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RESEARCH ARTICLE

KNOWLEDGE OF PRIMARY SCHOOL TEACHERS" ABOUT" FIRST AID" ON SELECTED MINOR INJURIES AMONG PRIMARY SCHOOL CHILDREN

*Mr. Vikas Choudhary and Mr. Yogesh Yadav

Principal Cum Professor JSNC, Jaipur

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ABSTRACT

Introduction: First aid is the treatment of any injury or sudden illness before professional medical help can be provided to prevent the condition worsening, fast recovery and preserve life. **Material and Methods:** An evaluative approach with one group pre-test and post-test design was used as research design in the study. Fifty participants were selected as sample by using purposive sampling technique. The data were collected using structured knowledge questionnaire and compliance check list through interview schedule. **Result:** The data analysis that the mean post test knowledge (18.52± 2.628) scores were apparently higher than the pre test knowledge (14.54 ±2.383) scores. The median of the post test (19) was also found to be higher than the median of the pre-test scores (15). Total post test mean Knowledge score (34.52) in all areas of first aid of selected minor injuries was higher than the total pre test mean score (27.64). the mean post test score in the areas of Psychology of children about play, Safe and healthy environment of school, Concept of First aid, First aid Box, Concept of minor injuries Management of Minor wounds, Musculoskeletal injuries Minor burn and scald, Dental injuries, Epistaxis, Minor ear and ear injuries and Application of dressing and bandages. **Conclusion:** The programme was highly effective in increasing knowledge and practice of primary school teachers about first aid on selected minor injuries among primary school children.

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INTRODUCTION

First aid is the treatment of any injury or sudden illness before professional medical help can be provided. The aim is to prevent the condition worsening, fast recovery and preserve life. It is not medical treatment, and cannot be compared with what a doctor would do, however it simply involves making common sense decisions based on quick observation that will help the injured person, until medical help arrives (Gupta, 2004). Most injuries are minor and can be treated without medical attention such as bruises, minor fractures, sprains and strain. Other forms of minor injury such as minor burns, minor wound like cuts, Abrasions and Scratches, slight pain due to falling, and more over soft tissue injuries. These injuries are caused by torn, stretched or damaged fibers in muscles, ligaments, tendons, blood vessels or the tissues its occurs due to falling, playing fighting etc and also first degree burns (sunburn), second degree burns (blisters) should be treated by first aid management (Singh Ajay, 1999). The knowledge of First Aid, when properly applied, can mean the difference between temporary or permanent injury, rapid recovery or long-term disability, and the difference between life and death.

Learning about first aid gives the confidence, to not react as an panic, but when emergency arises act as necessary help to preserve the life of the clients. So Knowledge of first aid helps to stay safe and health (Gulani, 2005). Children are more active, competent, adventitious and are vulnerable to injuries and accidents that may occur in schools. The children below 16 years of age are more prone to get injuries or trauma. Most common problems are sports injuries, eye injuries, and nose bleeding which often occurs. Children spend most of the time in school under the direct supervision of teachers. They are also exposed to various types of epidemiology factors in the school which influence their present and future state of health (Gulani, 2005). School health is an important branch of community health according to modern concept, school health is an economical and powerful mean of raising community health and more important in future generations (Park, 2005). So First Aid should be known by a school teacher to meet the urgent needs of these victim. Teacher is the key person in school who can attend in such type of victim probably will be in a position to save the life. When the investigator visited school during school health programmes, Investigator understood that, the teachers had lower knowledge regarding First Aid, Hence this information made investigator to think about the situation in Jaipur district prompting to make study among the teachers of primary school in Jaipur district with the help of health education in the form of structured teaching programme. The important aims of school health services are

*Corresponding Author: Mr. Vikas Choudhary,
Principal Cum Professor JSNC, Jaipur.

to provide safe and healthy environment to children by the school teachers and early detection of health problems and refer the children if needed (Basvanthappa, 2009).

Objectives of study

6. To evaluate the effectiveness of structured teaching programme about First aid management on selected minor injuries of Primary school teachers in selected Primary schools of Rajasthan.
7. To find the association between pre test level of knowledge and selected demographic variables.
8. To find the association between pre test level of self Reporting checklist and selected demographic variables.
9. To find correlation of knowledge and Practice Score of Structured teaching programme on First Aid on selected minor injuries.

