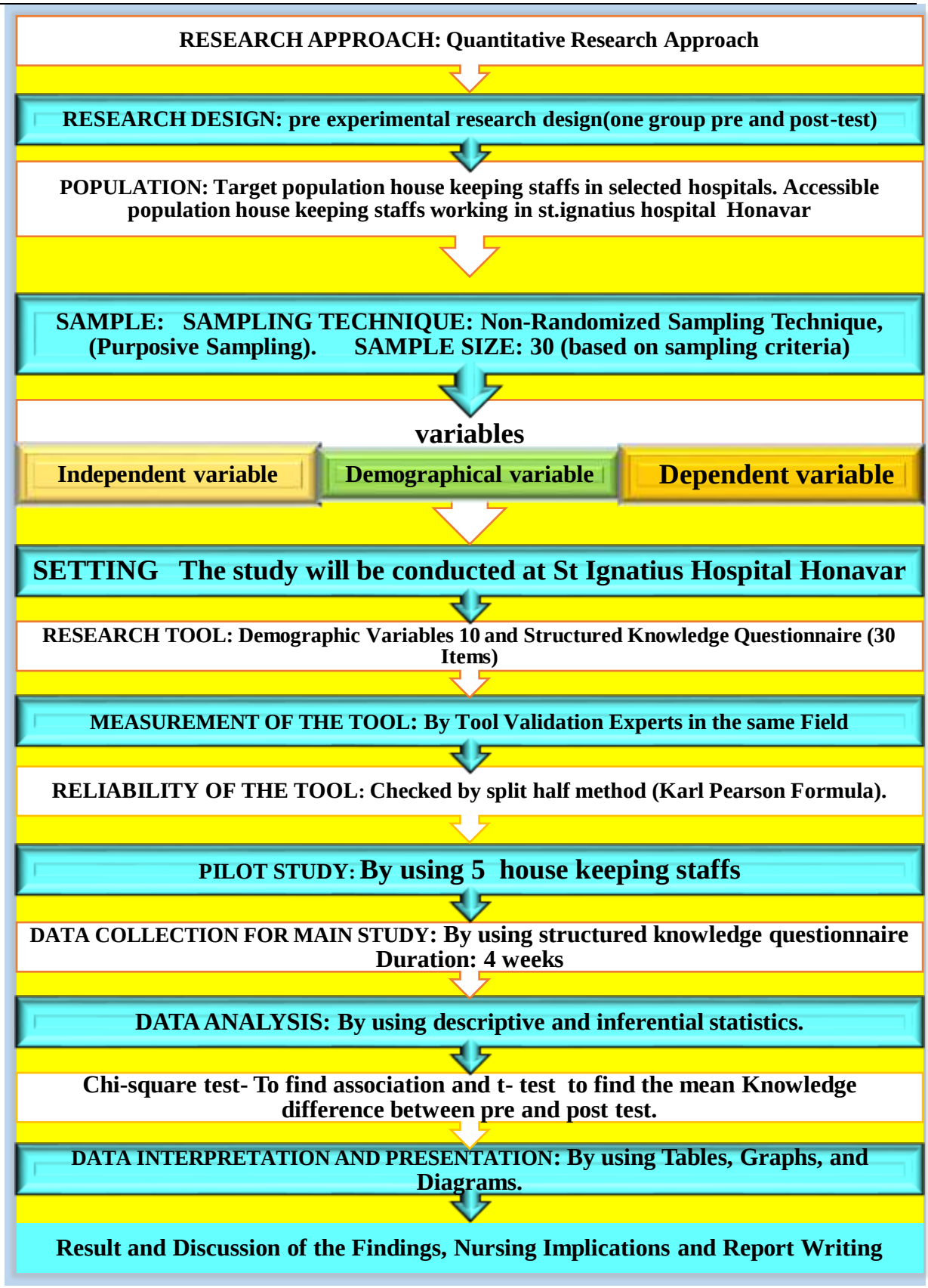

FIGURE NO: 1. SCHEMATIC DIAGRAM OF RESEARCH METHODOLOGY

DATA ANALYSIS AND INTERPRETATION

Analysis and interpretation of data collected among housekeeping staffs Regarding the Effectiveness of demonstration on donning and doffing of PPE. The purpose of this analysis is to reduce the data to a manageable and Interpretable form so that the research problem can be studies and tested the data were analysed in according to the objectives and hypothesis of the study.

OBJECTIVES OF THE STUDY

1. To assess the pre and post test knowledge level of house keeping staffs regarding donning and doffing of personal protective equipment(PPE).
2. To determine the significant enhancement in the post test knowledge level of housekeeping staff regarding donning and doffing of personal protective equipment (PPE).
3. To find the significant association between the pre-test knowledge level of house keeping staffs regarding donning and doffing of PPE with their selected demographic variables.

HYPOTHESIS:

- **H_1**: There will be a significant difference between pre and post-test knowledge score of housekeeping staffs regarding wearing PPE.
- **H_2**: There will be a significant association between the pre test knowledge score and selected demographic variables.

ORGANIZATION AND PRESENTATION OF DATA:

Analysis and interpretation was done as per the objectives of the study and the hypothesis formulated. Descriptive and inferential statistics were used for the analysis of the data.

The data and finding have been organized and presented under the following sections.

- **SECTION: I-** Frequency and Percentage and Distribution of study subjects according to socio-demographic variables.
- **SECTION: II-** Analysis of overall pre and post-test knowledge level of sample regarding donning and doffing of personal protective equipment (PPE) among housekeeping staffs.
- **SECTION: III-** Analysis of finding the mean difference in the pre and post-test knowledge housekeeping staffs regarding `Donning and Doffing of PPE.
- **SECTION: IV** Analysis of paired t test value showing the effectiveness of demonstration by finding the mean difference in the pre and post-test knowledge of housekeeping staffs regarding donning and doffing of personal protective equipment (PPE).
- **SECTION: V-.** Analysis of finding association between the pre-test mean knowledge level of the subjects with their selected demographic variables.

SECTION – I

Table 1: Frequency and Percentage distribution of housekeeping staffs according to Socio- Demographic Variables.

N= 30

SL.NO	DEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%)
1.	**Age in years**		
	a)21-25	00	00%
	b)26-30	07	23.33%
	c)31-35	09	30%
	d)36 and above	14	46.67%
2.	**Gender**		
	a) Male	07	23.33%
	b) Female	23	76.67%
3.	**Religion**		
	a)Christian	10	33.33%
	b)Muslim	00	00%
	c)Hindu	20	66.67%
	d)Other	00	00%
4.	**Education**		
	a)1-5th std	06	20%
	b)6-10th std	16	53.33%
	c)PUC	00	00%
	d)other	08	26.67%
5.	**Income per month**		
	a)< Rs, 8000	05	16.67%
	b)Rs, 8000- 10000	25	83.33%
6.	**Marital status**		
	a)unmarried	06	20%
	b)married	22	73.34%
	c)widow / widower	1	3.33%
	d)divorce	1	3.33%
7.	**Type of family**		
	a)Joint family	10	33.33%
	b) nuclear family	20	66.67
	c) extended family	00	00%

8	**Year of working experience**		
	a)2	04	13.33%
	b)3	03	10%
	c) 4	09	30%
	d) more than 4	14	46.67%
9	**Do you have PPE while handling patient and biomedical waste?**		
	a) yes	29	96.67%
	b)No	01	3.33%
10	**If yes specify.**		
	a) Mask and gloves	29	96.67%
	b)cap	1	3.33%
	c)gown	00	00%
	d)goggles	00	00%

Figure No-3:-Shows the frequency and percentage distribution of subjects according to socio demographic variables such as age, gender, Religion, income per month, marital status, type of family, educational status, year of working experience, , use of PPE among the housekeeping staffs, specific used.

Table 1: Frequency and distribution of subjects according to Age in years

N=30

AGE IN YEARS	FREQUENCY (n)	PERCENTAGE (%)
a) A)21-25	00	00%
b) B)26-30	07	23.33%
c) C)31-35	09	30%
d) D) 36 and above	14	46.67%
TOTAL	30	100%

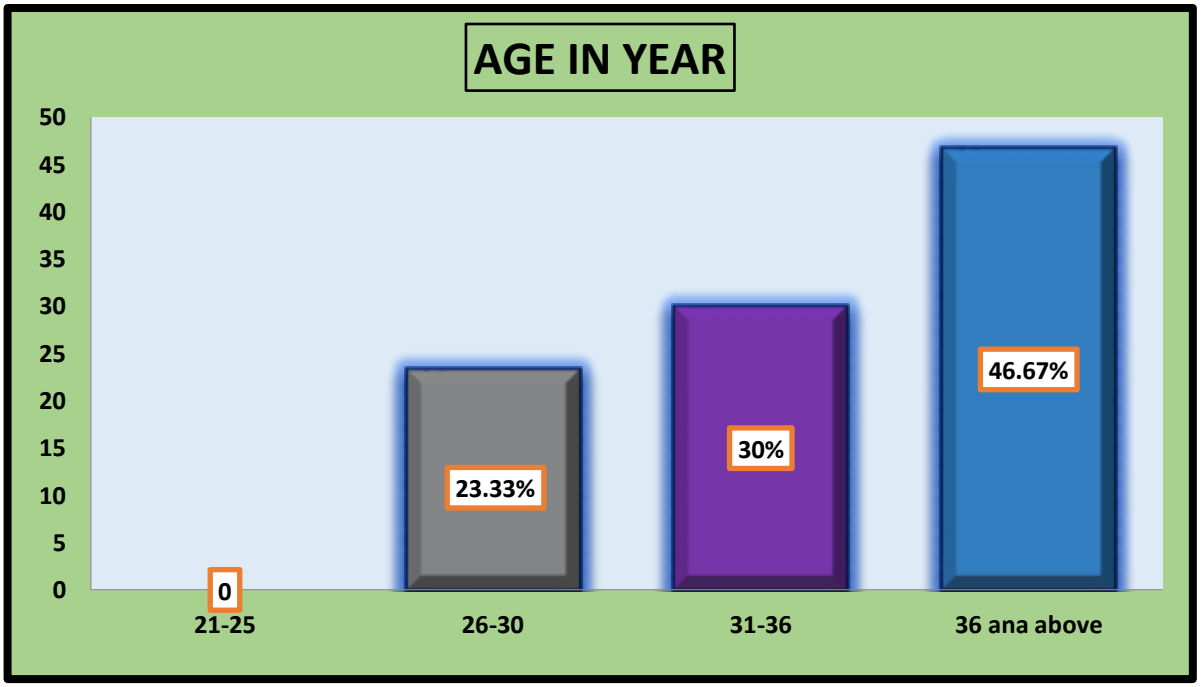

Figure no.2.1: Column diagram shows the percentage distribution of subjects according to the age of subjects.

Table1.1 (fig.2.1) Depicts that according to the age of subjects the maximum number of subjects 14(46.67%) were 36 and above, 9 (30%) were31-35, 7 (23.33%) were 26-30years, and 0(0%) were 21 - 25years.

