

The Effect of First Aid Training on Accidents (PPPK) on Knowledge of Fracture Handling of the “Pagar Nusa” Pencak Silat Trainer in Semanding District

Suhartono¹(corresponding author), Novia Dwi Astuti²

¹Department of Nursing, Institut Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia; artosuhartono@gmail.com

²Department of Nursing, Institut Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia; , noviastikesnu@gmail.com

Submitted: March 11, 2020 -Revised: April 11, 2020 -Accepted: April 17, 2020 -Published: April 30, 2020

ABSTRACT

Martial arts sports (body contact) have a very high risk of injury. This is due to several causes of injury, including fractures in both the upper and lower extremities. The purpose of this study was to determine the effect of first aid training on accidents (P3K) on knowledge of fracture handling of the pencak silat trainer "Pagar Nusa" in Semanding District. This study uses Pre-Experimental Designs with the type of one-group pretest-posttest design. The population in this study were all trainers of pencak silat fence nusa in the district of semading as many as 32 respondents, with a sample size of 32 respondents who were determined using simple random sampling technique. The instruments used were SOPs and questionnaires which were then analyzed using the Wilcoxon test. Almost all respondents (76.7%) have sufficient knowledge of fracture management. Meanwhile, after being given treatment, most of the respondents (53.3%) had good knowledge of fracture handling. The results of the Wilcoxon test statistical test showed a p-value of 0.003 where $p < 0.05$, then H_0 was rejected, meaning that there was an effect of first aid training in accidents (PPPK) on the knowledge of fracture handling of the pencak silat trainer "Pagar Nusa" in Semanding District. First aid training can be used as an alternative way to increase knowledge of fracture management.

Keywords: first aid in accidents; training; pencak silat trainer; knowledge; fracture treatment

INTRODUCTION

Martial arts sports (body contact) have a very high risk of injury. In addition to injury can cause various conditions that are dangerous and can lead to death. This is due to several causes of injury, including: sprains of the knee at the ankle, dislocation of the fingers, tears, and fractures of the limbs, both the upper and lower extremities. A fracture is a break in the discontinuity of bone structure, usually caused by trauma or physical exertion (Rendy & Margaret 2012 in Nilam 2019). A person who participates in pencak silat is prone to injury during training. Injuries that arise due to lack of knowledge about the treatment of fractures. This can make the victim's condition even worse. Injuries are often caused by collisions with opponents and also lack of technical maturity, plus physical conditions that are still not ready.

Mallina and Giannoudis (2011) explained that a total of 775,000 children under 15 years of age received emergency medical treatment for injuries related to martial arts in a year. According to the German Census Bureau conducted in 2007 (in Bruhmann & Schneider, 2011) an average of 23 cases in Germany, fatal sports injuries occur annually among 9 million children and adolescents younger than 20 years. Sheu, Chen, and Hedegaard (2016) said that the majority of injury diagnoses included sprains and strains by 41.1%, fractures by 20% and superficial injuries and bruises by 19%. Based on data from pencak silat athletes who were injured in a pencak silat match in the Special Region of Yogyakarta in 2013 were injuries to the legs and feet by 84.28% or as many as 59 athletes from the bruise injury indicator, the blister injury indicator as many as 53 athletes or 75.71 %, indicator of sprain injury was 46 athletes or 32.85%, indicator of dislocation injury was 39 athletes or 27.85%, indicator of strain injury was 19 athletes or 27.15%, and indicator of fracture was 14 athletes or by 20%. Supported from the data on the scale of handling sports injuries in National Championship athletes in 2013, it was found in the article that 70 percent of athletes who experienced martial arts injuries and serious injuries were currently handled by health workers directly obtained 79% of the results, the scale was classified as very good.

Based on the results of an interview with the Pagar Nusa pencak silat trainer, the Semanding Sub-district Branch Manager on March 13, 2020, it was found that some of the pencak silat members had broken bones and injuries, it was found that the trainer was late to help and did not know how to help properly. Of the 10 trainers interviewed said that 70% of the trainers did not know about the correct first aid treatment for fractures and 30% were more likely to avoid or more likely to ask for help without treating it first and the trainer did not know anything about first aid in handling fractures when occurs during practice.

Fracture handling behavior can be influenced by several factors, namely cognitive, affective, and psychomotor levels (Bloom, 1956). One of them is the cognitive factor or knowledge. According to research by Warouw et.al (2018), there is an effect of health education and simulation on knowledge of splints for first aid fractures. In pencak silat sports competitions there will be collisions and can cause injuries such as fractures in the extremities. Injury is a result of forces acting on the body or part of the body which exceed the body's ability to cope, these forces can take place quickly or in the long term (Andun Sudijandoko, 2000: 7). Fractures do not only affect the physical, but also affect the psyche so that proper treatment is needed (Santi & Pietrantonio, 2013:1030). Improper handling can result in a worse condition. In handling fractures requires training to improve skills. For a pencak silat trainer, having skills in handling fractures is something that the coach must have. Learning about skills in handling fractures during pencak silat practice can improve skills in first aid in cases of fractures.

