

## **First Aid Training and its Impact on the Management Skills of Injuries in Sports at Secondary Schools**

\* Muhammad Hashim Darya

\*\* Nisar Ahmed Khaskheli (Corresponding Author)

\*\*\* Muhammad Rafique Daudpoto

### **Abstract**

*The First Aid Training among society has a huge effect in limiting the proportion of injuries. The pupil's dynamic in sports is practically on the danger of having wounds due to a pool of fundamental information to oversee sports wounds. This exploration study was led to determine the capability of the program on first aid training of the Pupils of schools. Seventy volunteer students were chosen arbitrarily for First Aid Training from government model secondary school Bhakkar, Punjab-Pakistan. At first, the medical aid information and abilities of the students have evaluated arbitrarily 70 game dynamic students. After that fourteen-day, First Aid Training was directed, through proficient Emergency Medical Technicians (EMTs) for those school students. After the fruition of First Aid Training, an overview was directed to know the adequacy of Training through a survey. The gathered information was dissected on (SPSS) rendition 20 the frequencies, rates, and t-test was performed. This examination demonstrated that First Aid Training improves the abilities and information on the students about First Aid.*

**Keywords:** First Aid Training, Impact Assessment, Sports Injuries

### **Introduction**

The significant contrasts among youngsters and grown-ups and different times of adolescence ought to be considered during crisis care. The contrasts between these gatherings exist in anatomic, physiologic, and mental turn of events yet additionally in openness to different harms and diseases. The psychological and actual capacities of kids are not sufficiently grown to permit them to ensure and shield themselves. They support mishaps and wounds all the more oftentimes and consequently require medical aid more frequently than do grown-ups (Cummins, et al., 1991). Kids support wounds identifying with active work in different physical and social conditions, including during local area coordinated games, at school, and keeping in mind that taking part in non-coordinated dynamic relaxation pursuits, for example, bike riding, swimming, and playing. Nonetheless, the genuine degree and examples of actual work-related wounds are generally obscure (Orchard & Finch, 2002). School security is a principal and imperative segment of the normal functional activities of the schools (Davis et al., 2014). Well-being gauges can decrease the odds of having any kind of troublesome circumstance yet nobody can ensure or preclude the event of accidents (Oduor & Omoro, 2012). Medical aid (FA) is one of the wellbeing measures, and assuming appropriately and conveniently utilized, it can emphatically keep the circumstance from deteriorating. In the field of activity, the event of the minor setbacks causing hurt, injury, stun, and disillusionment are the normal activities of sports exercises. It might occur in any game, anyplace, whenever, and to any individual partaking in any action (Omolo & Simatwa, 2010). Indeed it appears to have been a typical duty of each resident to have some information about the expertise of delivering First Aid, so various occurrences can be forestalled. Emergency treatment is the valuable wellspring of the essential consideration gave to a harmed individual or the person who abruptly becomes sick (Toli et al., 2013). Treatment of First Aid as a term is on-spot care given to an individual, who is genuinely harmed or mentally bothered with morals of any difficulty (Fritz et al., 2012). So for as, the essential condition as for the considerable level of the school understudies concerning First Aid is concerned, the current forming reflects weak picture. The greater part of the understudies are ignorant about the authentic procedure and limits of

\* Department of Physical Education and Sports Sciences, Sukkur IBA University, Sindh-Pakistan

\*\* Department of Physical Education and Sports Sciences, Sukkur IBA University, Sindh-Pakistan

\*\*\*Department of Statistics, University of Sindh, Jamshoro, Sindh-Pakistan

FA and they don't have the central information for quickly passing on First Aid to the destitution stricken. In genuine games and other co-curricular exercises, there exist plentiful odds of the event of wounds (Morawska et al., 2013). School affiliation has an immense part in making the climate safe and gets (Lunenborg & Orstein, 2012). In a general sense, they are liable for the event of events, so they should adjust the more young understudies with basic First Aid Training, through qualified coaches (Breckwoldt & Kreimeier, 2013). Need imperative is to familiarize the youngsters with the limits and information on passing on First Aid to conform to unexpected conditions. In any case, in our educational affiliations least idea is paid to this basic piece of typical regular presence.

### **Sports Injury**

Regardless of the multitude of advantages coming about because of cooperation in sports, for example, improved body organization, cardiorespiratory capacity, expanded strength, developed confidence/psychosocial prosperity, weight control, and less maltreatment of liquor and medications, among others (Harrison & Narayan, 2003) taking an interest in a game with such a lot of actual interest, like a ball, where the competitor performs dull bounces during games and preparing, unexpected alters in course, running and deceleration (Backx, et al.,1991) may bring about a more danger of injury. This prompts an expansion in wellbeing costs and visits to specialists and medical clinics, a decrease in court time, and an expanded danger of new wounds (De, et al., 2000). Wounds are important for athletic support, and a large number of these wounds are at first treated by an undeveloped workforce because of an absence of medical care suppliers on the athletic field. Mentors are frequently confronted with the obligation of really focusing on these harmed players. Secondary school athletic projects are one degree of games that have gone through investigation in the course of recent a very long time for their clinical consideration. Region and secondary school directors, mentors, and group doctors are being expected to take responsibility for wounds supported by members. The present overall set of laws expects an elevated requirement of clinical consideration to be given by high schools.1-5 various examinations have explored the different medical aid and athletic-injury therapy work duties appointed to secondary school athletic mentors (Stapleton et al., 1984).