Hypothesis

- **H₁**- The mean post test level of knowledge primary school teacher about first aid management on minor injuries will be significantly higher than that of their mean pre test level of knowledge.
- **H₂**-The mean post test level practice of primary school teacher about first aid management on minor injuries will be significantly higher than that of their mean pre test level of practices.
- **H₃**-There will be association between pre test level of knowledge and practice of primary school teachers with selected demographic variables.

MATERIALS AND METHODS

The research approach adopted for the study was experimental with one group pre test post test design. Fifty participants were selected primary school teachers regarding first aid of selected minor injuries among primary school children in primary schools, Jaipur (Rajasthan). A structured teaching programme which includes demographic variables, factors influencing compliance check list, structured knowledge questionnaire and compliance check list was used to collect the data Table 1. The data presented in table shows that is majority (94%) of the school teachers are female, and age group (50%) were equal in below 40 and above 40 yrs of age. Educational qualification majority of school teachers were have professional qualification like basic teacher training. Mostly (60%) are married those having one and more than one children. Mostly (84%) School Teachers have Teaching experience 0-15 yrs. Majority of the teachers (72%) has pervious experience of handling injured child in schools. Primary school teachers most of (76%) were not attended any specific seminar or workshop related to first aid management of minor injuries. but (74%) School teachers have appropriate information about First Aid. Source of information higher (64%) through literature like health news paper, magazine, health letter than from friends, relatives and health personnel.

Table 2 Comparisons Between Pretest Knowledge And Post Test Knowledge Score: In this section, Comparison of pre-test and post-test knowledge scores of primary school teachers about First aid management regarding selected minor injuries among primary school children and to test the

statistical significance null hypothesis is given in Table 2 comparison between pretest and post test knowledge score. The data presented in table-2 show that the mean post test knowledge scores were apparently higher than the pre test knowledge scores. The median of the post test (36) was also found to be higher than the median of the pre-test scores (29) Table 3 Mean, Mean difference and t- value of pre-test and post-test knowledge of primary school teachers regarding First Aid management about selected minor injuries among school teachers. The data presented in table-3 show that the obtained' value is 8.13 which is significant at 0.05 level. Hence the researcher rejected the null hypothesis and alternative hypothesis was accepted indicating the gain in knowledge was not by chance but because of existing knowledge and the intervention. Table-4 Independent values computed to see the significance between the pre-test knowledge level of primary school teachers and selected variables like Age, Educational status, marital status, Number of Children, information about First Aid, If yes than Source of information.

For 9 variables, cui-squire, Yates and fissure test was applied. The data presented in the table 4 shows that the independent values obtained for the 6 variables such as gender age, education, marital status, number of children, previously handling of injured children at school and source of information were Non significant. Hence the researcher failed to reject the null hypothesis but the values obtained for the variable such as, yrs of experience, attendant of seminar or workshop and information about first aid had a significant association with knowledge at 0.05 level of Significance. Data presented in table 5 indicate that the total post test mean Knowledge score (34.52) in all areas of first aid of selected minor injuries was higher than the total pre test mean score (27.64). the mean post test score in the areas of Psychology of children about play, Safe and healthy environment of school, Concept of First aid, First aid Box, Concept of minor injuries Management of Minor wounds, Musculoskeletal injuries Minor burn and scald, Dental injuries, Epistaxis, Minor ear and ear injuries and Application of dressing and bandages.

Section 3. Tests to find the significance of difference between the means of pre test and post test practices scores of primary school teachers about first aid management regarding selected minor injuries among primary school children.

In order to find the significance of difference between two correlated means of pretest and post test practices scores, t-value was computed.

H₁The mean post test knowledge scores of primary school teacher's about First Aid Management regarding selected minor injuries among school children will be higher than the mean pretest knowledge scores as measured at 0.05 level of significance.

Section -C Tests to find the

Table -10 shows the correlation among pretest knowledge and pretest practices are negative correlation ship. Means pretest they have positive relation with existing knowledge and practices.

