



## Effectiveness of first aid training programme: An interventional study

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### Abstract

First aid is applied to injured or ill persons in any life threatening situation in order to save life, prevent degradation of the situation or contribute to a treatment process before professional medical care is available. This includes assessments and interventions that can be performed by a bystander or by the victim with minimal or no medical equipment. A cross-sectional interventional study was done. Total 30 participants were registered. Structured Knowledge Questionnaire was used. Result of the study showed that majority (96%) participants had poor knowledge before training program only (3.3%) participants had average knowledge. Only few (13.3%) participants had average knowledge further majority (70%) participant had good knowledge and only (16.6%) of participants had very good knowledge after the post test i.e. after the training programme. Further result revealed that there was statistically significant difference at 0.05 level which showed that the mean difference between pretest and posttest mean score was a true difference and not by chance. The participants has given good feedback about the sessions and expressed their wish to attend such more training programme.

**Keywords:** First aid training programme, nursing officers, teaching faculty

### Introduction

Having knowledge and awareness related to first aid is important in terms of helping people in emergency situation that as we know injuries are one of the leading causes of morbidity and mortality worldwide <sup>[1]</sup>. First aid is applied to injured or ill persons in any life threatening situation in order to save life, prevent degradation of the situation or contribute to a treatment process before professional medical care is available. This includes assessments and interventions that can be performed by a bystander or by the victim with minimal or no medical equipment <sup>[2]</sup>. Many experts believe that even a limited understanding of first aid would be an invaluable service to individuals who find themselves in emergency situations. This awareness and knowledge can help the people to provide a solution if a tragedy ever happens. First aid training courses are suitable for the people of all over the world, belonging to different age groups <sup>[3]</sup>. Studies have found that the knowledge of first aid amongst medical students has always been a neglected subject. Hence, it should not be surprising to note that even junior doctors at certain hospitals cannot perform the first aid skills satisfactorily <sup>[4]</sup>. Further Similar finding were reported a research Study on first aid knowledge and attitude of Secondary School Students in Saudi Arabia showed that the inadequate first aid preparedness <sup>[5]</sup>. Further a study on knowledge and attitudes to first aid among school

children of Doiwalablock, Dehradun showed 67% of the students had insufficient knowledge and skills regarding first aid <sup>[6]</sup>. As the incidence of medical emergencies are on the rise in recent years it is important to ensure that health personnel are adequately trained to deal with such events <sup>[7]</sup>. Therefore Training Programme is necessary to update knowledge, skill and competence of teaching faculty and nursing officers regarding first aid management. Approved policies, education, clinical skills, procedures based on current evidence can be implemented and evaluated for the change in practice. The various research studies and working area need, created insight in the researcher mind and felt the need for design a study to conduct training programme for nursing faculties & nursing officers who are working in various nursing colleges & hospitals on first aid management. This will help to learn and improve knowledge and skills of nursing teaching faculty and nursing officers regarding first aid management.

### Material and Methods

A cross-sectional interventional study was done to assess the effectiveness of a training programme on first aid management among the nursing faculties and nursing officers. It was conducted by nursing faculty members at Maharishi Markandeshwar College of nursing in October 2019. Total 30 participants were registered most of them

were nursing officers and very few were Nursing teaching faculty from various clinical areas of hospitals and colleges of Himachal Pradesh.

All participants were undergoing training programme for the very first time. Speakers and trainers was invited from outside. Teaching faculty of M. M. College of nursing were also engaged in many sessions. The four sessions were held for one day, eight hours of training scheduled for a day. Different teaching methods were used like lecture cum demonstration with power point, role play, white board, etc for the training programme. Under group activities, team based learning make the sessions very interesting. Topics covered in the training programme were aims and objectives of first aid & first aid kit, bandages & slings, wound dressing, shock management, effect of temperature and its management, burns and its management, fracture and its mananegent, poisoning and its management, road accidents and its mananegent, medical emergency management (asphyxia, drowning, suffocation). Finally, the sessions were wrapped with the feedback of participants. Every participants attended all the sessions. This study involved a pretest, educational intervention, and posttest. O1, X, O2. O1, O2 was the Observation of the dependent variable (pretest and posttest); X was the exposure to the educational intervention, the independent variable.

