EFFECT OF TRAINING PROGRAMME REGARDING FIRST-AID MANAGEMENT AMONG THE HIGH-SCHOOL STUDENTS

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Submission of the Reports

We are submitting the research report on, **"EFFECT OF TRAINING PROGRAMME REGARDING FIRST-AID MANAGEMENT AMONG THE HIGH-SCHOOL STUDENTS"** to NHRC.

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ABSTRACT

Effect of Training Program Regarding First-Aid Management Among the High-School Students

For life time exposure the average person in a developed country have 1% risk of death and 30% risk of injury. In world's rood daily 1,40,000 people injured, 3,000 die and some 15,000 disabled for life. The cost of treatment and the complications after trauma can be decreased, if first-aid support is given and patient is transferred for the treatment in proper place as early as possible.

The objectives of this study was to train the high school students (of class 9 and 10) regarding first-aid management of common problems requiring first-aid and evaluate the effectiveness of the programme.

It was Quasi-experimental single group, pre-test post-test research design, conducted among all the students studying in class 9 and 10 in the selected high schools i.e. Harinagra, Kaptangunj and Amahibelha. It was census study and 696 students were selected. Maintaining validity and reliability of the tool, pre-test survey was conducted. After pre-test training program on first-aid was conducted for two days and post-test was done after two weeks. The findings were analyzed.

It was found that the training program conducted is very effective. The application of Mc Nemar's chi squire test (P=0.0001) is highly significant in all the situations except the management of unconscious patient (P=0.2148).

Finally, it concludes that training program is highly effective and it can be implemented for all high school students.

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BACKGROUND OF THE STUDY:

Introduction: For life time exposure the average person in a developed country have a 1 percent risk of death and a 30 percent risk of injury (BMJ Aug. 2002). About 50 percent death occurs at the site of the crash or during transport and the rest of death occurs in hospital. Many developed countries provide fast emergency help, which can be on the spot in five minutes in urban areas and in 20 minutes in rural areas. The situation in Nepal is very measurable[1].

Every day as many as 140 000 people are injured on the world's roads, More than 3 000 die and some 15 000 are disabled for life. Each of those people has a network of family, friends, neighbors, colleagues or classmates who are also affected, emotionally and otherwise. Families struggle with poverty when they lose a breadwinner, or have the added expense of caring for disabled family membvers[2].

The victims of trauma and injury are increasing day by day. The cost of treatment and the complications after trauma can be decreased if first-aid support is given and patient is transferred of the treatment in proper place as early as possible. This can reduce the rate of disability also to a great extent. In Nepal the victims are left alone for themselves and their family members. In order to reduce the problem, the public needs to be aware and helpful in such conditions. The students are the basic forces of the county. If the students are equipped with the knowledge and skill they can help victims, motivate family members and educate other peer groups.

STATEMENT OF THE PROBLEM:

Effect Of Training Programme Regarding First Aid Management Among The High-School Students

OBJECTIVES:

Aims of the study:

To reduce the mortality and morbidity by speedy and efficient first aid care under the prevailing circumstances

General objectives:

To train the high school students (of class 9 & 10) regarding first- Aid management of common problems requiring first aid and evaluate the effectiveness of the Programme.

Specific objective:

The Specific Objectives of the study are:

1. To Train high school students regarding first aid management of common conditions.
2. Contribute to accident prevention, by raising awareness of the most common accidents.
3. It will also complement the disaster preparedness.
4. To evaluate the effectiveness of training Programme.

RATIONAL OR JUSTIFICATION OF THE STUDY:

The Victim of trauma and injury is increasing day by day. The cost of treatment and the complications after trauma can be decreased if first aid support is given in proper time. If the students are equipped with the knowledge and skill they can help victims, motivate family members, and other peoples educate and peer group.

This training Programme, was beneficial due to following reasons:

1. Trauma and accidents increasing day by day as vehicle and modernization increasing.
2. The area selected is far away from the city, town or hospital, hence aid in life saving and preventing complications.
3. As they are high school students, they will act as trainer at there own home and at there own villages.
4. The students can manage first aid of common problems at their own setting.
5. Equip them with first aid materials in-group so that it will increase more concern and interest.
6. It also trains the concerned teacher.
7. As these all school is government and most of the students are from villages and low economic group, family members, it will be very beneficial to them.

STUDY SITE AND ITS JUSTIFICATION:

The study was conducted in the following three-selected high school of Sunsari district, of southern region, situated in villages, far away from the head quarter of the district.

The High schools situated in the following VDC will be included: -

1. Harinagra Higher Secondary school (**Harinagra**)
2. Krishna Madhyamic Vidhyalaya (**Kaptangunj**)
3. Nepal Rastyra Madhyamic Vidhyalaya (**Amahibelha**)

As these schools are government and are situated in villages, far away from headquarters of the Sunsari district and away from town or Hospital. The simple emergency situations may create big problem due to lack of first-Aid management and lack of awareness regarding the first aid.

REVIEW OF LITERATURE:

During the course of literature review many books, newspapers, articles, old journals, new journals, mid-line search, news bulletin and many professional and non-professional journals and articles have been reviewed. During the course of literature search materials related to the topic of the study have been collected. The literature reveals the following salient features concerning the First aid management of common problems:

For life time exposure the average person in a developed country have a 1 percent risk of death and a 30 percent risk of injury (BMJ Aug. 2002).

About 50 percent death occurs at the site of the crash or during transport and the rest of death occurs in hospital. Many developed countries provide fast emergency help, which can be on the spot in five minutes in urban areas and in 20 minutes in rural areas. The situation in Nepal is very measurable[1]

Every day as many as 140 000 people are injured on the world's roads, More than 3 000 die and some 15 000 are disabled for life. Each of those people has a network of family, friends, neighbors, colleagues or classmates who are also affected, emotionally and otherwise. Families struggle with poverty when they lose a breadwinner, or have the added expense of caring for disabled family membvers[2].

A study conducted by Frederick [3], among 1200 children in UK, to evaluate the effect of an injury prevention program on school children reported that, before intervention, both groups had similar levels of knowledge. Five months after the intervention, significantly children demonstrated a greater increase in knowledge in administering first – aid and the correct procedure for making a call to the emergency services. They also demonstrated better basic life support techniques for example, mouth-to-mouth and cardiac compressions. They identified more subtle dangers, were likely to seek help, and tell others that their behavior was dangerous. Hence, the results demonstrate the benefits of the training program on injury prevention knowledge, attitude and behaviors.

A study conducted by Peterson [4], in nine public schools of suburban schools of USA, concluded that, First – aid is the most frequent reason to see the school nurse and is an important function of school nurse. Student injuries can cause absenteeism that interferes with student academic success. Whether the school nurse delegates or directly

provides first – aid, it is important to collect and analyze information about school injuries to plan injury prevention strategies when appropriate.

In a study or knowledge and practice of urban and rural high school children regarding minor injuries" conducted by Singh [5], emphasized the need of relevant health education to minimize trauma prevention and care.

