EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING DONNING AND DOFFING OF PPES AMONG THE STUDENTS OF SKILL DEVELOPMENT COURSE IN GOVT. NURSING COLLEGE, BARAMULLA, KASHMIR

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Abstract

*The persons who work in hospitals are constantly exposed to infectious pathogens while they provide care to the patients. Infection control measures are necessary in order to prevent the chances of infection in the hospital and community. By practicing infection control techniques, the workers can avoid spreading microorganism. This can be possible when the workers have the proper knowledge about the donning and doffing of PPEs. In this study the researcher conducted a study to assess the effectiveness of SIM on knowledge regarding donning and doffing of PPEs among students of skill development Course in Govt Nursing College, Baramulla. Research design adopted for this study was pre-experimental. Sample for this study was selected through purposive sampling technique. Total sample size for study was 40. Pre- test was done for the subjects through self-structured questionnaire regarding donning and doffing of PPEs. Self-instructional module was given to the students regarding donning and doffing of PPEs. On the seventh day post- test among subjects was done through self-structured questionnaire regarding donning and doffing of PPEs. Data collection was analyzed with the help of descriptive and inferential statistics. **Results:** Mean pre-test score 8.33 and the mean post-test score was 22.82. The mean difference was 14.49 and SD was 2.234 and 2.053 in pre- and post- test. Paired test was 20.415 and this was significant at 'P' value 0.000.Conclusion: This study reveals that SIM was effective in enhancing the knowledge of students about donning and doffing of PPEs.*

Keywords: Assess, Effectiveness, SIM (Self-instructional Module), PPE (Personal Protective Equipment), Students, Skill development course

INTRODUCTION

Personal protective equipment (PPE) is a protective gear designed to safeguard the health of workers by minimizing the exposure to a biological agent. PPE usage is a primary strategy to prevent disease transmission in health-care settings where health-care professionals directly come in contact with infected patients. Kang *et al.* discovered that health-care personnel contaminated themselves in almost 80% of the PPE simulations. [1] Different types of PPE are used which include gloves, gowns, masks, goggles, shoe covers and face shields, to prevent the wearer's skin and mucous membranes from becoming contaminated and other persons from infection. As cases of COVID-19 are increasing alarmingly in our country, appropriate use of PPE is one of the integral strategic initiatives to prevent COVID-19 infection in a health-care facility of any size and scale. A person can be infected when aerosols or droplets containing the virus are inhaled or come directly into contact with the eyes, nose, or mouth. The virus can also spread in poorly ventilated and/or

crowded indoor settings, where people tend to spend longer periods of time. This is because aerosols remain suspended in the air or travel farther than 1 meter (long-range).People may also become infected by touching surfaces that have been contaminated by the virus when touching their eyes, nose or mouth without cleaning the hands.[2] Effective use of Personal Protective Equipment's by healthcare workers (HCWs) is an important component of infection prevention in healthcare settings. However, Personal Protective Equipment's effectiveness is influenced by how health care workers wear and doff (remove)Personal Protective Equipment. Few studies have evaluated these practice and behaviours of PPE use in settings of routine clinical care such as hospitals and nursing care centres.[3] A study conducted in the early 2000s SARS outbreak reported that recommendations related to the usage of PPE were discordant and only few HCW were well acquainted with its correct usage and the way to avoid contaminating themselves . [4]

The Centres for Disease Control and Prevention (CDC) have released guidelines on the recommended PPE to be worn in various circumstances. [5] The appropriate use of PPE is one of the most effective strategies for protecting both patients and healthcare providers from transmissible pathogens. This strategy becomes especially important when no effective treatment or prophylaxis has been developed for an illness, as is currently the case for COVID-19. When healthcare providers are caring for patients with confirmed or suspected COVID-19, they must follow rigid protocols that necessitate the use of appropriate PPE .In most cases, healthcare providers protect themselves by using a waterproof gown, gloves, a surgical mask, hair protection and a face shield in conjunction with good hand hygiene to minimize mucous membrane exposure to airborne particles. [6]

OBJECTIVES

1. To assess the pre-test level of knowledge regarding donning and doffing of personal protective equipment's among the students of skill development course in Govt Nursing College, Baramulla.
2. To assess the post-test level of knowledge regarding donning and doffing of personal protective equipment's among the students of skill development course in Govt Nursing College, Baramulla.
3. To compare pre-test and post -test level of knowledge regarding donning and doffing of personal protective equipment's among the students of skill development course in Govt Nursing College, Baramulla.

METHODS

A Pre- experimental research approach was adopted for current study .Study participants were recruited from Govt. Nursing Baramulla who were enrolled there for Skill development course and who fulfilled the inclusion criteria. 40 students were selected by purposive sampling technique. Data was collected through structured questionnaire on donning and doffing of PPEs. SIM was given to subjects regarding donning and doffing of PPEs. The tool was sent to 10 experts from the field of nursing and medicine. The experts were requested to provide feedback regarding relevance of the content. Reliability of the tool was estimated was as 0.97, so the tool was found reliable to collect the data. Informed written consent of the participants was taken. Data was collected within the time period one month (15th Nov. -15th Dec. 2021).The exclusion criteria were the students who were not present at the time of study and who were not willing to participate in the study.