### **First Aid**

Prompt assistance or pre-emergency clinic cure of the incidence to build them protected from long-time dismalness or mortality is called First Aid. Emergency treatment isn't simply given to genuinely harmed or sick individuals yet in addition to the individual experiencing trouble, which is brought about by seeing a stunning circumstance (Melissa et al., 2012). The job of First Aid is a lot huge, especially when the survivor of any setback or mishap is making progress toward his or her existence and just on schedule and brief First Aid can save his or her existence. Emergency treatment is the quick and ideal clinical help given to the casualty of any mishap (Oliveira et al., 2015). It is transitory clinical consideration of restricted degree gave to the casualty preceding the expert clinical treatment is begun (Silveira et al., 2016). Taking into account the essentialness of the difficulty it merited choosing to prepare and instruct the juvenile gathering so that to empower them to expeditiously adapt to a setback or mishap that occurred in the regular daily existence (Buckley et al., 2012). The number of inhabitants in the auxiliary schools for the most part involves the young people and on the off chance that they have appropriately been prepared in delivering First Aid and ably taking care of the survivor of any mishap, it will be helpful for the local area in general (Silver, 2013). School life is the critical period having a direct effect upon the psyche and strength of kids. During this pivotal period, they should be appropriately guided towards dealing with any difficulties which are probably going to happen in the regular daily existence. A colleague of the more youthful age with the abilities and information on First Aid, for adapting to accidents of the games wounds just as of day by day life has a lot of importance (Lord & Washington, 2018).

### **First Aid Training and its importance**

It is fundamental to hold a First Aid Training program in schools. Low level of schools gives First Aid Training to their young ones. In the United States, the level of those schools that gives First Aid Training is essentially 5.4 %, which is low when stood apart from the schools which didn't give any First Aid Training (Federal Emergency Management Agency [FEMA], 2011). In this chain framework four cycles were to be done, specifically, make conceivable that the misfortune is in your entry, second participation is to begin CPR (Kanstad et al., 2011), as precisely on time as could be considered typical, then apply Automatic Defibrillator (ADF) machine for defibrillation and last

affiliation is to move the misfortune to the closest emergency office for additional improvement clinical idea. The contemplated mid-four examples of cardiovascular tirelessness, CPR, and crisis care were finished later by the American Heart Association in 1992 (Cloutier et al., 2016). Crisis clinical help turned with outing be such a huge load of striking that essentially all the inhabitants of U.S. approach and expertise of the utilization of 911 associations (DuPaul & Stoner, 2014). In time reaction for Pre-emergency office treatment and moving of patient to the middle is the responsibility of commonplace government in the United States (Xu et al., 2014). Preparing of EMS has been orchestrated into four fascinating levels. In EMS arranging, starting degree of preparing is for the First responder. The First Responder is the individual who is set up to rapidly react to any crisis circumstance. The First Responder must check perils, cordon off the region and eliminate all utilities like force, gas, and so forth Person on call is prepared to act in a crisis circumstance with the least hardware (Capel & Whitehead, 2015). Crisis Medical Technicians should go through the instructional course of 110 hours, to deliver legitimate First Aid to the casualty of any occurrence. EMTs are dependable in the wake of accepting patients from First Responders, they need to settle the person in question and afterward oversee moving conventions (Fulmer et al., 2008).

During preparing as a matter of first importance, the student figures out how to save themselves and afterward the survivor of any episode from additional harm through risks. Security is an overall concern consequently there is a requirement for a Global stage to examine methods of giving well-being in schools and networks (Bastidas, 2011). Crisis circumstances can occur whenever, anyplace, and to anybody. Fast reaction assumes a crucial part to keep the circumstance from deteriorating. Without a specialist's recommendation, a prepared First Aider can conquer the circumstance by giving essential Medical aid to the setback at the scene. Brief arrangement of first aid is just conceivable if spectators additionally have some essential expertise of the First Aid. Because of youthfulness, young adult younger students have more odds of wounds and need First Aid quickly when contrasted with others. As an issue of basic perception, in physical games and other co-curricular exercises, there exist adequate odds of the event of wounds (AIHW, 2008).