Section A. Demographic Characteristics of primary school teachers (N=50)

| S.no | Sample characteristics | Primary school teachers | |
|-------|---|-------------------------|------------|
| | | Frequency | Percentage |
| 1. | Gender | | |
| 1.1 | Male | 3 | 6% |
| 1.2 | Female | 47 | 94% |
| 2. | Age | | |
| 2.1 | <40 | 25 | 50% |
| 2.2 | >40 | 25 | 50% |
| 3. | Educational status | | |
| 3.1 | Professional | 39 | 78% |
| 3.2 | Others (B.A, B. ED, MA) | 11 | 22% |
| 4. | Marital status | | |
| 1.1 | Married | 30 | 60% |
| 1.2 | Unmarried | 20 | 40% |
| 4.1 | If married than no of children | | 26.66% |
| 4.1.1 | One children | 8 | 73.33% |
| 4.1.2 | More than two children | 22 | |
| 5. | Years of experience | | 84% |
| 5.1 | 0-15yrs | 42 | 16% |
| 5.2 | >15Yrs | 8 | |
| 6. | Previous experiences of handling injured children in schools. | | |
| 6.1 | Yes | 36 | 72% |
| 6.2 | No | 14 | 28% |
| 7. | Have attendant seminar. | | |
| 7.1 | Yes | 7 | 14% |
| 7.2 | No | 43 | 86% |
| 8. | Information about first aid. | | |
| 8.1 | yes | 37 | 74% |
| 8.2 | No | 13 | 26% |
| 9. | Sources of information. | | |
| 9.1 | Through literature | 32 | 64% |
| 9.2 | Through health personnel, friends and relatives | 18 | 36% |

Table 2. Shows that comparison between the pretest and post test knowledge score

| S.no | Knowledge score of Primary school teachers | Range | Mean \pm Sd | Median | Mean difference | "t" value |
|------|--|-------|------------------|--------|-----------------|-----------|
| 1. | pretest | 11-36 | 27.18 \pm 5.52 | 29 | 7.72 | 8.13 |
| 2. | post test | 24-39 | 34.9 \pm 2.79 | 36 | | |

"t" table value at $p < 0.05$ is = 2.01

Table 3. Different between Mean, Mean difference and t- value of pretest and post test knowledge score

| S. N. | knowledge score of primary school teachers | Mean \pm Sd | Mean difference | "t" value |
|-------|--|------------------|-----------------|-----------|
| 1. | Pretest | 27.18 \pm 5.52 | | |
| 2. | post test | 34.9 \pm 2.79 | 7.72 | 8.13 |

Table 4. Association of pretest knowledge score with selected demography variables

| S.No | Demographic Variables | Above Median >29 | Below Median <29 | Calculated Value | Significance |
|-------|--|------------------|------------------|------------------|--------------|
| 1. | GENDER | | | | |
| 1.1 | Male | 2 | 1 | 0.5914 | NS |
| 1.2 | Female | 26 | 21 | | |
| 2. | AGE | | | | |
| 2.1 | Below 40 | 20 | 19 | 0.037 | NS |
| 2.2 | Above 40 | 6 | 5 | | |
| 3. | EDUCATION | | | | |
| 3.1 | Professional trained | 27 | 13 | 1.553 | NS |
| 3.2 | Others | 4 | 6 | | |
| 4. | MARITAL STATUS | | | | |
| 4.1 | Married | 16 | 14 | 2.391 | NS |
| 4.2 | Unmarried | 15 | 5 | | |
| 4.1 | IF MARRIED THAN NO OF CHILDREN | | | | |
| 4.1.1 | One child | 5 | 3 | 0.117 | NS |
| 4.2.2 | More than two child | 17 | 5 | | |
| 5. | YEARS OF EXPERIENCES | | | | |
| 5.1 | 0-15Yrs | 19 | 19 | 0.254 | NS |
| 5.2 | Above 15 yrs | 7 | 5 | | |
| 6. | PREVIOUS HANDLING OF INJURED CHILDREN | | | | |
| 6.1 | Yes | 12 | 21 | 7.754 | *S |
| 6.2 | No | 14 | 3 | | |
| 7. | HAVE ATTENDED SEMINAR OR WORKSHOP. | | | | |
| 7.1 | Yes | 10 | 2 | 4.669 | *S |
| 7.2 | No | 16 | 22 | | |
| 8. | INFORMATION ABOUT FIRST AID | | | | |
| 3.1 | Yes | 13 | 19 | 4.993 | *S |
| 3.2 | No | 14 | 4 | | |
| 9. | SOURCE OF INFORMATION | | | | |
| 9.1 | Through literature | 24 | 16 | 0.328 | NS |
| 9.2 | Through health personnel, relatives and friends, | 5 | 5 | | |

