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Effectiveness of an interventional programme on knowledge and skills regarding selected first aid measures

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Abstract
First aid can be defined as the assessment and interventions that can be performed by a bystander immediately with no medical equipment. The aim of first aid is to alleviate suffering facilitates healing, ease pain and promote recovery. Among teachers various incorrect practices and myths associated with illness, injuries and first aid have also been reported. In the current study using the purposive sampling technique data was collected from 10 Government school teachers of Government School Tokiyo (Paonta Sahib)A self-structured questionnaire was used to assess the pre-test and post- test knowledge regarding first-aid and skills were assessed using the observational checklist. Findings of the pilot study revealed that Findings of study showed that majority of school teachers in pre test were having good knowledge i.e.50%, 30% had average knowledge, and 20% had poor knowledge about selected first aid measures. The majority of school teachers in post-test were having excellent knowledge i.e. 30% and 70% had good knowledge. Study shows correlation relationship between the pretest knowledge and pretest skills had low correlation, the correlation relationship between the posttest knowledge and posttest skill were highly correlated it means that the correlation is in a positive direction and when knowledge increases skills also increases.

Keywords: first-aid, knowledge, skills, teacher

1. Introduction

1.1 Background of the study

The term "first aid" first came in 1878 as a combination of "first treatment" and "National Aid." The International Liaison Committee on Resuscitation (ILCOR) First Aid Task Force in 2015 defined the First aid as it is the helping behaviors and initial care provided for an acute illness or injury. Globally, every year around 950 000 children and young people less than 18 years die due to injury and violence. Ten millions of children seek hospital care for unintentional injuries. More than 95% of all injury deaths in children occur in low- and middle-income countries. More than a million children aged 14 years and under, die each year from unintentional injuries.

World Health Organization (WHO): Worldwide climate change results in more than 150,000 deaths and 5.5 million lost disability-adjusted life years, in 2000 alone and more than 88% of this burden occurs in children under the age of five years.

1.2 Need for the study

The statistical view in India about the mortality and morbidity due to accidents is about 16% out of which more than 75% approximately is due to inadequate or ignored care or first aid. Other statistical figure, figures out that children are much more prone to get accidents due to their curiosity and the need to know things which when ignored. In the campus of a school only teachers are present at the time of incidence and they are playing a role of a parent at that time. Schools in India, lack of adequate medical facilities which leads to loss of life. Every teacher should be equipped with first aid techniques, so that they are able to handle basic emergencies in school campus.

2. Materials and methods

2.1 Research Approach

Quantitative Research Approach

2.2 Research Design

Pre experimental (one group pre test –post test des

2.3 Research Setting

Govt. Schools of District Sirmour

2.4 Population

Govt. School teachers

2.5 Target Population

Govt. School teachers of selected schools

2.5 Research Variables

Dependent variables - knowledge and skills regarding selected first aid measures among government school teachers

Independent variables- An **interventional programme (**Lecture cum discussion, demonstration)

2.6 Criteria for sample selection

Inclusion criteria

School teachers who are

- Present at the time of data collection
- Willing to participate in the study

Exclusion criteria
School teachers who are handicap

- Who have already undergone first aid training (within a period of last one year)

2.7 Sampling technique
Purposive sampling

2.8 Sample Size: 10

2.9 Data Collection tool
Tool I – Structured questionnaire

- **Section A**- Socio demographic data
- **Section B** –Knowledge questionnaire

TOOL II: Observational checklist

Description of the tool

1. **Socio-demographic Profile:** It Includes Age, gender, marital status, area status, education level, Number of children, Type of School, Area of school, Duration of teaching in school, Any person whom you know from medical profession, Have you ever attended any first aid training, Have you ever witnessed any student with any of the following conditions, & What first aid measures you have done to deal with the above mentioned condition.
2. **Knowledge questionnaire related to first aid measures:** It includes First aid, Head injury, Fracture, Foreign body Ear /Eye /Nose, choking, fainting (Definition, Causes, Sign & symptoms & first measures)
3. **Observational Checklist: Skills related to** Head injury, Fracture, Foreign body (Ear, Eye, Nose), Choking, Fainting
4. **Interventional Programme:** Lecture was given on selected first aid measures (such as head injury, fracture, foreign bodies in eyes / ears/nose, fainting, choking) for 1 hour 31 min minutes followed by a discussion, & a demonstration

2.10 Content Reliability
For internal consistency Cronbach's alpha was calculated

$$\alpha = \left(\frac{K}{K-1}\right)\left(1-\frac{\sum V_i}{V_T}\right)$$

Knowledge questionnaire (0.853)
Skill checklist (0.852)

2.11 Pilot Study
Study setting: Government school Tokiyon (Paonta Sahib)

Study sample: Government School Teachers

2.12 Ethical Considerations

- Before conducting the study a written consent was obtained from the participants for their willingness to participate in the study.
- The subjects were empowered with full autonomy to participate in the research study and withdraw at any time.
- Confidentiality of the subjects was maintained.