A study conducted by gagliardi [6], on "emergencies in the school setting: are public school teachers adequately trained to respond?" among 334 teachers found that, One-third (112 teachers) had no specific training in first-aid and 40% never had been trained in CPR. However, most (87%) of the respondents strongly agreed that emergency care training should be required in teacher preparation programs. Eighteen percent of the teachers responded to more than 20 injured or ill students annually, and 17% reported that they had encountered at least one life-threatening emergency in a student during their career. The average score for all respondents on the emergency care test was 58%. Those with prior first-aid training averaged 60.5%. Significant deficiencies were noted for recognition and appropriate treatment of student emergencies involving basic life support (BLS) and airway interventions, diabetic emergencies, and treatment of profuse bleeding. Forty of the 50 (80%) parents surveyed assumed that all teachers were adequately trained in first-aid and CPR.

Hence, Public school teachers represent a potentially effective first-response component during disasters and isolated emergencies in the school environment. Overall, most of public school teachers in this study were deficient in both training and knowledge of emergency care and BLS modalities. Lack of effective, formal emergency care training in teacher preparation programs coupled with no continuing education requirement is a possible explanation of these results. Emergency medical services

providers should seek opportunities to help with first-responder training and continuing education in their schools.

In a study "Assessment of physical education faculty students" knowledge about first – aid", conducted by Ally [7], at zagazing university, reported that, the physical education faculty students are highly exposed to different types of accidents, mainly fracture, cramp and bleeding. Lack of knowledge noted regarding cut wound, penetrating wound, falling, sprains and Epistaxis. It is recommended that first aid course should be taught by specialized medical personal and the course content should include theoretical knowledge plus clinical practice of first aid in correct ways.

In a study on "safety and first aid behavioral intentions of supervised and unsupervised third grade students", conducted by Frederick[9]", concluded that first – aid items received more dangerous responses than appropriate ones. Supervised students scored significantly higher than unsupervised students in accident prevention and first – aid".

A study conducted by thein[8] on "knowledge, attitude and practices of childhood injuries and their prevention by primary care givers in Singapore", concluded after study that, there is a need to educate parents and caregivers on home safety and first aid. Doctors and nurses should take a more active role in giving advice on child safety.

RESEARCH DESIGN AND METHODOLOGY:

Design: It was Quasi-experimental single group, pre-test post-test research design.

Population: All the students studying in class-IX and X in the selected high-schools constituted the population of the study.

Sampling method: It was census study.

Sample size: 696 students were included in the study.

Criteria for sample selection: All the students studying in class – 9 and 10 in selected schools, willing to participate in the study were selected.

Validity and reliability of the tools: The contents validity of the tool was maintained by checking the tool from the experts in the field of emergency, family medicine, foreign sic medicine and nursing. The tool prepared was tested among the 75 high school students of Dharan. The reliability of the tool was established by split half method and found reliable, them the tool was finalized.

Preparation of information booklet and checking its validity: The in formation booklet on first-aid was prepared, in Nepali, on selected topics of common health problems/situations requiring first-aid at local community level. The booklet was prepared consulting various available first-aid books, consulting the experts of emergency and trauma

management and the available booklet or materials of American society of preventive medicine and other.

The content validity of the booklet was checked after taking consultation with doctors, nurses and concerned others of the same field.

Tools and techniques for data collection: Using pre- tested questionnaire the baseline knowledge of the students was assessed before execution of first aid training program.

After the pre – test the concerned trainer introduced the first – aid training program, using prepared module (information booklet) in their own class-room. A continuous two days training program was provided to the students in their own classroom. A booklet was given to each student for his or her reference and future use.

A first – aid kit box was also given in each school with required supplies after the demonstration in the training. After two weeks of pre–test the post – test was taken using the same questionnaire. The collected data was analyzed.

Excel software program was used to entry the data, SPSS–4 programs were used for statistical analysis. Descriptive statistics like mean, percentages, SD etc are used to describe the variables.

Plan for Supervision and Monitoring: The entire study was conducted under the guidance and supervision of principle investigator

and co–Investigators. First-aid training provided by a group of trained doctors and Nurses under the direct supervision of Investigators in co-ordination with the physical- health teacher, student representatives from each class of 9 & 10. A co-ordination team was formed of five members i.e. two students, headmaster, health/science teacher, and Programme co-coordinator to coordinate the activities. Follow up and supervision was provided periodically till Eight weeks and necessary guidance help was provided.

Besides the schedule programme, a lot of resource materials are prepared and collected from various reliable sources especially in pictorial along with the description. This material are pasted in the walls and notice board in library room, science laboratory room, class-rooms and other common places, so that every students and teachers can read and get benefited easily. Common public attending these places can be also benefited.

A lot of pictorial on human anatomy and first aid management are also pasted on the same places. All, who have once seen this, appreciates it.

DATA ANALYSIS AND INTERPRETATION

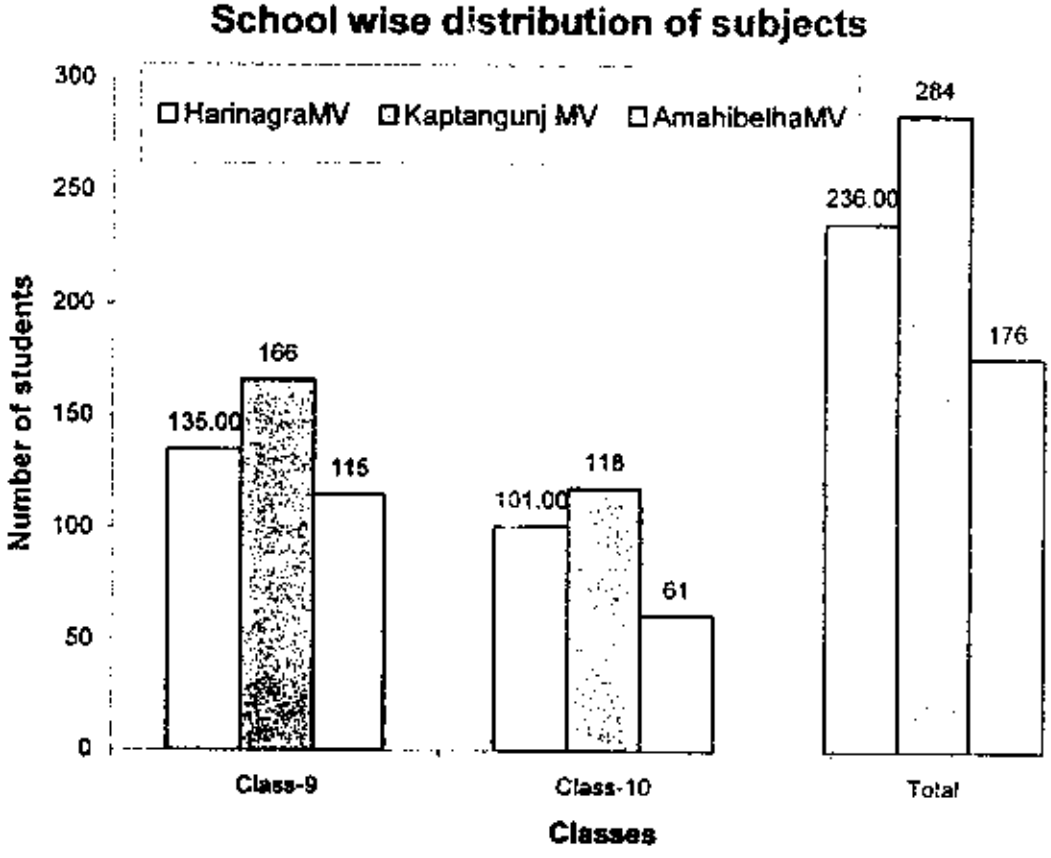
The data collected during the study has been analyzed by using descriptive statistics. In descriptive statistics mean, percentage, and standard deviation were used for analyzing the distribution of the respondents according to their socio-demographic characteristics and other variables.

