ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
National Library of Medicine - ID: 101731606

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 10, Issue – 1, January – 2025, Page No. : 121 – 131

A Study To Assess The Effectiveness of Planned Teaching Program on First Aid Management of Selected Minor Injuries Among School Teachers in Selected English Medium Schools of Meghalaya

[1]Ms. Alphul Doley, [2]Ms. Facymal Rynshon, [3]Ms. Gracia Basumatary, [4]Mr. Hafiz Al Asad, [5]Ms. Imsunaro, [6]Ms. Jaya Jupiter Singh, [7]Ms. Judith Suchiang, [8]Ms. Manira Parbin, [9]Ms. Kalpana Newar, [10]Ms. M. Alila Jamir

[1-8]BSc Nursing, College of Nursing, NEIGRIHMS, Shillong, Meghalaya, India, Pincode-793018

[9-10]Tutor, College of Nursing, NEIGRIHMS, Shillong, Meghlaya, India, Pincode-793018

Corresponding Author: Ms. Jaya Jupiter Singh, BSc Nursing, College of Nursing, NEIGRIHMS, Shillong, Meghalaya, India, Pincode-793018

Citation this Article: Ms. Alphul Doley, Ms. Facymal Rynshon, Ms. Gracia Basumatary, Mr. Hafiz Al Asad, Ms. Imsunaro, Ms. Jaya Jupiter Singh, Ms. Judith Suchiang, Ms. Manira Parbin, Ms. Kalpana Newar, Ms. M. Alila Jamir, "A Study To Assess The Effectiveness of Planned Teaching Program on First Aid Management of Selected Minor Injuries Among School Teachers in Selected English Medium Schools of Meghalaya", IJMSIR - January – 2025, Vol – 10, Issue - 1, P. No. 121 – 131.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Introduction: Childhood injury is a very common health problem that requires urgent attention. In school, minor injuries are common and first aid management is important in order to prevent further complication and preserve life. In school, as children are under the care of teachers, school teachers should have some basic skills to perform first aid. A planned teaching program on first aid management of selected minor injuries for school teachers can help in increasing their confidence to perform first aid in an emergency.

Methodology: A pre-experimental, one group pre-test post-test design was conducted in Pine Mount Higher Secondary School, Laban and St. Claret Higher Secondary School, Umkdait, Shillong, Meghalaya from

Results: Out of 60 participants for knowledge scores, in Pre-test 34 nos (56.66%) had Good scores while 26 nos (43.33%) had Poor scores while in Post-test 59 nos(98.33%) had Good scores and 1 nos (1.66%) had Poor knowledge scores .Out of 60 participants for practice scores, in Pre-test 26 nos(43.33%) were Poor and 34 nos (56.66%) had Good practice scores while in Post-test entire 60 nos (100%) had Good practice scores. The mean knowledge score in pre-test was 19.0 and in post-test was 24.06. The SD for pre-test was 3.36 and SD for post-test was 2.4. The paired t-test value is -13.173 with confidence interval. The mean practice score in pre-test is 8.2 and post-test is 23.3. The SD for pre-test is 2.47 and SD for post-test is 2.3, which shows there is significant difference between knowledge and practice score after the planned teaching program. Chi-square results show no association with demographic variables with knowledge and practice.

Conclusion: The study concluded that majority of the participants 98.33% (59) achieved good knowledge and 100% (60) achieved good practice skills regarding first

aid management of selected minor injuries after the planned teaching program.

Keywords: First-Aid Management, Selected Minor Injuries, Effectiveness, Planned Teaching Program, School Teachers.

Introduction

Background of the Study

First aid has been practiced since ancient times. General Esmarch (1823-1908) was the famous surgeon who first conceived the idea of first aid. In 1877, the St. John Ambulance Association of England was formed. The Red Cross Society of India was established in 1920 with more than 400 branches all over India. According to the study done by Giridhara Gopal Parmeshwaram, Hari Kalavani, Sanjeev Kumar Gupta, Anil Kumar Goswami, Baridalyne Nongkynrih, on Unintentional Childhood Injuries in Urban Delhi(2017), India, among 1639 children, 102 children suffer 116 episodes of various types of injuries in the last one year. Prevalence of injuries was 7.1%, main age was 8.5±5.1 years. Prevalence was more in boys (8.4%) than girls (5.1%). Accidental falls (37.1%), dog bite (5%) and road traffic injuries (18.9%) where the most common modes of injury. Therefore, guiding the people around the children regarding first aid is very crucial.