#### **The environment of the school and the sports**

Mishaps may happen to any individual and wherever. School climate has more possibilities for the event of setbacks and mishaps. Various variables are engaged with the school climate, which is liable for the predominance of mishaps among younger students. Offspring of various age gatherings, even teenagers of the auxiliary segment of the school, stay together at the hour of amusement, or while taking part in sports rivalry. While sports rivalries are all around arranged and authorities are included, so there are adequate possibilities for the event of any disaster. Emergency treatment pack and a group of experts stay there on the time of sporting occasions and Teachers in Physical Education additionally possess the expertise of delivering first aid (Meyers et al., 2012). Different parts like arranged age, social association, and academic perspectives, physical and visionary issues may better portray clarifications behind the occasion of emergencies in the school (Burghofer et al., 2008). Episodes or setbacks persistently happen inside the school environment, no one can guarantee to make the environment liberated from all damage. To meet the sudden conditions, the top of the school must hold a First Aid Training program among adolescent understudies and teachers as well (Jiménez-Fábrega et al., 2009). Clinical guide Training makes capable the understudies to vanquish the condition and prevent disarrays because of stupid treatment of setback (MANUAL of incident balance and First Aid in schools, 2007).

Children are in preparing age, they wish to explore new things, and anyway, during this examination, there are sufficient chances of the occasion of catastrophes or setbacks. On the occasion of any emergency, in time appearance of help may lightening the earnestness of an emergency (Garcia and DankaRuiz, 2008). In most emergency cases, children and young people are influenced more than people of other age get-togethers (Chapman et al., 2011). The extent of emergency among adolescents and adolescents is more for the clarification that overall society doesn't give them liberated from any risk ecological components. To restrict the extent of hostility and emergency among children and young people, gatekeepers and teachers are expected to focus on this age gathering (Manual of setback evasion and First Aid in schools, 2007).

#### **Statement of the Problem**

In the predominant modernized climate, wellbeing, and security taking all things together, different backgrounds have been given the most extreme need. Independent of the field possibly it plays

ordinary dealing of the discipline of the school, schedule endeavor of living, the part of wellbeing stays single of the topmost needs (Oduor & Omoro, 2012). Be that as it may, nobody can preclude the chance of event of any untoward occasion in any social status. In case of any incident inside or outside the school, each development is viewed as critical especially when somebody is battling for their life if there should arise an occurrence of apnea or dying (Breckwoldt & Kreimeier, 2013). As an issue of normal perception, instructive organizations have been denied of the on schedule and brief arrangement of FA office to the students (Williams et al., 2015). Need of great importance is to familiarize the school students with essential abilities and information on fundamental FA. By its essentialness, the scientist directed an exploration concentrate in Government model secondary school Bhakkar (Punjab) named "emergency treatment preparing and its effect on the administration abilities of wounds in sports at optional school level".

### **Significance of the study**

It has been recognized globally that Sports activities in childhood play a key role in the personality development of the children for their future ahead. Worldwide sports activities are ensured in the Schools, Colleges, and Universities. And it is a matter of common sense that the participants in the physical activities are most at risk of having an injury. Thus this study involves the general awareness for the training of first aid to manage injuries in sports and this will determine that the training programs are proposed to be arranged in the schools for the students.

### **The objective of the study**

- To find out the efficacy of a Training program about first aid on the skill of students of secondary schools to manage sports injuries.

### **The hypothesis of the study**

- There is a close relationship of Training programs about first aid on the skill of students of secondary schools to manage sports injuries.

### **Methods and Material**

The experimental study was conducted on the students of secondary schools of district Bakhar (Punjab). To collect the data the Government Model High School Bhakkar was visited, self-administered questionnaire was distributed among students who involve in regular sports activities. The questionnaire was distributed among players. At this stage, the current knowledge of students regarding first aid was assessed. After assessing the current knowledge of the students a two-week training program was planned to train the students for first aid to meet various emergencies. The enrolled students of government model High school Bakhar-Punjab who also sports participants were trained for two weeks. At the end of the training program, a survey was conducted using a questionnaire to know the impact of training on the students of secondary schools.

### **The population of the Study**

The population of this study consists of students of Government Secondary Schools of Bhakkar (Punjab).

### **The sample size of the research**

70 enrolled students of government Model high school Bakhar-Punjab who also were regular sports participants were selected for the study.

### **Data collection tool**

To assess the skills of students to face an emergency related to sports injury a self-administered questionnaire was prepared which was utilized pre and post-training programs.

### **Reliability of tool**

The reliability of the instrument was checked by the Cronbach's alpha test which was found to be 0.973i.e reliable.

### **First Aid (F/A) Training Program of 02 weeks:**

The First Aid Training program of 02 weeks was conducted to enhance first aid knowledge and skills among the students of schools (secondary) model high schools of District-Bhakkar to focus on the following elements;

- Introduction and importance of first aid training
- The panic situation of an emergency
- manage unconscious victim
- External bleeding

- Vomiting
- Fracture

**Statistical Analysis**

To show up at the strong disclosures and finishes, the assembled data was taken care of through fitting authentic gadgets from version 20 of SPSS. T-test, repeat, and the rate were used to find the effect of the training program of first aid, to reach strong disclosures and goals.

