Effectiveness of Structured Teaching Programme on Levels of Knowledge Regarding First Aid Management Among Primary School Teachers

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***Abstract** – Aim of the study was to identify the effectiveness of structured teaching program (STP) in improvement of knowledge of primary school teachers on first aid management so that they can extensively use it at school premises to save children at any untoward circumstances. Pre experimental one group pre & post test design was used with 60 sample. There was a mean difference (15.4) between mean pre test knowledge scores (12.3 with SD 2.80) and mean post test knowledge scores (27.7 with SD 2.10). Significant difference was calculated using paired t test. Obtained t value is 36.11 which was higher than the table value of 3.66 (at P<0.05). There was an association found between pre test knowledge scores and variables such as age of sample and source of information used to get knowledge on first aid management (p<0.05). in conclusion it is important that every stakeholders must be aware of handling common emergencies during any epidemic or in any emergency situations to keep health environment around us.*
***Keywords-** Effectiveness, STP, Knowledge, First Aid Management, School teachers*

I.   Introduction

India is one of the biggest developing countries in the world. 73% of children aged 6-10 year go to primary school. It's 37% of total population come under this age group. The Future of our country depends on the children who will become leader of tomorrow. Children spend most of the time in school under the direct supervision of teachers. Schools are one of the common places of accidents & Injuries which are the major cause of illness, especially for primary school children. First aid is the initial care for ill and injured. It helps to manage the health problems of school children at earliest. Basic first aid knowledge helps the teachers to deal with emergency situations. First aid is all about using common sense in the hour of need. Preventing injuries by providing safe educational environment is one of the basic concerns. According to WHO, 950,000 children die in the world due to an injury each year & as per National Crime Record Bureau data, nearly 15-20% of deaths occur due to injury among children. A study conducted on public school teachers showed that only one third of them were trained in first aid & 87% of teachers expressed that emergency care training should be a part of teacher preparatory.

II.   Related Work

Every time a health worker would not be available in the school where the accidents can take place at any point of time. It is needed or desired that the staff of the school should have knowledge so that they can be responsible to look after the minor ailments or accidents in the school. Student's safety is a major concern for the parents and the school staff. A study was conducted titled "First aid knowledge among health assigned teachers of primary schools". With non-experimental survey by using 40 samples from different schools through purposive sampling technique. It was found that 72.5% had average knowledge and 25% had good knowledge and 2.5% had poor knowledge. Majority of teachers were female (52.5%) from private schools and majority of educational status was post graduate 67.5%. The study results revealed that there was significant association (P>0.05) of teacher's qualification with the level of knowledge of First Aid Management

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PROBLEM STATEMENT & OBJECTIVES

"A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON LEVEL OF KNOWLEDGE REGARDING FIRST AID MANAGEMENT AMONG PRIMARY SCHOOL TEACHERS IN SELECTED PRIMARY SCHOOLS AT MANDYA DISTRICT."

1. To assess pre-test levels of the knowledge of school teachers regarding the First Aid Management.
2. To evaluate the effectiveness of structured teaching program on knowledge scores of teachers regarding First Aid Management.
3. To find out association between the post-test level of knowledge regarding first aid management among school teachers with selected socio demographic variables.

HYPOTHESES:
H1 - There will be significant increase in post- test knowledge scores than pre test knowledge regarding first aid management among primary school teachers.
H2 - There will be significant association between post-test level of knowledge scores with selected demographic variables regarding first aid management among primary school teachers.

