



RESEARCH ARTICLE

EFFECT OF STRUCTURED TEACHING PROGRAMME REGARDING FIRST AID MANAGEMENT
AMONG THE SCHOOL TEACHERS AT Z. P.HIGH SCHOOL, PILER, ANDHRA PRADESH, INDIA

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ARTICLE INFO

Article History:

Received 19th October, 2017
Received in revised form
15th November, 2017
Accepted 22nd December, 2017
Published online 19th January, 2018

Key words:

Effectiveness,
Planned Teaching Programme,
First aid Management.

ABSTRACT

The aim of the present study was to assess the knowledge regarding first aid management among 30 Zilla Parishad High school teachers. In pre-test knowledge scores of teachers is Mean, 18.27 and Standard deviation 4.544037397. in post-test knowledge score of teachers is Mean 28.67 and Standard Deviation was 3.744728.. The comparison of pre-test and post- test parameters showed significant improvement of knowledge regarding first aid management Paired t value in pre-test and post-test knowledge of teachers is 1.01836, which is significant at 0.05 levels. Thus it can be concluded that Planned Teaching is effective in increasing knowledge of teachers. There was no significant association of knowledge with demographic variables.

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Citation: Dr. Anuradha, S., 2018. "A Study to assess the effect of structured teaching programme regarding first aid management among the school teachers at Z. P.High School, Piler, Andhra Pradesh, India", *International Journal of Current Research*, 10, (01), 63931-63935.

INTRODUCTION

First aid means administering initial care adopting few simple and sometimes, potentially life saving techniques with minimal equipments. The fact is, medical management may not be required in some self limiting illnesses or minor injuries after the first aid intervention. Injuries afflict millions of people, many of them killing every year simply because timely response was inadequate or not just available. Immediate action by appropriate techniques could have improved the magnitude of injury or chances of survival.¹ The most common unintentional injuries result from motor vehicle crashes, falls, fires and burns, drowning, poisonings and aspirations². Un intentional injuries yearly and more than 95% of these deaths happen in countries with low and middle income levels (Altunda and Öztürk, 2007; İnanç, Baysal, Coşgun, Taviloğlu, and Ünüvar, 2008; WHO, 2006)³. Injuries and sudden illnesses are an essential issue in public health and usually occurring at any times of daily life. Besides, school children injuries take a major part. Unintentional playground injuries occurring during school hours and includes falls, head injuries, wound bleeding and others (Salminen, Kurenniemi, Raback, Markkula, and Lounamaa, 2014).

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Accidental injuries are usually categorized based on their happening, for instance: burns, scalds, poisoning, falls and drowning, etc. (WHO, 2010). Also, school aged children exposed to numerous kinds of epidemiological factors in the school which impact their current and upcoming condition of health (Masih, Sharma, and Kumar, 2014)³. According to the World Health Report, the burden of the disease due to injuries has increased from about 12% in 1990 to 15% in 2000 and expected to increase to about 20% by 2020⁴. According to World Health Organization (2011), Indian child injury death occur in the age group between from birth to 20 years. This statistically are mentioned various aspect such as Road Traffic injuries 1,52,689 (31%) ,Fall from bicycles and skating devices cause significant number of head injuries in school children., Drowning 25911(5%), poisoning 26,634 (6%), Fire related burn 23268(5%) and falls10622 (2%) respectively⁵. American Academy Association Science Daily 2009 reported that dog bite is a particular threat to young children in an evaluation of 84 cases of dog bites in children over 8 years period Jagnoor et .al. (2012). In most of the death occur drowning it happens quickly and without warning It is second leading cause of death in rural areas in India 110 children /1, 00,000 children, (27%).Drowning happens in the age of below 18 years. 28. Harris County, (2012) Drowning is the cause of approximately 7000-8000 death each year in the US. Many deaths due to drowning occur also in older school age children and adolescents⁶. As the most populous developing country, China has an annual incidence of

injuries of 16.1~21.9% for all ages¹². Incidence of paediatric unintentional burns ranges from 2.9% to 20.6% in China. Some studies reported a higher incidence in rural areas than in urban areas^{13,14}, while a few reported a higher incidence in urban areas¹⁵. Pediatric unintentional burns have become a common public health issue in China⁶. The five most common unintentional injuries in South African children are, in descending order: road traffic injuries, burns, drowning, poisoning and falls⁷. A significant part of children's life is school lifetime, which directly affects their physical and mental health (Olympia et al., 2005; Thyer, 1996). Unfortunately, school health services are ignored in some countries particularly the developing ones.

