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Original Article

A Study to Assess the Effectiveness of Skill Training Programme on First Aid Management of Selected Fractures among School Children at Selected Government Schools, Tirupati

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Abstract

Background:School children are a significant and important segment of the population. They need maximum attention in terms of their education, health, social and emotional development [1].The most severe fall-related injuries were fractures or open wounds [2]. Most common non-fatal injuries include fractured limbs, with 10–20 per cent of children involved in road traffic accidents [3]. It has been estimated that up to 25 per cent of children sustain injury every year, with 10 to 25 per cent of these injuries consisting of a fracture[4].The WHO describes fractures as the most common category of unintentional injuries suffered by children below 15 years. Around 10-25 per cent of all pediatric injures are fractures [5]. Around one-third of all children suffer at least one fracture before the age of 17 and fracturesare the cause of 9 per cent of all injuries [6]. *Objectives*:To assess the knowledge, knowledge on practices and skills among school children regarding first aid management of fractures in experimental and control group. To evaluate the effectiveness of skill training programme on first aid management of fractures among school children in experimental and control group.To associate the relationship between demographic variables and knowledge, knowledge on practices and skills of school children on first aid management of fractures in experimental and control group. *Methods*: An experimental study involving 25 school children for experimental group and 25 school children for control group from 9th class were taken for the study. Pretest – posttest experimental and control group design was adopted for this study. Data were collected using a structured questionnaire. It included data regarding socio-demographic characteristics and questions pertaining to knowledge on first aid management of fractures, knowledge on practices on prevention of fractures and observational checklist (5- point Likert scale) for skills on bandaging technique. *Results*: In an experimental group out of 25 students, 48%(12) have inadequate knowledge and moderately adequate knowledge in pretest and76%(19) have adequate knowledge inpost test. In control group out of 25 students, 64%(16) have inadequate knowledge in pretest and 52%(13) have inadequate knowledge in post test. In an experimental group, 44%(11) have inadequate knowledge on practices in pretest and 76%(19) have adequate knowledge on practicesin post test. In control group, 52%(13) have moderately adequate knowledge on practices in pretest and 48%(12) have moderately adequate knowledge on practicesin post test. In an experimental group, 92%(32) have inadequate skillsin pretest and 48%(12) have adequate skills inpost test. In control group, 84%(21) have inadequate skillsin pretest and 72%(18) have inadequate skillsin post test. *Conclusion*: A majority of 9th class students among experimental group were having adequate and moderately adequate knowledge, knowledge on practices and skills and demographic variables were statistically significant, hence it can be concluded that, there is an improvement on level of knowledge, knowledge on practices and skills in post test in experimental group.

Keywords: Skill Training Programme; First Aid; Fractures.

School children are a significant and important segment of the population. They need maximum attention in terms of their education, health, social and emotional development [1]. Musculoskeletal injuries most often result from road traffic accidents and recreational activities [7].

The incidence of musculoskeletal injuries are increasing due to various reasons and environmental changes leading to long term sufferings and fatal outcome in children [8].

Traumatic injuries, especially those involving motor vehicles are the leading cause of fatalities among children and teenagers [7].

The most severe fall-related injuries were fractures or open wounds [2]. Most common non-fatal injuries include fractured limbs, with 10–20 per cent of children involved in road traffic accidents [3].

Fracture is defined as a break or disruption in the continuity of bone. A bone gets fractured when the force applied to it exceeds the amount the bone can absorb [8]. Fractures occur more frequently in children and adolescents. 42 per cent of boys and 27 per cent of girls will suffer a fracture during childhood [9].

The common types of fractures in children include open fracture, closed fracture, bend fracture, buckle (torus) fracture, greenstick fracture, complete fracture, spiral fracture, oblique fracture, transverse fracture and epiphyseal fractures. Other types of fractures which may be found in children are pathological fractures due to weakening of the bone structure by pathological processes such as neoplasm, osteomyelitis etc [8].

Accidental injury to older children and adolescents is caused largely by their greater mobility and risk-taking behavior on bicycles, motorcycles and automobiles outside their home and school environment [10].

Trauma is a common cause of joint pain and swelling in childhood. When a child traumatizes a joint, the most vulnerable structure is the growth plate rather than the ligaments [11]. The signs and symptoms of fractures include pain, swelling, deformity of the injured area, loss of normal function of the injured part, discoloration of the skin or bruising, altered sensation and a grating sensation if injured bone ends are rubbing together [12].