**Figure-1.1** showing the Frequencies and percentages of the respondents as a pre-preparing and post preparing audit on the thing as; if there should be an occurrence of a crisis circumstance, you stay in alarm.

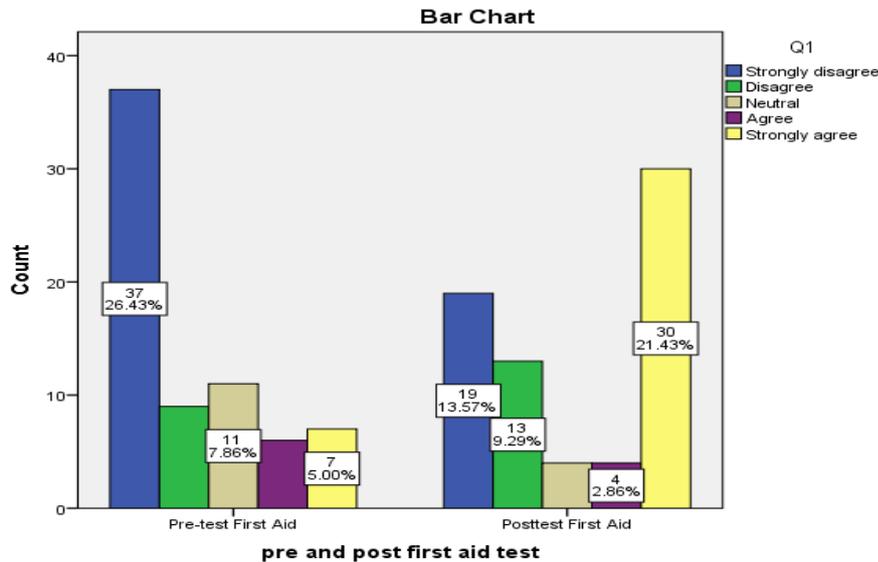


Figure 1.1 showing the frequencies and rates against the attestation in the event of a crisis circumstance, you stay in alarm the prevailing part were unequivocally veered off (26.43%) in pre-getting ready yet lion's offer solidly agreed in post-planning (21.43%).

The consequences of t-test as of pre getting ready and post planning score of the understudies of thing; as in case of an emergency condition, you stay in the alert are follows. The results have been discovered one of a kind t (69) = - 3.853, Sig. = .000 <math>\alpha = .05</math>. Posttest score (M= 3.19, SD= 1.74, n= 70) was inside and out more unmistakable than pre-test score (M= 2.10, SD= 1.39, n= 70).

Figure # 1.2 showing frequencies and paces of the respondents as of pre-planning and post getting ready as for the things as; oblivious casualty ought to be put in the right bend position.

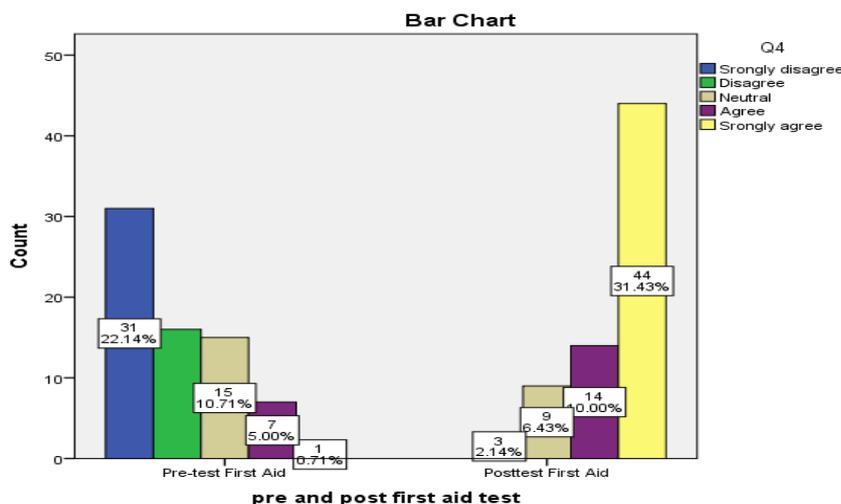


Figure 1.2 showing the frequencies and rates against the declaration Unconscious casualty ought to be put in right bend the larger part were immovably stray (22.14%) in pretest yet lion's offer unequivocally agreed in posttest (31.43%).

The consequences of t-test as of pre-planning and post getting a ready score of the understudies of thing; as careless loss should be set in right twist position. The results show pre-getting ready and post-planning score in the verbalization negligent loss should be placed in right twist position was through and through exceptional  $t(69) = -14.449$ ,  $Sig. = .000 < \alpha = .05$ . Posttest score ( $M = 4.41$ ,  $SD = .876$ ,  $n = 70$ ) was through and through more vital than pre-test score ( $M = 2.10$ ,  $SD = 1.09$ ,  $n = 70$ ).