This contributes to shortage in awareness and knowledge regarding sudden illnesses and first aid measures (Bhatia et al., 2009). Children's times mostly spend in school under direct supervision of teachers. Consequently, first-aid should be well-known by teachers who are the key personnel to deal with urgent health needs during school hours (Masih et al., 2014). Teachers are almost the first and the main caregiver represented the first line to protect school children, in addition, teachers' role complements the parent's role. School teachers during the school hours, are the real first-respondent to emergencies, injuries resulting from school accidents. Therefore, they have to be capable to act accurately with health emergencies affected the school children (Barrett, 2001; Sönmez, Uskun, and Pehlivan, 2014; Uskun, Alptekin, Öztürk, and Kışioğlu, 2008). The first aid is an urgent attention delivered to victims of sudden illness or injury until medical helps arrive. So that, early treatment of such emergencies decreases morbidity and deaths among school aged children (Abdella, Abu-Elenen, Elkazaz, and Moussa, 2015; Khatatbeh, 2016; Singer, Gulla, Thode Jr, and Cronin, 2004)³.

First aid can be obtained by everybody and comprises self-care, so that first aider can be any person exist in the scene of emergency and provides such care like parents, teachers, policeman, fireman, first responder, professional medic, etc. (Piazza, 2014; Singletary et al., 2015). The field of first aid is affected by both training and regulatory constraints. Therefore, the definite on of this scope mutable and could be defined regarding to surrounding circumstances, needs and regulations (Singletary et al., 2015)³. International Federation of Red Cross and Red Crescent Societies, [IFRC], (2009) reported that first aid measures can be life-saving at work, school, home and in community setting.

This could include performing procedures such as: placing an unconscious patient into the recovery position, performing CPR, and stopping bleeding using pressure and evaluation. Several studies assessed the first aid knowledge, attitude, perception and practice among School teacher's worldwide (Devashish, Gaurav, and Bharat, 2013; Joseph et al., 2015; kerim, 2016; Krishna, 2013; Kumar et al., 2013; Masih, Sharma, and Kumar, 2014) and most of them reported poor level and unsatisfactory first aid knowledge as well as poor perception and practice regarding first aid⁸. Assessment of knowledge of school teachers regarding first aid measures will help the nursing personnel to plan and organize health education training programs to enhance teachers' awareness, as teacher plays pivotal role in taking care of children during emergencies, Hence, this study aims at improving the knowledge to school teachers in selected first aid measures because today's children are tomorrow's citizens⁹.

Objectives

- To assess the level of knowledge regarding first aid management among Z.P High school teachers
- To evaluate the effectiveness of planned teaching programme regarding first aid management among Z.P High school teachers
- To find the association between the levels of knowledge of first aid management with selected demographic variables

Review of literature

A study in Egypt conducted by Salwa A. Ali. et al. (2008) assessed the effect of an educational program on the knowledge of newly graduated nursery teachers regarding common accidents and emergencies among preschoolers and their first-aid management. There was high significant improvement of knowledge and practice of the studied group in the post test in comparison to pre test. Knowledge and practice increased, on the average, from 0-10% to 80-95% in first aid of wound, fractures, epileptic convulsions, fainting, epistaxis, suffocation and burn.¹⁰