"t" value 49=2.01, $p < 0.05$ NS= Not Significant at 0.05 level S= Significant at 0.05 level

Table 5. Areas wise Maximum possible score mean and standard deviation of pretest and post test knowledge score obtained by teachers in 12 areas of first aid management

| S.No | Knowledge Areas | Maximum Possible Score | Pre-Test Score | | Post Test Score | |
|------|--|------------------------|----------------|-------|-----------------|-------|
| | | | Mean | Sd | Mean | Sd |
| 1 | Psychology of children about play | 2 | 1.62 | 56.70 | 1.92 | 67.20 |
| 2 | Safe and healthy environment of school | 4 | 2.3 | 56.92 | 2.9 | 72.13 |
| 3 | Concept of First aid | 3 | 2.28 | 65.37 | 3.06 | 87.74 |
| 4 | First aid Box | 4 | 2.62 | 65.1 | 3.34 | 83.00 |
| 5 | Concept of minor injuries | 3 | 2.26 | 64.8 | 2.76 | 79.14 |
| 6 | Management of Minor wounds | 3 | 2.04 | 58.49 | 2.76 | 79.14 |
| 7 | Musculosketel injuries | 11 | 6.18 | 93.0 | 7.3 | 109.8 |
| 8 | Minor burn and scald | 2 | 1.8 | 63.0 | 2 | 70.0 |
| 9 | Dental injuries | 2 | 1.38 | 48.31 | 1.94 | 67.99 |
| 10 | Epistaxis | 2 | 1.46 | 51.10 | 1.96 | 68.6 |
| 11 | Minor ear and ear injuries | 3 | 1.68 | 48.17 | 2.6 | 74.55 |
| 12 | Application of dressing and bandages | 3 | 1.68 | 48.17 | 1.98 | 74.55 |
| | Total | 42 | 27.64 | 653.5 | 34.52 | 932.2 |

S D=Standard Deviation

Table 6. Distribution of pretest and post test practices scores by Range, Mean, Median, Standard deviation

| N=50 | | | | |
|------|--|-------|---------------|--------|
| S.no | Practices Score Of Primary school teachers | Range | Mean ± Sd | Median |
| 1. | pretest | 10-19 | 14.54 ± 2.383 | 15 |
| 2. | post test | 12-22 | 18.52 ± 2.628 | 19 |

‘t’ value 49=2.01,p<0.05

Table 7. Significance of different the mean of pre-test and post-test practices score of primary school teachers regarding first aid of selected minor injuries

| Different between mean of pretest and post test practices score. | | | | N=50 |
|--|--|---------------|-----------------|-----------|
| S.no | Practices Score of primary school teachers | Mean ± Sd | Mean Difference | ‘t’ Value |
| 1. | Pretest | 14.54 ± 2.383 | 3.94 | 22.79 |
| 2. | post test | 18.52 ± 2.628 | | |

Table 8. Association of pretest practices score with selected demography variables.

| N=50 | | | | | | |
|------|--|------------------|------------------|------------------|--------------|----|
| S.no | Demographic Variables | Above Median >15 | Below Median <15 | Calculated Value | Significance | |
| 1. | GENDER | | | | | |
| | 1.1 Male | 1 | 2 | 0.4389 | NS | |
| | 1.2 Female | 26 | 21 | | | |
| 2. | AGE | | | | | |
| | 2.1 Below 40 | 16 | 15 | 2.391 | NS | |
| | 2.2 Above 40 | 14 | 5 | | | |
| 3. | EDUCATION | | | | | |
| | 3.1 Professional trained | 22 | 19 | 0.018 | NS | |
| | 3.2 Others | 4 | 5 | | | |
| 4. | MARITAL STATUS | | | | | |
| | 4.1 Married | 19 | 11 | 0.057 | NS | |
| | 4.2 Unmarried | 12 | 8 | | | |
| 4.1 | IF MARRIED THAN NO OF CHILDREN | | | | | |
| | 4.1.1 One child | 6 | 5 | 0.032 | NS | |
| | 4.2.2 More then two child | 11 | 8 | | | |
| 5. | YEARS OF EXPERIENCES | | | | | |
| | 5.1 0-15Yrs | 25 | 13 | 2.724 | S | |
| | 5.2 Above 15 yrs | 4 | 8 | | | |
| 6. | PREVIOUS HANDLING OF INJURED CHILDREN | | | | | |
| | 6.1 Yes | 18 | 15 | 0.475 | NS | |
| | 6.2 No | 11 | 6 | | | |
| 7. | HAVE ATTENDED SEMINAR OR WORKSHOP. | | | | | |
| | 7.1 Yes | 4 | 8 | 2.724 | S | |
| | 7.2 No | 25 | 13 | | | |
| | | 29 | 21 | | | |
| 8. | INFORMATION ABOUT FIRST AID | | | | | |
| | 3.1 Yes | 17 | 15 | 3.337 | S | |
| | 3.2 No | 4 | 14 | | | |
| 9. | SOURCE OF INFORMATION | | | | | |
| | 9.1 Through literature | | 13 | 17 | 0.055 | NS |
| | 9.2 Through health personnel, relatives and friends, | | 8 | 12 | | |