Need of The Study

According to the study done by Viral R Dave at el. On epidemiology of unintentional childhood injuries in one of the districts of Gujarat (2022) the overall prevalence of childhood injuries was 7.62%. Falls related injuries has the highest prevalence (3.38%). The study concluded that majority of the injuries were of minor type. As children are more prone to minor injuries in school, the investigators/researchers decided to conduct the study to increase the knowledge of school teachers as they are the primary caregiver; so that they can prevent and/or manage minor injuries in their respective schools. School teachers play a critical role in providing immediate care and assist in the management of minor injuries, as they are often the first point of contact for students who get hurt. However, according to the study done by Rakhi Pandey et al. (2017) result shows that majority of the health assigned teachers were having average knowledge about first aid i.e.29(72.5%), 10(25%) were having good knowledge and 1(2.5%) was having poor knowledge regarding first aid. As a result, many school teachers may not have the necessary knowledge, skills, or confidence to provide effective first aid management of minor injuries. This can be due to various factors such as; lack of training or updates on first aid procedures, limited access to resources or equipment, fear of liability or litigation, and personal discomfort or anxiety in dealing with injuries. As a result, there is a need to conduct a study in order to find out the current state of first aid management of minor injuries among school teachers, identify gaps in knowledge and practice, and develop strategies to improve their ability to provide effective care.

Objectives of the Study

Primary Objective

1. To assist the existing knowledge and practice of school teachers regarding First Aid Management of selected minor injuries in selected English Medium of Meghalaya.
2. To determine the effectiveness of Planned Teaching Program on Knowledge score regarding first aid management of selected minor injuries in selected English medium school of Meghalaya.
3. To determine the effectiveness of Planned teaching program on practice score regarding first aid management of selected minor injuries in selected English medium school of Meghalaya.

Secondary Objectives

To find out the association between knowledge and practice score, with selected demographic variables regarding first aid management among the school teachers of selected English medium school of Meghalaya

Methodology

Research Design: pre-experimental one group pre -test post- test was adopted to assess the effectiveness of planned teaching program on first aid management of selected minor injuries among school teachers in selected English medium schools of Meghalaya

Settings: The study was conducted in Pine mount higher Secondary School, Laban and St Claret Higher Secondary School, Umkdait, Nongmynsong, Shillong.

Ethical Consideration

1. Ethical consideration was obtained from the Institutional Ethical Committee (IEC-NEIGRIHMS).
2. Informed consent was taken from the school teachers orally as well as in writing after explaining to them the objectives and the purpose of the study.
3. Confidentiality and anonymity of the subject was maintained throughout the study period.
4. The participants have the right to withdraw from the study at any point of time.

Population

The target population consisted of school teachers of Pine Mount Higher Secondary School, LABAN, and St. Claret Higher Secondary School, Umkdait, Nongmynsong, Shillong.

Sample Design

In this study, Non Probability Purposive Sampling Technique was used. The sample consists of 60 numbers of school teachers of Pine Mount Higher Secondary School, Laban, Shillong and St. Claret Higher Secondary School, Umkdait, Nongmynsong, Shillong.

Sample Size - 60 participants

Criteria for Sample Selection

a) Inclusion criteria

- Primary, secondary, and higher secondary school teachers in selected English Medium Schools of Meghalaya.
- Teachers who are willing to take part in the study.

b) Exclusion criteria

- Teachers who underwent first aid training within 6 months prior to the date of conduct of study.

Development of Data Collection Tool

The following steps were adopted prior to the development of the tool:

- Review of literature from books, research journals, online resources, available tools, books related to research subjects and unpublished results.
- Discussions with the guide, co-guide, and other experts.
- Personal/empirical experience of the investigators.
- Discussion with the investigators.

Data Collection Procedure

The data collection was carried out from 25th March 2024 to 5th April 2024 at Pine Mount Higher Secondary School, Laban, Shillong and St. Claret Higher Secondary School, Umkdait, Nongmynsong, Shillong. The subjects who fulfilled the sampling criteria were identified. The investigators explained the purpose of the study to the subjects to obtain their cooperation. Confedentiality was assured and informed consent was taken from each subject.