Distribution of the subjects: The total number of students participated in the first-aid research based training programme was 696.

The details of subjects are mentioned in Figure-I.

Figure No.: I

Distribution of subjects according to their school



Age and Sex distribution of the subject: About 50% of the subjects belong to age group of 14-16 years. The mean age was 15.51 years, and range of age was 12-20 years. Majority of the subjects are male i.e. 60.5%.

The details of Age and sex of each class and school was tabulated in table-I

Table No.: I

Distribution of Subjects according to their Age group and sex (post-test)

S.N.	Age & Sex Distribution	Harinagra		Kaptangunj		Amahibelha		Total
		Class-9	Class-10	Class-9	Class-10	Class-9	Class-10	
		N=135	N=101	N=166	N=118	N=115	N=61	N=696
		Percentage	Percentage	Percentage	Percentage	Percentage	Percentage	Percentage
1.	**Age group (In years)**							
	12-14	44.4	6.0	51.8	14.4	13.0	1.6	26.6
	14-16	41.3	61.4	42.2	62.7	56.6	26.3	49.1
	16-18	14.0	29.8	4.2	21.2	26.1	72.1	22.3
	18-20	0.7	3.0	1.8	1.7	4.3	0.0	2.0
	Mean	14.86	16.09	14.7	15.69	16.04	16.79	15.51
	SD	1.39	1.12	1.49	1.13	1.45	0.86	1.41
	Range	12-19	13-19	12-19	13-19	13-20	14-18	12-20
2.	**Sex**							
	Male (M)	63.7	75.2	57.8	61.9	43.5	65.6	60.5
	Female (F)	36.3	24.8	42.2	38.1	56.5	34.4	39.5

Capabilities of the students regarding first-aid management: There is incensement in the capabilities of the students. The incensement difference in fully capable is 24.8%. In each school and in classes there is incensement in capabilities of the students, as they mentioned.

The details are tabulated in table-II, II-A, II-B, and II-C.

Table No.: II

Differences In Capabilities Of Students Regarding First-Aid Management, Before And After Education Intervention (In average)

SN	Capabilities	Pre-test (Percentage)	*Post-test* (Percentage)	Differences (Percentage)
1	Fully Capable	30.4	55.2	+24.8
2	All right (OK)	43.0	37.8	-5.2
3	Only few (Some extent)	25.9	6.8	-19.1
4	Not capable at all	0.6	0.3	-0.3

Table No.: IIA

Differences In Capabilities Of Students Regarding First-Aid Management, Before And After Educational Interventions In Harinagra MV.

SN	Capability	Harinagra					
		Class-9			Class-10		
		Pre-test (%)	Post-test (%)	Difference (%)	Pre-test (%)	Post-test (%)	Difference (%)
1	Fully Capable	26.1	50.4	+24.3	58.6	64.4	+5.8
2	All right (OK)	42.5	44.4	-1.9	31.3	32.7	+1.4
3	Only few (Some extent)	28.4	5.2	-23.2	10.1	3.0	-7.1
4	Not capable at all	3.0	0.0	-3.0	0.0	0.0	0.0

Table No.: IIB

Differences In Capabilities Of Students Regarding First-Aid Management, Before And After Educational Interventions In Kaptangunj MV

SN	Capability	Kaptangunj					
		Class-9			Class-10		
		Pre-test (%)	Post-test (%)	Difference (%)	Pre-test (%)	Post-test (%)	Difference (%)
1	Fully Capable	18.1	47.0	+28.9	36.5	61.9	+25.4
2	All right (OK)	39.8	38.0	-1.8	57.4	36.4	-21.0
3	Only few (Some extent)	42.2	13.9	-28.3	6.1	1.7	-4.4
4	Not capable at all	0.0	1.2	+1.2	0.0	0.0	0.0

Table No.: IIC

Differences In Capabilities Of Students Regarding First-Aid Management, Before And After Educational Interventions In Amahibelha MV

SN	Capability	Amahibelha					
		Class-9			Class-10		
		Pre-test (%)	Post-test (%)	Difference (%)	Pre-test (%)	Post-test (%)	Difference (%)
1	Fully Capable	27.2	59.1	+31.9	23.0	52.5	+29.5
2	All right (OK)	39.5	33.9	-5.6	50.8	41.0	-9.8
3	Only few (Some extent)	33.3	7.0	-26.3	26.2	6.6	-19.6
4	Not capable at all	0.0	0.0	0.0	0.0	0.0	0.0

Opinion regarding capabilities of performing first-aid in various situations (Accidents/Conditions): The capabilities of participants (fully capable) was markedly increased after educational intervention regarding management of various individual situations/problems requiring first aid, from38.1% to 50.2%. In each individual schools and classes there is highly incensement in the percentage of fully capable to manage the first-aid of various individual problems/situation.

The details are tabulated in table-III, III-A, III-B, III-C, III-D, III-E, III-F

Table No.: III

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention As Per Their Responses (In aggregate)

Situations/Conditions	Fully Capable			All Right (Average)			Not Capable at all		
	Pre-test	Post-test	Differences	Pre-test	Post-test	Differences	Pre-test	Post-test	Differences
	%	%	%	%	%	%	%	%	%
Fracture	15.4	62.8	+47.4	58.7	35.6	-37.8	25.9	1.6	-24.3
Burn	23.0	63.4	+40.4	56.1	35.9	-20.2	20.9	0.7	-20.2
Poisoning	18.3	58.3	+40.0	53.6	39.7	-13.9	28.1	2.0	-26.1
Cut injury/bleeding	25.1	63.2	+38.1	54.6	36.6	-18.0	20.3	0.1	-20.2
Epistaxis	21.2	62.4	+41.2	54.9	36.8	-18.1	23.9	0.9	-23.0
Drowning	21.3	61.9	+40.6	52.9	36.6	-16.3	25.8	1.4	-24.4
Diarrhea/Vomiting	20.1	63.2	+43.1	55.2	35.9	-19.3	24.6	0.9	-23.7
Fever	16.4	61.8	+45.4	56.7	36.9	-19.8	27.0	1.3	-25.7
F.B. in Eye /ENT	11.6	60.8	+49.2	59.4	38.2	-21.2	29.0	1.0	-28.0
Chocking	8.4	58.6	+50.2	59.7	40.7	-19.0	31.9	0.7	-31.2
Snake bite	9.4	59.2	+49.8	62.5	40.2	-22.3	28.1	0.6	-27.5
Shock	9.4	59.5	+50.1	60.3	39.9	-20.4	30.3	0.6	-29.7