In cases of suspected fractures splinting, elevation and topical application of ice may reduce discomfort and local swelling. Splinting is particularly important for displaced and unstable fractures because it prevents further soft tissue injuries and

reduces the risk of embolization [13].

The complications of fractures are immediate, early and late. Immediate complications are injury to major vessels, muscles, tendons, joints and viscera. Early complications include hypovolemic shock, infections and compartment syndrome. Delayed union, non-union, malunion, shortness and joint stiffness are late complications [14].

The first aid for fractures includes rest, ice, compression, elevation and referral during the first 48 hours after a fracture. It can limit swelling and help speed up recovery [15].

Fractures heal in less time in children than in adults. The approximate healing time for a femoral shaft in early childhood is 2-3 weeks, late childhood is 6-8 weeks and adolescence is 8-12 weeks [16].

Methodology

After obtaining the permission from Mandal Education Officer and the principals of selected schools, the subjectswere approached individually with the permission of authorities.The data was collected from the 9th class school students of selected schools with informed consent included in the study. The sample was selected by simple random sampling technique. The total 25 cases and 25 controls were given self-administered questionnaire.

Inclusion Criteria

Both males and females. The students who are interested in skill training programme.

Results

Table 1 shows that out of 25 students from experimental group, majority 52%(13) were girls and only 48%(12) boys. In relation to religion, majority 88%(22) were Hindus and only 0%(0) were Christians. Pertaining to ordinal position of child, majority 32%(8) were second and only 20%(5) were third in the family. Related to number of siblings, majority 36%(9) have two and only 12%(3) have none. With regard to type of family, majority 48%(12) belongs to nuclear and only 4%(1) belongs to single parent family. Regarding family income, majority 36%(9) have Rs.6000-10000 and only 8%(2) have Rs.11000-15000. Considering to place of residence, majority 100%(25) were from urban. In respect to type of health facilities available near your residence, majority 76%(19) attends community health centre

and only 24%(6) attends primary health centre. With regard to member of voluntary agencies, majority 88%(22) were none and only 4%(1) belongs to NCC. In relation to source of information, majority 84%(21) gained information from family members and only 0%(0) from mass media.

Out of 25 students from control group, majority 56%(14) boys and only 44%(11) were girls. In relation to religion, majority 88%(22) were Hindus, and only 4%(2) were Muslims. Pertaining to ordinal position of child, majority 40%(10) were second and only 12%(3) were first in the family. Related to number of siblings' majority 36%(9) have two and only 12%(3) have none. With regard to type of family, majority 56%(14) belongs to nuclear and only 20%(5) belongs to joint family. Regarding family income, majority 48%(12) have Rs.6000-10000 and only 16%(4) have Rs.11000-15000. Considering to place of residence, majority 76%(19) were from urban and only 24%(6) were from rural. In respect to type of health facilities available near your residence, majority 84%(21) attends community health centre and only 16%(4) attends primary health centre. With regard to member of voluntary agencies, majority 8%(2) belongs to Red cross and only 4%(1) belongs to NSS & NCC. In relation to source of information, majority 48%(12) gained information from family members and only 8%(2) gained information from friends.

Table 1: Distribution of demographic variables of school students in experimental and control group (n=25)

S. No	Demographic variables		Experimental group n=25		Control group n=25	
			No.	%	No	%
1.	Sex	a. Boy	12	48%	14	56%
		b. Girl	13	52%	11	44%
2.	Religion	a. Hindu	22	88%	22	88%
		b. Muslim	3	12%	1	4%
		c. Christian	0	0%	2	8%
3.	Ordinal position of the child	a. First	5	20%	3	12%
		b. Second	8	32%	10	40%
		c. Third	5	20%	8	32%
		d. Fourth and above	7	28%	4	16%
4.	Number of siblings	a. Nil	3	12%	3	12%
		b. One	6	24%	7	28%
		c. Two	9	36%	9	36%
		d. Three and above	7	28%	6	24%
5.	Type of family	a. Nuclear	12	48%	14	56%
		b. Extended	5	20%	6	24%
		c. Joint	7	28%	5	20%
		d. Single parent family	1	4%	0	0%
6.	Family income per month	a. Below 5000	8	32%	9	36%
		b. 6000-10000	9	36%	12	48%
		c. 11000-15000	2	8%	4	16%
		d. 16000 and above	6	24%	0	0%
7.	Place of residence	a. Urban	25	100%	19	76%
		b. Rural	0	0%	0	6%
8.	Type of health facilities available near your residence	a. Primary health centre	6	24%	4	16%
		b. Community health centre	19	76%	21	84%
9.	Are you a member of voluntary agencies	a. NSS	2	8%	1	4%
		b. NCC	1	4%	1	4%
		c. Red cross	0	0%	2	8%
		d. None	22	88%	21	84%
10.	Source of information	a. Family members	21	84%	12	48%
		b. Friends	0	0%	2	8%
		c. Medical personnel	4	16%	8	32%
		d. Mass Media	0	0%	3	12%