III. Methodology

Research Approach: Quantitative evaluative approach.
Research Design: Pre experimental one group pre test post test design
Setting: Selected primary schools at Mandya District. The setting was chosen on the basis of feasibility and availability of adequate samples
Sampling technique: Non probability convenient sampling technique
Sample size: 60 Primary school teachers
CRITERIA FOR SELECTION OF SAMPLES
Inclusion criteria: -
Teachers who
❖   Were working in the primary school
❖   Were willing to participate in the study.
❖   Were in the age group between 20 to 60 years

Exclusion Criteria: -
Teachers who
❖   Were sick or leave at the time of data collection
❖   Had already undergone first aid training within 6 months
VARIABLES:
❖   **Independent variable**: Structured Teaching Program.
❖   **Dependent variable**: Level of knowledge regarding First aid management

DESCRIPTION OF TOOL:
❖   The tool was divided into 2 sections, which consisted of Section A and Section B.
SECTION -A: Demographic Profile
❖   This section consists of 9 items pertinent to primary school teachers such as age gender, education, residence, years of teaching experience, marital status, if married number of children, previous knowledge regarding first aid management, if yes sources of information regarding first aid management.
SECTION -B: Level of Knowledge regarding First aid management.
❖   It consists of 30 self-administered knowledge questionnaire to assess the level of knowledge related to causes, signs and symptoms, types, and management of first aid emergencies such as bleeding, wound, fracture, foreign body aspiration (nose bleeding, ear bleeding, eye bleeding) dog bite, snake bite, honey bee sting.

Score Interpretation:
The tool consists of 30 questions each where a correct response was awarded a score of one mark and wrong response was given a score of zero
➢   Inadequate Knowledge   -   < 50 %
➢   Moderately adequate knowledge   -   50-75 %
➢   Adequate Knowledge   -   >75%

PILOT STUDY:
After getting formal permission from the school headmaster, pilot study was conducted using 6 sample between 01.09.2021 to 07.09.2021 at selected BG Nagar primary schools in Mandya district. Pretest was given using self administered knowledge questionnaire followed by administration of intervention which composed of lecture and video clipping. The post test was conducted after 7 days of intervention by administering same self administered knowledge questionnaire.

VALIDITY AND RELIABILITY:
To determine the content validity, the tool was submitted to 5 experts from the specialty of child health nursing and biostatistics. After obtaining valuable suggestions, necessary modifications were made accordingly. The reliability of the tool was established by test and retest method & the r value was 0.92 which was found to be reliable.

DATA COLLECTION PROCEDURE:
Data collection for the main study was done from 08.09.2021 to 14.09.2021. Number of samples selected for the study was 60. On first day, pre test was given using self administered knowledge questionnaire followed by administration of structured teaching program. Post test was given after 8 days of intervention.

IV. RESULTS AND DISCUSSION
Table No. 1: Frequency & percentage distribution of primary school teachers according to their socio demographic variables.

N=60

Sl. No	Variables		Frequency (N)	Percentage (%)
01	Age in Years	21-30	27	45
		31-40	19	32
		41-50	11	18
		51-60	03	5
02	Gender	Male	21	35
		Female	39	65
03	Education	Diploma	8	13.3
		Graduate	38	63.4
		Post Graduate	14	23.3
04	Residence	Rural	57	95
		Urban	3	5
05	Teaching experience	< 5 Years	9	15
		6-10 years	24	40
		11-15 Years	17	28.3
		>15 years	10	16.7
06	Marital status	Unmarried	5	8.3
		Married	55	91.7
07	Number of children	One	11	18
		Two	35	58
		Three	14	24
08	Previous knowledge	Yes	55	91.6
		No	5	8.4
09	Source of information	Books	37	67.2
		Health workers	6	11
		Friends	4	7.2
		Mass media	8	14.6

Table 2: Frequency and percentage distribution of pre and post-test knowledge scores regarding first aid management.

