"A Study To Assess The Effectiveness Of Structured Teaching Programme (Stp) On Knowledge And Beginning Skills Regarding The First Aid Management Of Selected Common Conditions In Children Among The Primary School Teachers Of Selected Schools At Bardoli, Surat, Gujarat."

Moirangthem Vidyathoi Devi[1*], Shivani Sharma[2], Natasha Verma[3], Neha Katoch[4], Shikha Gupta[5], Dinesh Kumar[6], Manju Rajput[7], Neha Kakran[8], Garima Rohillai[9], Sheetal Singh[10], Imran Khan[11]

[1]*Assistant Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*
Orcid id – 0000-0003-3203-6270

[2,] *Associate Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*

[3,] *Assistant Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*

[4,] *Assistant Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*

[5,] *Ph.D. Scholar in Public Health, Assistant Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India*

[6,] *Professor, Dean, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India*

[7,] *Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*

[8,] *Nursing Tutor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India*

[9,] *Assistant Professor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India*

[10.] *Nursing Tutor, School of Nursing, Noida International University, Plot 1, Yamuna Expressway, Sector 17A, Gautam Budh Nagar, Greater Noida, Uttar Pradesh, India.*

[11,] *Associate Professor, School of Nursing, Sanskriti University, Mathura, Uttar Pradesh, India*

*Corresponding author: Moirangthem Vidyathoi Devi

Moirangthem Vidyathoi Devi (MVD), Shivani Sharma (SS), Natasha Verma (NV), Neha Katoch (NK), Shikha Gupta (SG), Dinesh Kumar (DK), Manju Rajput (MR), Neha Kakran (NK)[8], Garima Rohillai (GR)[9], Sheetal Singh (SS)[10], Imran Khan (IK)[11]
All persons entitled to authorship are listed as authors.

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Ethical approval

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Corresponding author

Moirangthem Vidyathoi Devi,
MSc. Nursing, Assistant Professor, School of Nursing,Noida International University; Greater Noida, Uttar-Pradesh, India
Orcid id – 0000-0003-3203-6270

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Orcid id – 0000-0003-3203-6270

"A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP) ON KNOWLEDGE AND BEGINNING SKILLS REGARDING THE FIRST AID MANAGEMENT OF SELECTED COMMON CONDITIONS IN CHILDREN AMONG THE PRIMARY SCHOOL TEACHERS OF SELECTED SCHOOLS AT BARDOLI, SURAT, GUJARAT."

Abstract
Background: School aged children are active youngster, have more interest in playing, attempt to get mastery over new motor skills and these aged group children can be naughty, deficient and impulsive from time to time which is perfectly normal. So, occurrences of unexpected injuries are more common especially among primary school children. It is important for the primary school teachers to have knowledge and equipped with relevant skills of first aid management to deal with any emergency situation occur in school premises.

Objective: To assess the knowledge regarding the first aid management of selected common conditions in children among primary school teachers before and after structured teaching program.To co-relate the skill scores of primary school teachers and to find the association between the post-test knowledge scores with selected demographic variables.

Design: Pre-experimental one group pre-test post-test research design.

Setting: In this study the settingsselected English medium schools of Bardoli, Surat, Gujarat. The first setting that the researcher selected was Shree Shantaram Bhat English Medium School, Mota, Umrakh, Bardoli, and secondly Vasishtha Genesis English School, Baben, Bardoli.

Participants: Primary School Teachers.

Methods: Pre-experimental one group pre-test post-test design was used for the study. Population of the study was primary school teachers of two selected schools. 60 primary school teachers were selected using convenient sampling technique. Structured knowledge questionnaire, observation checklist and lesson plan were used as tools to assess.

Results: In the socio-demographic data majority (73.34%) of the sample were above 30 years of age, majority (86.67%) were females, majority of the sample (71.67%) belongs to Hindu religion, most(71.67%)were married, majority (51.67%) resides in Urban areas, Graduate with B.Ed was the major (36.67%) qualification,

Majority(41.66%) works in school for 1-5 years and majority (55.00%) sample earning 10,001-20,000 per month . In post-test knowledge mean score was (31.87%), SD=3.32which significantly increased after STP which was (18.47%),(SD=2.63) in pre-test. Overall knowledge of primary school teachers was inadequate (85.00%) in pre-test whereas majority (78.3%) were having adequate knowledge in post-test. With regards to beginning skills mean post-test beginning skills score was (32.13%), SD=2.22 and pre-test mean beginning skills score was found to be (16.82%), SD=2.07. In pre-test overall beginning skills score (92.00%) had poor beginning skills in post-test majority(83.00%) had good beginning skills, Significant association was found between post-test knowledge and beginning skills score only with age and working experience of samples.

Conclusion: Structured teaching program was found to be an effective teaching strategy in improving knowledge and beginning skills of primary school teachers regarding first aid management of selected common conditions in children.

