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## KNOWLEDGE AND SKILLS ON FIRST AID AMONG COLLEGE STUDENTS

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### ABSTRACT

Though adequate knowledge is essential for management of an emergency, outside hospital settings, at the site of the accident or emergency, most schools and colleges do not have formal first aid preparation in the curriculum. This Pre-experimental study was conducted using a self-administered questionnaire to assess the college students' knowledge and skills on selected first aid measures. The results illustrated that the overall pre-test mean knowledge on first aid management among college students was  $9.14 \pm 5.77$  and the post-test mean score was  $19.85 \pm 4.9$  which was found to be statistically significant at  $p < 0.001$ . There was a significant positive correlation at  $p = 0.001$  between knowledge and skills, which indicates that when knowledge increases, their skills also increase. The demographic variables such as age and academic performance had shown statistically significant association with level of knowledge ( $p < 0.05$ ) and skills ( $p < 0.01$ ,  $p < 0.001$ ) respectively. Thus, the study concludes that the level of knowledge and skills about first aid management was not good among the majority of the students during pre-test which increased significantly after the video teaching program. So, there is a need for formal first aid training to be introduced in the college curriculum to enable the younger generation to efficiently handle emergencies and save valuable lives.

### KEYWORDS

Video teaching, First aid management and College students.

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### INTRODUCTON

First aid is the immediate initial assistance given to a victim who is injured or suffering a sudden illness, which includes assessing the victim for life threatening conditions, giving appropriate treatment to sustain life, and maintaining the person in the best possible physical and mental condition until the help of emergency medical services is obtained. According to the National First aid Science Advisory Board, first aid education is essential to

every individual and first aid training and education should be made mandatory in all formal education systems. But unfortunately, it is not mandatory in either our school or collegiate curriculum. In particular, first-aid training is invariably necessary to college students because it provides them crucial life skills, as well as confidence, communication skills, and the ability to work successfully in a group.

The fundamental goal of first aid is to save someone's life and prevent disease by performing a rapid, temporary, and uncomplicated action outside of the hospital with little or no medical equipment. This also enhances the social responsibility towards the society and reinforces humanitarian values. It consist of initial intervention in a serious condition before the professional medical help arrives, such as performing cardiopulmonary resuscitation (CPR) while awaiting for an ambulance, as well as Heimlich maneuver for choking and the complete treatment for minor ailments, such as control bleeding, applying dressing and medications to a wound, preventing more injuries etc.

Every year, 1,50,000 people may lose their life in situations where first aid could have given them a chance to live (St. John Ambulance, 2012). Approximately, 35% of deaths happen within 5 minutes of an accident while 54% would die within 30 minutes. However, by giving first-aid at the site of the injury, deaths can be decreased by 20% (Metin and Mutlu, 2010)<sup>1</sup>. Unintentional injuries amid children are mostly preventable causes of death and disability. According to the World Health Organization, 2016, Global Burden of Disease Study estimates, unintentional injuries account for about 8,55,000 deaths in children and adolescents under the age of 18 years each year.

Several accidents can occur in colleges ranging from minor wounds to fractures and other health problems that require a speedy initial medical attention. Providing college students with first aid training helps to reduce risks and empower them with the ability to monitor and manage the condition in the event of a medical emergency. This has motivated the researcher to conduct a study on effect of video training programme on first aid management for selected emergencies among college students.

## MATERIAL AND METHODS

This Pre-experimental study was conducted using a self-administered questionnaire to assess the college students' knowledge and skills on first aid management for selected emergencies. The students' baseline knowledge and skills related to selected first aid measures were assessed followed by the video teaching and post test after 15 days. Using purposive sampling, 100 students who were willing to participate were selected. A self-administered structured questionnaire with 25 questions on knowledge regarding first aid management on selected emergencies such as basic life support, drowning, choking, basic wound care and electric shock. A 3 point observational checklist was used to assess the skills on first aid management of selected emergencies. The reliability value of the tool was  $r = 0.81$ . The institutional ethical approval and consent from the participants were obtained before the study.