Table 2 Indicates that, in the experimental group out of 25 students, 48%(12) have inadequate knowledge, 48%(12) have moderately adequate knowledge and 4%(1) have adequate knowledge in pretest.

Whereas, in the control group out of 25 students, 64%(16) have inadequate knowledge, 28%(7) have moderately adequate knowledge and 8%(2) have

adequate knowledge in pretest. In post test, out of 25 students, 8%(2) have inadequate knowledge, 16%(4) have moderately adequate knowledge and 76%(19) have adequate knowledge in experimental group.

Whereas, in control group out of 25 students, 52%(13) have inadequate knowledge, 28%(14) have moderately adequate knowledge and 42%(21) have adequate knowledge in post test.

Table 2: Distribution of level of knowledge among school students in pretest and post test in experimental and control group
(n=50)

S. No	Variables		Pre test				Post test			
			Experimental n=25		Control n=25		Experimental n=25		Control n=25	
			No	%	No	%	No	%	No	%
1.	Knowledge	Inadequate	12	48	16	64	2	8	13	52
		Moderately Adequate	12	48	7	28	4	16	14	28
		Adequate	1	4	2	8	19	76	21	42

Table 3: Distribution of level of knowledge on practices among school students in pretest and post test in experimental and control group
(n=50)

S. No	Variables		Pre test				Post test			
			Experimental n=25		Control n=25		Experimental n=25		Control n=25	
			No	%	No	%	No	%	No	%
1.	Knowledge on practices	Inadequate	11	44	11	44	1	4	11	44
		Moderately Adequate	9	36	13	52	5	20	12	48
		Adequate	5	20	1	4	19	76	2	8

Table 3 Indicates that, in the experimental group out of 25 students, 44%(11) have inadequate knowledge on practices, 36%(9) have moderately adequate knowledge on practices and 20%(5) have adequate knowledge on practices in pretest.

Whereas, in the control group out of 25 students, 44%(11) have inadequate knowledge on practices, 52%(13) have moderately adequate knowledge on practices and 4%(1) have adequate knowledge on practices in pretest.

In post test, out of 25 students, 4%(1) have inadequate knowledge on practices, 20%(5) have moderately adequate knowledge on practices and 76%(19) have adequate knowledge on practices in experimental group.

Whereas, in control group out of 25 students, 44%(11) have inadequate knowledge on practices, 48%(12) have moderately adequate knowledge on practices and 8%(2) have adequate knowledge on practices in post test.

Table 4: Distribution of level of skills on bandages among school students in pretest and post test in experimental and control group
(n=50)

S. No	Variables		Pre test				Post test			
			Experimental n=25		Control n=25		Experimental n=25		Control n=25	
			No	%	No	%	No	%	No	%
1.	Skills	Inadequate	23	92	21	84	2	8	7	28
		Moderately Adequate	2	8	4	16	11	44	18	72
		Adequate	0	0	0	0	12	48	0	0

Table 4 Indicates that, in the experimental group out of 25 students, 92%(32) have inadequate skills, 8%(2) have moderately adequate skills in pretest.

Whereas, in the control group out of 25 students, 84%(21) have inadequate skills, 16%(4) have moderately adequate skills in pretest.

In post test, out of 25 students, 8%(2) have inadequate skills, 44%(11) have moderately adequate skills and 48%(12) have adequate skills in experimental group.

Whereas, in control group out of 25 students, 72%(18) have inadequate skills, 28%(7) have moderately adequate skills in post test.