Figure 1.3: Frequencies and paces of the respondents in pre-planning and post getting ready as for the attestation if there should be an occurrence of an oblivious casualty, promptly open their mouth and pour some water gradually.

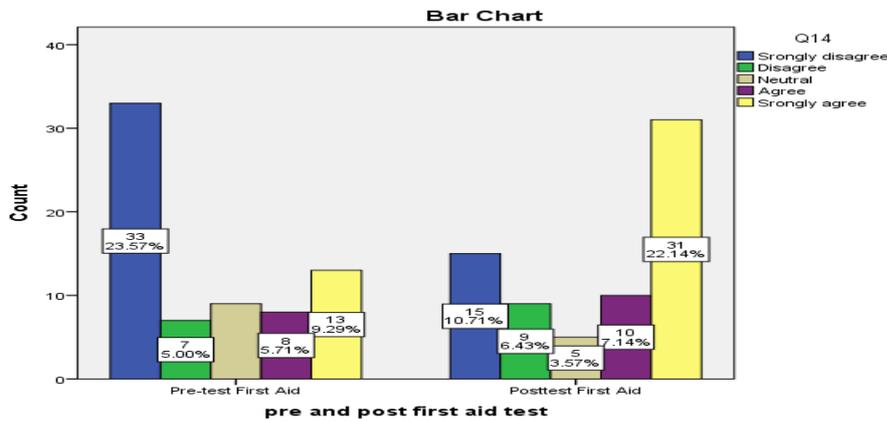


Figure 1.3 showing the frequencies and rates against the statement in case of a negligent loss, quickly open their mouth and pour some water gradually the lion's offer was immovably veered off (23.57%) in pretest yet predominant part unequivocally agreed in posttest (22.14%).

The consequences of t-test as of pre-planning and post getting ready to score of the understudies of thing; as in case of a careless loss, quickly open their mouth and pour some water progressively. The results show pre-test and post-test scores in the clarification in case of an unaware loss, immediately open their mouth and pour some water progressively was through and through exceptional  $t(69) = -3.270$ ,  $Sig. = .002 < \alpha = .05$ . Posttest score ( $M = 3.47$ ,  $SD = 1.648$ ,  $n = 70$ ) was through and through more imperative than pre-test score ( $M = 2.44$ ,  $SD = 1.60$ ,  $n = 70$ ).

Figure # 1.4: Frequencies and rates of the respondents in pre-preparing and post-preparing concerning the attestation outside draining is the solitary manifestation of head injury.

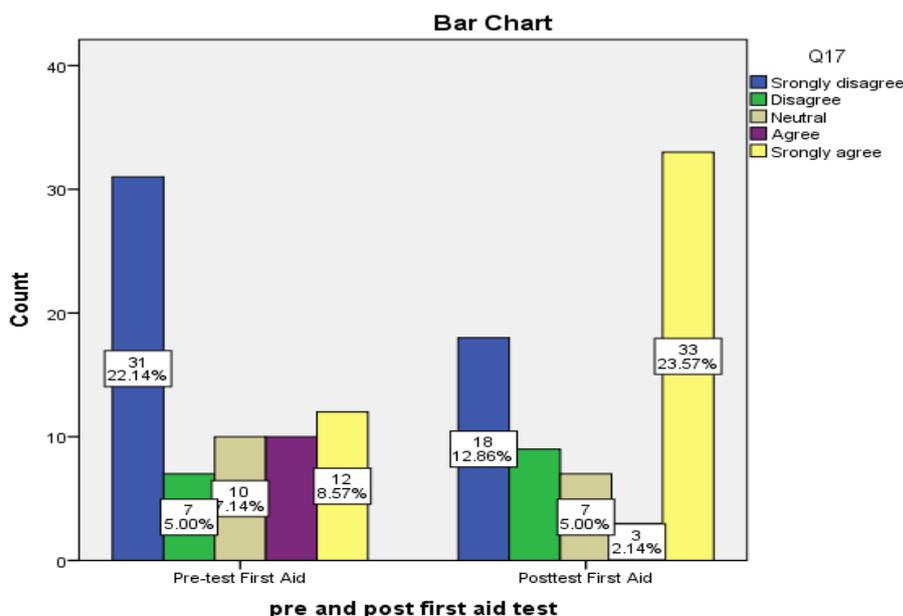


Figure 1.4. Showing the frequencies and rates against the assertion outside draining is the solitary manifestation of head injury the larger part were decidedly contradicted (22.14%) in pretest anyway lion's offer unequivocally agreed in posttest (23.57%).

The consequences of t-test as of preparing and post preparing score of the understudies of thing; as outer draining is the lone indication of head injury. The results show pre-test and post-test score in the declaration external depleting is the lone sign of head injury was exceptional  $t(69) = -2.566$ ,  $Sig. = .012 < \alpha = .05$ . Posttest score ( $M = 3.34$ ,  $SD = 1.735$ ,  $n = 70$ ) was by and large more critical than pre-test score ( $M = 2.50$ ,  $SD = 1.57$ ,  $n = 70$ ).7%).