Table No.: IIIA

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Harinagra				Class: 9			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	15.7	56.3	44.0	42.2	40.3	1.5
2	Burn	14.2	62.2	47.8	37.8	38.1	0.0
3	Poisoning	13.4	56.3	43.3	40.7	43.3	3.0
4	Cut injury/bleeding	11.9	66.7	47.0	32.6	41.0	0.7
5	Epistaxis	13.4	65.9	44.0	32.6	42.5	1.5
6	Drowning	14.9	65.2	45.5	31.1	39.6	3.7
7	Diarrhea/Vomiting	13.4	71.1	47.8	26.7	38.8	2.2
8	Fever	9.7	66.7	49.3	31.1	41.0	2.2
9	F.B. in Eye /ENT	8.2	66.7	50.0	30.4	41.8	3.0
10	Chocking	9.7	61.5	47.0	37.0	43.3	1.5
11	Snake bite	9.7	63.7	47.0	35.6	43.3	0.7
12	Shock	8.2	62.2	44.8	36.3	47.0	1.5

Table No.: IIIB

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Harinagra				Class: 10			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	29.3	69.3	57.6	30.7	13.1	0.0
2	Burn	26.3	74.3	64.6	25.7	6.1	0.0
3	Poisoning	25.3	58.4	66.7	37.6	8.1	4.0
4	Cut injury/bleeding	35.4	64.4	61.6	35.6	3.0	0.0
5	Epistaxis	25.3	66.3	65.7	33.7	9.1	0.0
6	Drowning	27.3	68.3	63.6	31.7	9.1	0.0
7	Diarrhea/Vomiting	22.2	71.3	73.7	28.7	4.0	0.0
8	Fever	18.2	63.4	74.7	36.6	7.1	0.0
9	F.B. in Eye /ENT	14.1	60.4	77.8	39.6	8.1	0.0
10	Chocking	8.1	62.4	81.8	37.6	10.1	0.0
11	Snake bite	8.1	70.3	80.8	29.7	11.1	0.0
12	Shock	7.1	70.3	81.8	29.7	11.1	0.0

Table No.: IIIC

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Kaptangunj				Class: 9			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	9.6	63.3	62.0	34.3	28.3	2.4
2	Burn	14.5	66.3	63.3	33.7	22.3	0.0
3	Poisoning	18.1	63.3	63.9	34.9	18.1	1.8
4	Cut injury/bleeding	15.7	65.7	60.2	34.3	24.1	0.0
5	Epistaxis	15.1	63.9	63.3	34.9	21.7	1.2
6	Drowning	15.7	57.8	59.0	40.4	25.3	1.8
7	Diarrhea/Vomiting	15.1	54.2	59.0	44.0	25.9	1.8
8	Fever	15.1	57.2	59.0	40.4	25.9	2.4
9	F.B. in Eye /ENT	9.0	59.6	62.0	40.4	28.9	0.0
10	Chocking	9.0	57.2	62.0	42.8	28.9	0.0
11	Snake bite	5.4	58.4	64.5	39.8	30.1	1.8
12	Shock	6.6	56.6	63.3	42.2	30.1	1.2

Table No.: IIID

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Kaptangunj				Class: 10			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	10.4	74.6	65.2	24.4	24.3	0.0
2	Burn	29.6	62.7	49.6	36.4	20.9	0.8
3	Poisoning	17.4	61.0	56.7	38.1	25.2	0.8
4	Cut injury/bleeding	33.9	61.9	42.6	38.1	25.5	0.0
5	Epistaxis	26.1	66.1	40.0	33.9	33.9	0.0
6	Drowning	20.9	63.6	46.1	36.4	33.0	0.0
7	Diarrhea/Vomiting	25.2	64.4	33.9	35.6	40.9	0.0
8	Fever	20.0	66.9	39.1	33.1	40.9	0.0
9	F.B. in Eye /ENT	10.4	65.3	46.1	33.9	43.5	0.8
10	Chocking	9.6	66.9	40.9	33.1	49.6	0.0
11	Snake bite	8.7	63.6	47.8	36.4	43.5	0.0
12	Shock	13.9	61.0	40.9	39.0	45.2	0.0

Table No.: IIIE

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Amahibelha				Class: 9			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	8.8	56.5	64.0	39.1	27.2	4.3
2	Burn	27.2	54.8	56.1	41.7	16.7	3.5
3	Poisoning	20.2	51.3	28.1	47.0	51.8	1.7
4	Cut injury/bleeding	38.6	59.1	51.8	40.9	9.6	0.0
5	Epistaxis	30.7	53.9	58.8	44.3	10.5	1.7
6	Drowning	35.1	58.3	43.0	40.0	21.9	1.7
7	Diarrhea/Vomiting	36.8	62.6	56.1	47.4	7.0	0.0
8	Fever	23.7	56.5	63.2	43.5	13.2	0.0
9	F.B. In Eye /ENT	16.7	59.1	65.8	40.9	17.5	0.0
10	Chocking	9.6	47.0	66.7	50.4	23.7	2.6
11	Snake bite	15.8	45.2	61.9	54.8	12.3	0.0
12	Shock	14.9	53.9	67.5	41.1	17.5	0.0

Table No.: IIIF

Differences In Capabilities Of Performing First-Aid In Various Accidents/Conditions Among The Students Before And After Educational Intervention In each Class (Opinionniare)

Name of School: Amahibelha				Class: 10			
SN	Accidents/conditions	Fully Capable (%)		All Right (%)		Not Capable (%)	
		Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
1	Fracture	29.5	54.1	62.3	45.9	8.2	0.0
2	Burn	36.1	57.4	54.1	42.6	9.8	0.0
3	Poisoning	16.4	57.4	68.9	42.6	14.8	0.0
4	Cut injury/bleeding	21.3	57.4	73.8	42.6	4.9	0.0
5	Epistaxis	21.3	52.5	60.7	47.5	18.0	0.0
6	Drowning	16.4	59.0	67.2	41.0	16.4	0.0
7	Diarrhea/Vomiting	4.9	55.7	70.5	44.3	24.6	0.0
8	Fever	11.5	60.7	59.0	36.1	29.5	3.3
9	F.B. in Eye /ENT	18.4	45.9	57.4	50.1	27.9	3.3
10	Chocking	68.9	55.7	31.1	44.3	0.0	0.0
11	Snake bite	11.5	50.8	72.1	49.2	16.4	0.0
12	Shock	4.9	50.8	75.4	49.2	19.7	0.0

Differences in Knowledge regarding first-aid management of various problems/situations after education intervention: There is markedly increase in the knowledge regarding first-aid management of individual problems 8.8% to 55% after education intervention. The least Knowledge incensement is on the management of Diarrhea i.e. 8.8%, where maximum incensement in knowledge is in the cut injury i.e 55%. There is also incensement in knowledge in each school and in each class also.