Key words: First aid management, primary school teachers, effectiveness.

1. Introduction

First aid is the assistance given to any person suffering from sudden illness or injuries. It is temporary and immediate care. The main aims of first aidis to preserve life, prevent worsening and promote recovery. First aid can be performed by the lay person or any person trained with providing basic level of first aid and other willing to provide from acquired knowledge(Kaur N, 2017).It is definitely limited to the assistance rendered at the time of emergency situation with the available materials(TK, 2008).School age children are active youngster, have more interest in playing, attempt to get mastery over new motor skills and these age group children can be naughty, deficient and impulsive from time to time which is perfectly normal. So, they are at risk for unexpected injury and fracture in schools(Thomas LM, 2015).

2. Background

In many countries, school age children spend about 30% of their time in schools. Therefore, school is the place with a greater risk of injuries and medical emergencies. In European countries the present culture is that all teachers must first learn first aid themselves and then teach to the pupils right from the nursery school level and basic first aid can be applied in the classrooms. In contrast several studies carried out in Asian countries have reported that awareness, perception and practices of first aid among teachers were poor(Joseph N, 2015).

In India one third of total population are children between the age of 0-14 years. According to WHO report (2008), In India injuries were the fourth leading cause of death in children under 15 years age(Banerjee S, 2016).As children grow older, the percentage of deaths from injuries increases. The type of injury and the circumstances surrounding it are closely related to normal growth and developmental behaviour. As children develop, their innate curiosity impels them to investigate activities and to mimic the behaviour of others. Although the rate of injuries is high in children less than 9 years of age, most fatal injuries occur in later childhood and adolescence(Wilson David, 2012).

A child's world centres on the home, school and the community. The biggest threats to children's health are these places. So these should be safest home, school and community. First aid measures are the best way to save the children under some health problems and injuries, because the future development of our children depends on their enjoying good health today(Thomas LM, 2015). Most schools in India do not have trained medical personnel to manage medical emergencies or minor injuries. Due to resources constraint, training of school teachers in basic first aid skills may be convenient, effective and also prudent decision for immediate management and timely referral of children injuries(Jacob OM, 2018).

According to the Centre for Disease Control Prevention, more than 2.6 million school children related to sports and recreation-related injuries are reported worldwide annually(Joseph N, 2015). Injuriesrelated deaths account for 9% of mortality worldwide. Globally, every year about 950,000 children <18 years of age die due to injury and violence; nearly 90% of these deaths were due to unintentional injuries(Tabassom A, 2019).

The landmark Convention on the Rights of the Child, ratified by almost all governments, states that children around the world have a right to a safe environment and to protection from injury and violence. It further states that the institutions, services and facilities responsible for the care or protection of children should conform with

established standards, particularly in the areas of safety and health(World Report on Child Injury Prevention., 2019).

In Belgium, as in many countries, children spend, on average, 4.5 week- days at school, during nearly 8 hours per day. Studies have shown that, the risk of school-related injury exceeds the risk during leisure time, i.e. Head injuries, upper and lower limbs injuries were investigated in more details, 29.4% were seen between the age group of 6 - 9 years, 26.9% of 10 - 12 years and 17.8% from 13 years or more, the major places of injuries were the playground (56.9%) and the physical education (19.7%); falls were observed in 52.1% of cases and contacts were reported in 24.3%. The head injuries account for 40.6%, the upper limbs for 32.0% and the lower limbs injuries for 20.2% whereas the bruises and scratches were observed in 23.8% and the wounds in 21.5%. Fractures were reported in 16.1%(Senterre C, 2014).

As per the reports from several studies done in various parts of India, the prevalence of injury ranges from 11% to 64% and the occurrence of injury was high among female children compared to male children(Banerjee S, 2016).Childhood injuries caused loss of school attendance and financial burden to the family(Jacob OM, 2018).

Teachers have an important role to play in child protection. Their role can only be properly carried out, if teachers are equipped with the relevant skills. Appropriate training in child protection for teachers is of key importance in both emphasizing child protection issues and in promoting these skills in teachers(Senterre C, 2014).The role of teachers are complement with the role of mother and during school hours teachers are the real defendant of emergency and injuries caused by school accidents. So, they must be able to work accurately with health emergencies affecting the school children(Kaur N, 2017).

3. Aims and objectives

- To assess the knowledge regarding the first aid management of selected common conditions in children among primary school teachers before and after STP.
- To assess the beginning skills of primary school teachers regarding first aid management of selected common conditions in children before and after STP.
- To compare the pre-test and post-test knowledge and beginning skills of primary school teachers regarding first aid management of selected common conditions in children.
- To co-relate the knowledge and beginning skill scores of primary school teachers regarding the first aid management of selected common conditions in children.
- To find the association between the post-test knowledge and beginning skills score with the selected demographic variables of primary school teachers such as age, gender educational qualification etc.