Table 1.2: Frequency and distribution of subjects according to Gender

N=30

GENDER	FREQUENCY(n)	PERCENTAGE (%)
a. male	07	23.33%
b. female	23	76.66%
TOTAL	30	100%

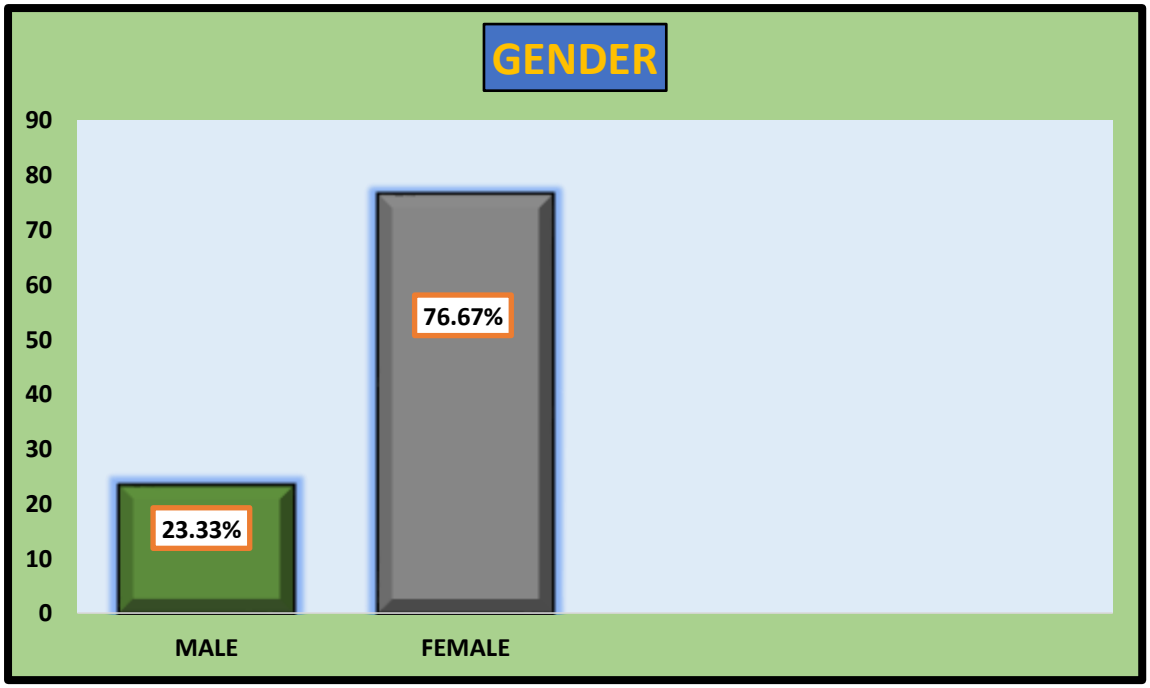

Figure 2.2 column graph shows the percentage of subjects according to gender of the subjects.

Table 1.2(fig.2.2) Depicts that according to gender of the subjects the maximum number of subject 23(76.67%)were female and 7(23.33%) were male.

Table 1.3: Frequency and percentage distribution of subject according to religion of housekeeping staffs.

N=30

RELIGION	FREQUENCY(n)	PERCENTAGE (%)
a. Hindu	20	66.67%
b. Christian	10	33.33%
c. Muslim	0	0%
d. others	0	0%
TOTAL	30	100%

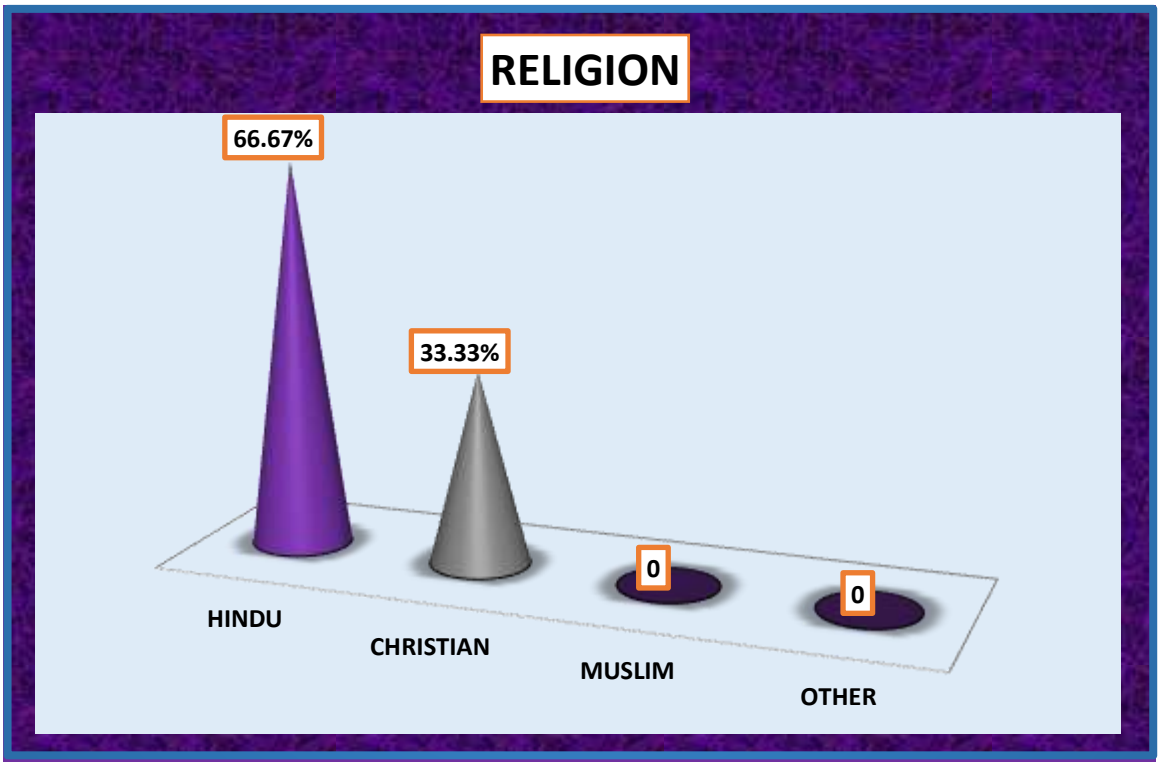

Figure 2.3- Cone diagrams representing the percentage distribution of subject according to religion of housekeeping staffs

Table 1.3 (Figure 2.3): Depicts that majority of housekeeping staffs 20(66.67%) belongs to Hindu and 10(33.33%) belongs Christian religion

Table 1.4 : frequency and distribution of subjects according to educational status

N=30

EDUCATIONAL STATUS	FREQUENCY(n)	PERCENTAGE(%)
a. 1 – 5th std	6	20%
b.6 – 10th std	16	53.33%
c. PUC	0	0%
d. others	08	26.67%

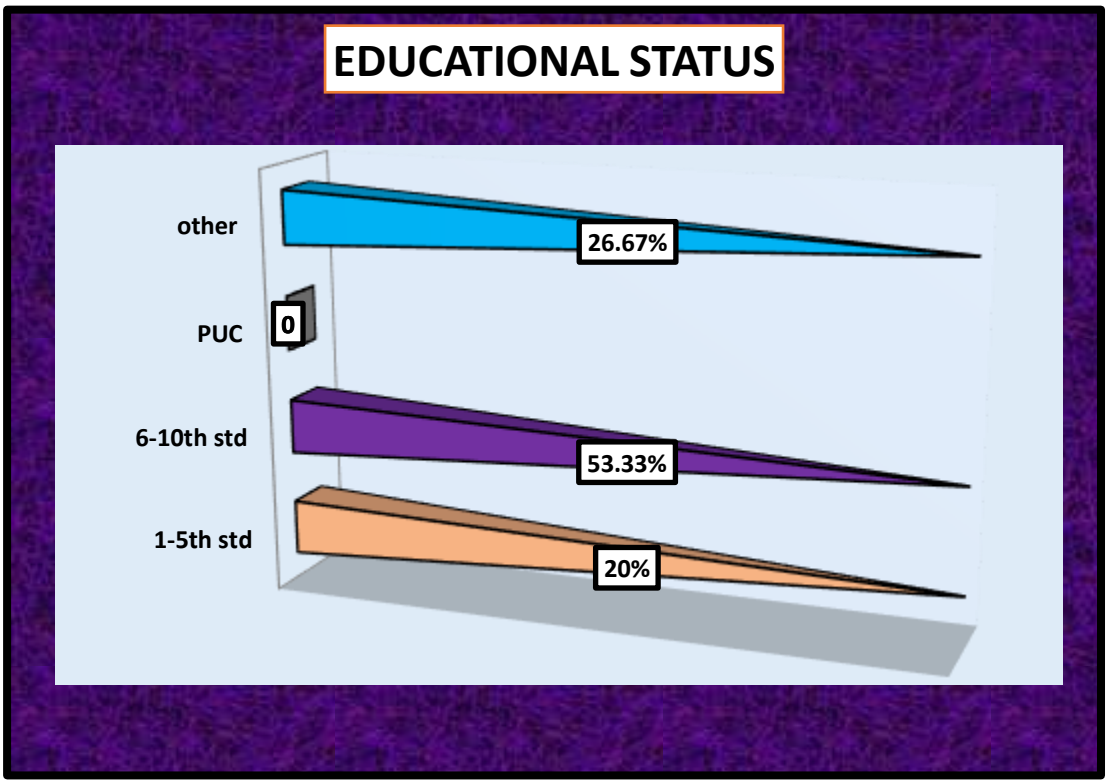

Figure 2.4: pyramidal graph shows the percentage of subjects according to educational status of the house keeping staffs

Table 1.4(fig.2.4) Depicts that according to educational status of the house keeping staffs the maximum number of subjects 16 (53.33%)were 6-10th standard, 8(26.67%) were other and 6(20%) were 1-5th standard.

Table 1.5: Frequency and distribution of housekeeping staffs according to income.

N=30

INCOME	FREQUENCY(n)	PERCENTAGE (%)
a.Rs.< 8000	05	16.67
b.< Rs.8001- 10000	25	83.33

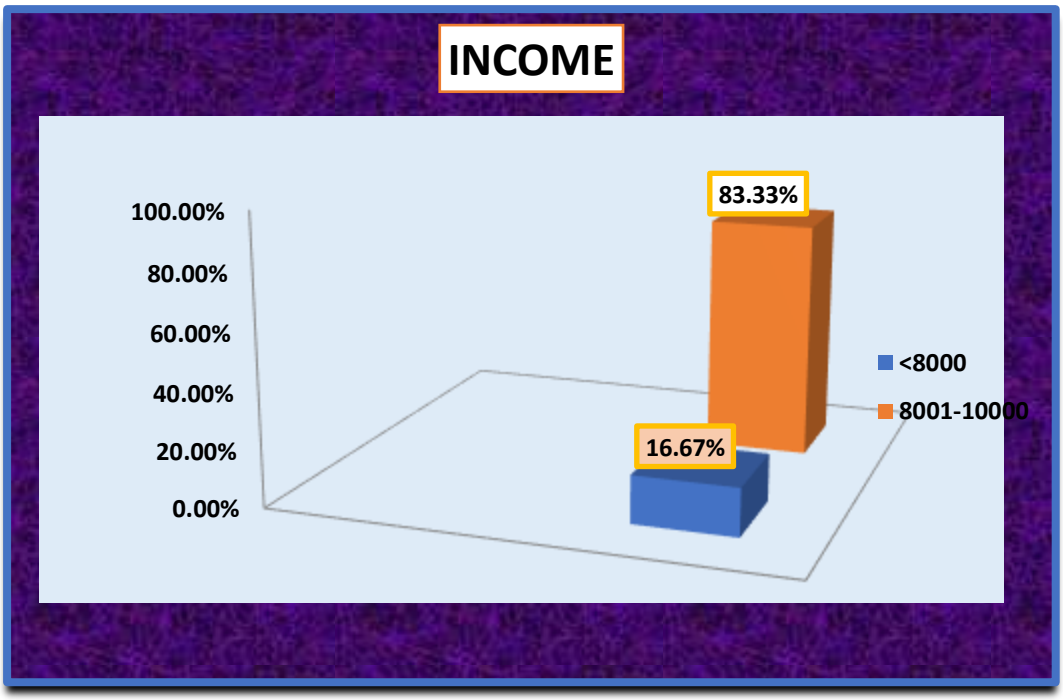

Figure 2.5:Column diagram shows the percentage of housekeeping staffs according to income.