Suresh Sharma, (2008) - conducted a descriptive survey approach to evaluate the effectiveness of Self-Instructional Module regarding first aid management and emergency care among school teachers at selected primary schools in Bangalore. Result revealed that 24.92 % had inadequate knowledge and 50.78 % had unfavourable attitude in pre-test. It shows they need health teaching programme regarding first aid management. After the teaching programme study shows 78.0 % had moderate knowledge and 70.0% had favourable attitude in post test. Overall mean knowledge score found to be 62.3% and attitude score found to be 84.6% in post test. It showed the teaching programme regarding first aid management was more effective.⁵ Khan A frasyab et.al (2010)., conducted a cross-sectional study to assess Knowledge, attitude and practices of first aid measures at various emergency situation. The researcher found that first aid training programmes must introduced at school and college level to developing countries⁵

P. Yasodha and Anju Thomas (2011) conducted a study to evaluate the effectiveness of planned teaching program on first aid for emergencies to primary school teachers. An inferential statistical analysis was used to analyze the data and the results showed that, there is a difference in knowledge level of primary school teachers before and after the education¹¹ Sunil Kumar D., et.al., (2013)., A cross sectional study was conducted from 40 schools from Mysore. 255 (97.3%) had ever heard of first aid out of these 201 (78.8%) had explained about first aid in the emergency case of wounds, 77 (30.2%) were aware that even fainting needs first aid care. The imported conclusion on perception and practices of school teachers on first aid was found to be very poor.⁵ Li, feng et al (2014). Assessed the effects of paediatric first aid training among teachers. 82.8% of the participants achieved a pass mark of 80% or above; 42.8% of participants achieved the pass mark at 6 months, 41.7% at 9 months and 11.7% at 4 years (compared with pre-test, $P < 0.001$). The mean score of the subjects' emotions in the post-test period increased to 81 ($P < 0.001$). The mean scores of emotions at 9 months or 4 years were higher than the pre test mean ($P < 0.001$). At the 4-year mark, the majority of preschool staff (>70%) had administered correct first aid for

injuries¹² De p (2014). conducted a study among school teachers at Anekal Taluk, Bangalore to make them aware about different accidents of children at school premises and their first aid management. The sample consisted of 30 primary and higher primary school teachers selected by convenience sampling technique. The analysis showed that improvement of knowledge occurred after administering structured teaching programme (STP) on first aid management. Nursing professionals can benefit from the study result at the area of community, administration, research and education.¹³ A study of (Sharma. 2014) was done among primary school teachers to evaluate the effectiveness of teaching program on knowledge and practice regarding first aid management of selected minor injuries in children, the result were Majority (94%) of the teachers were female, paired sample t-test revealed that the mean post test knowledge score regarding first aid management of selected minor injuries was significantly higher (34.76 ± 4.35) than that of mean pre test knowledge score (27.32 ± 5.73) ($P < 0.005$); mean post test practice score was significantly higher (18.52 ± 2.63) then mean pre test practice score (14.52 ± 2.39) ($P < 0.005$). There was a significant positive correlation between knowledge score and practice score of participants ($r = 0.9$; $P < 0.001$), the study conclusion the training program was effective in significant improvement of knowledge and practice score regarding first aid management of selected minor injuries among study participants.⁸