Table 5: Effectiveness of skill training programmme on first aid management of fractures among school students in experimental group   (n=25)

S. No	Variables	Mean	Std. Deviation	t-test	p value
1.	Pre test Knowledge	5.560	1.294	11.708	0.000***
	Post test Knowledge	8.240	1.508		
2.	Pre test Practice	9.000	2.566	10.864	0.000***
	Post test Practice	12.440	2.063		
3.	Pre test Checklist	75.560	8.651	5.132	0.000***
	Post test Checklist	120.240	43.905		

Significance: *** $p < 0.001$

Table 6: Effectiveness of skill training program on first aid management of fractures among school students in control group   (n=25)

S. No	Variables	Mean	Std. Deviation	t-test	p value	sig
1.	Pre test Knowledge	4.800	1.708	1.877	0.073	NS
	Post test Knowledge	5.120	1.691			
2.	Pre test Practice	8.080	2.465	1.809	0.083	NS
	Post test Practice	8.200	2.630			
3.	Pre test Checklist	78.640	8.774	1.105	0.280	NS
	Post test Checklist	79.800	11.321			

Significance: NS: Not significant

Table 7: Correlation among pretest and posttest knowledge, knowledge on practices and skills on bandages among school students in experimental group   (n=25)

S. No.	Variables	Correlation	Sig.
1.	Pre test Knowledge &Post test Knowledge	0.676***	0.000
2.	Pre test Practice &Post test Practice	0.787***	0.000
3.	Pre test Skills &Post test Skills	0.142NS	0.499

Significance: ***: $p < 0.001$

Table 8: Correlation among pretest and posttest knowledge, knowledge on practices and skills on bandages among school students in control group   (n=25)

S. No.	Variables	Correlation	Sig.
1.	Pre test Knowledge &Post test Knowledge	0.874***	0.000
2.	Pre test Practice &Post test Practice	0.994***	0.000
3.	Pre test Skill &Post test Skill	0.894***	0.000

Significance: ***: $p < 0.001$

Table 6 Indicates that there is a significant improvement in the level of knowledge on first aid management of fractures, level of knowledge on practices on prevention of fractures and level of skills on bandages at $p < 0.001$ level in experimental group.

Table 6 Indicates that there is no significant improvement in the level of knowledge on first aid management of fractures, level of knowledge on practices on prevention of fractures and level of skills on bandages in control group.

Table 7 Reveals that there is a positive correlation between pretest and post test knowledge on first aid management of fractures, knowledge on practices on prevention of fractures at $p < 0.001$ level whereas there is no correlation between pretest and post test skills on bandages in experimental group.

Table 8 Reveals that there is positive correlation between pretest and post test knowledge on first aid management of fractures, knowledge on practices on prevention of fractures and skills on bandages in control group at $p < 0.001$ level in control group.

Association between demographic variables with level of knowledge in pre test among school students in experimental and control group.

There is a significant association between level of knowledge in pre test regarding first aid management of fractures with type of health facilities available near residence at $p < 0.01$ level in experimental group.

Regarding the control group, there is a significant association between level of knowledge in pre test regarding first aid management of fractures with religion and are you a member of voluntary agencies at $p < 0.05$ level.

Association between demographic variables with level of knowledge in post test among school students in experimental and control group.

There is a significant association between level of knowledge in post test regarding first aid management of fractures with number of siblings, family income per month and type of health facilities available near your residence at p<0.01 level; with ordinal position of the child and type of family at p<0.05 level; and with type of health facilities available near your residence at p<0.001 level in experimental group.

Regarding the control group, there is a significant association between level of knowledge in post test regarding first aid management of fractures with religion and are you a member of voluntary agencies at p<0.05 level.

Association between demographic variables with level of knowledge on practices in pre test among school students in experimental and control group

There is no significant association between level of knowledge on practices with demographic variables.

Regarding the control group, there is a significant association between level of knowledge on practices in pre test regarding prevention of fractures with are you a member of voluntary agencies at p<0.05 level.

Association between demographic variables with level of knowledge on practices in post test among school students in experimental and control group

There is a significant association between level of knowledge on practices in post test regarding prevention of fractures with type of health facilities available near residence at p<0.01 level in experimental group.

Regarding the control group, there is no significant association between level of knowledge on practices with demographic variables.

Association between demographic variables with level of skills in pre test among school students in experimental and control group

There is a significant association between inadequate and moderately adequate skills on bandages in pre test with type of family and are you a member of voluntary agencies at p<0.01 level in experimental group.

Regarding the control group, there is a significant association between inadequate and moderately adequate skills on bandages in pre test with are you a member of voluntary agencies at p<0.01 level.

Association between demographic variables with level skills in post test among school students in experimental and control group

There is a significant association between level of skills on bandages in post test with type of health facilities available near your residence at p<0.01 level in experimental group and with type of family and family income per month at p<0.05 level in experimental group.

Regarding the control group, there is no significant association between level of skills on bandages with demographic variables.