Table 1.5 (fig. 2.5) Depicts that according to income of the house keeping staffs the maximum number of subjects 25(83.3%) were include < Rs. 8001-10000 and 5(16.67%) were earning Rs<8000 per month.

Table 1.6: frequency and distribution of subjects according to marital status.

N=30

MARITAL STATUS	FREQUENCY(n)	PERCENTAGE (%)
a) unmarried	06	20%
b) married	22	73.34%
c) widow / widower	1	3.33%
d) divorce	1	3.33%

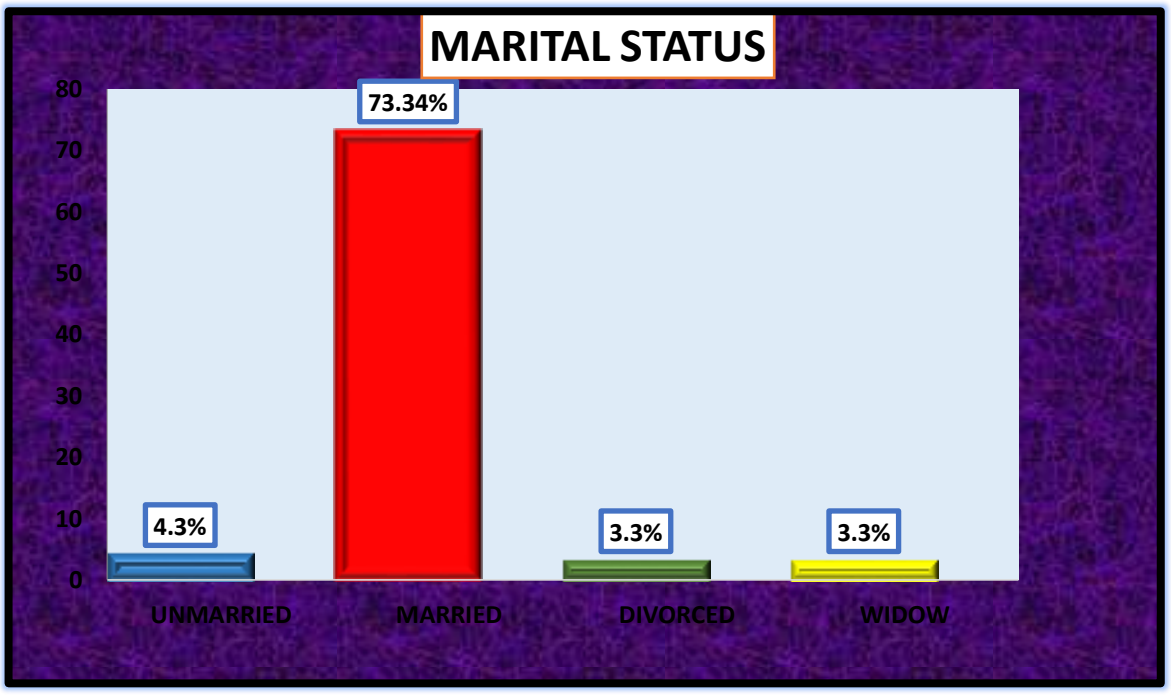

Figure 2.6:Column diagram shows the percentage of housekeeping staff according to marital status.

Table 1.6(fig.2.6) Depicts that according to marital status of the house keeping staffs the maximum number of subjects 22(73.34%) were married, 6(20%) were unmarried, 1(3.3%) were divorced and 1(3.3%) were widow or widower

Table 1.7: Frequency and distribution of subjects according to the year of working experience.

N=30

YEAR OF WORKING EXPERIEENCE	FREQUENCY(n)	PERCENTAGE (%)
a) a) 2	04	13.33%
b) b) 3	03	10%
c) c) 4	09	30%
d) d) more than 4	14	46.67%

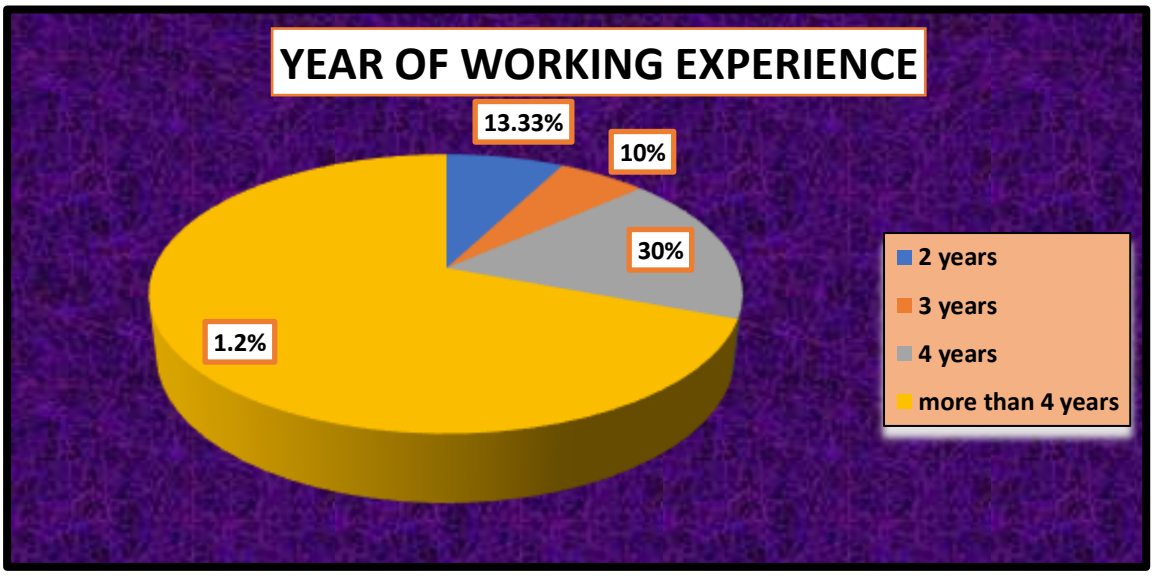

Figure 2.7: Pie chart shows the percentage of subjects according to year of experience of the subjects.

Table 1.7(Fig.2.7) Depicts that according to the year of working experience of the house keeping staffs the maximum number of subjects 14(46.67%)were more than 4 years, 9(30%) were 4 years, 4(13.33%) were 2 years and 3(10%) were 3 years.

Table 1.8: Frequency and distribution of subjects according to type of family.

N=30

TYPE OF FAMILY	FREQUENCY(n)	PERCENTAGE (%)
a) Joint family	10	33.33%
b) Nuclear family	20	66.67%
c) Extended family	0	0%

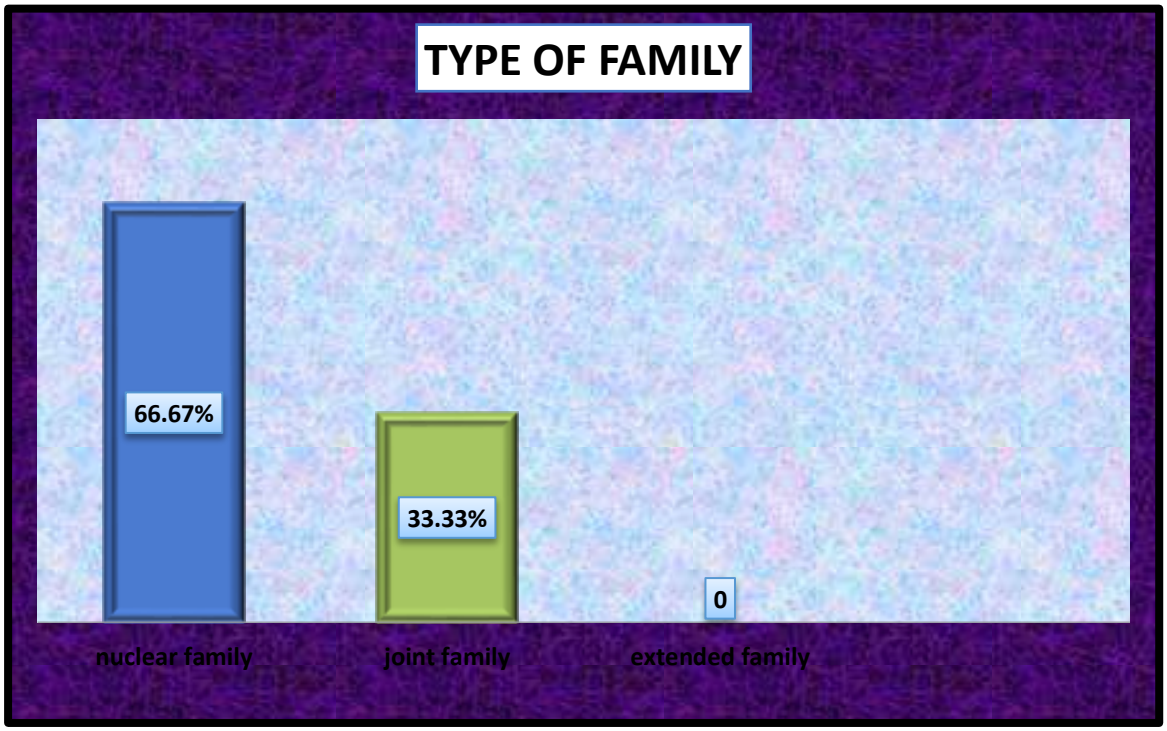

Figure 2.8: column chart shows the percentage of subjects according to type of family of subjects.

Table 1.8(Fig.2.8) Depicts that according to the type of family of the house keeping staffs the maximum number of subjects 20(66.67%)were nuclear family, 10(33.33%) were joint family, and 0(0%) were extended family.

Table 1.9: Frequency and distribution of subjects according to use of personal protective equipments.

.