RESULTS

Section A

I : Analysis of socio-demographic variables of the students of skill development course.

Table 1: Frequency and percentage Distribution of sociodemographic variables of the students of skill development course.

N=40

Sr. No.	Demographicvariable	Frequency	(Percentage)
01.	AGE (in years)		
a	18-24	05	12.5%
b	25-29	28	70%
c	30-34	6	15%
d	Above 34	1	2.5%
02.	GENDER		
a	Male	24	60%
b	Female	16	40%
03.	EDUCATIONAL QUALIFICATION		
a	10TH	8	20%
b.	12TH	26	65%
c.	Graduate	6	15%
d	Post graduate	0	0
04.	Marital status		
a	Married	2	5%
b	Unmarried	35	95%
04.	Area of residence		
a	Rural	27	67.5%
b	Urban	13	32.5%
06.	RELIGION		
a	Muslim	36	90%
b	Sikh	4	10%
c	Hindu	0	0%
07.	Any formal training of PPEs		
a	YES	2	5%
b	NO	38	95%

Table 1 reveals that Out of 40 students; majority 28 (70%) were in the age group of 25-29 years followed by 6 (15%) who were in the age group of 30-34 years, 5 (12.5%) were in the age group of 18-24 years,1 (2.5%) were in the age group of above 34 years.

On intervention of the gender majority 24 (60%) were females followed by 16 (40%) who were males.

On analysis of Educational qualification majority 26 (65%) were educated up to 12th, 8 (20%) were educated up to 10th, 6 (15%) were graduates and no one was postgraduate.

On interpretation of the marital status; majority 38 (95%) were unmarried and 2(5%) were married.

With regard to area of residence majority 27 (67.5%) were living in rural areas followed by 13 (32.5%) who were living in urban areas.

With respect to religion majority 36 (90%) were Muslims followed by 4 (10%) who were Sikh and

no one was Hindu.

Out of 40 students 38(95%) had not received any formal training of PPEs and only 2 (5%) had received formal training of PPEs.

Section B

I: Analysis of Pre-test level of knowledge on donning and doffing of PPEs among the students of skill development course.

Table 2: Frequency and percentage distribution of subjects according to pre- test level of knowledge.

S. No.	Pre- test levelof knowledge	N=40	
		Frequency	**%**
01.	**Poor (1-10)**	24	60
02.	**Average (11-20)**	12	30
03.	**Good (21-30)**	4	10

Table 2 shows that majority of subjects 24 (60%) were having poor level of knowledge followed by 12 (30%) who were having average level of knowledge , 4 (10%) were having good knowledge regarding donning and doffing of PPEs before intervention.

II: Analysis of Post-test level of knowledge on donning and doffing of PPEs among the students of skill development course.

Table 3: Frequency and percentage distribution of subjects according to pre- test level of knowledge.

S. No.	Post- test levelof knowledge	N=40	
		Frequency	**%**
01.	**Poor (1-10)**	2	5
02.	**Average (11-20)**	8	20
03.	**Good (21-30)**	30	75

Table 3 shows that majority of subjects 30 (75%) were having good knowledge followed by 8 (20%) who were having average level of knowledge, 2 (5%) were having poor knowledge regarding donning and doffing of PPEs after intervention.

III. Mean, mean difference, standard deviation and paired 't'-test value regarding pre- test and post- test knowledge among subjects in Experimental group.

Table 4: Mean, mean difference, standard deviation and paired 't'- test value regarding pre- test and post- test knowledge among subjects.

N = 40

S. NO.	Test	Mean	Mean Difference	Standard Deviation (ST)	't' test	'p 'Value
01.	**Pre- test**	8.33	14.49	2.234	20..415	0.000
02.	**Post- test**	22.82		2.053		

* Significant at P value less than 0.05

Table 4 reveals that the mean pre-test score was 8.33 and the mean post test score was 22.82. The mean difference was 14.49and SD were 22.234 and 2.053 in pre and post-test.

Paired test was 20.415 and this was significant at 'P' value 0.000.

CONCLUSION AND RECOMMENDATIONS

The study finding proved that the Self-instructional Module administered by researcher was effective to enhance the knowledge regarding donning and doffing of PPEs among students of skill development course in Govt. Nursing College, Baramulla.

1. Based on the research findings the recommendations are as follow:
2. A similar study can be conducted to assess the knowledge and practice among student nurses
3. A comparative study can be conducted among thenurses working in rural and urban areas.
4. Similar study can be conducted with large sample togenerate the findings.

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