The details are mentioned in Figure II-A, II-B, II-C, and Table- IV-A, IV-B, IV-C, IV-D, IV-E and IV-F.

Figure No.: - IIA

Differences in Knowledge regarding proper First-aid management of various Accidents/Problems among the students before and after educational Interventions (In aggregate of all School)

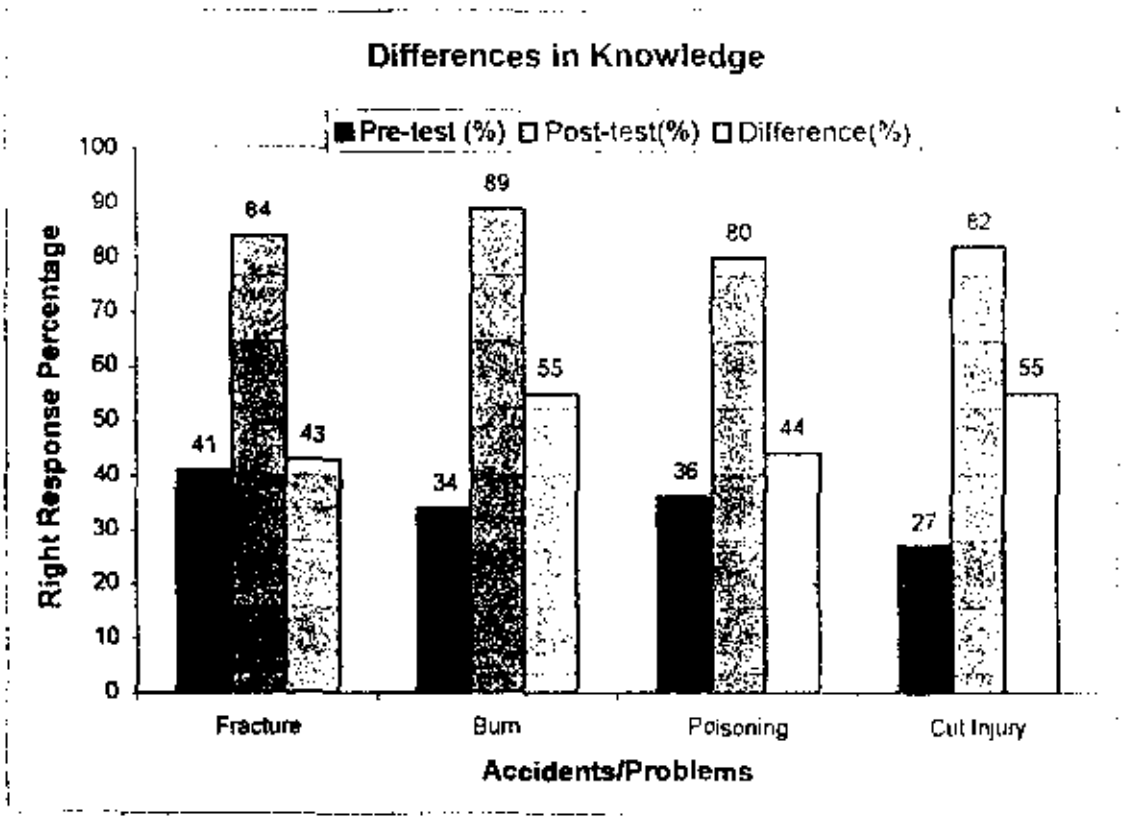


Figure No.: - 11B

Differences in Knowledge regarding proper First-aid management of various Accidents/Problems among the students before and after educational Interventions
(In aggregate of all School)

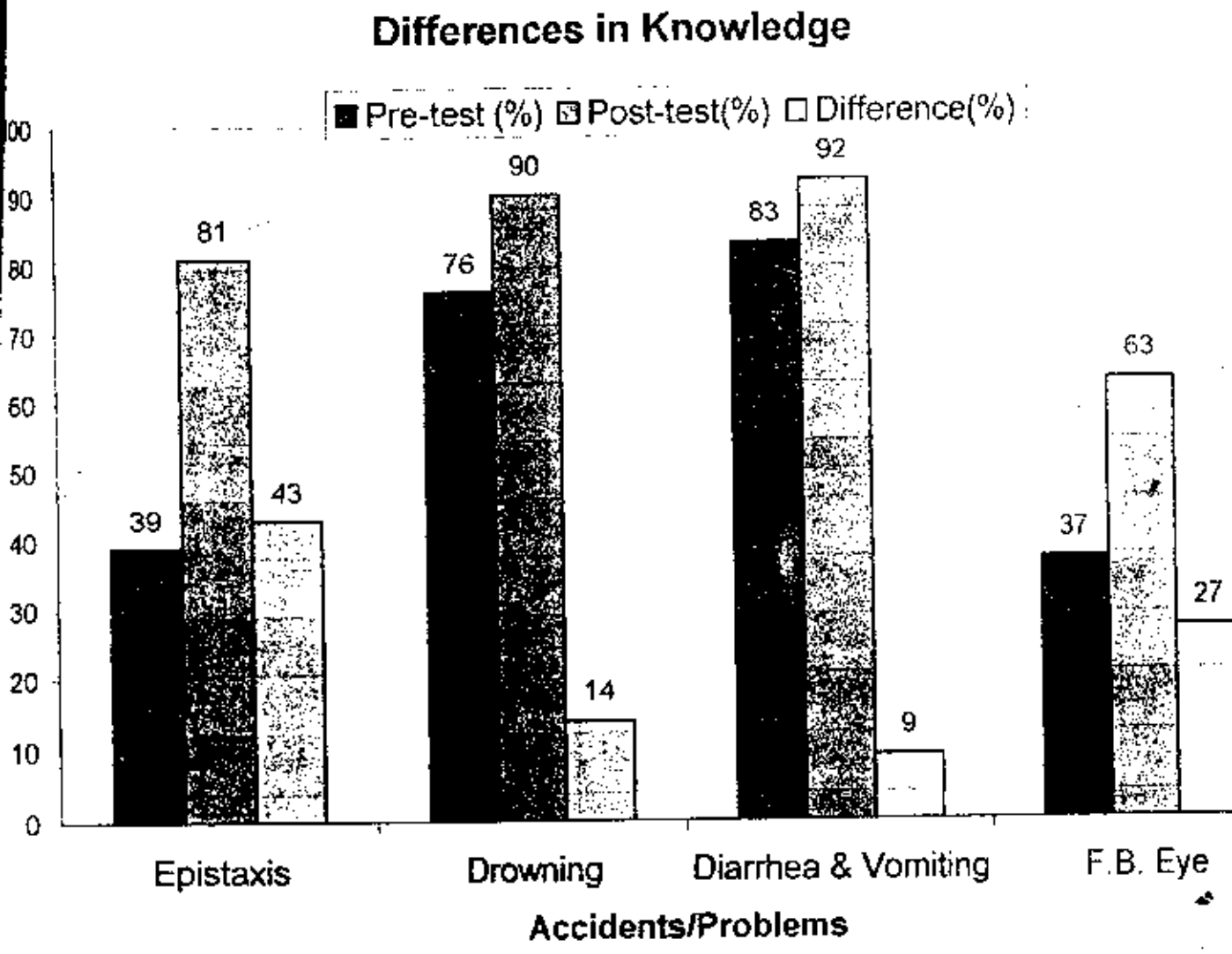


Figure No.: - IIC

Differences in Knowledge regarding proper First-aid management of various Accidents/Problems among the students before and after educational Interventions
(In aggregate of all School)