4. Methods
4.1. Study Design

A Pre-experimental one group pre-test post-test design was chosen as the most appropriate design for this study as it was an evaluative in nature.

4.2. Study Setting

This study was carried out in English medium schools of Bardoli, Surat, Gujarat. The first setting that the researcher selected was Shree Shantaram Bhat English Medium School, Mota, Umrakh, Bardoli, and secondly Vasishtha Genesis English School, Baben, Bardoli.

4.3. Sample

Purposive sampling was used to select participants' i.e. primary school teachers

4.4. Ethical considerations

Institutional Committee experts of Maniba Bhula Nursing College, Uka Tarsadia University, Bardoli approved the study along with written information about the study was given to the participating primary school teachers and also a written consent was obtained via informed consent and primary investigator of the study maintained the anonymity of the primary school teachers along with the confidently of data throughout the study.

4.5. Data collection

Data was collected using demographic proforma ofprimary school teachers, which was collected before structured teaching program.Demographic proforma comprised of 8 items they are age, gender, religion, marital status, residence, qualification, working experience, income per month.40 knowledge questionnaire under sub sections namely knowledge, comprehension, application, analysis, synthesis and evaluation of first aid. The method of scoring was 1 for correct answer and 0 for incorrect. An observational check list was used to assess the improvement in the skill sets acquired during structured teaching program. The scales were classified as poor, average and good level of knowledge / beginning skills.The structured teaching program was organised into following subheadings, i.e. introduction, definition, aims, first aid priorities, responsibilities of first aid providers, epitaxsis, cuts and scraps, chocking, fracture, and conclusion.

4.6. Data analysis

The data was analyzed using descriptive and inferential statistics. Descriptive analysis included Frequency and percentage distribution of socio-demographic data of primary school teachers, knowledge of primary school teachers regarding first aid management of selected common conditions in children, and beginning skills regarding the first aid management of selected common conditions in children. Further, Mean and standard deviation were assessed during pre-test and post-test scores of primary school teachers. Furthermore, inferential analysis was used to assess paired t-test for hypothesis testing and Chi-square for association of post-test knowledge and beginning skills score with the selected demographic variables.

5. Results
5.1. Demographic characteristics

The primary school teachers (n=60)demographics shows that majority of teachers n=22(37%) belonged to the age group of 31–≥37 years, majority of the teachers n=52(87%) were females, majority of them were Hindus, i.e., n=43(72), majority marital status was found to be, married, i.e., n=43(72%), majority of the teachers were residing in urban i.e., n=31(52%), majority of samples selected by researcher to be

teachers were qualified as graduates with B.Ed., i.e., n=22(37%), majority working experience was found to be 1 to 5 years, i.e., n=25(42%), and majority income per month was found to be 10 to 20 thousand i.e., n=33(55%).

5.2. Comparison of Mean and standard deviation regarding knowledge scores of primary school teachers during pre and post test

The statistical results showed increase in mean ofknowledge variable before and after implementation of intervention (structured teaching program) by the researcher i.e. pre-test, and post-test. An overall Mean±SD of knowledge scores, pre-test was 18.47±2.63, and post-test 31.87±3.32, (**Table 1**).

Table 1 Shows all the Mean±Sdof knowledge scores among primary school teachers

Knowledge scores	N	Mean	Std. Deviation
Pre-Test	60	18.47	2.63
Post-Test	60	31.87	3.32

5.3. Comparison of Mean and standard deviationregardingrange of beginning skills of primary school teachers during pre and post test

The statistical results showed increase in mean of beginning practice oriented skill variable before and after implementation of intervention (structured teaching program) by the researcher i.e. pre-test, and post-test. An overall Mean±SD of beginning skills scores, pre-test was 16.82±2.07, and post-test 32.13±2.22,(**Table 2**).

Table 2 Shows Mean±SD of beginning skills among primary school teachers

beginning skills	N	Mean	Std. Deviation
Pre-test	60	16.82	2.07
Post-Test	60	32.13	2.22

5.4. Hypothesis testing-1: there will be significant difference between mean pre-test, post-test scores of knowledge among primary school teachers.

Thepre-test knowledge mean score was 18.47, standard deviation was 2.63 and post-test

knowledge mean score was 31.87 and standard deviation was 3.32. The mean difference of pre-test and post-test knowledge was 13.40, standard deviation difference was 0.69 and standard error was 0.54, as the calculated paired 't' test value found to 41.39 which was higher than the tabulated value at 0.05 level of significance. Hence, it can be inferred that the structured teaching program was effective and there was significant improvement in knowledge regarding first aid management of selected common conditions in children among primary school teachers (**Table3**).