Figure 1.5. Frequencies and rates of the respondents in pre-preparing and post preparing in regards to the assertion if a casualty is regurgitating, place them in right or left-hand bend position.

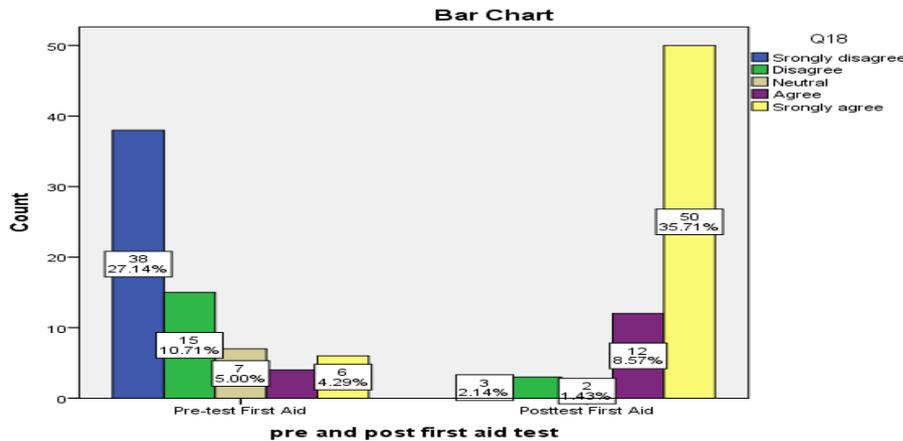


Figure 1.5 showing the frequencies and rates against the statement outside draining is the lone manifestation of head injury the bigger part were unequivocally contradict (27.14%) in pretest yet lion's offer insistently agreed in posttest (35.71%).

The results of the t-test as of pre-preparing and post preparing score of the understudies of thing; as though a casualty is regurgitating, place them in right or left-hand bend position. The results exhibit pre-test and post-test scores in the decree if a setback is spewing, place them in right or left-hand twist position was through and through phenomenal  $t(69) = -13.122$ ,  $Sig. = .000 < \alpha = .05$ . Posttest score ( $M = 4.47$ ,  $SD = 1.04$ ,  $n = 70$ ) was out and out more noticeable than pre-test score ( $M = 1.93$ ,  $SD = 1.28$ ,  $n = 70$ ).

Figure 1.6. Frequencies and paces of the respondents in pre-planning and post getting ready concerning the declaration in crack crises, just crape wrap is immovably used to stable the harmed part.

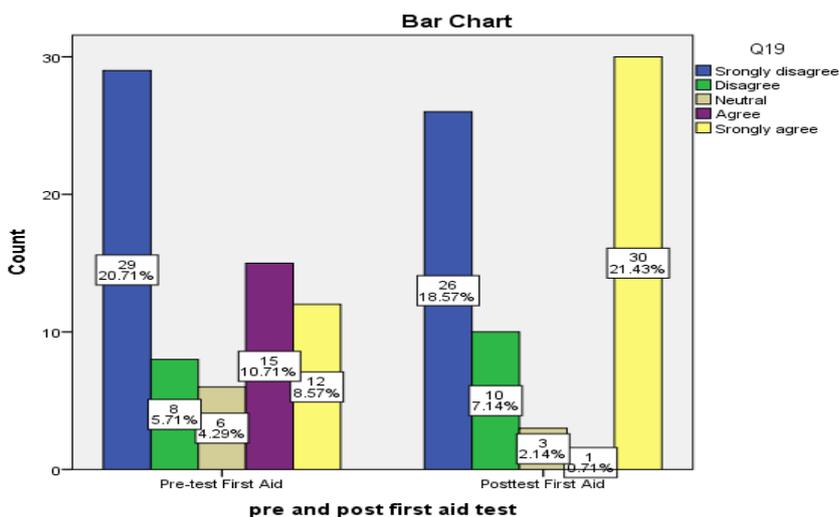


Figure 1.6 showing the frequencies and rates against the assertion in crack crises, just crape gauze is immovably used to stable the harmed part the lion's share unequivocally contradict (20.71%) in pretest anyway larger part solidly agreed in posttest (21.43%).

The outcomes of the t-test as of pre-planning and post getting a ready score of the understudies of thing; as in break crises, just crape swathe is solidly used to stable the harmed part. The results show pre-training and post-training score in the clarification in causalities, simply crape

wrap is determinedly used to fixed the hurt part was not unprecedented  $t(69) = -1.045$ ,  $\text{Sig.} = .300 > \alpha = .05$ .