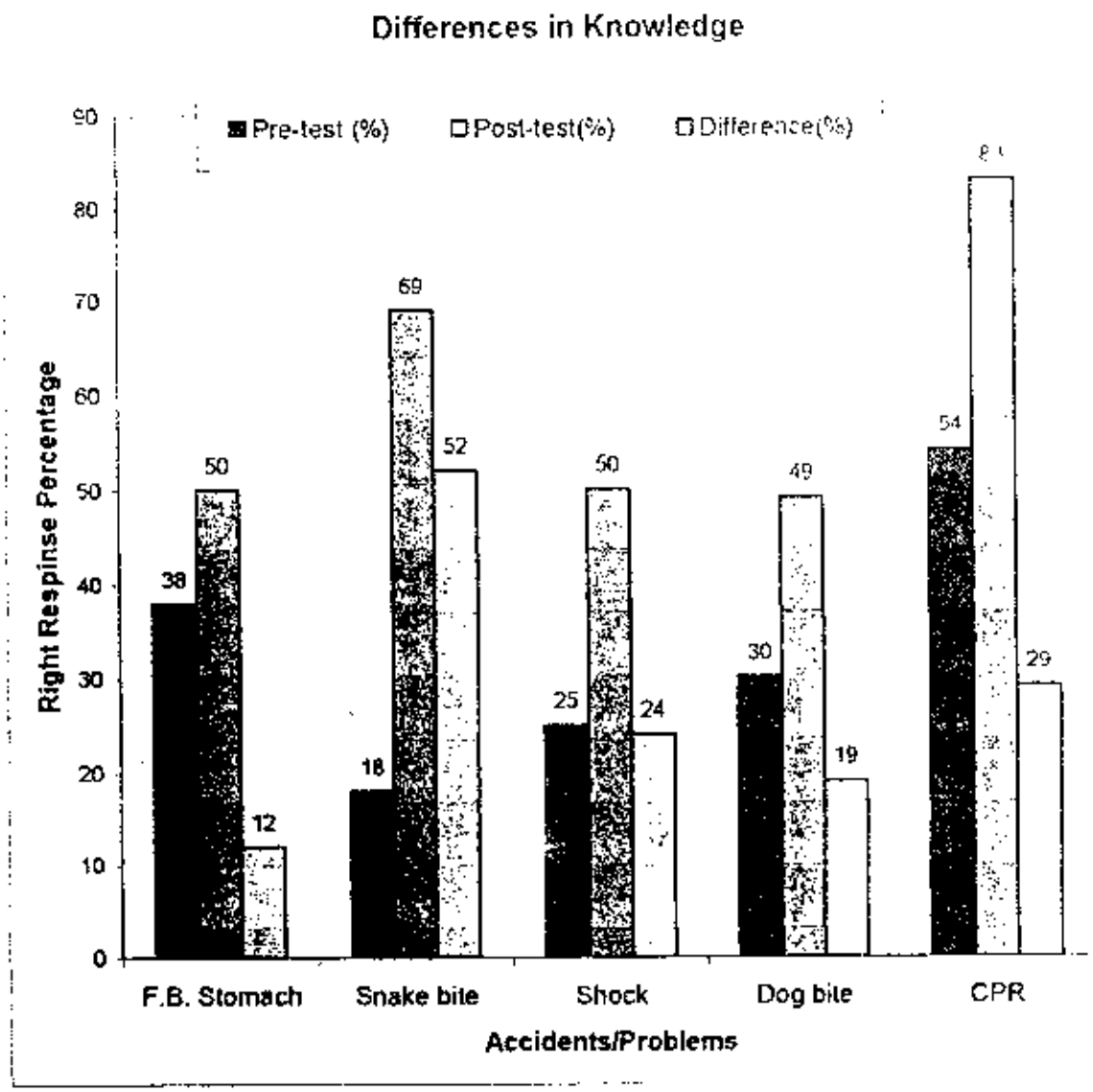


Table No.: IVA

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-9 of Harinagra School (Only Right Responses)

Name of School: Harinagra		Class: 9		
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	31.3	83.0	51.7
2	Burn	35.1	83.7	48.6
3	Poisoning	41.0	76.3	35.3
4	Cut Injury	22.4	72.6	50.2
5	Epistaxis	39.6	79.3	39.7
6	Drowning	69.4	87.4	18.0
7	Diarrhea & Vomiting	70.1	89.6	19.5
8	F.B. Eye	35.1	69.6	+34.5
9	F.B. Stomach	29.9	48.9	+19.0
10	Snake bite	16.4	80.0	63.6
11	Shock	38.1	40.0	+1.9
12	Dog bite	23.1	42.2	19.1
13	CPR	43.3	74.1	30.8

Table No.: IVB

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-10 of Harinagra School (Only Right Responses)

Name of School: Harinagra		Class: 10		
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	37.4	83.2	45.8
2	Burn	38.4	84.2	45.8
3	Poisoning	23.2	88.1	64.9
4	Cut Injury	27.3	88.1	60.8
5	Epistaxis	48.5	74.3	25.8
6	Drowning	65.7	84.2	18.5
7	Diarrhea & Vomiting	79.8	94.1	14.3
8	F.B. Eye	44.4	84.2	39.8
9	F.B. Stomach	32.3	56.4	24.1
10	Snake bite	11.1	89.1	78.0
11	Shock	36.4	47.5	11.1
12	Dog bite	35.4	49.5	14.1
13	CPR	45.5	87.1	41.6

Table No.: IVC

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-9 of Kaptangunj School (Only Right Responses)

Name of School: Kaptangunj			Class: 9	
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	43.4	79.5	36.1
2	Burn	21.1	87.3	66.2
3	Poisoning	36.7	78.3	41.6
4	Cut Injury	21.7	83.7	62.0
5	Epistaxis	38.6	78.9	40.3
6	Drowning	74.7	90.4	15.7
7	Diarrhea & Vomiting	79.5	88.0	8.5
8	F.B. Eye	25.3	54.8	29.5
9	F.B. Stomach	25.9	48.8	22.9
10	Snake bite	14.5	53.0	38.5
11	Shock	35.5	54.2	18.7
12	Dog bite	17.5	39.8	22.3
13	CPR	47.6	78.9	21.3

Table No.: IVD

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-10 of Kaptangunj School (Only Right Responses)