Description of Data Collection Tools and Techniques

The tool used for the study consists of the following:

Section 1: Questionnaire to collect the socio-demographic data of participants like Age, Educational qualification, teaching experience, Gender, Performed

any first aid previously in the school, Any information on first aid and its sources.

Section 2: It includes questionnaires to assess the knowledge regarding first aid management on selected minor injuries. This section consists of 30 questions, correct response was scored 1 (one) point and wrong response or unanswered question was scored 0(zero).

Section 3: It includes checklist to assess the practice skills regarding first aid management on selected minor injuries. This section consists of 3 checklist for choking, nose bleeding and wounds and bandaging with 10, 8 and 10 questions on each checklist respectively, correct action was scored 1(one) and wrong action was scored 0(zero).

Interpretation of Scores

Knowledge score was categorized into two categories-

Poor knowledge (0-18)

Good Knowledge (≥19)

Practice score was categorized into two categories-

Poor practice (0-7)

Good practice (≥8)

Analysis and Interpretation

Analysis of interpretation of the data was done by using both descriptive and inferential statistics based on the objectives of the study.

Organization of the Findings

The data was analyzed, interpreted and presented under the following headings-

Section 1: Knowledge and practice on first aid management of minor injuries among school teachers.

Table 1: Frequency and percentage distribution of the participants according to the demographic variables

Demographic Variables	Frequency (F)	%
Age In Years		
25-35	22	36.6
36-45	23	38.3
46-55	15	25
Educational Qualification		
Graduate	17	28.33
Post-Graduate	43	71.66
Gender		
Female	53	88.33
Male	7	11.67
Teaching Experience In Years		
1-10	36	60
11-20	20	33.3
21-30	4	6.6

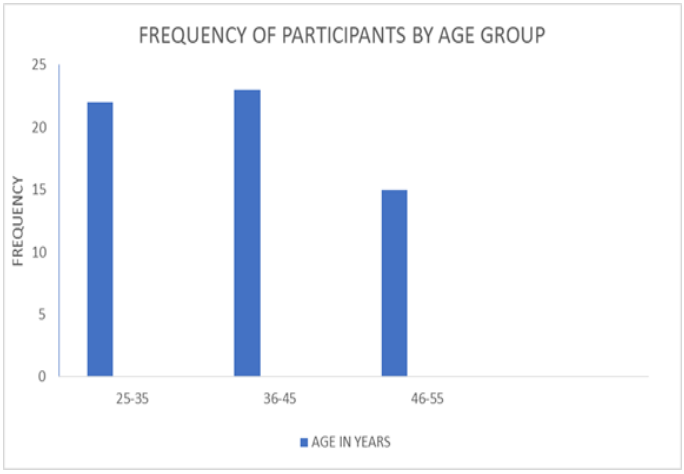
Performed Any First Aid Previously In School		
Yes	40	66.66
No	20	33.33
Any Information On First Aid (If yes, sources of information)		
Yes	37	61.66
No	23	38.33
Sources Of Information On First Aid		
Internet	12	32.43
Book	23	62.16
Journal	2	5.40

MEAN AGE -36.89

Mean Teaching Experience in Years -9.62

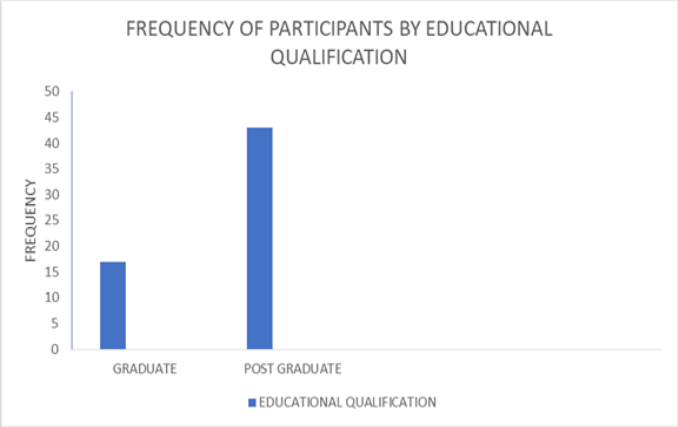
The data presented in the table 1 above show the demographic variables of the samples. The findings of the study revealed that 22 nos of the sample were between 25-35 years of age (36.6%), 23 nos of the sample were between 36-45 years of age (38.3%) and 15 nos of the sample were between 46- 55 years of age (25%). 17 nos of the sample were graduates (28.33%) and 43 nos of the sample were post graduates (71.66%). 53 nos of the sample were female (88.33%) and 7 nos of the sample were male (11.6%).36 nos of the sample have teaching experience between 1-10 years (60%)and 20 nos of the sample were between 11-20 years (33.3%) and 4 nos of the sample were between 21-30 years (6.6%).40 nos of the sample have performed first aid before (66.66%) and 20 nos of the sample have not performed first aid before(33.33%).37 nos of the sample have information about first aid(61.66%) and 23 nos of the sample have no information about first aid(38.33%).12 nos of the sample have information on first aid(32.43%) and 23 nos of the sample (62.16%) and 2 nos of the sample (5.40%).