### **Discussion**

Competitor's altogether sports at each degree of capacity are defenseless to injury during athletic rivalry, along these lines, quality clinical help ought to be promptly accessible for all competitors (Whieldon and Cerny, 1990). It likewise is essential to have first-aid units in quite a while, workplaces, and schools if there should arise an occurrence of a mishap. Since youngsters spend a lot of timing they have at disciplines of school while they may be not families their own, circumstances demanding emergency treatment frequently may be experienced. In the disciplines of schools, instructors frequently are the emergency treatment suppliers. Encouraging fundamental medical aid ought to be necessary taking all things together schools disciplines. One investigation discovered that a very high ratio of wounds supported by the associate (88%) was straightforwardly identified with actual work, and roughly 20% of all actual work-related wounds happened during school hours (Spinks, et al., 2006). To increase knowledge and competence about first aid in the population, first-aid instruction is included in primary and secondary school curricula. This study aimed to establish how much time is spent on first-aid training, which first-aid measures are taught, and which factors prevent teachers from providing. The essential purpose behind the assessment was to know the effect of the Training program of first aid upon the administration abilities of management of injuries in discretionary school understudies of Punjab. Clinical guide test was used in pre and post-training of First Aid the chiefs capacities of sports wounds. The possibility of the assessment was test subsequently; hard and fast 70 understudies were picked for the training of first aid as for multi-days. The expert took only a solitary preliminary pack in this particular assessment with concurrence with the possibility of the examination.

### **Conclusion**

- The expert reached the result that there is an immense impact of the training program of first aid upon the administration abilities of sports wounds in the pupils of Model High School, Bakhar Punjab.
- First Aid Training expected Sports-Injuries' management-skills among students of schools. First Aid Training explained the tremendous degree of contrast in First Aid the administration abilities of sports wounds among discretionary school understudies subsequently the objective achieved.

### **Recommendations;**

This exploration suggests that;

- The authority school may offer the opportunity to the pupils at the discipline of school to get some answers concerning first aid through the planning given by this assessment, which must lead towards enhanced appreciation of pupils about first aid.
- The administration might give revised and latest stuff to all the associated schools of Punjab for the educating and dominating of First Aid capacities at discretionary school disciplines...
- The administration and concerned experts may put First Aid information in a genuine tutoring plan as a required part.

### **References**

- Australian Institute of Health & Welfare. (2008). *Australia's Health 2008*. Cat. No. AUS 99. Canberra.
- Bastidas P, (2011). *School safety baseline study: The matric platform on knowledge & education (TPKE)*. UNISDR.
- Breckwoldt J, & Kreimeier U, (2013). Education of schoolchildren on First Aid during resuscitation. *Notfall&RettungsmedizinMEDIZIN*. 16(5), 356-360
- Burghofer K. & M. U.A. Köhler, (2008). Erste-Hilfe-Maßnahmen bei Notfällen, Prospektive Beobachtungsstudie bei Primäreinsätzen des RTH Christoph 1. *Notfall&Rettungsmedizin*, 11(2)127-136, DOI 10.1007/s10049-007-0985-5.
- Buckley L, Chapman, R., & Sheehan, M. (2012). Adolescent involvement in anti-social & delinquent behaviors: Predicting future injury risk. *Accident Analysis & Prevention*, 48, 518-522.
- Backx, F.J., Beijer, H.J. & Bol, E. (1991). 0 Injuries in high-risk persons & high-risk sports. A longitudinal study of 1818 school children. *Am J Sports Med*. 19:124-130?