N=30

DO YOU WEAR PPE	FREQUENCY(n)	PERCENTAGE (%)
a. Yes	29	96.67%
b. No	1	3.33%
Total	30	100%

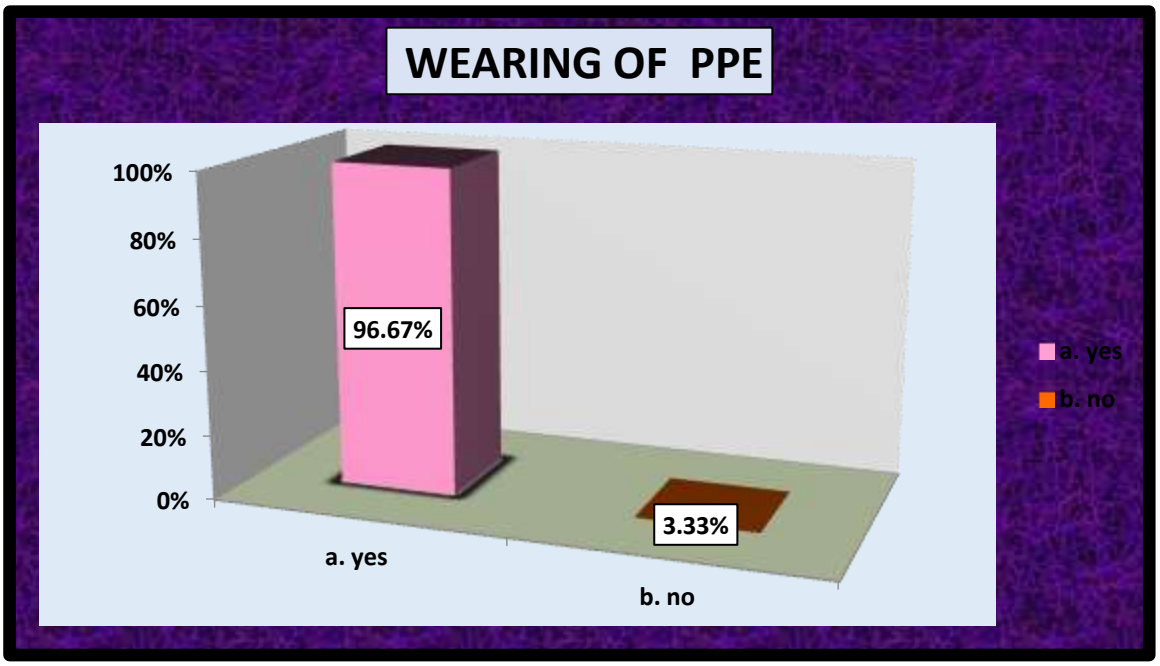

Figure 2.9: Column graph shows the percentage of subjects according to use of PPE by the subjects.

Table 1.9(Fig.2.9) Depicts that according to use of PPE by the subjects the maximum number of subjects 29(96.67%) were using PPE and 1(3.33%) were not using PPE.

Table 1.10: Frequency and distribution of subjects according to type of personal protective equipments.

N =30

IF YES SPECIFY,	FREQUENCY(n)	PERCENTAGE (%)
a. Gloves and mask	29	96.67%
b.Cap	1	3.33%
c.Goggals	0	0%
d.Gown	0	0%
Total	**30**	**100%**

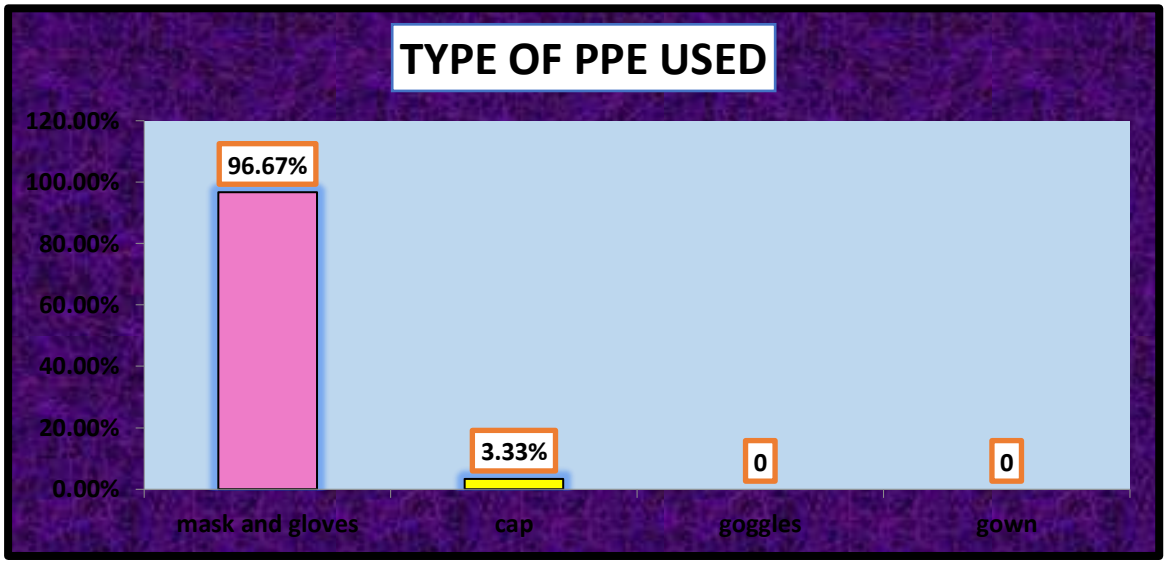

Figure 2.10: Column graph shows the percentage of subjects according to type of PPE by the subjects.

Table 1.10 (Fig.2.10) Depicts that according to type of PPE by the subjects the maximum number of subjects 29(96.67%) were using mask and gloves, 1(3.33%) were using cap.

SECTION –II

Finding of overall Knowledge Level housekeeping staffs Regarding Donning and Doffing of PPE.

Table No.-2: Shows the frequency and percentage distribution of overall knowledge level of housekeeping staffs Regarding Donning and Doffing of PPE.

N=30

Knowledge Level	Pre test		Post test	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Poor	5	16.67%	0	0%
Average	11	36.66%	0	0%
Good	14	46.67%	7	23.33%
Excellent	0	0%	23	76.67%

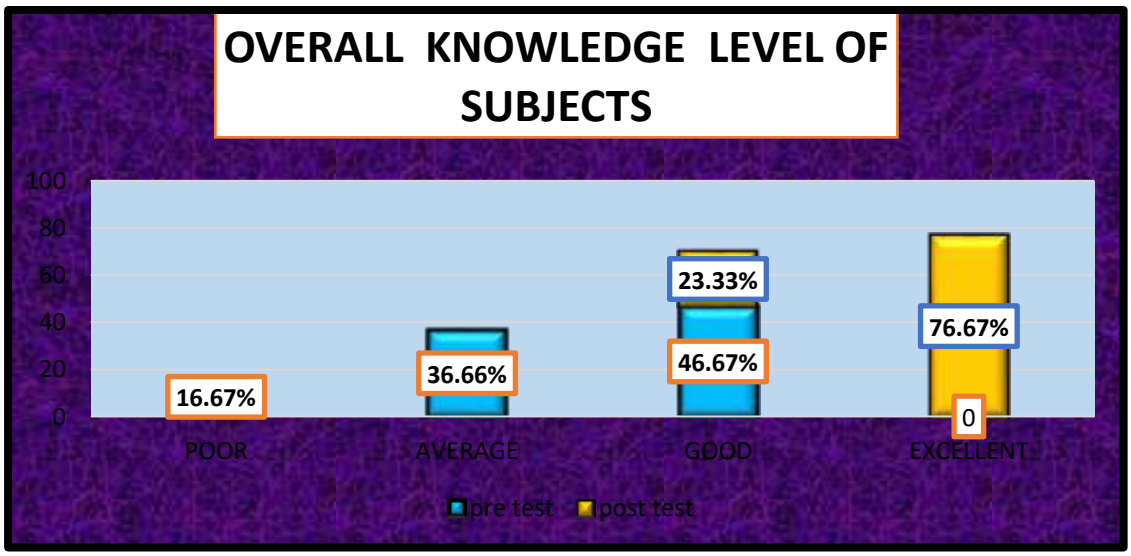

Figure No.-3: Column diagram representing the pre test and post test Knowledge score of pre experimental group regarding Donning and Doffing of PPE

Table No.2 (Figure No.-3) Depicts that only 5 (16.67%) had poor knowledge, 11(36.66%) of subject had average knowledge, 14 (46.67%) have good knowledge, and 0(0%) had excellent knowledge pretest. After administering video assisted teaching programme the knowledge level were poor (0%), average (0%), and good (23.33%), excellent (76.66%).

SECTION –III

Finding of mean difference in the pre and post-test knowledge of housekeeping staffs Donning and Doffing of PPE.

Table No. -3: shows the mean difference in the pre-test and post-test knowledge regarding Donning and Doffing of PPE.

N=30

knowledge Level	Mean score	Mean percentage	Standard deviation	Mean percentage difference
Pre-test	13.73	49.03%	3.79	34.18%
Post-test	23.3	83.21%	2.47	

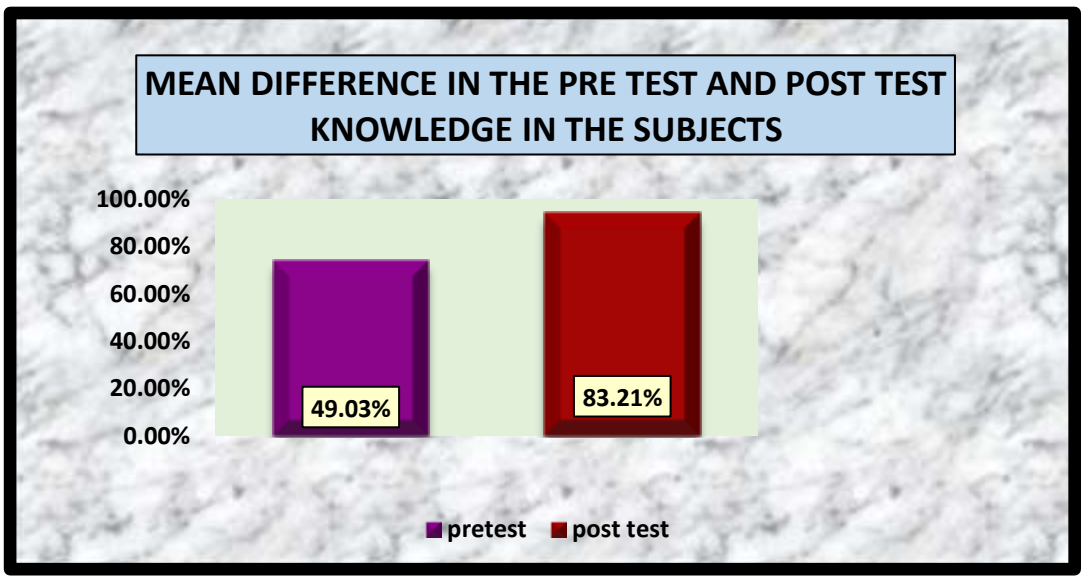

Figure No.-4.Column diagram shows the mean difference between pre test and post-test knowledge scores.

Table No.-3 (Figure no. 4) Shows the pre test mean knowledge score of subject was 13.73, mean percentage was 49.03% and SD was 3.79, where as in post-test mean knowledge score was 23.3, mean percentage was 83.21% and SD was 2.47 percentage difference was 34.18%.