2.13 Plan for data analysis
Descriptive and inferential statistics are used for the analysis of data.

- **Descriptive analysis:** Frequency, percentage, mean and standard deviation was used.
- **Inferential statistics:** 't' test was used to compare pretest and post test knowledge and skill scores & Karl Pearson's formula was used to show the correlation between scores.

3. Analysis of Pilot Study
Section A: Personal Profile of the subjects
Section B: Assessment of Knowledge regarding first aid

Table 1: Frequency & Percentage Distribution of Govt. School teachers on the basis of socio demographic variables N = 10

Sr. No.	Variables	Frequency (f)	Percentage (%)
1.	Age (in years)		
	▪ 31-40	4	40%
	▪ 41-50	5	50%
	▪ 51-60	1	10%
2.	Gender		
	▪ Male	3	30%
	▪ Female	7	70%
3.	Marital Status		
	▪ Married	10	100%
5.	Area of Residence		
	▪ Urban	3	30%
	▪ Rural	7	70%
6.	Education level		
	▪ High school	4	40%
	▪ Senior Secondary	2	20%
	▪ Post-graduation	4	40%
7.	No. of children		
	▪ One	1	10%
	▪ Two	6	60%
	▪ Three or more	3	30%
8	Type of school		
	▪ Primary	4	40%
	▪ High school	6	60%

9	Area of school		
	▪ Rural	10	100%
10	Duration of teaching		
	▪ <1 year	3	30%
	▪ 1-3 years	1	10%
	▪ Above 6 yrs	6	60%
11	Any person from medical profession		
	▪ Family member	2	20%
	▪ Friend	2	20%
	▪ Relative	1	10%
	▪ No one	5	50%
12	Ever attended first aid training		
	▪ Yes	1	10%
	▪ No	9	90%
13	Witnessed any student with		
	▪ Fracture	1	10%
	▪ Fainting	3	30%

Table 2: Pretest knowledge & skill scores N =10

Group	Pre-test Knowledge		Pre-test skill	
Experimental	Mean ± SD	Mean %	Mean ± SD	Mean %
	16.00 ± 6.498	45.71	27.40 ± 1.647	66.83

Table 3: Post- test knowledge & skill scores N =10

Group	Post-test Knowledge		Post-test skill	
Experimental	Mean ± SD	Mean %	Mean ± SD	Mean %
	27.00 ± 1.56	77.14	31.6 ± 1.57	77.07

Table 4: Paired t test of Pre-test & Post test scores N = 10

Area		Mean ± SD	Mean difference	Paired t test	p value	Table value at 0.05	Result
Knowledge	Pre Post	16.00 ± 6.49 27.00 ± 1.56	11.00	6.65	0.0001	2.26	Significant
Skill	Pre Post	27.40 ± 1.64 31.60 ± 1.57	4.20	6.67	0.0001	2.26	Significant

Table 5: Correlation of Pre knowledge and Skill scores N = 10

Area	Mean ± SD	df	p value	Correlation	Result
Pre- Knowledge	16 ± 6.49	0.63	0.155	0.478	Not Significant
Pre- Skill	27.4 ± 1.64				

Table 6: Correlation of Post knowledge and Skill scores N = 10

Area	Mean ± SD	df	p value	Correlation	Result
Post- Knowledge	27 ± 1.56	0.632	0.001	0.946	Significant
Post- Skill	31.6 ± 1.57				

Major Findings of the study

- Findings of study showed that majority of school teachers in pre-test were having good knowledge i.e.50%, 30% had average knowledge,20% had poor knowledge about selected first aid measures
- The majority of school teachers in post-test were having excellent knowledge i.e. 30% and 70% had good knowledge.
- Study shows correlation relationship between the pretest knowledge and pretest skills had low correlation, the correlation relationship between the posttest knowledge and posttest skill were highly direction and when knowledge increases skills also increases. correlated it means that the correlation is in a positive

6. Conclusion and results

This concludes that the interventional programme was effective in significant improvement of knowledge and skills score regarding selected first aid measures (Head injury, Fracture, Foreign bodies in ear /eyes/nose, choking & Fainting) among government school teachers.

Majority of teachers were of age group 41-45 years i.e.50%, 70 % female and 40% had educational status of high school & post graduation, 60% had teaching experience of > 6 years.

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