N=60

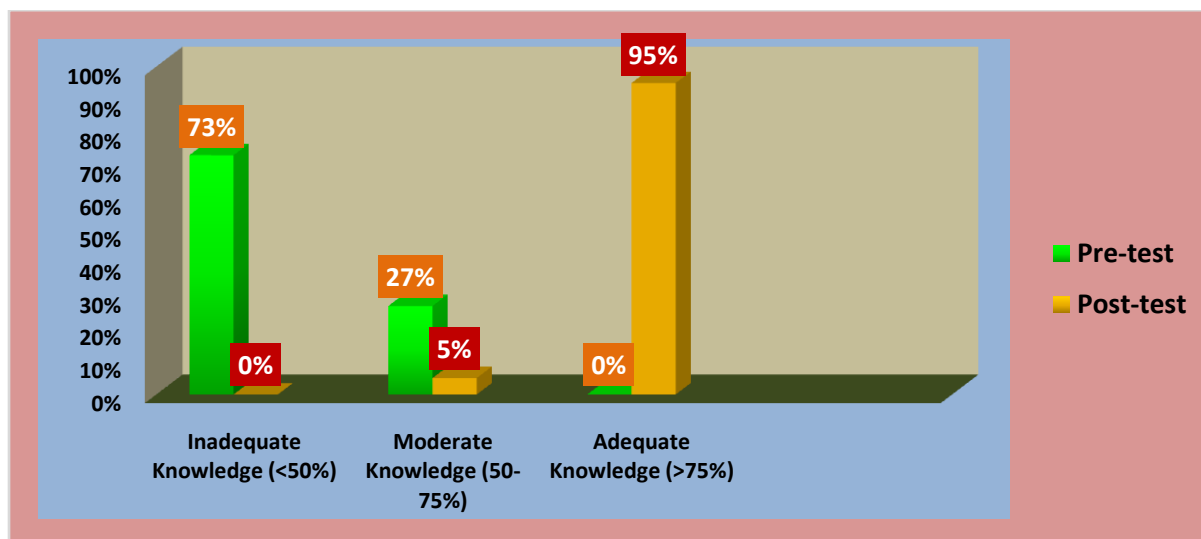| KNOWLEDGE	PRE-TEST		POST-TEST	
	Frequency	Percentage	Frequency	Percentage
Inadequate knowledge	44	73%	0	0
Moderate knowledge	16	27%	3	5
Adequate knowledge	0	0%	57	95

Diagram 1: Overall Pre test & post test knowledge scores of socio demographic variables

Above diagram represents that in the pre-test 44 (73%) teachers had inadequate knowledge, 16 (27%) teachers had moderately adequate knowledge and none of the teachers had adequate knowledge on first aid management. With regarding to the post - test 57 (95%) of the teachers had adequate knowledge, 3 (5%) had moderately adequate knowledge and none of the teachers had inadequate knowledge after structured teaching programme on first aid management.

Table 3: Paired 't' value of pre and post-test levels of knowledge regarding first aid management among primary school teachers.

n = 60

Level of Knowledge	Mean	Standard Deviation	Mean Difference	Paired 't' Test
Pre-test	12.3	2.80	15.4	36.11*
Post-test	27.7	2.10		

Statistically significant(p<0.05)

Table 3 shows that pre-test knowledge mean score was 12.3with standard deviation of 2.80 and the post-test knowledge mean score was 27.7 with standard deviation of 2.10. The mean difference of pre and post-test knowledge was 15.4. As the calculated 't' test value is 36.11 was higher than the table value 3.66(p<0.05). Hence there was significant improvement in knowledge regarding first aid management. Therefore, hypothesis 1 is accepted.

SECTION – C
Table 4 reflects analysis of association between pre and post-test levels of knowledge and selected demographic variables.