One way to increase knowledge about first aid for fractures is to do training. This treatment training is about first aid in handling fractures by means of splinting. First aid training is a temporary relief and treatment for fracture victims before receiving more perfect help from doctors or paramedics (Puskesmas, Hospitals). In addition to training, supporting things that can be done are through socialization and the closest health workers, pencak silat trainers who understand or who have attended previous first aid training can be supportive things that can influence.

Based on the above background, the researcher is interested in conducting a research entitled "the effect of first aid training in accidents (PPPK) on knowledge of handling fractures in Pagar Nusa Pencak Silat Trainers in Semanding District".

METHODS

This research is an experimental research with a pre-experimental design, namely "one group pre-post test design". with a cross sectional time approach which was carried out at MWC NU, Semanding District in July 2020. The population in this study were 32 Pagar Nusa Pencak Silat trainers in Semanding District. The sample in this study were 30 trainers of pencak silat Pagar Nusa in Semanding District using the "Simple Random Sampling" technique. The instrument used in this research is the Standard Operating Procedure (SOP) and the questionnaire consists of 12 questions. The data were analyzed using the Wilcoxon test.

RESULTS

Knowledge of Handling Fracture Victims Before being given Fracture Handling Training

Table 6. Distribution of knowledge about handling fractures before being given training in handling fractures to Pagar Nusa Pencak Silat trainers in Semanding District in 2020

No.	The knowledge before being given training in handling fractures	Frequency	Percentage
1.	Less	4	13.3
2.	Enough	23	76.7
3.	Good	3	10
Total		30	100

Based on the research conducted, it can be seen that before being given training on fracture management, most of the respondents had knowledge about fracture treatment in the enough category (76.7%).

Knowledge of Handling Fracture Victims After being given Fracture Handling Training

Table 6. Distribution of knowledge about handling fractures after being given training in handling fractures to Pagar Nusa Pencak Silat trainers in Semanding District in 2020

No.	The knowledge before being given training in handling fractures	Frequency	Percentage
1.	Less	1	3.3
2.	Enough	13	43.3
3.	Good	16	53.3
Total		30	100

Based on the research conducted, it can be seen that before being given training on fracture management, most of the respondents had knowledge about fracture treatment in the good category (53.3%).

Analysis of the Effect of First Aid Training on Accidents (PPPK) on Knowledge of Fracture Handling of Pagar Nusa Pencak Silat Trainers in Semanding District

Table 8. Analysis of the effect of first aid training on accidents (PPPK) on knowledge of fracture handling of the Pagar Nusa pencak silat trainer in Semanding District

No.	The knowledge before being given training in handling fractures	Less		Enough		Good		Total	
		f	%	f	%	f	%	f	%
1.	Before training	4	13.3%	23	76.7%	3	10%	30	100%
2.	After training	1	3.3%	13	43.3%	16	53.3%	30	100%
<i>Wilcoxon Test Asymp. Sing (2-sided)=0,003</i>									

Based on the research conducted, it can be seen that before being given treatment, most of the respondents (76.7%) had knowledge about fracture treatment in the "enough category". Meanwhile, after being given treatment, most of the respondents (53.3%) had knowledge about handling fractures in the good category.

The results of the Wilcoxon test showed p-value = 0.003, indicating that there was a difference in the level of knowledge between before and after training, so it could be interpreted that training on PPK had an effect on knowledge about handling fractures of the Pagar Nusa pencak silat trainer in Semanding District.

DISCUSSION

Knowledge Level of Handling Fracture Victims Before Being Provided with Fracture Handling Training for Pencak Silat Trainers in Semanding District

The results of the pre-test using an observation sheet in the form of a questionnaire, it was found that before being given the First Aid In Accident (P3K) training intervention on the knowledge of handling fractures to the Pagar Nusa pencak silat trainer in Semanding District with a total of 30 respondents showed that almost entirely 23 (76.7 %) respondents have sufficient knowledge about handling fracture victims.

According to Sucipto (2009), first aid is to provide temporary emergency aid and treatment that is carried out appropriately and quickly. The main goal is not to provide final treatment, but an attempt to prevent and protect the victim from the further severity of an accident. Handling is the application of knowledge so that a person's skill level is related to the level of knowledge (Notoadmodjo, 2007).