Discussion

The first objective of the study was to assess the knowledge, knowledge on practices and skills among school children regarding first aid management of selected fractures in experimental and control groups.

The pretest was conducted by using questionnaire and observation checklist.The study reveals that, in experimental group out of 25 school students, 48%(12) have inadequate knowledge, 48%(12) have moderately adequate knowledge and 4%(1) have adequate knowledge in pretest. Whereas in the control group out of 25 school students, 64%(16) have inadequate knowledge, 28%(7) have moderately adequate knowledge and 8%(2) have adequate knowledge in pretest.

In experimental group out of 25 school students, 44%(11) have inadequate knowledge on practices, 36%(9) have moderately adequate knowledge on practices and 20%(5) have adequate knowledge on practices in pretest. Whereas in the control group out of 25 school students, 44%(11) have inadequate knowledge on practices, 52%(13) have moderately adequate knowledge on practices and 4%(1) have adequate knowledge on practices in pretest.

In experimental group out of 25 school students, 92%(32) have inadequate skills, 8%(2) have moderately adequate skills in pretest. Whereas in the control group out of 25 school students, 84%(21) have inadequate skills, 16%(4) have moderately adequate skills in pretest.

The present study was supported by a cross sectional study conducted in Mysore in 2013 to assess the perception and practice regarding first aid

among teachers. This study concluded that the perception and practice of first aid among teachers was poor and needs to be improved [17].

The second objective of the study was to evaluate the effectiveness of skill training program on first aid management of selected fractures in experimental and control groups.

The post test was conducted by using same pre test questionnaire and observation checklist after 7 days of skill training program to 9th class school students.The study reveals that, in experimental group out of 25 school students, 8%(2) have inadequate knowledge, 16%(4) have moderately adequate knowledge and 76%(19) have adequate knowledge in post test. Whereas in the control group out of 25 school students, 52%(13) have inadequate knowledge, 28%(14) have moderately adequate knowledge and 42%(21) have adequate knowledge in post test.

In experimental group out of 25 school students, 4%(1) have inadequate knowledge on practices, 20%(5) have moderately adequate knowledge on practices and 76%(19) have adequate knowledge on practices in post test. Whereas in the control group out of 25 school students, 44%(11) have inadequate knowledge on practices, 48%(12) have moderately adequate knowledge on practices and 8%(2) have adequate knowledge on practices in post test.

In experimental group out of 25 school students, 8%(2) have inadequate skills, 44%(11) have moderately adequate skills and 48%(12) have adequate skills in post test. Whereas in the control group out of 25 school students, 72%(18) have inadequate skills, 28%(7) have moderately adequate skills in post test.

The present study was supported by the study conducted in 2015 to assess the kindergarten teachers about pediatric first aids. It is an intervention study. The 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 [18].

The reveals the effectiveness of skill training program among 9th class school children. The paired 't' value shows that there is a significant improvement in the level of knowledge on first aid management of fractures, level of knowledge on practices on prevention of fractures and level of skills on bandages at p<0.001 level in experimental group. Whereas in control group, there is no significant improvement in the level of knowledge on first aid management of fractures, level of knowledge on practices on prevention of fractures and level of skills on bandages in control group.

The present study supported by the study embarked in 2010 to assess the knowledge and performance of high school students in first aid at emergency scene. The results of paired t-test showed that the students' performance in proper way to do bandage, immobilizing injured area and proper ways of carrying injured person after educational course was significantly increased in both groups (p < 0.001) [19].

The study reveals that there is a positive correlation between pre test and post test knowledge on first aid management of fractures, knowledge on practices on prevention of fractures at p<0.001 level whereas there is no correlation between pretest and post test skills on bandages in experimental group.

Whereas in control group, there is a positive correlation between pre test and post test knowledge on first aid management of fractures, knowledge on practices on prevention of fractures and skills on bandages at p<0.001 level.

The third objective of the study was to associate the relationship between demographic variables and knowledge, knowledge on practices and skills of school children on first aid management of selected fractures in experimental and control groups.

The studyshows the association between demographic variables with level of knowledge in pre test among 9th class school students in experimental and control groups.

It reveals that in pre test, type of health facilities available near your residence was significant at p<0.05 level in experimental group.

It reveals that in pre test, are you a member of voluntary agencies was significant at p<0.01 level whereas, the study reveals that the religion was significant at p<0.05 level in control group. The studyshows the association between demographic variables with level of knowledge in post test among 9th class school students in experimental and control groups.