DEMOGRAPHIC VARIABLES	KNOWLEDGE SCORE (PRE-TEST)				df	Chi SQUARE VALU X2	INFERENCE
	IA	MA	A	TOTAL SCORE			
1) AGE							
21 – 30	20	7	0	27			
31 – 40	13	6	0	19	3	24.362	S
41 - 50	9	2	0	11			

51 - 60	3	0	0	3			
2) GENDER							
MALE	14	7	0	21	1	1.195	NS
FEMALE	31	8	0	39			
3) EDUCATION							
DIPLOMA	7	1	0	8	2	1.074	NS
GRADUATE	27	11	0	38			
PG	11	3	0	14			
4) RESIDENCE					1	0.09	NS
URBAN	2	1	0	3			
RURAL	42	15	0	57			
5) TEACHING EXPERIENCE							
<5 YEARS	7	2	0	9	3	3.716	NS
6 – 10 YEARS	15	9	0	24			
11 – 15 YEARS	14	3	0	17			
>15 YEARS	9	1	0	10			
6) MARITAL STATUS					1	0.654	NS
UNMARRIED	3	2	0	5			
MARRIED	42	13	0	55			
7) IF MARRIED NO OF CHILDRENS							
ONE CHILD	7	3	0	10	2	2.034	NS
TWO CHILD	26	6	0	32			
THREE CHILD	8	5	0	13			
8) PREVIOUS KNOWLEDGE REGARDING FAM					1	0.654	NS
YES	3	2	0	5			
N0	42	13	0	55			
9) IF YES, SOURSES OF INFORMATION							
BOOKS	30	7	0	37	3	10.084	S
HEALTH WORKERS	4	2	0	6			
FRIENDS	3	1	0	4			

| MASS MEDIA | 2 | 6 | 0 | 8 | | | |

Statistically significant (p<0.05)

Table 4 revealed that age and sources of information first aid management are statistically significant at p<0.05 level, whereas gender, education, residence, teaching experience, marital status, if married number of children, previous knowledge regarding first aid management are not statistically significant. Hence it is interpreted the difference in mean score values are true and the hypothesis H2 was accepted.

Discussion:

First objective of the study was to assess the pre-test levels of knowledge regarding first aid management among primary school teachers.

A self-administered questionnaires schedule was used to assess the levels of knowledge among primary school teacher regarding first aid management. In the pre-test 44(73%) teachers had inadequate knowledge, 16(27%) teachers had moderately adequate knowledge, no teachers had adequate knowledge regarding first aid management.

This study was supported by R.S.H. Eldosoky 2012 conducted a cross-sectional study in Qalubeya governorate, Egypt was to measure the incidence and types of school children injuries affecting rural area children aged up to 12 years and to assess their school teacher's knowledge on first aid management, and practices about first aid and its associated factors. An interview was completed by 150 rural area teachers to assess the level of knowledge, the incidence of school playground injuries in the previous 4 weeks was 38.3% (57.5% were boys). Cut wound, fractures, bleeding and foreign body aspiration were the common forms of school playground injuries. Teachers answered an average of 11.0 (SD 5.3) out of 29 questions correctly. Younger age of teachers, higher level of education, higher socio economic status, source of knowledge about first aid for school teachers was associated with post test score.

Second objective study was to assess the effectiveness of structured teaching programmed teaching on levels of knowledge regarding first aid management among primary school teachers.

The pre-test knowledge mean score was 12.3, standard deviation 2.80 and the post-test mean score was 27.7 and standard deviation was 2.10. The mean difference of pre and post-test knowledge was 15.4. The calculated paired 't; test value (36.11) was higher than the table value 3.8 which is significant at P<0.05 level. It shows that the structured teaching programmed is effective, hence hypothesis 1 is accepted.

Naimer.M (2015) conducted a descriptive study to assess check list primary school teacher's knowledge on first aid management. The first group between the age of6-14 years was given a traditional lecture about first aid management of common accidents of children during school day. School teachers participate also the same information by video teaching or lecture method and the same. At end group 2 asked to fill a structured knowledge questionnaire regarding first aid management of common childhood injuries for about 30 minutes, 45 minutes for each participant primary school teachers to be observed for re-demonstration of all the procedures that were involved in the observational checklists. Results: The study showed a statistical significant improvement in total knowledge score of primary school teachers undergoing video-assisted teaching method regarding first aids (28.68 ± 3.77) compared to teachers undergoing practice (12.77 ± 5.00). Also, there was statistical significant improvement in management skills of primary school teachers undergoing video-assisted teaching method (28.68 ± 3.77) compared to teachers.

