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Effectiveness of Structured Teaching Programme on Sports Injuries Among High School Children in Selected High Schools, Kanpur

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Abstract

Injuries are common in sports. Sports injuries result from accidents and due to poor training practices, improper equipment, lack of conditioning, or insufficient warm up and stretching. Each year more than 3.5 million sports-related injuries requiring medical treatment occur in children under age of 15 years.[1] a structured teaching programme on sports injuries among high school children is important to make them aware of the sports injury which will enable them to prevent complications. Objectives of the study were to determine the knowledge of sports injuries among high school children by using structured knowledge questionnaire, To evaluate the effectiveness of structured teaching programme on sports injuries among high school children. And to find out the association of knowledge score of high school children's regarding sports injury with selected demographic variables the findings of the study revealed marked increase in the knowledge level of the high school children. The pre- test and post-test knowledge score of the high school children ranged from 8-19 and 18-26 respectively. In the pre test, majority (91.7%) of the high school children had moderately adequate knowledge, whereas in the post-test, majority (90%) of the high school children had adequate knowledge on sports injury. The mean pre-test knowledge score was 13.6+2.68 and mean post test score was 23.16+1.99. Area wise mean percentage knowledge score in pre test were minimum in the areas of classification (42.99%) and management and prevention of sports injury (36.07%). In the other area the mean pre-test knowledge score was above 60% whereas, in the post test knowledge scores in all the areas was increased, 'introduction' (87.55%), 'classification' (80.91%) and 'management and prevention of sport injury' (70.92%). There was significant association between levels of knowledge score and selected demographic variable like gender (x^2=5.38*). There was no significant association between age (x^2=5.92), class of study (x^2=4.75), religion (x^2=0.00), suffering from sports injury (x^2=0.58) and previous knowledge on sports injury (x^2 = 0.71) at 0.05 level of significance.

Keywords: Sports injury; High school children; Structured Teaching Programme.

Introduction

Sports is a concept historically very familiar to societies and individuals, linked with the physical and mental well-being of the person and the enjoyment of play, often through peaceful athletic competition[2].

Sports help to improve physical fitness, develop confidence through learning skills and success. It provides exercise for growing muscles, interacting with peers in a socially acceptable means of enjoying stimulation. Competitive activities help teenagers to engage in self appraisal and develop self respect and concern for others.[3]

Sports injuries occur to athletes participating in sports events. Every sport has some potential for injury to the participant.[4] The popularity of sports has increased and also the injuries. Injuries range from minor soft tissue strains to major disruptions of vital organs and bone fractures. Each sport has its characteristic injury profile and degree of risk and varies among sport.[5]

Schools provide an environment for learning skills and for the development of intelligence that can be utilized by students to achieve their goals in life.[6] Providing knowledge to children regarding sports injuries helps to prevent injury and reduce complications. Although most injuries in children are not life threatening, they may coincide with direct pain, short-term disability, school absence and long term consequences such as osteoporosis in later life[7].

The investigator has personally noticed that a lot of sports injuries are found in high school children compared to other children because in this period children are more involved in sports participation. There is a need to increase knowledge regarding prevention and management of sport injury among high school children. Hence the investigator felt it necessary to teach high school children regarding prevention and management of sports injuries.[8]

Materials and method

Pre-experimental one group pre-test post-test design was used to determine effectiveness of structured teaching programme on sports injuries among high school children. The sample comprised of 60 high school children. In this study schools were selected by random sampling method and the high school children (sample) were selected by stratified random sampling.

The main study was conducted by including the high school children of st.xavior's English medium belonging to an urban area of Kanpur. Informed consent from the high school children was obtained prior to the data collection process. The data were collected by administering a structured knowledge questionnaire consisted of three areas. The structured teaching programme was conducted. Post-test was administered on the 7th day.

Results

Section A: Description of the demographic variables of the sample

Most (41.7%) of the high school children where in the age group of 14 years, and least percentage(1.6%) of them were in the group of 12 years. Equal percentage (33.3%) of high school children was from 8th, 9th and 10th standard. The sample included the equal percentage (50%) of male and female high school children. All (100%) the selected samples were Hindus. The 50% of students had suffered a sports injury. Highest percentage of students (60%) had no previous knowledge regarding sports injury management and prevention.