Figure 1: N=60



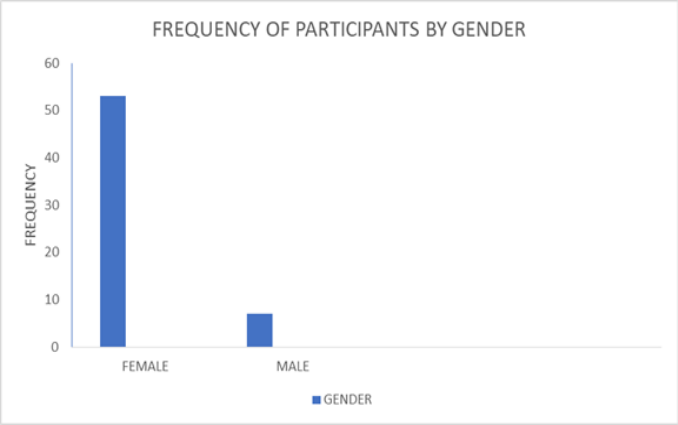
The data in the above figure 1 show that among 60 samples, the school teachers i.e.22 nos (36.6%) are in the age group of 25-35 years, 23 (38.3%) are in the age group of 36-45 years, and 15(25%) are in the age group of 46-55 years.

Figure 2: N=60



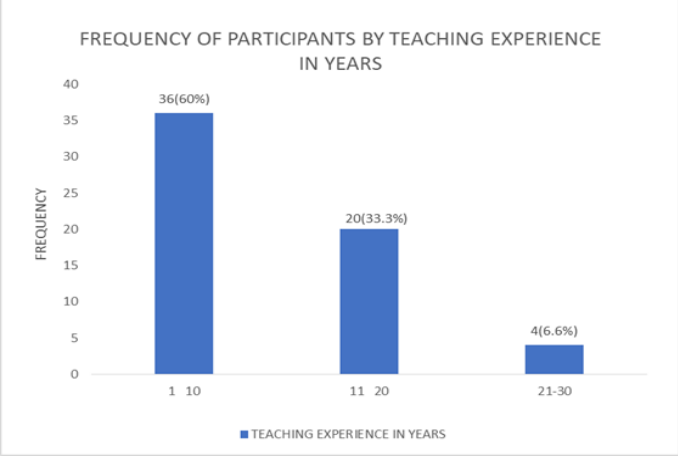
The data in the above figure 2 show that among the 60 samples, 17 nos (28.33%) are graduates and 43 (71.66%) are post graduates.

Figure 3: N=60



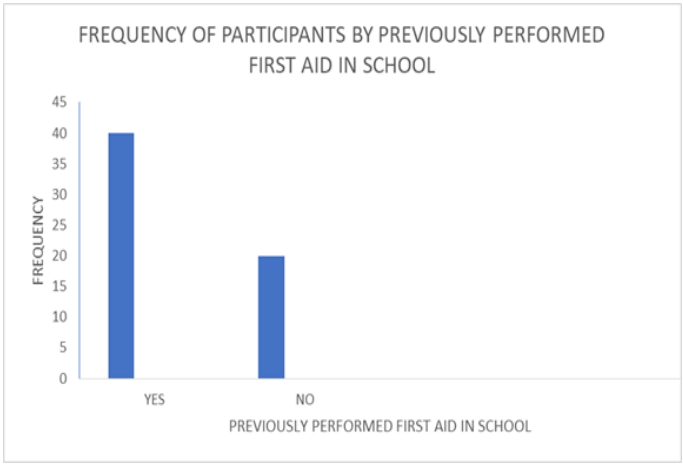
The data in the above figure 3 show that among the 60 samples 53(88.33%) are females and 7(11.67%) are males.