- Capel S, & Whitehead M, (2015). *Learning to Teach Physical Education in the Secondary School: A companion to school experience*. Routledge.
- Cummins RO, Ornato JP, Thies WH, Pepe PE. (1991). Improving survival from sudden cardiac arrest: the 'Chain of survival' concept. *Circulation*. 83:1832-47.
- Cloutier M. S, Apparicio, P., & Thoeuz, J. P. (2016). GIS-based spatial analysis of child pedestrian accidents near primary schools in Montréal, Canada.
- Davis C. S, Southwell, J. K., Niehaus, V. R., Walley, A. Y., & Dailey, M. W. (2014). Emergency medical services naloxone access: a national systematic legal review. *Academic Emergency Medicine*, 21(10), 1173-1177.
- DuPaul G. J, & Stoner, G, (2014). *ADHD in the Schools: Assessment & intervention strategies*. Guilford Publications.
- De L. M, Dahlsted T.L. & Thomee R. A. (2000). A 7-year study on risks & costs of knee injuries in male & female youth participants in 12 sports. *Scand J Med Sci. Sports*, 10:90– Pp. 7.
- Federal Emergency Management Agency [FEMA], A Whole Community Approach to Emergency Management: Principles, Themes, & Pathways for Action FDOC 104-008-1/December 2011. [http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole\\_community\\_dec\\_2011\\_\\_2\\_.pdf](http://www.fema.gov/media-library-data/20130726-1813-25045-0649/whole_community_dec_2011__2_.pdf).
- Fritz CO, Morris PE, Richler JJ (2012) Effect size estimates: Current use, calculations, & interpretation. *J Exp Psychol Gen* 141(1):2– 18. Doi: 10.1037/a0024338.
- Fulmer D, Brown, R., Mullins, S., Hill, J., Windisch, F., Buchanan, F., & Hanna, G. (2008). *Leading & managing EMS in volunteer & combination fire departments*. Retrieved from [http://www.iafc.org/files/VCOS\\_OrangeRibbonReport.pdf](http://www.iafc.org/files/VCOS_OrangeRibbonReport.pdf).
- Harrison, P.A., & Narayan, G. (2003). Differences in behavior, psychological factors, & environmental factors are associated with participation in school sports & other activities in adolescence. *J Sch Health* 2003; 73:113–20.
- Jiménez-Fábrega X, Escalada-Roig, X., Miro, O., Sanclemente, G., Diaz, N., Gomez, X., Sanchez, M. (2009). Comparison between exclusively school teacher-based & mixed school teacher & healthcare provider-based program on basic cardiopulmonary resuscitation for secondary schools. *Emergency Medicine Journal*, 26, 648-652.
- Kanstad B, Nilsen, S., & Fredriksen, K. (2011). CPR knowledge & attitude to performing bystander CPR among secondary school students in Norway. *Resuscitation*, 82, 1053-1059.
- Lord D, & Washington S (2018). Introduction. In *Safe Mobility: Challenges, Methodology, & Solutions* (pp. 1-10). Emerald Publishing Limited.
- Lunenburg F. C, & Orstein A. C, (2012). *Educational administration: Concepts & practices* (6th Ed.). Belmont, CA: Wadsworth.
- MANUAL of accident prevention & First Aid in schools. Secretariat of health. Coordination of development of programs & policies of health-CODEPPS. São Paulo: SMS, 2007. Available in: [http://ww2.prefeitura.sp.gov.br/arquivos/secretarias/saude/crianca/0005/manual\\_prev\\_acid\\_primsocorro.pdf](http://ww2.prefeitura.sp.gov.br/arquivos/secretarias/saude/crianca/0005/manual_prev_acid_primsocorro.pdf).</http> > Access in: 20 Aug. 2016.
- Melissa Brymer, Matt Taylor, Pia Escudero, Anne Jacobs, Mindy Kronenberg, Robert Macy, Lou Ann Mock, Linda Payne, Robert Pynoos, & Juliet Vogel, *Psychological First Aid For Schools: Field Operations Guide, Second Edition*. Los Angeles: National Child Traumatic Stress Network, 2012.
- Meyers D. C, Durlak, J. A., & Wandersman, A. (2012). The quality implementation framework: A synthesis of critical steps in the implementation process. *American Journal of Community Psychology*.
- Morawska A, Fletcher, R., Pope, S., Heathwood, E., Anderson, E., & McAuliffe, C. (2013). Evaluation of mental health first aid training in a diverse community setting. *International Journal of Mental Health Nursing*, 22(1), 85-92.
- Oduor A, & Omoro J, (2012). Kenyan schools face closure over safety standards. *East African Standard*, p. 3.
- Orchard JW, Finch CF. (2002). Australia needs to follow New Zealand's lead on sports injuries. *Med J Aust* 177:38-9.

- Omolo D. O, &Simatwa E. M, (2010). *An assessment of the implementation of safety policies in public secondary schools in Kisumu East & West districts, Kenya* (Unpublished master's thesis). Maseno University.
- Silver, C. (2013). Getting real about globalization & legal education: potential & perspectives for the US. *Stan. L. & Pol'y Rev.*, 24, 457.
- Silveira, Lauren Theobald of; MOULIN, AlexandreVaillantFachetti. Aid in physical activities: theoretical practical course. 6. Ed. 2006. 32 p. Available in: <http://kyokushinkaikan.com.br/antigorite/dicas/imagens\_dica/primeiros%20socorros.pdf="">.</http:> Access in: 28 Mar. 2016.
- Stapleton KL, Tomlinson CM, Shepard KF, Coon VA. (1984). High school coaches' perceptions of the irresponsibility in managing their athletes' injuries. *J Orthop Sports Phys Ther.* 1984; 5:253-260.
- Spinks AB, McClure RJ, Bain C, Macpherson AK. (2006). Quantifying the association between physical activity & injury in primary school-aged children. *Pediatr Vets*; 118:43-50.
- Toli T, Sourtzi, P., Tsoumakas, K., & Kalokerinou-Anagnostopoulou, A. (2013). Association between knowledge & attitudes of educators towards epilepsy & the risk of accidents in Greek schools. *Epilepsy & Behavior*, 27(1), 200-203.
- Whieldon, T.J., F.J., Cerny. (1990). Incidence & severity of high school athletic injuries. *Athl Train, JNATA.* 1990; 25:344-350.
- Xu B, Da Xu, L., CAI, H., Xie, C., Hu, J., & Bu, F. (2014). Ubiquitous data accessing method in IoT-based information system for emergency medical services. *IEEE Trans. Industrial Informatics*, 10(2), 1578-1586.