SECTION –IV

Paired T- Test finding for the effectiveness of demonstration on knowledge regarding Donning and Doffing of PPE.

Table No.- 4: Shows the Paired 't' test finding the effectiveness of demonstration on knowledge regarding Donning and Doffing of PPE**.**

N=30

Knowledge level	**Mean**	**SD**	**SE**	**Paired T Test value**		**Inference**
				P	**T**	
Pre-test	13.73	3.79	0.825	2.05	-18.572	P >0.05 significant
Post-test	23.3	2.47				

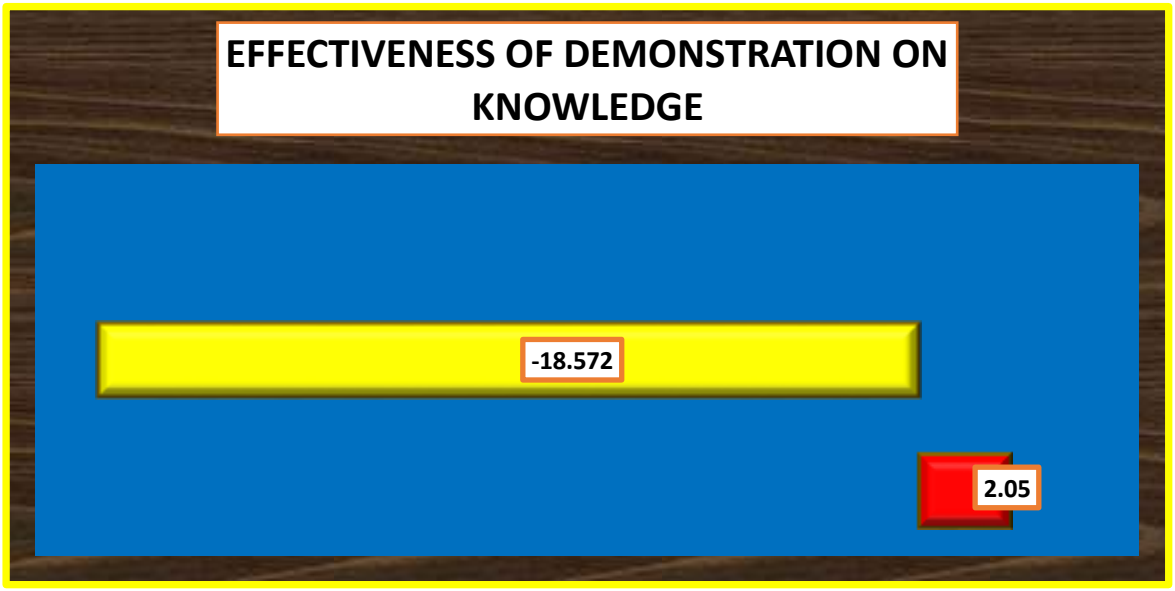

Figure No.- 5 Bar diagram shows the effectiveness of demonstration on knowledge gain after teaching and pre-test and post-test knowledge score.

Table No.-4 (figure No.5) Depict that the pre-test mean knowledge score of subjects is ±13.73, SD was 3.79 whereas in post-test mean knowledge score is 23.3, SD is 2.47 SE was 0.825. The calculated paired-t test value is -18.572(p= 0.05) was lesser than table value 2.05 at 0.05 level of highly significance.

SECTION –V

Chi square test finding of association between the pretest and posttest knowledge regarding donning and doffing of PPE.

Table No. 5: Shows the chi-square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE among housekeeping staffs with demographic variables.

N=30

SI. No.	Demographical variables	Pre test knowledge score				Chi-square		DF	Inference
		P	A	G	E	$\chi 2$	P		
1.	**Age in year**								
	a) 21-25	00	00	00	00	4.21	16.92	09	**P>0.05 S***
	b) 26-30	00	02	05	00				
	c) 31-35	02	03	04	00				
	d) 36 and above	03	06	05	00				
2.	**Gender**								
	a) Male	00	04	03	00	2.59	7.82	03	**P>0.05 S***
	b) Female	05	07	11	00				
3.	**Religion**								
	a) Hindu	03	09	08	00	2.10	16.92	09	**P>0.05 S***
	b) Christian	02	02	06	00				
	c) Muslim	00	00	00	00				
	d) Others	00	00	00	00				
4.	**Education**								
	a) 1-5th std	01	02	03	00	2.15	16.92	09	**P>0.05 S***
	b) 6-10th std	02	03	09	00				
	c) PUC	00	00	00	00				
	d) others	02	04	02	00				
5.	**Income per month**								
	a) < Rs. 8000	01	01	03	00	0.93	7.82	03	**P>0.05 S***
	b) Rs. 8000-10000	04	11	10	00				
6.	**Marital status**								
	a) Unmarried	00	02	04	00	6.51	16.92	09	**P>0.05 S***
	b) Married	05	08	09	00				
	c) Divorced	00	00	01	00				
	d) Widower	00	01	00	00				
7.	**Type of family**								
	a) Joint family	00	06	04	00	4.89	12.59	06	**P>0.05 S***
	b) Nuclear family	05	05	10	00				
	c) Extended family	00	00	00	00				

8.	**Years of working experience**								
	a) 2	01	00	03	00	12.09	16.92	09	**P>0.05 S***
	b) 3	00	03	00	00				
	c) 4	02	01	06	00				
	d) more than 4	03	06	03	00				
9.	**Do you wear PPE while handling patients and bio medical waste**								
	a) Yes	05	11	13	00	3.294	7.82	03	**P>0.05 S***
	b) No	00	00	01	00				
10.	**If yes specify the PPE**								
	a) mask and gloves	05	11	13	00	1.1826	16.92	09	**P>0.05 S***
	b) cap	00	00	01	00				
	c) goggles	00	00	00	00				
	d) gown	00	00	00	00				

S*-Significant **NS*- Non**

Table no.6: Shows the chi square test value of association between the pre-test knowledge level of housekeeping staffs to their demographic variables like Age, Gender, religion, Education, Income per Month, Marital status, Type of Family, Year of working experience, PPE used while handling patients and biomedical waste, Type of PPE used, seen or assist in donning and doffing of PPE at 0.05 level of significance.

Table No.-5.1: Shows the chi square test value of association between the pretest knowledge regarding Donning and Doffing of PPE according to age.

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	inference
	P	A	G	E	χ^2	P		
AGE IN YEARS								
a)21-25	00	00	00	00	4.21	16.92	09	P<0.05 S*
b)26-30	00	02	05	00				
c)31-35	02	03	04	00				
d)36 and above	03	06	05	00				

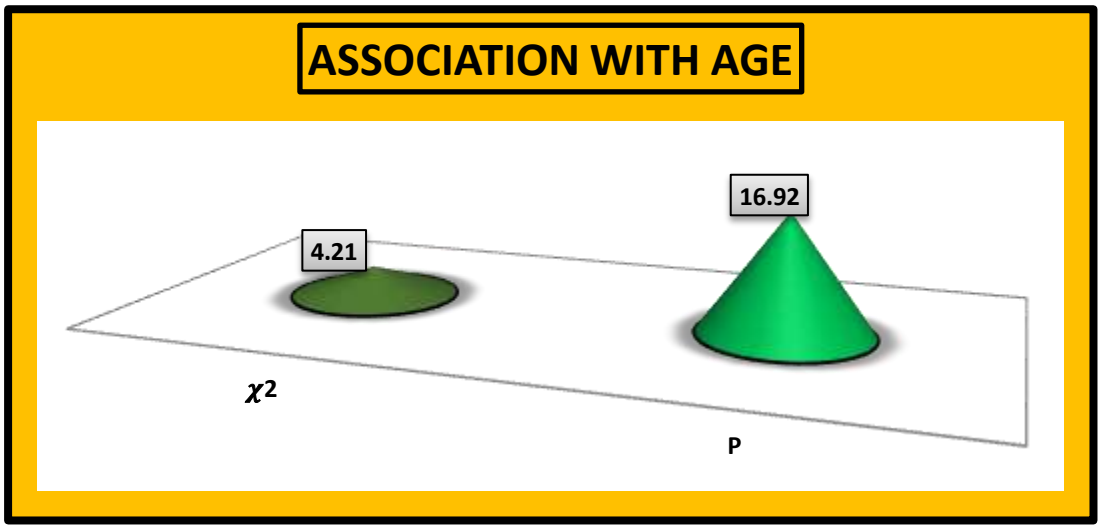

Figure No.-4.1: Cone diagram shows the chi-square test value of association between pre test knowledge regarding donning and doffing of PPE with Age in years.

Table No.-6.1: Depict that the association between pre test knowledge regarding donning and doffing of PPE with Age in years. Hence the chi-square value is 4.21 (P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with age in years.

Table No.-5.2: Shows the chi square test value of association between the pre test knowledge regarding Donning and Doffing of PPE with Gender

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	Inference
	P	A	G	E	$\chi 2$	P		
GENDER								
a) Male	00	05	03	00	2.59	7.82	03	**P>0.05 S***
b) Female	05	07	11	00				

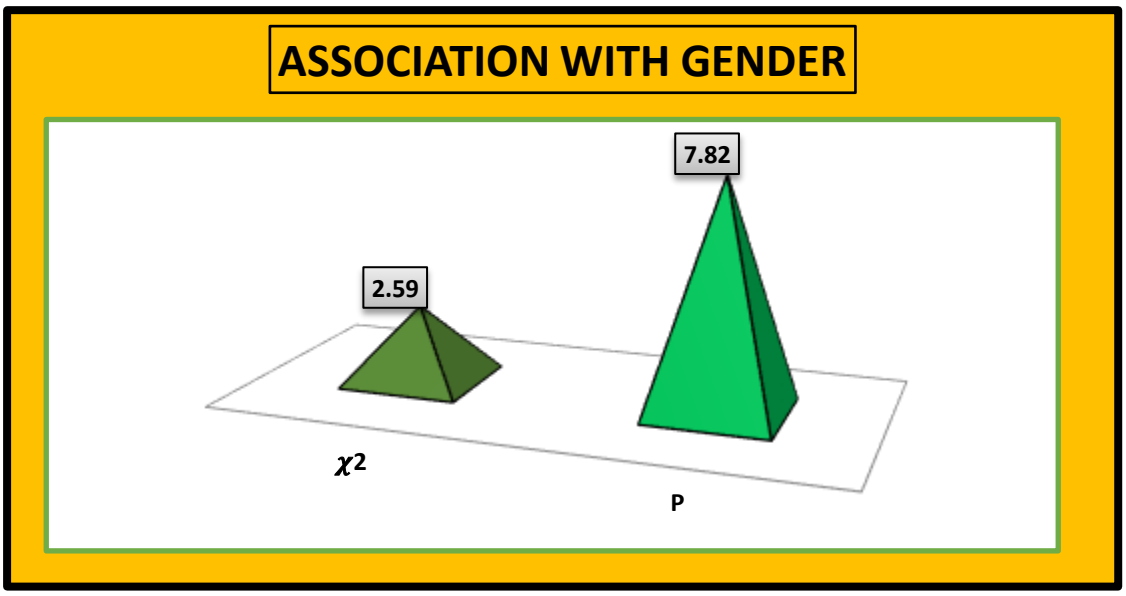

Figure No.-4.2: pyramidal diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with Gender.