Figure 4: N=60



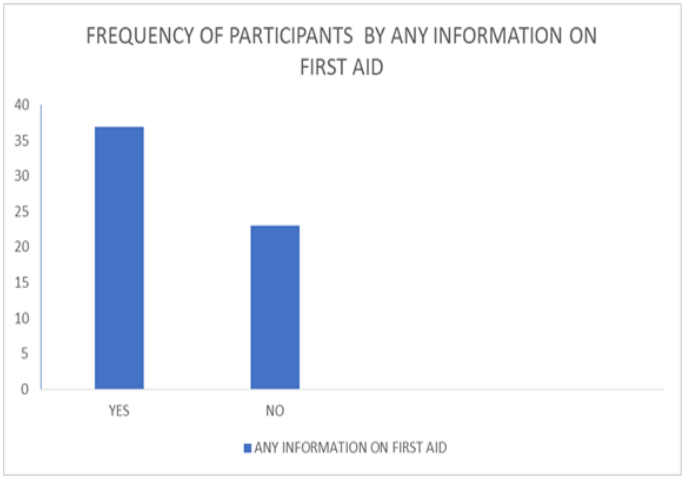
The data in the above figure 4 show that among the 60 samples, 36(60%) have 1-10 years of teaching experience, 20(33.3%) have 11-20 years of teaching experience, and 4(6.6%) have 21-30 years of teaching experience.

Figure 5: N=60



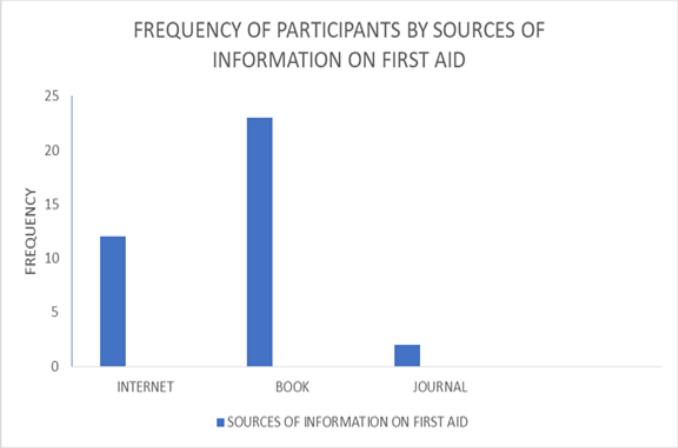
The data in the above figure 5 show that 40 (66.66%) have previously performed first aid and 20 (33.33%) have not performed first aid previously.

Figure 6: N=60



The data in the above figure 6 show that among the 60 samples,37(61.66%) have information on first aid and 23(38.33%) have no information on first aid.

Figure 7: N=60



The data in the above figure 7 show that 12(32.43%) have information on first aid from internet, 23(62.16%) have information from book and 2(5.40%) have information from journals.

Section 2: Finding effectiveness of planned teaching program regarding first aid management on selected minor injuries for knowledge and practice scores using paired t-test.

Comparison of Pre-Test and Post-Test Knowledge Scores of Teachers

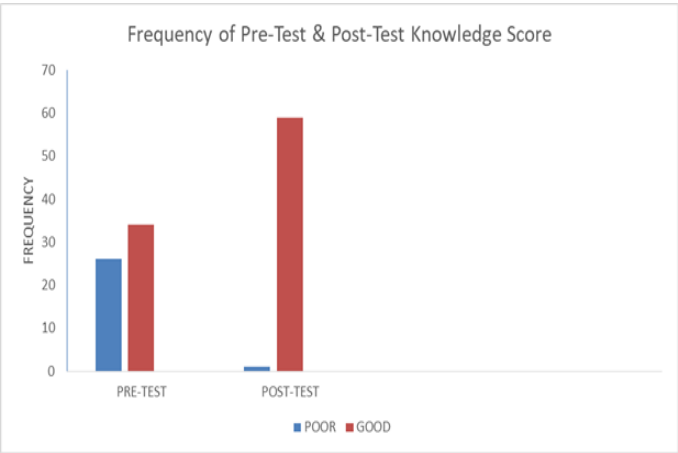
Frequency distributions of pre-test and post-test knowledge scores are presented in the table below. Two categories were made for the grading scores with "GOOD" denoting scores equal and higher than median and "POOR" denoting scores less than median (Median=19). The knowledge scores obtained by the school teachers are tabulated in the mater sheet.