## RESULTS AND DISCUSSION

The Table No.1 shows the pre-test and post-test knowledge scores on first aid management such as basic life support, drowning, choking, basic wound care, electric shock and the overall knowledge of the college students which were improved significantly in the post test after video teaching. The overall score revealed that the mean pre-test score with standard deviation was  $9.14 \pm 5.77$  and the post-test mean score was  $19.85 \pm 4.9$ . According to the calculated paired 't' value, each aspect of first aid and overall knowledge was found to be statistically significant at  $p < 0.001$ . This indicates that video teaching on knowledge regarding first aid management on selected emergencies given for college students was found to be significantly effective in improving their level of knowledge. Similar findings were observed in a study conducted by Kumar *et al*, (2008) which concluded that there was less than adequate knowledge (52%) and practices (54%) in all groups of participants such as resident doctors, hospital consultants, and private practitioners<sup>2</sup>. Additionally, Rachna Kapoor *et al*, (2017) had concluded from their school based interventional study which was done among 300 secondary school students of the age group 13-18

years, that there was a statistically highly significant difference in knowledge of students after teaching<sup>3</sup>. The post-test mean and standard deviation score of knowledge was 19.85±4.9, and skill was 55.19±7.24. The correlation ( $r = 0.619$ ) between knowledge and skill shows a significant positive correlation at  $p=0.001$  which indicates that when knowledge increases, their level of skill also increases. Similar findings were reported a the systemic review conducted by Harvey PR *et al*, (2012) that most of the studies reviewed showed a significant improvement in the practice score after training of first aid skills and there was a positive correlation between knowledge and practice<sup>4,5</sup>.

The demographic variables such as age and academic performance of college students had shown statistically highly significant association with level of knowledge ( $p<0.05$ ) and skills ( $p<0.01$ ,  $p<0.001$ ) respectively regarding first aid management. There was also a similar finding from the study by Reveruzzi, B. Buckley, L. Sheehan, M. (2016), which concluded that an association was found between age, sex, place of the study participants<sup>6</sup>. This shows that the college students should be given opportunity to learn and practice about the first aid management of the emergencies which can improve their life saving skills.

**Table No.1: Pre-test and Post-test knowledge scores regarding first aid management**

S.No	Knowledge	Test	Mean	SD	Paired 't' Value
1	Basic Life Support	Pre-test	1.74	1.13	t = 12.46, p =0.001***
		Post-test	4.42	0.84	
2	Drowning	Pre-test	1.48	0.99	t = 15.237, p=0.001***
		Post-test	3.96	1.05	
3	Choking	Pre-test	2.97	1.29	t = 11.912, p=0.001***
		Post-test	4.30	0.94	
4	Basic Wound Care	Pre-test	1.27	1.27	t = 13.151, p=0.001***
		Post-test	3.46	0.93	
5	Electric Shock	Pre-test	1.68	1.02	t = 17.31, p=0.001***
		Post-test	3.71	1.14	
6	Overall	Pre-test	9.14	5.7	t = 21.261, p=0.001***
		Post Test	19.85	4.9	

**Table No.2: Correlation between post-test knowledge and skill on first aid management**

S.No	Variables	Mean	S.D	"r" value
1	Knowledge	19.85	4.9	r = 0.619, p=0.001
2	Skills	55.19	7.24	

## CONCLUSION

The present study demonstrates that the video training programmes can have excellent effect with great impact on the knowledge and practice of college students as well it may help to reduce the morbidity and mortality related to the emergency inflicted injuries and illness. Thus, this should be included in the school and college curriculum and made to be mandatory for graduation so that this knowledge and skills may reduce the morbidity and mortality related to accidents and medical emergencies.

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## DECLARATION OF CONFLICTING INTEREST

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

## BIBLIOGRAPHY

1. Metin I, Mutlu C. Level of knowledge about first aid of the university students, *Trakia Journal of Sciences*, 8(2), 2010, 262-265.
2. Kumar S, Agarwal A K, Kumar A, Agrawal G G, Chaudhary S, Dwivedi V. A study of knowledge, attitude and practice of hospital consultants, resident doctors and private practitioners with regard to pre-hospital and emergency care in Lucknow, *Indian J Surg*, 70(1), 2008, 14-18.
3. Rachna Kapoor *et al.* Impact of training on knowledge and attitude regarding first aid among students of schools of Ahmedabad, *National Journal of Community Medicine*, 8(7), 2017, 381-384.
4. Harvey P R, Higenbottam C V, Owen A, Hulme J, Bion J F. Peer-led training and assessment in basic life support for healthcare students: synthesis of literature review and fifteen years practical experience, *Resuscitation*, 83(7), 2012, 894-899.
5. De Buck E, Van Remoortel H, Dieltjens T, Verstraeten H, Clarysse M, Moens O, Vandekerckhove P. Evidence-based educational pathway for the integration of first aid training in school curricula, *Resuscitation*, 94, 2015, 8-22.
6. Reveruzzi, B. Buckley L. Sheehan M. School-based first aid training programs: A systematic review, *The Journal of School Health*, 86(4), 2016, 1-5.

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