Table No.-5.2: Depict that the association between pre test knowledge regarding Donning and Doffing of PPE with Gender. Hence the chi-square value is 2.59 (P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with religion.

Table No.-5.3: Shows the chi square test value of association between the pre test knowledge regarding Donning and Doffing of PPE with Religion

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	inference
	P	A	G	E	$\chi 2$	P		
RELIGION								
a) Hindu	03	09	08	00	2.10	16.92	09	**P>0.05 S***
b) Christian	02	02	06	00				
c) Muslim	00	00	00	00				
d) Others	00	00	00	00				

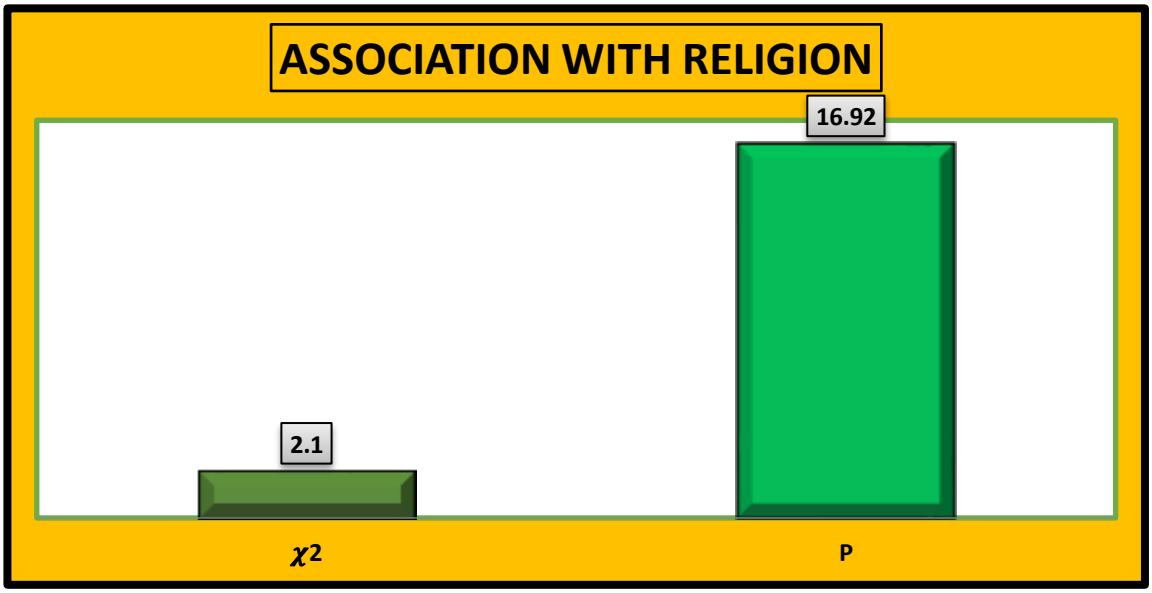

Figure No.-4.3: Column diagram shows the chi-square test value of association between pre-test knowledge regarding Donning and Doffing of PPE with Religion.

Table No.-5.3: Depicts that the association between pre-test knowledge regarding Donning and Doffing of PPE with Religion. Hence the chi-square value is 2.10(P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with religion

Table No.-5.4: Shows the chi square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE with Education

N=30

demographical variables	pre-test knowledge score				chi-square		DF	inference
	P	A	G	E	X2	P		
EDUCATION								
a) 1-5th std	01	02	03	00	2.15	16.92	09	**P>0.05 S***
b) 6-10th std	02	03	09	00				
c) PUC	00	00	00	00				
d) others	02	04	02	00				

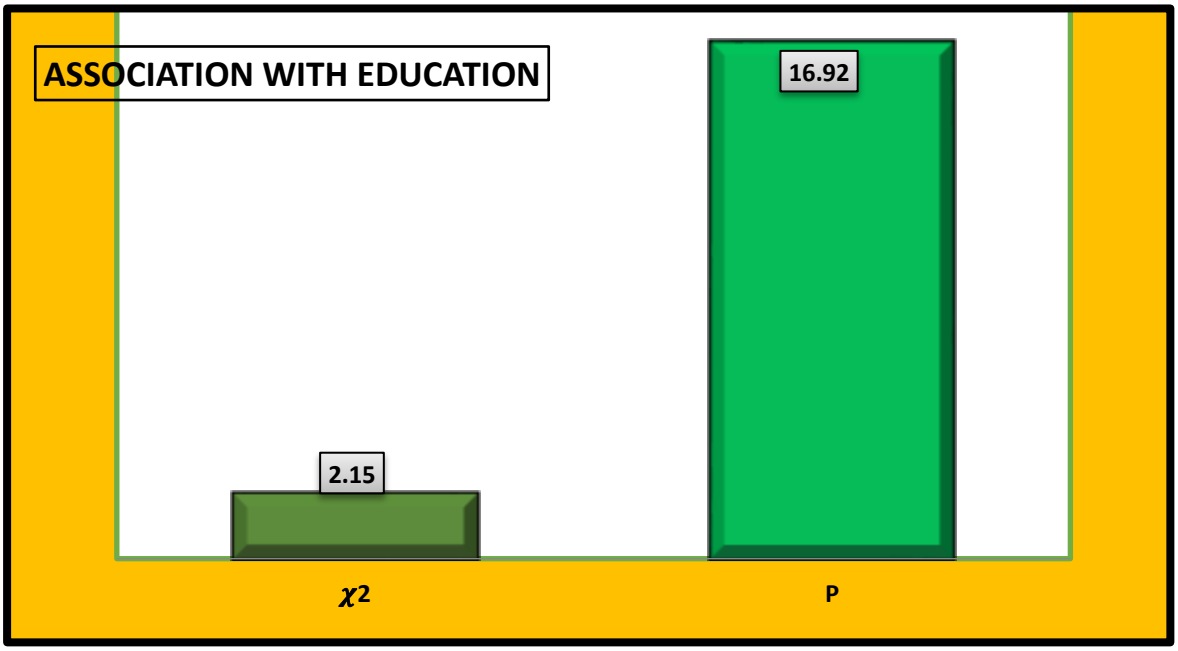

Figure No.-4.4: Column diagram shows the chi-square test value of association between pre-test knowledge regarding Donning and Doffing of PPE with Education.

Table No.-5.4: Depict that the association between pre-test knowledge regarding Donning and Doffing of PPE with Education. Hence the chi-square value is 2.15(P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Education.

Table No.-5.5: Shows the chi square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE with Income per Month

N=30

demographical variables	pre-test knowledge score				chi-square		DF	inference
	P	A	G	E	χ^2	P		
INCOME PER MONTH								
a) < Rs. 8000	01	01	03	00	0.93	7.82	03	**P>0.05 S***
b) Rs. 8000-10000	04	11	10	00				

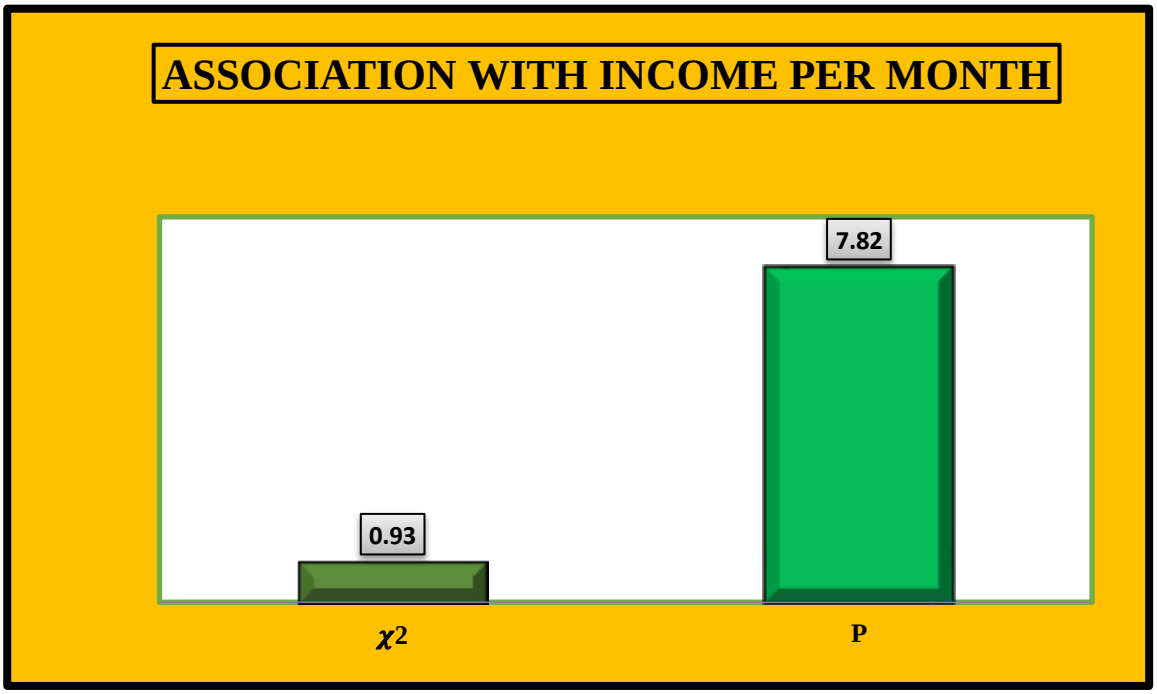

Figure No.-4.5: Column diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with Income per Month.

Table No.-5.5: Depict that the association between pre test knowledge regarding Donning and Doffing of PPE with Education. Hence the chi-square value is 0.93 (P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Income per Month.

Table No.-5.6: Shows the chi square test value of association between the pre test knowledge regarding Donning and Doffing of PPE with Marital Status.

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	inference
	P	A	G	E	χ^2	P		
MARITAL STATUS								
a)Unmarried	00	02	04	00	6.51	16.92	09	**P>0.05 S***
b)Married	05	08	09	00				
c)Divorced	00	00	01	00				
d)Widower	00	01	00	00				

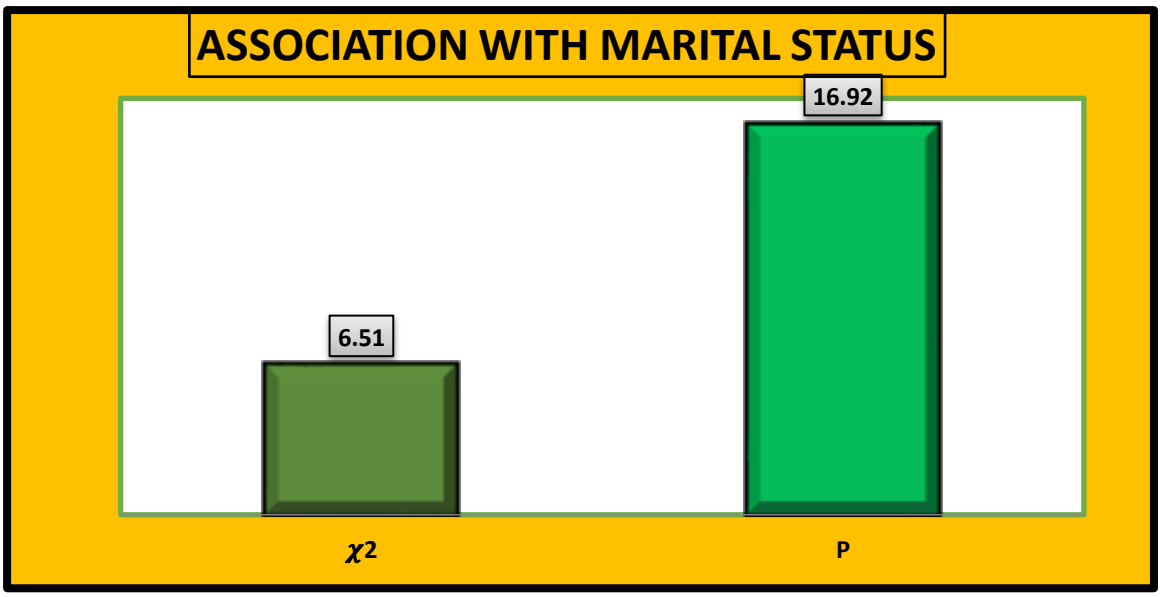

Figure No.-4.6: Column diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with Marital Status.