Table 2; N=60

		PRE-TEST		POST- TEST	
Range of score	Knowledge score	Frequency	%	Frequency	%
0-18	Poor	26	43.33%	1	1.66
≥19	Good	34	56.66%	59	98.33
	Total	60		60	

Median Pre-Test=19

Figure 8: N=60



The data in figure 8 above show that among the 60 samples, in Pre-test 34 nos (56.66%) had GOOD scores while 26 nos (43.33%) had POOR, while in Post-test 59 nos (98.33%) had GOOD scores while 1 nos (1.66%) had POOR score.

Comparison of Pre-Test and Post-Test Practice Scores of Schools Teachers

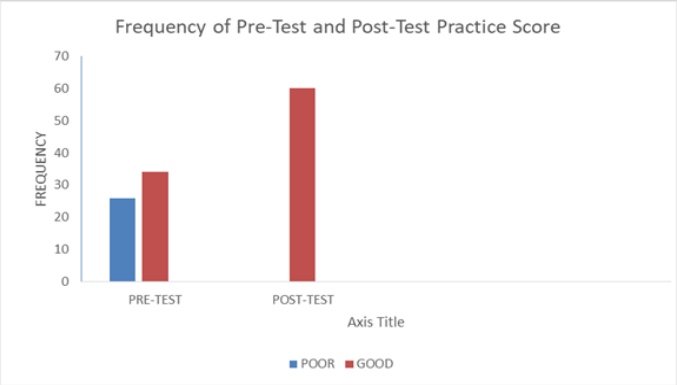
Frequency distribution of pre-test and post-test practice scores are presented in Table 4. Two categories were made for the grading score with "GOOD" denoting scores equal and higher than median and "POOR" denoting scores less than median (Median=8). The practice scores obtained by the school teachers were tabulated on the master sheet.

Table 3: N=60

		Pre-Test		Post-Test	
Range of score	Practice score	Frequency	%	Frequency	%
0-7	Poor	26	43.33%	0	0%
≥8	Good	34	56.66 %	60	100%
	TOTAL	60		60	

Median pre-test=8

Figure 9: N=60



The data in the above figure 9 shows that among 60 samples, in the pre- test 26 nos (43.33%) were POOR and 34 nos (56.66%) had GOOD practice scores while in post-test entire 60 nos (100%) had GOOD practice scores.

Table 4: N=60

Knowledge score	Mean	SD
Pre-test	19.0	3.36
Post-test	24.06	2.4

The above table 4 show that the mean pre-test knowledge score was 19.0 and the mean post-test knowledge score was found to be 24.06. The standard deviation of the pre-test knowledge score was 3.36 and the post-test knowledge score was found to be 2.4

Table 5: N=60

Practice Score	Mean	SD
Pre-Test	8.2	2.47
Post-Test	23.3	2.3

The above table 5 shows that the mean Pre- test practice scores were 8.2 and the mean Post- test Practice scores were found to be 23.3. The standard deviation of the Pre-test practice score was 2.47 and the post-test practice score was found to be 2.3.

Effectiveness of The Planned Teaching Program On Knowledge of First Aid Management of Selected Minor Injuries Among School Teachers in Selected English Medium Schools of Meghalaya Paired T-Test:

To test the significant difference, the following hypothesis is formulated.

H0: There is no significant difference in the knowledge score, after the Planned Teaching Program.

In order to find out the significant difference between pre-test and post-test, after the planned teaching program, the data was tested using the paired 't' test and the 't' value was computed.

Table 6:

	Pre- Test	Post-Test	't'	P
	Mean±SD	Mean±SD	Value	Value
knowledge	19.0±3.36	24.06±2.4	-13.173	0.000*

(P value=0.05)

*significant

The data presented in the above table 6 depicts that there is a significant difference between the mean pre-test and post-test knowledge score. Paired-t test value is -13.173. Hence, the null hypothesis is rejected.