Name of School: Kaptangunj		Class: 10		
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	42.6	78.8	42.2
2	Burn	37.4	86.4	49.0
3	Poisoning	39.1	67.8	28.7
4	Cut Injury	37.8	77.1	29.3
5	Epistaxis	41.7	82.2	40.5
6	Drowning	81.7	86.4	4.7
7	Diarrhea & Vomiting	90.4	91.5	1.1
8	F.B. Eye	33.9	57.6	23.7
9	F.B. Stomach	21.7	60.2	38.5
10	Snake bite	29.6	68.6	39.0
11	Shock	21.7	44.9	23.2
12	Dog bite	36.5	63.6	40.3
13	CPR	57.4	89.8	32.4

Table No.: IVE

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-9 of Amahibelha School (Only Right Responses)

Name of School: Amahibelha			Class: 9	
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	54.4	96.5	42.1
2	Burn	51.8	100	48.2
3	Poisoning	36.8	88.7	51.9
4	Cut Injury	26.3	89.6	63.0
5	Epistaxis	32.5	88.7	56.2
6	Drowning	82.5	98.3	9.8
7	Diarrhea & Vomiting	92.1	96.5	4.4
8	F.B. Eye	28.9	+67.0	38.1
9	F.B. Stomach	36.8	+47.8	11.0
10	Snake bite	18.4	68.7	50.3
11	Shock	36.8	+57.4	20.6
12	Dog bite	40.4	56.5	16.1
13	CPR	77.2	92.2	15.0

Table No.: IVF

Class Wise Differences In Knowledge Regarding Proper First-Aid Management Among The Students, Before And After Educational Intervention In Class-10 of Amahibelha School (Only Right Responses)

Name of School: Amahibelha		Class: 10		
SN	Condition/Situation requiring first-aid	Percentage of Right Response		
		Pre-test (%)	Post-test (%)	Differences (%)
1	Fracture	37.7	90.2	52.5
2	Burn	24.6	100	75.4
3	Poisoning	36.1	90.2	54.1
4	Cut Injury	13.1	83.6	70.5
5	Epistaxis	24.6	88.5	63.9
6	Drowning	88.5	96.7	8.2
7	Diarrhea & Vomiting	95.1	93.4	4.5
8	F.B. Eye	26.2	42.6	16.4
9	F.B. Stomach	31.1	82.0	50.9
10	Snake bite	14.8	57.4	42.6
11	Shock	41.0	55.7	14.7
12	Dog bite	36.1	44.3	8.2
13	CPR	62.3	80.3	18.0

Differences In The Knowledge Among The Students Regarding First-Aid Management: It was seen that regarding the first-aid management of fracture, 245 students given the correct response both before and after training interventions, where as 40 students given correct response before and incorrect response in post test, similarly, 336 students given the incorrect (wrong) response in pre-test but correct response in post-test; and 69 students given incorrect response in both pretest and post-test.
The application of MC Nemar's chi squire test, value is 233.02 (P=0.0001), which is highly significant. It signifies that the training programme conducted was highly effective.

Similarly, in the first-aid management of burn (Q.9), poisoning (Q.10), Cut injury (Q.11), Epistaxis (Q.12), Drowning (Q.13), Diarrhoea/vomiting (Q.14), F.B. in eye (Q.15), Coins in stomach (Q.16), snake bite (Q.17), Dog bite (Q.19), and CPR (Q.20), there is significant incensement in the knowledge (P= 0.0001). These findings clearly imply that the training program conducted was very effective. But in the First-aid management of unconscious patient in the road there is significant increase in the knowledge (P= 0.2148), but less in compare to the other situations. Hence, we can say that the training programme conducted was highly effective.

The details of each conditions/situations (Q.9 - Q.20) are tabulated below in table-IVG:

Table –IVG

Differences In The Knowledge Among The Students Regarding First-Aid Management

Q. No./ Conditions	YY	YN	NY	NN	Mc Nemar's Chi squire	P. Value
Q. 8 Fracture	245	40	336	69	233.02	0.0001
Q. 9 Burn	216	27	405	48	330.75	0.0001
Q. 10 Poisoning	204	50	355	87	229.69	0.0001
Q. 11 Cut Injury	161	31	410	94	325.72	0.0001
Q. 12 Epistaxis	221	51	345	79	218.27	0.0001
Q. 13 Drowning	475	56	152	13	44.31	0.0001
Q. 14 Diarrhea	526	52	112	6	21.95	0.0001
Q. 15 F.B. Eye	73	187	105	331	23.03	0.0001
Q. 16 F.B. Stomach	74	193	107	322	24.65	0.0001
Q. 17 Snake bite	85	42	396	173	286.11	0.0001
Q. 18 Shock	41	140	120	395	1.54	0.2148
Q. 19 Dog bite	106	106	234	250	48.19	0.0001
Q. 20 CPR	316	65	264	51	120.37	0.0001

YY = before correct, after correct.
YN = before correct, after wrong.
NY = before wrong, after correct.
NN = before wrong, after wrong.

Exposed = correct.
Unexposed = in correct.
Case = before.
Control = after.

Opinion of the Respondents Regarding Usefulness of the Training Programme: In average about 87% subjects reported that first-aid training programme was very useful, where as 12.8 % reported useful. In each school and class wise, the participant mentioned the programme was very useful.

The details are depicted in table –V.

Table No.: V

Opinion of Respondents Regarding Usefulness of the Training Programme (Post-test)

SN	Usefulness	Harinagra		Kaptangunj		Amahibelha		Total
		Class-9	Class-10	Class-9	Class-10	Class-9	Class-0	Aggregate
		N=135	N=101	N=166	N=118	N=115	N=61	N=696
1	Very Useful	85.9	88.1	81.9	91.5	87.8	93.4	87.2
2	Useful	14.1	11.9	18.1	8.5	12.2	6.6	12.8
3	Not useful	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Evaluation of the various aspects of the training programme: Majority of the subjects reported that there is adequate coverage of Heading or Topic (64.2%) and contents (65.1%). The teaching learning method used was very effective (73.7%), time planned was adequate (69.1%), and overall management was good (78.2%).

The details are tabulated in table-VI.

Table No.: VI

Evaluation Of The Various Aspects Of The Training Programme (Combination Of All Schools) (Opinion Regarding The Training Programme)

N=696

SN	Item/Particular	Responses		
		Adequate/Good (%)	All Right (OK) (%)	*Inadequate/Poor* (%)
1	**Heading / Topics**	64.2	35.3	0.4
2	**Contents**	65.1	36.4	0.3
3	**Teaching Learning Methods**	73.7	25.7	0.6
4	**Allotted time**	69.1	30.3	0.6
5	**Management/Arrangement**	78.2	21.6	0.3

DISCUSSION:

Distribution of the subjects: The highest numbers of students were from Krishna M.V., Kaptangunj, i.e. 284 in number; where as only 176 students were from Amahibelha. The main reason of more students coming in Kaptangunj is that it is approachable for the students of surrounding VDCs i.e. Dewangunj, Rangunj, Ghuski, and Kaptangunj it self.

Age group: The majority of the students were below 18 years. The age range was 12 – 20 years and mean age was 15.51 years. These figures signify the early enrollments of school, even these schools are situated in remote area of the teria, where literacy rate is vary.