‘t’ table value at p<0.05is =2.01 NS= Not Significant at 0.05 level S= Significant at 0.05 level

Table 9. Maximum possible score mean and standard deviation of pretest and post test knowledge score obtained by teachers in 12 areas of first aid management.

| S.No | Practices Areas | Maximum Possible Score | Pre-Test Score | | Post Test Score | |
|------|--|------------------------|----------------|-------|-----------------|-------|
| | | | Mean | *SD | Mean | *SD |
| 1 | Safe and healthy environment of school | 2 | 1.14 | 39.90 | 1.6 | 56.0 |
| 2 | Concept of First aid | 5 | 1.38 | 29.84 | 1.8 | 40.0 |
| 3 | First aid Box | 3 | 2.84 | 81.43 | 3.3 | 94.62 |
| 4 | Management of Minor wounds | 2 | 1.48 | 51.80 | 1.94 | 67.90 |
| 5 | Musculoskeletal injuries | 4 | 2.08 | 51.74 | 2.54 | 63.18 |
| 6 | Minor burn and scald | 2 | 1.3 | 45.50 | 1.76 | 61.6 |
| 7 | Epistaxis | 1 | 0.98 | 48.02 | 1.46 | 71.54 |
| 8 | Minor ear injuries | 1 | 1.7 | 83.3 | 1.98 | 97.02 |
| 9 | Application of dressing and bandages | 3 | 1.46 | 41.86 | 1.92 | 55.05 |
| | Total | 23 | 14.36 | | 18.3 | |