Shobha Masih et al. (2014) conducted a Quasi-experimental study with one group pre- and post-test research design was conducted among the primary school teachers of Dehradun district of Uttarakhand. Majority (94%) of the teachers were female. Paired sample t-test revealed that the mean post-test knowledge score regarding first aid management of selected minor injuries was significantly higher (34.76 ± 4.35) than that of mean pre test knowledge score (27.32 ± 5.73) ($P < 0.005$); mean post test practice score was significantly higher (18.52 ± 2.63) then mean pre test practice score (14.52 ± 2.39) ($P < 0.005$). There was a significant positive correlation between knowledge score and practice score of participants ($r = 0.9$; $P < 0.001$).¹⁴ Nabila Hassan Ali Abdella et al., (2015) conducted The interventional study and results revealed that high significant improvement of knowledge and practice of the studied group in the post and follow up intervention in comparison to pre intervention. Additionally, the knowledge mean and SD for pre, post and follow intervention were 22.2 ± 5.0 , 35.7 ± 4.7 and 33.3 ± 5.3 respectively. Also, the total practice was improved in post and follow up intervention compared to pre intervention as cleared by mean and SD of 17.4 ± 6.6 , 16.1 ± 7.8 and 9.2 ± 5.1 respectively.¹⁵ Ganime AydinParim.,(2015). Conducted a survey technique among teachers regarding levels of knowledge of first aid among practicing teachers and prospective teachers. It was concluded that all prospective teachers had received some first aid education in secondary school and some had additional first aid education in university so their collective first aid knowledge level (FADKL) was not high enough to qualify them to teach first aid and for the treatment of students.⁵ JakleinR.Younis and Amal El-Abassy., (2015)., Utilized video-assisted teaching method and it was succeeded in achieving significant improvements in the primary school teachers' knowledge and skills regarding first aid of children's school day accidents compared to traditional lecture method.⁵ Josephn et al.(2015)conducted a study to determine awareness, attitudes and practices of school teachers and the facilities

available at schools with respect to administration of first aid, data were obtained from 146 teachers in nine schools in Mangalore, India Only 69 (47%) teachers had received first aid training previously. Poor and moderate knowledge of first aid was observed among 19 (13%) and 127 (87%) teachers, respectively. Only eight teachers knew the correct procedure for cardiopulmonary resuscitation. Most teachers 96 (66%) were willing to administer first aid if provided with the required training. A total of 74 teachers reported having practiced first aid in response to a situation arising at their school. Wounds (36%) and syncope attack (23%) were among the commonly encountered situations requiring first aid management at schools. Teachers' confidence level in administering first aid was significantly associated with prior training in first aid ($p=0.001$). First aid kits were available in only five of the nine schools surveyed.¹⁶ Hussein M, A Ai-Tameemi and Fatima w Khudair (2016) Conducted a descriptive cross-sectional study. The result showed that 287 (95%) of participants had total fair knowledge and only 15 (5%) of participant teachers had poor knowledge, besides no one of them had good knowledge. With regard to teachers' attitudes towards first aid, the results showed that 282 (93.4%) of the teachers commonly had a positive attitude toward first aid.¹⁷ Lukas Felix Calandrim's et al., (2017) evaluated the knowledge of teachers and employees after first aid training and revealed the results 97.1% (34) female professionals participated, 42.8% (15) reported having received some training and 71.4% (25) had already witnessed an emergency case. Before the training, an average score of 19.43 referring to skill and 2.91 points in knowledge was verified and after 174.57 points in skill and 9.17 in knowledge, a statistically significant difference by the Wilcoxon Signal Station Test ($p<0.001$). Concluded that training is effective, with a significant increase in the percentage of correct answers after first aid training in the school environment.¹⁸ Mohammad q tait and Nawaf RN Amro [2017], conducted a cross-sectional study among schoolteacher's in southern of Hebron and revealed the total mean score knowledge of general first aid is 71.41%. Most of teachers answered correct of important balanced diet and the suitable management for hypoglycemic for diabetic patients (87.3%) and (77.3%) respectively. the school teachers' knowledge of first aid concerning external bleeding and fractures and trauma, dealing with epilepsy, diabetes and burn is high, the knowledge of CPR is medium, the school teacher need more training in CPR.⁸ Neama Mohamed El magrabetal(2017) Conducted a quasi-experimental study with one group pre/post test research design was used. Multistage random sample used to select the five preparatory schools and the participated teachers which included 150 teachers.The findings of the study revealed that Mean \pm SD of teachers' age were 38.78 ± 8.83 , 26.7% of the teacher attended training program about first aid, there was statistical significant differences between total score of teachers' knowledge (p -value = .000) in pre and immediate post-test. There was statistical significant differences between the performance level of preparatory schools teachers (p -value = .000*).¹⁹

METHODOLOGY

It was an evaluative research study with one group pre- test and post –test design, conducted at Z.P High school, Piler, Andhra Pradesh.