Third objective of the study was to find out the association between pre- test levels of knowledge regarding first aid management among primary school teachers and selected demographic variables.

Chi- square' test was used to find out the association between levels of knowledge and selected demographic variables. The result reveals that age, sources of information regarding first aid management are associated at p<0.05 level, whereas gender, education, residence, teaching experience, marital status, if married no of children are not associated. Hence the H2 was accepted.

This study was supported by N. Joseph (2011) conducted a cross-sectional study among 50 primary school teachers, data was collected using a self-administered questionnaire. Based on the scores obtained in each condition requiring first aid, the overall knowledge was graded as good, moderate and poor. Only 11.2% (17/152) of the total student participants had previous exposure to first aid training. Good knowledge about first aid was observed in 13.8% (21/152), moderate knowledge in 68.4% (104/152) and poor knowledge in 17.8% (27/152) participants. Analysis of knowledge about first aid management in select condition found that 21% (32/152) had poor knowledge regarding first aid management for bleeding and 20.4% (31/152) for epistaxis and

foreign body in eyes. The level of knowledge and practices about first aid was good among majority of the primary school teachers. The study also identified the key areas in which first aid knowledge was improved. In primary school teachers. The study also identified the key areas in which first aid knowledge was improved in primary school teachers.

Conclusion:

NURSING IMPLICATION

The findings of the present study enabled to determine the effectiveness of programmed teaching on levels of knowledge regarding first aid management. Finding of the study have implications for nursing education, nursing administration and nursing research regarding first aid management.

NURSING EDUCATION

- Continuing nursing education programmes on effectiveness of first aid management among primary school teachers.
- Make available literature related to first aid management nursing institution.
- Adequate awareness on programmed teaching and the demonstration should be made on the first aid management in the curriculum.

NURSING RESEARCH

- Encourage further studies on first aid management such as chocking, fracture, bleeding, awareness, prevention of injury.
- Conduct more research to assess the prevalence of accidents and the research finding should disseminate the findings through conferences, seminars and journals.

NURSING ADMINISTRATION

- The nurse administrator has a vital role in creating increased awareness and increased knowledge on first aid management among primary school teachers, by preparing nurses.
- Paediatric and community nurses can be appointed in schools.

RECOMMENDATION

The study recommends the following for further research –

- The study can be done on large samples for better generalizations.
- A pre-experimental study of first aid management can be conducted among primary school teachers in different setting.
- Counselling programme based on first aid measures can developed.
- A comparative study can be done on rural and urban schools.

References:
[1]. Gupta LC. Manual of First Aid. 1st ed. New Delhi: Jypee publisher; 2004. p. 110-116.
[2]. Gulani KK. Community Health Nursing Principles and Practices. 1st ed. New Delhi: Jypee publisher; 2005. p. 285-444.
[3]. Basvanthappa BT. Community Health Nursing. 2nd ed. New Delhi: Jypee publisher; 2009. p. 536-537.
[4]. Wilson CC. First aid cabinet of a school nurse, her standing orders for first aid, and her school nursing procedure. Am J Public Health Nations Health 1930;20:147-154.
[5]. Kelm J, Ahlhelm F, Pape D, Pitsch W, Engel C. School sports accidents: analysis of causes, modes, and frequencies. J PediatrOrthop 2001;21:165-168.
[6]. Salwa A. Ali, Amany R. Abu-Elseoud, Soheir M. Heybah, Azhar A. Mohame. Implementation of an education training programme. Zigzag J Occup Health Saf 2010;3:21
[7]. Arvind. R., (2007) 'Text book of Paediatric Nursing´,1st edition, Emmess publisher, pg-525-526.
[8]. Brabhakaran G.N., (2004).'Text book of community health for nursing´, 1st edition, Jaypeebrother's publisher, pg440-441.