Table No.-5.6: Depict that the association between pre test knowledge regarding Donning and Doffing of PPE with Marital Status. Hence the chi-square value is 6.57 (P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Marital Status

Table No.-5.7: Shows the chi square test value of association between the pre test knowledge regarding Donning and Doffing of PPE with Type of Family.

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	Inference
	P	A	G	E	$\chi 2$	P		
TYPE OF FAMILY								
a)Joint family	00	06	04	00	4.89	12.59	06	**P>0.05 S***
b)Nuclear family	05	05	10	00				
c)Extended family	00	00	00	00				

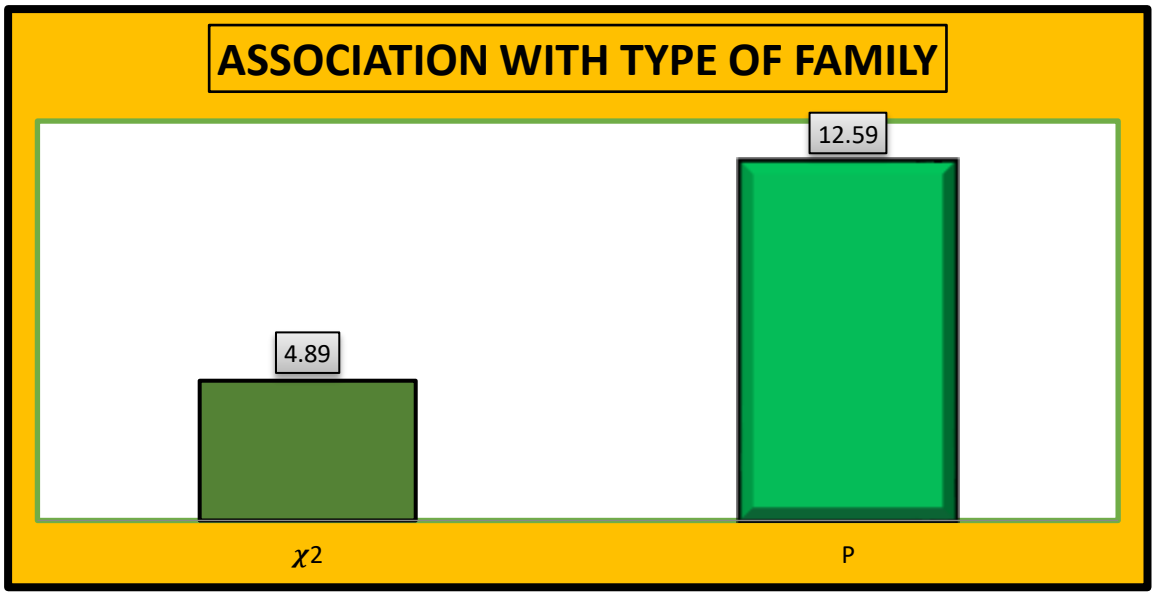

Figure No.-4.7: Column diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with Type of Family.

Table No.-5.7: Depict that the association between pre test knowledge regarding Donning and Doffing of PPE with Type of Family. Hence the chi-square value is 4.89(P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Type of Family.

Table No.-5.8: Shows the chi square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE with Years of working experience.

N=30

Demographical variables	Pre-test knowledge score				Chi-square		DF	inference
	P	A	G	E	$\chi 2$	P		
YEAR OF WORKING EXPERIENCE								
a) 2	01	00	03	00	12.09	16.92	09	**P>0.05 S***
b) 3	00	03	00	00				
c) 4	02	01	06	00				
d) more than 4	03	06	03	00				

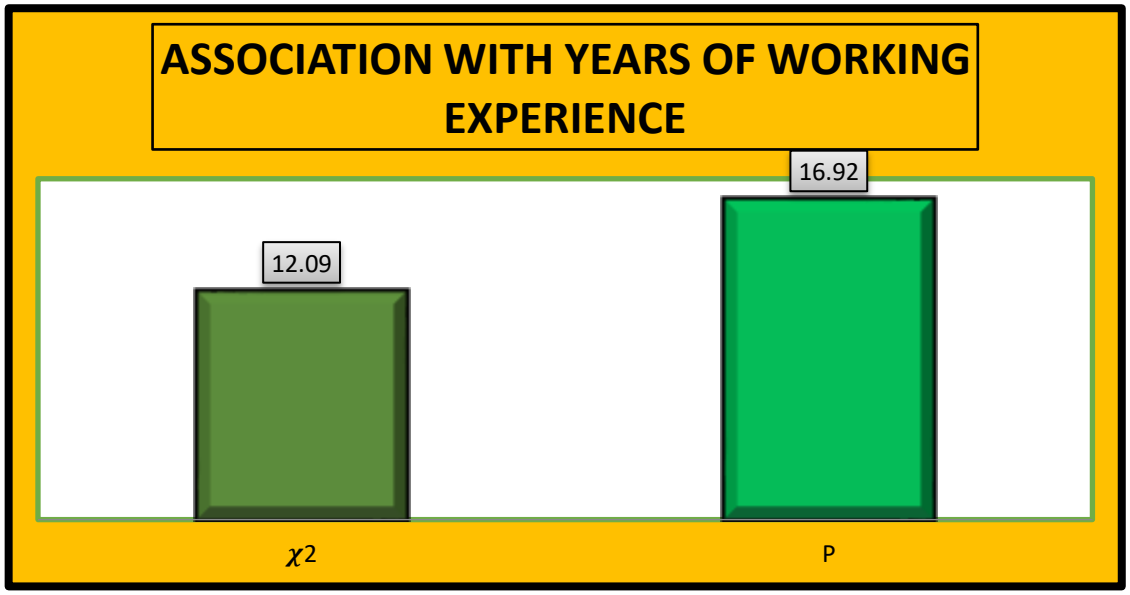

Figure No.-4.8: Column diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with Years of working experience.

Table No.-5.8: Depict that the association between pre-test knowledge regarding Donning and Doffing of PPE with Years of working experience. Hence the chi-square value is 12.09(P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Years of working experience.

.

Table No.-5.9: Shows the chi square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE with wearing PPE while handling patients and bio medical waste.

N=30

Demographical variables	Pre-test knowledge score				Chi-square		DF	Inference
	P	A	G	E	$\chi 2$	P		
DO YOU WEAR PPE WHILE HANDLING PATIENTS AND BIOMEDICALWASTE								
a) Yes	05	11	13	00	3.29	7.82	03	**P>0.05 S***
b) No	00	00	01	00				

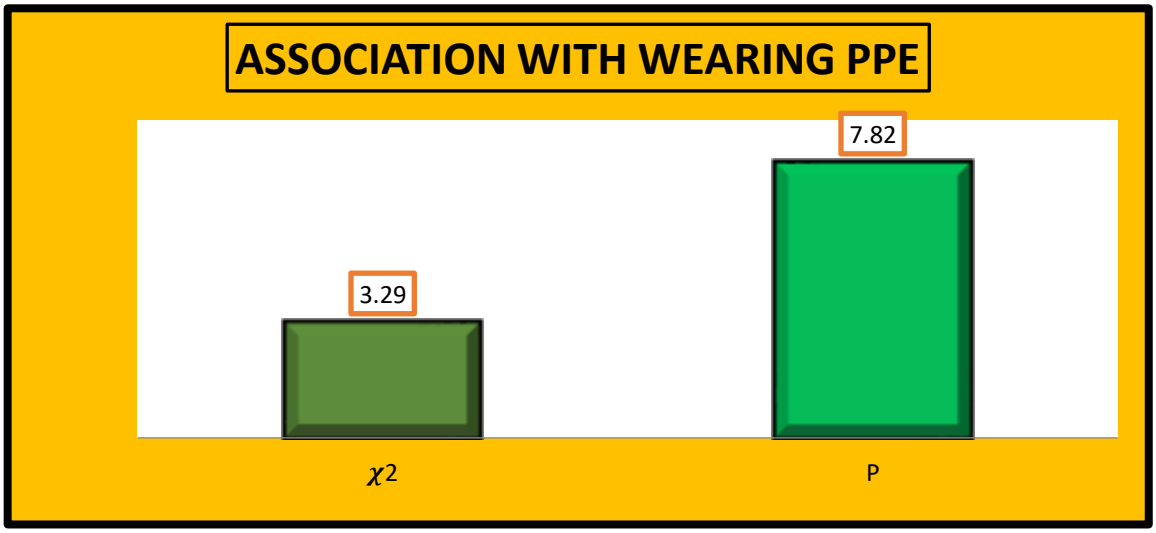

Figure No.-4.9: Column diagram shows the chi-square test value of association between pre test knowledge regarding Donning and Doffing of PPE with wearing PPE while handling patients and bio medical waste.

Table No.-5.9: Depict that the association between pre test knowledge regarding Donning and Doffing of PPE with wearing PPE while handling patients and bio medical waste. Hence the chi-square value is 3.294(P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with wearing PPE while handling patients and bio medical waste.

Table No.-5.10: Shows the chi square test value of association between the pre-test knowledge regarding Donning and Doffing of PPE with Type of PPE.