It reveals that in post test; ordinal position of child and type of family were significant at p<0.01 level whereas, the study reveals the number of siblings, family income per month and type of health facilities available near your residence were significant at p<0.05 level in experimental group.

It reveals that in post test are you a member of voluntary agencies was significant at p<0.01 level whereas, the study reveals that the religion was

significant at p<0.05 level in control group.

The study shows the association between demographic variables with level of knowledge on practices in pre test among 9th class school students in experimental and control groups.

It represents that none of the demographic variables were significant with level of knowledge on practices in pre test among 9th class school students in experimental group.

It reveals that in pre test are you a member of voluntary agencies was significant at p<0.05 level in control group.

The studyshows the association between demographic variables with level of knowledge on practices in post test among 9th class school students in experimental and control groups.

It reveals that in post test, type of health facilities available near your residence was significant at p<0.05 level in experimental group.

It represents that none of the demographic variables were significant with level of knowledge on practices in post test among 9th class school students in control group.

The studyshows the association between demographic variables with level of skills on bandages in pre test among 9th class school students in experimental group and control groups.

It reveals that in pre test, type of family and are you a member of voluntary agencies were significant at p<0.05 level in experimental group.

It reveals that in pre test, type of family and are you a member of voluntary agencies were significant at p<0.05 level in experimental and control group.

The studyshows the association between demographic variables with level of skills on bandages in post test among 9th class school students in experimental group and control groups.

It reveals that in post test, type of family and family income per month were significant at p<0.01 level whereas, the study reveals that the type of health facilities available near your residence was significant at p<0.05 level in experimental group.

It shows that none of the demographic variables were significant with level of skills in post test among 9th class school students in control group.

A study was conducted in 2010 to study the pattern of fractures across pediatric age groups: analysis of individual and lifestyle fractures. Results suggested that there is a significant association between first aid management of fractures with gender [3].

Conclusion

Out of 25 experimental group and 25 control group, the study findings in pre test include 48%(12) have inadequate knowledge, 48%(12) have moderately adequate knowledge and 4%(1) have adequate knowledge in experimental group and 64%(16) have inadequate knowledge, 28%(7) have moderately adequate knowledge and 8%(2) have adequate knowledge in control group.

On knowledge on practices in pretest, 44%(11) have inadequate knowledge on practices, 36%(9) have moderately adequate knowledge on practices and 20%(5) have adequate knowledge on practices in experimental group and 44%(11) have inadequate knowledge on practices, 52%(13) have moderately adequate knowledge on practices and 4%(1) have adequate knowledge on practices in control group.

On level of skills in pre test, ,92%(32) have inadequate skills, 8%(2) have moderately adequate skills in experimental group and 84%(21) have inadequate skills, 16%(4) have moderately adequate skills in control group.

Regarding post test knowledge 8%(2) have inadequate knowledge, 16%(4) have moderately adequate knowledge and 76%(19) have adequate knowledge in experimental group and 52%(13) have inadequate knowledge, 28%(14) have moderately adequate knowledge and 42%(21) have adequate knowledge in control group.

On knowledge on practices in post test, 4%(1) have inadequate knowledge on practices, 20%(5) have moderately adequate knowledge on practices and 76%(19) have adequate knowledge on practices in experimental group and 44%(11) have inadequate knowledge on practices, 48%(12) have moderately adequate knowledge on practices and 8%(2) have adequate knowledge on practices in control group.

On level of skills in post test, 8%(2) have inadequate skills, 44%(11) have moderately adequate skills and 48%(12) have adequate skills in experimental group and72%(18) have inadequate skills, 28%(7) have moderately adequate skills in control group.

A majority of 9th class students among experimental group were having adequate and moderately adequate knowledge, knowledge on practices and skills and demographic variables were statistically significant, hence it can be concluded that, there is animprovement on level of knowledge, knowledge on practices and skills in post test in

experimental group.

Recommendations

- The study can be replicated on a large sample, there by findings can be generalized into a large population.

- Comparative study can be done between urban and rural school children regarding first aid management of fractures.

- Skill training programme can be done through video assistance, information booklet, pamphlets and leaflets.

- KAP studies can be done on first aid management excluding upper and lower limb fractures.

- Skill training programme on first aid management of fractures can be conducted on nursing students.

- Qualitative studies can be conducted to assess knowledge and attitude towards first aid management of fractures.

- Descriptive studies can be conducted on health professionals regarding first aid management of fractures.

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