Effectiveness of The Planned Teaching Program On Practice of First Aid Management of Selected Minor Injuries Among School Teachers in Selected English Medium Schools of Meghalaya Paired T-Test

H0: There is no significant difference in the knowledge score, after the Planned Teaching Program

In order to find out the significant difference between pre-test and post-test, after the planned teaching program, the data was tested using the paired 't' test and the 't' value was computed.

Table 7: N=60

	Pre-Test	Post-Test	't' Value	P Value
	Mean ± SD	Mean ± SD		
Knowledge	8.2± 2.47	23.3±2.3	-38.51	0.000*

(P value =0

The data presented in the above table 7 depicts that the computed value of practice score between the Pre-test and post- test is significantly different. Paired t-test value is -38.51 ($p \leq 0.001$) at 0.05 level of significant. Hence the null hypothesis is rejected.

Thus, it is shown that there is significant difference in practice score between pre-test and post-test.

Section 3: Finding the association between knowledge and practice scores regarding first aid management on selected minor injuries with demographic variables.

Association between Knowledge On First Aid Management of Selected Minor Injuries with Selected Demographic Variables with Chi-Square Test

H0: There is no significant association of knowledge with selected demographic variables, after the planned Teaching program**.**

The Chi-square value computed between the post-test knowledge scores with the demographic variables is lower than the tabled value($p<0.05$) level of significance. Hence, we accept the null hypothesis that there is no significant association between knowledge score and demographic variables of the school teachers, after the planned teaching program.

Association between Practice Scores On First Aid Management of Selected Minor Injuries with Selected Demographic Variables with Chi-Square Test

H0: There is no significant association of practice score with selected demographic variables, after the Planned Teaching Program.

The Chi-square value computed between the post-test practice scores with the demographic variables is lower than the tabled value ($p<0.05$) level of significance. Hence, we accept the null hypothesis that there is no significant association between practice scores and demographic variables of the school teachers, after the planned teaching program.

*=Significant

Discussion

The present study revealed that during pre-test (43.3%) of the participants, the participants had poor knowledge on first aid management of selected minor injuries. The mean score of knowledge on first aid management of selected minor injuries was 19.0 during the pre-test. The participants were categorised into "GOOD" and "POOR" knowledge on first aid management of selected minor injuries based on the median score. The median score for pre-test was 19. Participants scoring 19 and above were termed as "GOOD" while the ones scoring less than 19 (i.e. 18 and below) were termed as "POOR". Tabulation of the pre-test scores indicated that there were 34 participants were "GOOD", while 26 participants were "POOR".

Similarly, for the practice score, the present study revealed that the mean practice score on first aid management of selected minor injuries was 8.2 during the pre-test. The median for practice score is 8. The participants were categorised into "GOOD" and "POOR"

practice on first aid management of selected minor injuries based on the median score. Participants scoring 8 and above were termed as "GOOD" while the ones scoring less than 8 (i.e. 7 and below) were termed as "POOR". All participants score less than 8, hence all participants were "POOR".

The findings of the current study are supported by a study done by Rakhi Pandey, Richa Dobhal et al., 2017 to assess the first aid knowledge among health assigned teachers of primary schools shows that majority of health assign teachers were having average knowledge about first aid i.e. 29 (72.5% and 10 (25%) were having good knowledge and 1 (2.5%) was having poor knowledge regarding first aid.

Conclusion

The mean knowledge score in pre-test was 19.0 and in post-test was 24.06. The SD for pre-test was 3.36 and SD for post-test was 2.4. The paired t-test value is -13.173 with confidence interval. The mean practice score in pre-test is 8.2 and post-test is 23.3. The SD for pre-test is 2.47 and SD for post-test is 2.3, which shows there is significant difference between knowledge and practice score after the planned teaching program. Chi-square results show no association with demographic variables with knowledge and practice. The study concluded that majority of the participants 98.33% (59) achieved good knowledge and 100% (60) achieved good practice skills regarding first aid management of selected minor injuries after the planned teaching program.