The sample size of the study was 30 z p school teachers who met the inclusion criteria. The convenient sampling technique

was used for selection of subjects for the study. The investigator developed a structured questionnaire to assess the level of knowledge regarding first aid management in children. Tool consists of 2 parts.

Part-I: Deals with demographic variables consist of age, sex, religion, experience in first aid management, education of teachers.

Part-II: Consist of 36 questions on selected emergencies among school children to assess the knowledge regarding first aid management.

Formal permission was obtained from concerned authority. The purpose and benefits of the study was explained to subjects and consent was obtained from school teachers to participate in the study. Data collection procedure was carried out for a period of 2 weeks (31/1/16-12/2/16). The time duration taken for each sample was 45 minutes. The collected was analysed by using descriptive and inferential statistics.

RESULTS

Table 1. Frequency and percentage distribution of level of knowledge regarding first aid management of school teachers in pre and post-test

KNOWLEDGE	PRE-TEST		POST-TEST	
Inadequate knowledge	18	60%	01	3.33%
Moderate knowledge	10	33.33%	06	20%
Adequate knowledge	02	6.67%	23	76.67%

Table: 1 shows in pre-test out 30 teachers 18 (60%) of them are having inadequate knowledge, 10 (33.33%) of them are having moderate knowledge and 02 (6.67%) of them are having adequate knowledge regarding first aid management. In post-test out 30 teachers 01 (3.33%) of them are having inadequate knowledge, 06 (20%) of them are having moderate knowledge and 23 (76.67%) of them are having adequate knowledge regarding first aid management.

Table 2. Mean, Median, Standard deviation of pre-test and post-test knowledge scores of teachers (n=30)

Knowledge on first aid management of school teachers	Pre-test		Post-test		(t) value
	Mean	S.D	Mean	S.D	
	18.27	4.544037397	28.67	3.744728	1.01836

Table 2. shows that the pre-test knowledge scores of teachers provide data like Mean, 18.27 and Standard deviation 4.544037397. The post-test knowledge score provide data with Mean 28.67 and Standard Deviation was 3.744728. Compared to the pre-test and post-test the knowledge had increased. Paired t value in pre-test and post-test knowledge of teachers is 1.01836, which is significant at 0.05 levels it shows the effect of structured teaching programme. There was no significant association of knowledge with demographic variables.

DISCUSSION

As per the study done by Abdella et al. (2014) there was significant improvement in knowledge about paediatric first aid among staff in the preschools.

In the present study pre-test mean score of knowledge was 18.27 were as in post-test mean score was 28.67 shows significant increase in knowledge on first aid management.¹⁰

Similar study by Nabila Hassan Ali Abdella et al., (2015) supports the present study, results revealed that high significant improvement of knowledge and practice of the studied group in the post and follow up intervention in comparison to pre intervention. Additionally, the knowledge mean and SD for pre, post and follow intervention were 22.2 ± 5.0 , 35.7 ± 4.7 and 33.3 ± 5.3 respectively. Supporting the study by Shobha Masih et al (2014) revealed that Paired sample t-test revealed that the mean post-test knowledge score regarding first aid management of selected minor injuries was significantly higher (34.76 ± 4.35) than that of mean pre test knowledge score (27.32 ± 5.73) ($P < 0.005$); mean post test practice score was significantly higher (18.52 ± 2.63) than mean pre test practice score (14.52 ± 2.39) ($P < 0.005$).

Recommendation

- The similar study can be replicated in different settings.
- The study can be conducted by using other strategies like information booklets and Video-assisted teaching
- The study can also be carried out on large scale comparing with other socioeconomic Variables, urban and rural areas and literate and illiterate.
- An experimental study can be conducted with a controlled group.
- Similar study can be conducted to the graduate students.
- Interventional studies can be conducted on management of common accidents among school teachers.

Conclusion

The structured teaching was quite effective in enhancing the knowledge of teachers on first aid management.

Acknowledgement

The co-operation of respondents to participate in the study is gratefully acknowledged.

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