Section B: Description of knowledge of high school children regarding sports injury.

Knowledge assessment on sports injuries revealed that in pre-test most (91.7%) of the high school children had moderate knowledge, and none of them had adequate knowledge, where as in post-test most(90%) of the high school children had adequate knowledge and none of them had inadequate knowledge. Comparing the pre-test with post-test score, it was found that all the subjects scored higher in the post-test than the pre-test.

Data in Table 1 shows that in the pre-test, mean percentage was highest in the area of introduction (62.50%) and least in the area of management and prevention (36.07%) where as in the post-test, the mean percentage score for the area of introduction increased to 87.50% and for the area of management and prevention was increased to 70.92%.

Table 1: Area wise mean percentage and mean gain of pre test and post test knowledge score of high school children regarding sports injury N=60

Areas of knowledge	Mean percentage scores		Mean possible gain (%)	Mean actual gain (%)	Modified gain
	Pre test	Post test			
Introduction	62.50	87.50	37.50	25.00	66.66
Classification	49.66	80.91	50.34	31.25	62.07
Management & prevention	36.07	70.92	63.93	34.85	54.51

Section C: Effectiveness on structured teaching programme on sports injury.

The data in the Table 2 shows that the mean post-test knowledge score (23.15+1.99) was higher than the mean pre-test knowledge score(13.6+2.68) . The calculated t' value (26.979) was greater than the table value (t(59)=2.001) at 0.05 level of significance. Hence

the null hypothesis $H0_1$ was rejected and the research hypothesis H_1 was accepted.

Table 2: Mean, Mean difference, SD and t' value of pre and post test knowledge score N=60

Parameters	Mean	SD	Mean difference	t-value
Pre test	13.60	2.68		
			9.55	26.979*
Post test	23.15	1.99		
Df=59,t=2.001 p<0.05*			Significant	

Section D: Association of knowledge scores with selected demographic variables.

The association of the pre-test and post test knowledge score with selected demographic variables was found out using Chi-square test. The result shows there was a significant association of gender with pre-test and post-test knowledge score as the calculated value was more than the table value at 0.05 level of significance. So the null hypothesis $H0_2$ was rejected for this variable. However, no significant association was found between age, class of study, religion, suffering from sports injury and previous knowledge on sports injury with the pre-test and post-test knowledge score. Hence the null hypothesis was accepted by for this variable. This finding revealed that the post-test knowledge score was not associated with any demographic variable and it was only due to the planned teaching programme.

Discussion

The present study findings indicated that after the administration of structured teaching programme, the mean post-test knowledge score (23.15) was higher than mean pre-test knowledge score(13.16) and the difference between pre-test and post-test knowledge score was statistically significant ($t=26.979^*; p < 0.05$). The above study findings are supported by a study conducted to assess the effectiveness of injury minimization programme on road safety, accidents at home and school among 1200 school children in United Kingdom. The findings revealed that 10% difference in knowledge, skills and attitude and behaviour at 0.01 level of significance.[9]

The findings of the study are congruent with the study conducted to assess the effectiveness of structured teaching programme on road traffic accident among school children, Chennai The mean post-test knowledge score (83.44) was higher than mean pre-test knowledge score (62.81). Overall mean difference is 20.72 with SD 17.52 and t=15.37 were statistically significant. In brief it can be stated that structured teaching programme was very effective method in imparting information to school children[10].

Recommendations

- A similar study can be conducted with a larger sample to generalize the findings.
- Replication of the study can be done among the children who are not going to the school in the community.
- A descriptive survey can be conducted to assess the incidence and prevalence of sports injury.
- Comparative study can be conducted with a control group.
- Correlative study can be conducted to assess the knowledge and need for prevention regarding sports injury among children.
- Comparative study can be conducted to find out to find out the effectiveness between various teaching methodologies.

Conclusion

Pre-test findings showed inadequate knowledge of high school children on sports injuries. This existed in varying degrees among the high school children in all aspects of the sports injury. This highest deficit was noted in the area of management and prevention of sports injury. Structured teaching programme tested in the study was found to be effective in improving the knowledge of the high school children and an effective teaching method for providing information. It was very much appreciated by the high school children and they expressed their gratitude for providing information on sports injury.

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