References

1. Giridara Gopal Parmeswaran, Mani Kalaivani, Sanjeev Kumar Gupta, Anil Kumar Goswami, Baridalyne Nonkynrih. "Unintentional Childhood Injuries in Urban Delhi".A community-based study. Indian Journal of Community Medicine/Vol 42/ Issue 1/ January- March 2017: 8-9.
2. Viral R Dave, Bhavik Mukesh Rana, Venu R. Shah, Kantibhai N. Sonaliya. "A study on Epidemiology of Unintentional Childhood Injury at One of the Districts of Gujarat state". An Indian Council of Medical Research Task Force Study. Indian Journal of Community Medicine 2022 April-June;47(2): 187-191.
3. Ali E.Mansour, Ahmad Hamad Alsager, Abdulrahman Abdullah Alasqah, Addulaziz Abdullah Alsuhaibani, Abdullah Ibrahim, Abdulaziz Abdullah Alayed, Abdulmalik Abdullah Aljlali, Hassan Abdullah Almogbel, Ibrahim Musaad Alijuraifani, Abdullah Saleh Altamimi."Knowledge and Practice of Primary School Teachers about First Aid Management of Minor Injuries among Children in the Qassim region, Saudi Arabia". International Journal of Medicine in Developing Countries,2019;3(11): 941-946.
4. Hussein M.A Al-Tamimi and Fatima W. Khudair." Knowledge and Attitudes of Primary School Teachers Toward First Aid in Al-Najaf Al-Ashraf City". International Journal of Current Research and Academic Review 2016;4(12): 64-79.
5. Kalabarathi Selvaraj." Assessment of Knowledge Regarding First Aid Measures for Common Injuries in Children among School Teachers". Indian Journal Applied Research. Vol 9/Issue 8/ August 2019:1.
6. Navjot Kaur, Savitri and Mandeep Kaur." A Descriptive Study to Assess the Level of Knowledge Regarding the First Aid Management among School Teachers in Selected Schools of District Mohali, Punjab. Journal of Health and Medical Informatics 2017. Vol 8, Issue 4 : 1-4.
7. Gitumoni Konwar, Nirmala Gogoi, Anusuya Goswami, Bidyashori Konjenbam. "A Review on Awareness of First Aid among Students. IP Journal

of Pediatrics and Nursing Science. Vol 4, Issue 3,2021: 87-89.

8. Darshana Hazarika, Ranjita Devi and M Thoibi Devi."Effectiveness of Self- Instructional Module on Knowledge Regarding First Aid Management Among Anganwadi Workers in Selected District of Sikkim. International Journal of Advance Research in Community Health Nursing 2021;3(1):33-38.
9. Indian Red Cross Society- Belgian Red Cross Flanders. Indian First Aid Guidelines. 2014.
10. St. John Ambulance- British Red cross. First Aid Manual. 2016.
11. Medline Plus. Bruises- Also called: Contusion, Ecchymoses; retrieved from: http:// medlineplus. gov/bruises.html.
12. Godoy Medical Forensics Incorporated. Abrasions & Lacerations; retrieved from: http:// godoymedical. net/abrations-lacerations/.
13. MedicalNewsToday. Yellow Scabs: What do they mean? retrieved from: https:// www. medicalnewstoday.com/articles/325821.
14. Anne Waugh, Allison Grant. Ross & Wilson. Anatomy and Physiology in Health and Illness. Thirteenth Edition International Edition. Page Number: 262- 264.Published by Reed Elsevier Private Limited; 2015.
15. Polit DF, Beck.C.T. Nursing Research Generating and Assessing Evidence for Nursing Practice. 2nd edition. New Delhi: Wolters Kluwer; 2011.
16. Shobha Masih, Rajesh Kumar Sharma, Atul Kumar," Knowledge and practice of primary school teachers about first aid management of selected minor injuries among children "; Dehradun District, Uttarakhand. International Journal of Medicine & Public Health 4 (4) 2014.
17. Rakhi Pandey, Richa Dobhal et al.,"First aid knowledge among health assigned teachers of primary schools"; Dehradun Uttarkhand. International Journal of Research in Medical Sciences ;Pandey R et al.Int J Res Med Sci. 2017 Apr; 5(4): 1522-1527.
18. 1st Ms. Beena Devi,2nd Ms. Neerja Massey et al., "A study to assess the knowledge and practices regarding first aid and emergency care among primary schools teachers in selected primary schools at Gurgaon"; 2023 IJCRT| Volume 11, Issue 5; May 2023.
19. Suresh K.Sharma. Nursing Research and Statistics.3rd Edition.Elsevier; 2018.