*SD=Standard Deviation

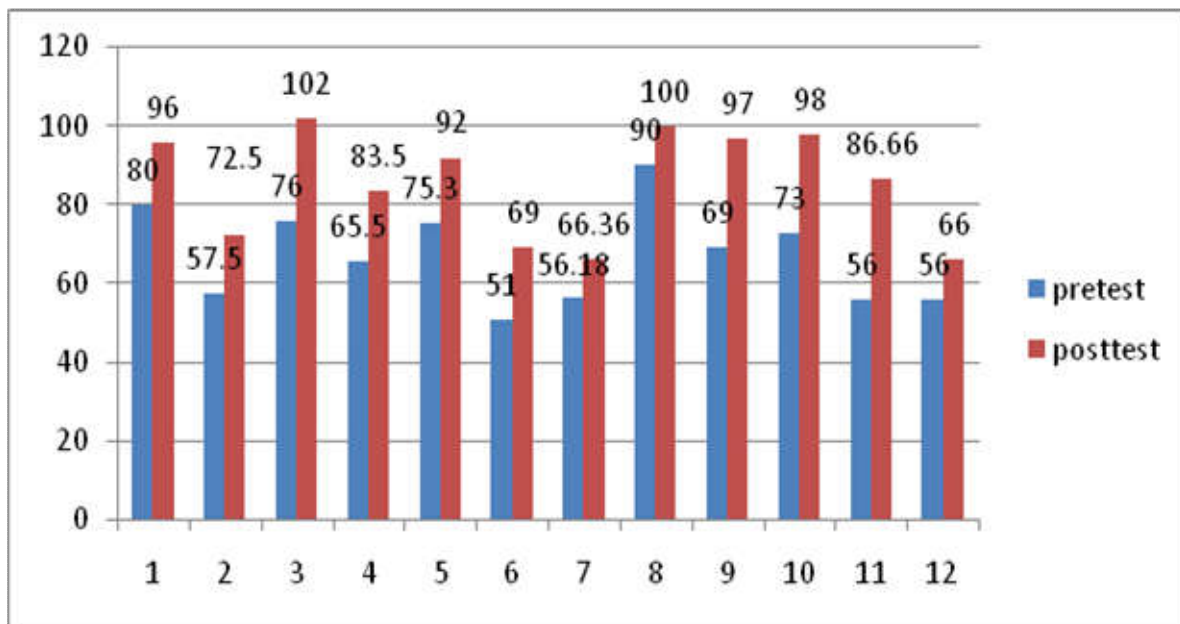
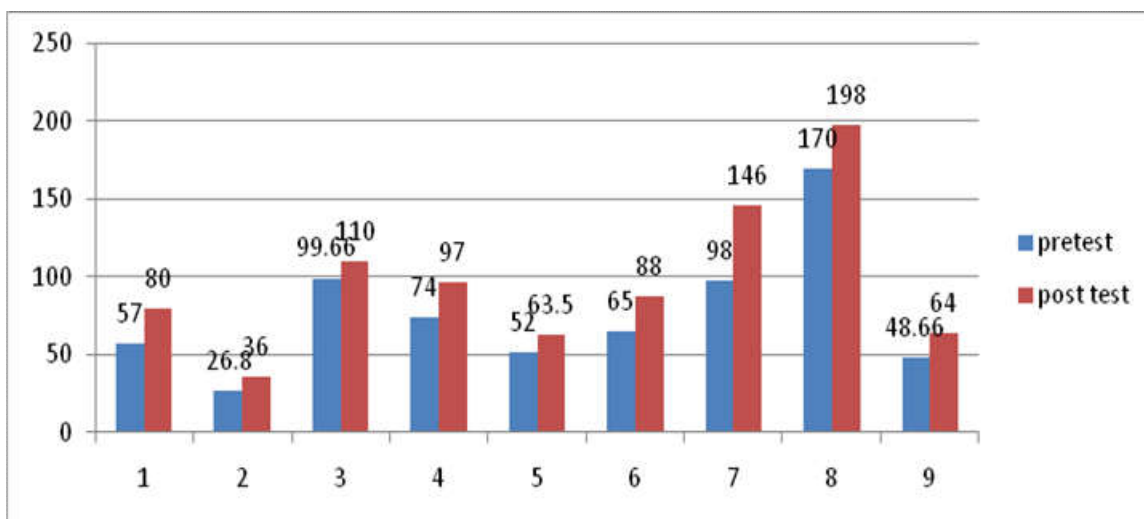


Figure 1. Shows areas wise mean percentage of pretest and post test knowledge score on First aid among primary school teachers



Keys of area:-

1.Healthy environment of school. 2. Concept of first aid among primary school teachers. 3. Practices about first aid Box.4.Management of minor wound.5. Musculoskeletal injury .6.Minor burn and scald.7.Epistaxis.8.Minor ear and eyes injuries.9.Application of Dressing and bandaging.

Figure 2. Shows areas wise mean percentage of pretest and post test practices score on First aid among primary school teachers

Table 10. Correlation between pretest and post test knowledge and practices score

| S.No | Score | "r" Value |
|------|-----------|-----------|
| 1 | Pre-test | r = 0.6 |
| 2 | Post-test | |

Pearson's formula - Correlation is significant at the 0.01 level (2-tailed).

Table 11. Correlation between post test and post test knowledge and practices score

| S.NO | SCORE | "r" value |
|------|-----------|-----------|
| 1 | Pre-test | r = 0.8 |
| 2 | Post-test | |

Pearson's formula - Correlation is significant at the 0.01 level (2-tailed).

Table 11 shows the correlation among pretest knowledge and pretest practices are negative correlation ship. Means pretest they have positive relation with existing knowledge and practices.

Conclusion

The study was undertaken to evaluate the effectiveness of Teaching Programme on knowledge and practice of Primary school Teachers" about" First Aid" on selected Minor injuries among Primary school children.

There was a significant increase in the knowledge level of primary school children. Hence it may be concluded that not only attainment of knowledge but also continuous practice, reinforcement and time is necessary to for this.

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