The intervention group (n = 30) trained about bandages & slings, wound dressing, shock management, temperature management, burn management, fracture mananegent, poisoning management, road accident's mananegent, medical emergency management (asphyxia, drowning, suffocation in a nursing foundation laboratory by receiving instructions. Emphasis was placed on practical exercise with the help of participants which were involved in role play. This was created a more realistic training situation, to enhance the participant's involvement and to support the acquisition of patient nurse communication.

A pre-test and post-test contained 30 questions and for the test completion 20 minutes were given and this test includes various topics in the sessions. Test was given on a day before the start and after of the Training Programme, to test the participants knowledge before and after the training programme. Structured Knowledge questionnaire with closed ended questions were used. An answer key was prepared for all the questions. Each correct response was awarded by 1 mark and an incorrect response was awarded by 0 marks. All the participants were certified with the certificate of participation at the end.

**Statistical Analysis**

The mean test score of pre-test and post-test were compared by using paired t-test, for p-value of <0.005. The statistical package used was used SPSS 22 version.

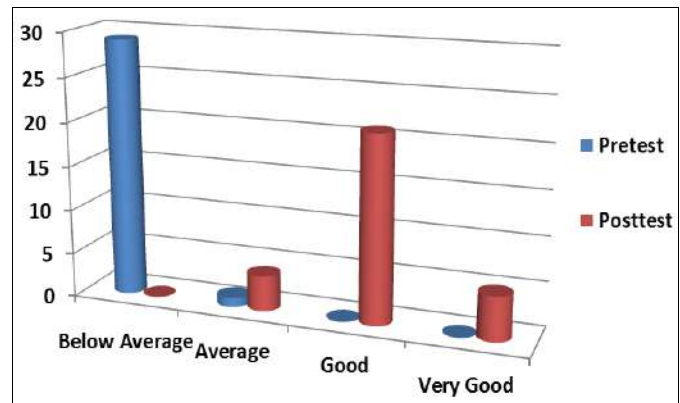
**Result**

Study results revealed that the mean pretest knowledge score of nursing officers and teaching faculty was 10.96 and in posttest it was 20.06. The result further showed that the computed 't' value i.e. -15.47 was found to be statistically significant at 0.05 level which showed that the mean difference between pretest and post test mean score was a true difference and not by chance. (Table1 / Figure1)

**Table 1:** Mean, Mean difference, Standard Deviation Difference, Standard Error of Mean Difference and 't' value of pretest and posttest Knowledge Score of Nursing Officers and Teaching Faculty Before and After the First Aid Training Programme

	Mean	Meand	SDd	SEMD	t- value	p-value
Pre test (n=30)	10.96					
		-9.10	3.22	.587	-15.47	.000*
Post test (n=30)	20.06					

\*significant (p≤ 0.05), 't'(29)=2.05 NS not significant(p> 0.05)



**Fig 1:** Knowledge Score of Pretest and Post test

Participant's feedback showed that training programme created more interest, enthusiasm, and inspiration to learn the topic. They also increased peer coordination and group dynamics.

**Discussion**

This study prospectively investigated knowledge and skills acquired by nursing officers and teaching faculties through training session. An analysis of the data has helped the investigator to get a clear understanding of the study undertaken. The interpretation drawn from the findings of the study were based on the knowledge related to first aid & first aid kit, bandages & slings, wound dressing, shock management, effect of temperature and its management, burns and its management, fracture and its mananegent, poisoning and its management, road accidents and its mananegent, medical emergency management (asphyxia, drowning, suffocation).

Present study showed that majority (96%) participants had poor knowledge before training program only (3.3%) participants has average knowledge. Only few (13.3%) participants had average knowledge further majority (70%) participant had good knowledge and only (16.6%) of participants had very good knowledge after the posttest i.e. after the training programme. Similar finding were reported a research study on knowledge on first aid skills among students of medical college in Mangalore city of south India showed study very few students had good knowledge about first aid and this was not influenced with whether the student was previously trained or not in first aid [8].

Further a research study on general knowledge and first aid among schoolteacher's in Palestine showed the school teachers' knowledge of first aid concerning with fractures and trauma, burns was medium [9].

### Limitations

The limitations of the present study were duration was short for the training programme and the small number of participants.

### Conclusion

Present study showed improvement in the knowledge and skills after the training programme. The participants has given good feedback about the sessions and expressed their wish to attend such more training programme. It leads to an improvement for patient safety and emergency care. Furthermore, researchers should investigate how concomitant clinical supervision affects the transfer of procedural skills from a simulated setting into clinical practice. The findings of this study show that there was highly statistical significant relation difference between pre-test and post-test.

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