Table 3 Comparison of knowledgescoreswitht-value and level of significance
n=20

Knowledge score				Mea-n difference	SD Difference	SED	T- value		Sig
Pre-test		Post-test					Table Value	Calculated Value	
Mean	SD	Mean	SD						
18.47	2.63	31.87	3.32	13.40	0.69	0.54	2.00	41.39	0.001

5.5. Hypothesis testing-2: there will be significant difference between mean pre-test, post-test scores of beginning skills among primary school teachers.

The pre-test beginning skills mean score was 16.82, standard deviation was 2.07 and post-test beginning skills mean score was 32.13 and standard deviation was 2.22.The mean difference of pre-test and post-test beginning skills was 15.31, standard deviation difference was 0.15 and standard error was 0.39, as the calculated paired 't' test value found to 38.89 which was higher than the tabulated value at 0.05 level of significance. Hence, it can be inferred that the structured teaching program was effective and there was significant improvement in beginning skills regarding first aid management of selected common conditions in children among primary school teachers statistically (**Table 4**).

Table 4 Comparison of beginning skills scores with t-value and level of significance
n=20

Beginning skills score				Mea-n difference	SD Difference	SED	T- value		Sig
Pre-test		Post-test					Table Value	Calculated Value	
Mean	SD	Mean	SD						
16.82	2.07	32.13	2.22	15.31	0.15	0.39	2.00	38.89	0.001

6. Discussion

The researcher found that there wasgreater need for the primary school teachers to learn about first aid management. This educational study explored effects of structured teaching program. The findings of this study revealed that the structured teaching program imparted via teaching and learning process along with hands on practice. Similar findings were evident in a study to assess effectiveness of structured teaching program on knowledge regarding first aid management of selected emergencies among pre university students at selected college of Jammu and Kashmir; the subjects had inadequate knowledge with a mean percentage of 44.0% in the pre-test and after the structured teaching program there were significant improvement in knowledge upto 83.4%(Kaur M D. R., 2016).

The current study participants identified teaching methods like group discussion, lecture and discussion, live demonstration and re-demonstration, and stimulation role playing along with practicing live skills, will be incorporated into structured teaching program like introduction, definition, aims, first aid priorities, responsibilities of first aid providers, epitaxsis, cuts and scraps, chocking, fracture, and conclusion.

Consistent with current research a study was supported by (Imbaraj LR, 2016)research to assess the effectiveness of programme teaching on levels of knowledge and expressed practices regarding first aid management among primary school teachers at selected Schools Vellore, Tamil Nadu, India; under which pre-test knowledge mean score was 18.9 and standard deviation was 2.99 and post-test knowledge score was 25.3 and SD was 3.15 the mean difference of pre-test and post-test knowledge score was found 6.4 regards to practice, the calculated paired "t" test value was 20.5 for knowledge and 15.6 for the practice which showed significant improvement in knowledge and practice at p<0.05 level of significance and STP was found to be effective

The statistical results of 'chi' square analysis reveals that there was no significant association between post-test knowledge scores and their selected demographic variables viz gender, religion, marital status, residence, qualification and income per month in rupees. The calculated chi square value was less than tabulated value at 0.05 level. Whereas there was significant association between post-test knowledge scores with age in years and working experience, since

the calculated chi square value was greater than that of tabulated value for both age in years and working experience respectively at 0.05 level of significance.

For the beginning skills statistical outcome of 'chi' square analysis reveals that there was no association between post-test beginning skills score and their selected demographic variables like gender, religion, marital status, residence, qualification and income per month in rupees. The calculated chi square value was less than tabulated value at 0.05 level of significance. Whereas age in years and working experience was having significant association with post-test beginning skills score, here the calculated chi square value was greater than that of tabulated value for both age in years and working experience respectively at 0.05 level of significance.

The researcher has in this study recommends that the study may be replicated with a larger sample. Another consideration would be to conduct a comparative study with control group with a view to compare the practice. Further, a follow up of the study can be conducted to evaluate the long term effect of the structured teaching program and to find out the necessity of the reinforcement. Moreover, a study of qualitative nature can be conducted to assess the actual benefits of different approaches of the education program.

7. Study limitations

The present study was undertaken limited to primary school teachers working in private setting, samples were selected using non-probability convenient sampling technique, sample size was limited to 60, and study organization was not done in real situation.

8. Conclusion

The focus of this study was to assess level of knowledge and level of practical understanding regarding first aid management; in pre-test there was lack of adequate knowledge and beginning skills of primary school teachers regarding first aid management of selected common conditions in children but after the administration of Structured teaching programme there was significant improvement in knowledge and beginning skills of primary school teachers. So, it can be concluded that structured teaching programme is found to be an effective and feasible method of teaching strategy to improve knowledge and beginning skills of primary school teachers.

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