Sex distribution: Majority of the students were male (60.5%), but the number of female percent is also increasing gradually as per the school record, which signifies the positive impact of education in community.

Capabilities of the students regarding first-aid management: In the pre – test 30.4% students were fully capable, 43% were all right, 25.9% had only few (some extent) and 0.6% not capable at all, where as in post 55.2% were fully capable, 37.8% all right (ok). This signifies the effectiveness of first-aid-training program. Similar findings were reported by Frederick [3], Peterson [4], Hagliardi [6], Singh [5], and aly [17].

Similarly in each individual components (situations/conditions: e.g. fracture, poisoning, Epistaxis etc) there is markedly increase in capabilities of performing first – aid management.

Knowledge gained on various situations / conditions requiring first-aid: After the intervention of first – aid training program the maximum increasement in knowledge is on cut injury or bleeding i.e. 55%, where least incensement is 8.8% in management of Diarrhea and use of Jeevan jal. This finding clearly illustrates the effectiveness of training program. The reason for more knowledgeable on diarrhea and use of ORS is because of diarrhea control program. The findings of the study are also supported by the study conducted by Frederick [3], and gagliardi [6].

Usefulness of the training program: As 87.2% students reported that the training program is very useful, 12.8% useful and none of them reported not useful. This finding clearly illustrates the effectiveness of the training programme. Similar findings were reported by Frederick [3], gagliardi [6], Aly [7]and Mdkano [9].

Evaluation of the training program: The students replied that the heading / topics covered were adequate (64.2%), contents taught is adequate (75.1%), teaching learning methods were good (73.7%), time allotted was adequate (69.1%) and overall management is good (78.2). these findings clearly shows that the training program conducted was well planned and managed.

THE POSITIVE IMPACT OF THE TRAINING PROGRAM MENTIONED BY THE STUDENTS ARE:

1. This program is essential for all classes (from VI – XII) and all teachers, in each school, if possible to conduct.
2. This training program aid in public awareness to raise health consciousness in the community also.
3. Knowledge about some common medicines (e.g. Paracetamol, spasmindon, chlomphenical eye/eardrops, Jeevan jal etc) also gained.
4. This information booklet provided is very useful, knowledgeable and practical.
5. Much new knowledge about human anatomy and health matter is known, which is very useful.
6. This training help to remedy many misconceptions of health practices related to first–aid care.
7. Many recent/current health practices and knowledge on first aid gained and the training is unique in nature till date we receive.
8. We get the chance to interaction and share our problems with concerned doctors and experts from BPKIHS.
9. This program stimulates us to choose the medical and nursing profession.
10. This training raises the feeling of service to humanity.

SUGGESTIONS AND FEEDBACK FOR FUTURE:

About 50% of the respondents (students) donot give any feedback / suggestions (no response), about 45% praise the training program (i.e. mentioned the positive impacts: as mentioned above), and only 5% respondents given the suggestion/feedback are as mentioned below:

1. It will be more beneficial, if the re-demonstration opportunity will be provided to all students.
2. Refreshment training on first-aid if arranged after some time will be very useful.
3. This first-aid training will be more befinicial if audio-visual (video-show) can be managed.
4. It will be very helpful if lunch or heavy breakfast for students can managed.
5. The contents taught and discussion made is aid in course contents also.

OPINION OF THE HEADMASTER, HEALTH-SCIENCE TEACHER, OTHER TEACHERS, TRAINERS AND THE STUDENTS REGARDING THIS FIRST -AID TRAINING PROGRAM:

Headmaster of Kaptangunj: Till date this type of practical and useful training, I have seen first time and it should be continue in future.

Headmaster of Amahibelha: I am surprised, I donot think the programme will be this much useful, he mentioned and requested to continue in future also.

Headmaster of Harinagra: Before this time, few first-aid training was also organized by some NGOs, but that was only for namesake and I think it will very useful and must continue in future.

Health teacher of Harinagra: My self learned various new concepts like why bandage is not tightly applied after snakebite.

Science – Teacher of Amahibelha: He had participated in the whole training programme and he told I have learned many new concepts.

Students of class 10 of Harinagra: We found it very useful, Practical and Knowledgeable activity and must continue in future and refresh us in time to time.

Dr. Rajesh paudel trainer and co-investigator: I think this training should be given to community level people also, as it is useful for every people.

Remark:

The Principal Investigator and Co-Investigators found that the Research programme carried out was very useful and practicable. If this training should be provide in all high schools of Nepal it will be very useful. All the Headmasters, teachers and the participated students along with the trainers appreciated the training Programme.

IMPLICATIONS OF THE STUDY:

Following are the implications of this first aid study:

1. The trained students can perform first aid of common problems at their own setting.
2. The students are equipping with first–aid materials in-group so that it increase more concern and intrest.
3. The concerned health/science teachers are also trained will act as guide for the students.
4. The selected students have knowledge about some common drugs like: paracetamol, Jeevan jal, Brufen etc.
5. The information Booklet provided to each student is very useful and practical.
6. The Basic information provided about Human anatomy and common health problems, is very useful.
7. This training also aids to remedy many misconceptions of health practices related to first-aid.
8. Much new knowledge about first-aid management of snakebite and epistaxis are imparted on them.
9. The students get opportunity for interaction and share their problems and concerns with the doctors of BPKIHS.
10. This training raises the feeling of social services to humanity.

RECOMMENDATION:

Based upon the findings and experiences gained on this first-aid training programme following recommendations were made:

1. This training is necessary to all high school students, all teachers and educated community people also.
2. It is mandatory to put one chapter of first aid in class 8, 9 or 10.
3. The booklet prepared was very useful and appreciated by all users. If this booklet can be provided to each student and general public then it will be very helpful.
4. Similar study can be conducted among the schoolteachers, educated community peoples and industrial workers.
5. This same study can be conducted taking a large sample both Urban and Rural schools.
6. By preparing A-V aids of whole contents this training can be provided to general public as well as all High school level students.
7. A first-aid kit box is mandatory in each school and in each family with necessary supplies. The concerned authority should pay attention towards this.
8. Health education campaign can be conducted in mass public to raise awareness regarding prevention of common accidents and common first-aid measures.
9. In teachers training curriculum first-aid chapter can be introduced.
10. This training can be conducted by red-cross society, in community level.

PROBLEM FACED DURING THE STUDY:

During the course of study following problems were encountered:

1. As the groups of students were very big, it created problems in re-demonstration.
2. As the training site is very far from BPKIHS (i.e. about 80 km), the transportation was expensive and tearful.
3. As the training program is about 6 hours daily, it will be easy if provision of heavy snakes will be possible.
4. The lack of A-V aids (especially electronic) creates some problem in imparting knowledge.
5. As the selected schools are far away from market, it create problem in arranging tea, and lunch.
6. In adequate budget, create allot of problems in paying trainers.
7. Lack of communication facilities in schools (esp. telephone) creates problems in management. For any communication physical presence is necessary, as there is no alternatives.

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