N=30

Demographical variables	Pre test knowledge score				Chi-square		DF	inference
	P	A	G	E	$\chi 2$	P		
IF YES SPECIFY THE PPE								
a) mask and gloves	05	11	13	00	1.18	16.92	09	**P>0.05 S***
b) cap	00	00	01	00				
c) goggles	00	00	00	00				
d) gown	00	00	00	00				

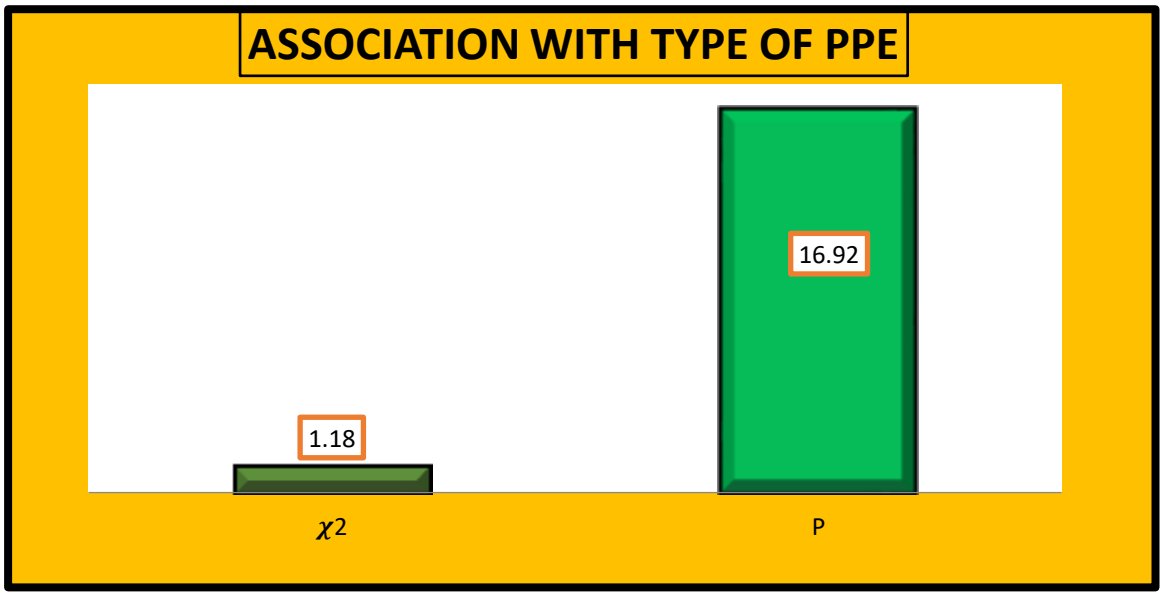

Figure No.-4.10: Column diagram shows the chi-square test value of association between pre-test knowledge regarding Donning and Doffing of PPE with Type of PPE.

Table No.-5.10: Depict that the association between pre-test knowledge regarding Donning and Doffing of PPE with Type of PPE. Hence the chi-square value is 3.294 (P>0.05 S*) at 0.05 level of significance, it shows that there is a high significant association with Type of PPE

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

I Ms. Vijaya Shibar paid full my effort to teach subjects about donning and doffing of personal protective equipment by demonstration to prevent spread of infection. This opportunity was immense privilege to demonstrate correct practicing of donning and doffing of PPE among house keeping staffs.

Administered demonstration to improve the knowledge level of house keeping staffs regarding donning and doffing of PPE.

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

The present study was indented to analyze the effectiveness of Demonstration on knowledge regarding donning and doffing of personal protective equipment (PPE).

SUMMARY:

The present study was to assess the demonstration on knowledge regarding donning and doffing of personal protective equipment (PPE).

CONCLUSION:

The demonstration is necessary to educate the house keeping staffs in area about donning and doffing of personal protective equipment .The study was undertaken to A Study to evaluate the demonstration on Knowledge Regarding donning and doffing personal protective equipment (PPE) among house keeping staff at St. Ignatius Hospital, Honavar, UttaraKannada. The study was conducted in a sample of 30 housekeeping staffs. Among In pre-test, only 0(0%) had excellent knowledge, 14(46.67%) of subject had good knowledge, 11 (36.66%) have average knowledge, 5(16.67%) had poor knowledge. It shows that maximum number of subject had excellent knowledge in the study after post test. Research Hypothesis (H_1) is accepted.

RESEARCH OBJECTIVE:

1. To assess the pre and post-test knowledge level of house keeping staffs regarding donning and doffing of PPE.
2. To determine the significant enhancement in the post-test knowledge level of house keeping staffs regarding donning and doffing of PPE.
3. To find the significant association between the pre-test knowledge level of house keeping staffs regarding donning and doffing of PPE with their selected demographic variables.

HYPOTHESIS:

- **H_1:** There will be a significant difference between the pre and post-test knowledge score of housekeeping staffs regarding wearing PPE.
- **H_2**: There will be a significant association between the pretest knowledge score and selected demographic variables.

MAJOR FINDING OF THE STUDY:

The present study to evaluate the effectiveness of demonstration on donning and doffing of personal protective equipment (PPE) among housekeeping staff at St. Ignatius Hospital, Honavar.

The major findings shows that evaluate Demonstration programme in improving knowledge regarding donning and doffing of personal protective equipment (PPE) among housekeeping staffs at St. Ignatius Hospital Honavar, UttaraKannada. The pre-test knowledge score of subject was 13.73, mean percentage was 49.03% and SD was ± 3.79 Where in post-test mean knowledge score was 23.3, mean percentage was 83.21% and SD was ±2.47 and the mean percentage difference was 34.18 .The calculated 'T' test value is -18.572($p>0.05$) was greater than the value of 2.05 at 0.05 level of highly significance. So that, there is an effectiveness of Demonstration on regarding donning and doffing of personal protective equipment (PPE) and the research hypothesis (H_1) was accepted.

Finding of association between the pre-test Knowledge regarding donning and doffing of personal protective equipment with demographic variables Chi-square ($\chi 2$) test showing analysis of association between pre-test knowledge score of subjects and their selected demographic variables. Third objective was to find out association between knowledge level and demographic variables of subjects. Hence the calculated Chi-square value are lesser than table value ($P >0.05$). It shows there is significant association with Age of subjects 4.21(P=16.92), gender of subjects 2.593(P=7.82), religion of subjects 2.101(P=16.92), educational status of subjects 2.1523(P=16.92), income per month of subjects 0.93729(P=7.82), marital status of subjects 6.5746(P=16.92), type of family of subjects 4.898(P=12.59) , years of working of subjects12.092(16.92) , wearing of PPE of subjects 3.294(P=7.82) ,type of PPE used 1.1826(P=16.92).

NURSING IMPLICATION:

❖ **Nursing Education:**

- The nursing curriculum should consist of knowledge related to donning and doffing of PPE and their effective implementation.
- Nurses at the post-graduate level need to develop skills in preparing health teaching material in various health aspects in Immunization, newer techniques have to be used for motivating staff participation. Emphasis should be made on in service education and training
- Programmes in the department to increase the knowledge of staff nurses.

❖ **Nursing Practice:**

- Nurses have a vital role in proper donning and doffing of personal protective equipment.
- Nurses should enhance their professional knowledge.
- The finding of the study can be used to bring about awareness among the housekeeping staffs knowledge on donning and doffing of personal protective equipment which will help in the improvement of skills and techniques of donning and doffing of personal protective equipment.
- Nurses can also plan teaching in clinical setting.

❖ **Nursing Administration:**

- The finding of the study reveals the need to conduct an ongoing training program for the housekeeping staffs who are working in the clinical settings. The training program should include both theoretical and practical input. This can also bring awareness among nurse administrators of the need to provide training to new staffs regarding donning and doffing. Nurse administrators can prepare a new protocol about the teaching.
- Nurses can also teach to student nurses about the same. She/he should be able to plan and organize Program taking in to consideration the cost effectiveness and carry out successful educational Program.

❖ **Nursing research:**

- The finding of the study can be utilized for conducting research on the knowledge regarding donning and doffing of PPE among house keeping staffs.
- Future investigators can use the finding and the methodology as reference material. It highlights the area, which requires future exploration.
- The suggestion and the recommendation can be utilized by other researchers for conducting further studies in the same field.

LIMITATION:

The following factors were beyond the control of the investigator:

- This study is limited to those housekeeping staffs who are readily available.
- Purposive sampling was done which restrict the generalization of the study.
- The assessment of effect of demonstration programme is limited to one post test conducted on the eighth day of structured teaching Program.
- Since the study was mainly based on the responses of the subjects through questionnaire, and no other tool was undertaken for the generalization of the finding remains limited.
- The study is limited to population that understands Kannada.
- The study will be limited to housekeeping staffs the study was limited to the experience level of the investigator.

RECOMMENDATIONS:

Measures which can be implemented for housekeeping staff s in order to improve their knowledge regarding donning and doffing of personal protective equipment:

- A similar study can be replicated for longer samples, in different settings to make broad generalization.
- A similar study can be done in the form of descriptive study.
- The donning and doffing of personal protective equipment guidelines should include current and more information to update the knowledge regarding PPE
- A similar study can be conducted in communities through various audio –visual aids.
- A study can be done on association between various demographic variables which were significant on longer sample.

13. ABSTRACT

***Background**: PPE is inherent in the theory of universal precaution which required specialized clothing or equipment for the protection of individuals from hazards. There was awareness of all components of PPE in 90.3% of the health-care providers. However, on being inquired whether virus dispersion occurs more during donning than doffing, only 31.6% of the HCWs knew that this is incorrect.*

***Objectives:** The study aimed at* **A** *study to evaluate the effectiveness of demonstration on knowledge regarding donning and doffing of PPE with a view to prevent spread of infection among house keeping staff in selected hospital at Honavar, uttarakannada. The study focused on enhancing the knowledge level of house keeping staff on donning and doffing of PPE.*

***Methodology**: An evaluative approach with pre -experimental one group pre and post-test research design was adapted in this work. The sample size was 30 housekeeping staff, were selected by purposive sampling technique. Data were collected by using self-administered structured knowledge questionnaire with 30 multiple choice questions. Data analysed by using paired-t-test to draw out the inference by comparing the mean score difference.*

***Results:** The computed paired-t-test value showed there is significant difference in the pre($\bar{x}_1$=13.73)and post-test ($\bar{x}_2$=23.3) knowledge score (t_{29}=2.05, < t=-18.572, at 0.05 level of significance).chi square test[x^2] score reveals that there was significant association in the pre-test knowledge score with the Age(df_9=16.92,>x^2=4.21) Gender(df_3=7.82,>x^2=2.593), Religion(df_9=16.92,> x^2 = 2.101), Education(df_9=16.92,> x^2 = 2.15),Income per month(df_3=7.82,> x^2 =0.93), Marital status(df_9=16.92,> x^2 =6.57), Type of family(df_6=12.59,>x^2=4.89),Years of working experience(df_9=16.92,> x^2 =12.09), Wearing of PPE(df_3=7.82,> x^2 =3.29)and Type of PPE used(df_9=16.92,> x^2 =1.18) at 0.05 level of significance.*

***Conclusion: :** The study was concluded as the effectiveness of demonstration on donning and doffing of PPE was effective in promoting the knowledge level of housekeeping staff. This kind of fruitful future studies may ensure skill full housekeeping staff as well as health professionals in donning and doffing of PPE.*

***Recommendation:** A similar study can be replicated for longer samples, in different settings to make broad generalization and conduct a comparative study in different healthcare professionals. The Nursing school curriculum should include current and more information to update the knowledge regarding donning and doffing of PPE. A similar study can be*

conducted in communities through various audio –visual aids and can be done on association between various demographic variables which were significant on longer sample.

Keywords: [Evaluate, Demonstrate, Knowledge, Donning And Doffing Of PPE, Infection]

NAME AND SIGNATURE WITH DATE

1. Shibas
Mr. VIJAYA SHIBAR
(Name of the student)

2. Sonu
A. SUSAI MARI
(Name of the guide)

3. 27/4/2022
(Head of the Institution)