Factors that influence the handling of accidents according to Notoadmodjo (2007) and Widyatun (2005) include the level of education (the higher a person's education, the better the knowledge possessed), age (when a person's age increases, there will be changes in a person's physical and psychological), experience (something that will strengthen a person's ability to perform an action or skill), motivation (something that evokes a desire in a person to perform various actions), expertise (a person's expertise will make him skilled in performing certain skills).

Iverson (2001) said that handling requires basic skills that everyone has can help produce something more valuable and faster. Handling can be defined as a person's ability to apply knowledge into action.

Handling fractures is also greatly influenced by a lack of knowledge, Notoatmodjo (2003) says that knowledge is the result of knowing, and this happens after people sense a certain object. Sensing occurs through the five senses, namely the senses of sight, hearing, smell, taste, and touch. Most of human knowledge is obtained through the eyes and ears.

As for an experience that is very important in the handling process, in this case Ranupantoyo and Saud (2005) say the longer a person works in a job that is occupied, the more experienced and better he will be.

From the research that has been conducted by researchers on pencak silat trainers in Pagar Nusa in Semanding District, the knowledge and experience of handling fractures by pencak silat trainers in Pagar Nusa is mostly sufficient, this is shown when there are fracture victims they are more likely to avoid. This happens because there has not been much research or training that provides an overview of the handling of bone paths in trainers. First aid training is taught to the pencak silat trainer Pagar Nusa so that they have the basics of handling fractures with the right response time and handling.

Another factor that causes almost all of the respondents to have adequate knowledge of fracture handling is age. In this study, it can be seen that almost all of the respondents are aged 16-20 years. Increasing the age of a

coach is associated with an increasing amount of experience, which also affects a person's mindset and maturity. At this age, trainers tend to be less active in seeking information about fracture treatment because they still rely on seniors if there are fracture victims.

Another factor that causes a small proportion of respondents to have poor knowledge of fracture management is lack of knowledge and lazy to seek information about how to handle fractures.

Another factor that affects the handling of fractures in pencak silat coaches is the length of time they have been coaches. In this study, it can be seen that most of the respondents have been trainers for 1-2 years. The longer you are a coach, the more you will encounter events in the field so that it will affect the trainer's experience in dealing with fractured victims.

Knowledge Level of Handling Fracture Victims After Being Provided with Fracture Handling Training for Pencak Silat Trainers in Semanding District

The results showed that most of the trainers after being given first aid training had a good level of knowledge in handling fractures as many as 16 (53.3%) respondents.

From the results of the explanation above, it is known that the handling of fractures in pencak silat trainers has changed after being given first aid training. This is reinforced by the theory that explains that to increase knowledge of handling fractures in Pagar Nusa pencak silat trainers can be done by conducting training (Fajarwati, 2015). Justine (2006) said to increase knowledge and apply in the form of handling influenced by education and training, someone who has a high education will have good knowledge so that it helps them in completing new things. Training really supports increasing knowledge well (Wardani, 2017).

So that in addition to increasing knowledge, experience will also increase because the experience that someone has had will affect a person's maturity in thinking in doing something, as said by Ranupantoyo and Saud (2005) the longer a person works in a job that is occupied, it will be the more experienced and the better.

The results of the study after the intervention was given to the pencak silat trainer Pagar Nusa, Semanding District, amounted to 30 respondents, most of whom had a good level of knowledge in handling fractures. This shows that there is an increase in knowledge of handling fractures in respondents after being given first aid training. This change in the level of knowledge in handling fractures is influenced by several things, including the effectiveness of carrying out activities and the ability of the trainer to understand the objectives of the first aid training. First aid training is carried out for 3 days with an evaluation or post test conducted on the last day. Respondents who participated in the first aid training activities with active enthusiasm, proved to have significantly benefited from this activity. Knowledge of respondents increased because all respondents were given complete knowledge.

The results showed that after the intervention, almost half of the respondents had sufficient knowledge of fracture handling. This is because the respondents paid less attention to the training process. Then there is still one respondent with less knowledge of fracture handling because at the time of training the respondent did not pay attention when attending the training.

The Effect of First Aid Training on Accidents (P3K) on Knowledge of Fracture Management in Pagar Nusa Pencak Silat Trainers in Semanding District

Based on table 5.8 the results from the data of 30 respondents which show that before treatment most of 23 (76.7%) respondents had knowledge of handling fractures in the sufficient category, evidenced by the respondent's understanding by filling out a pre-questionnaire and obtained a value indicating that the respondent was in the C1 category. knowledge, C2 understanding, C3 application. Meanwhile, after being given treatment, almost 16 (53.3%) respondents had knowledge of fracture handling in a good category in determining that respondents already had good knowledge, judging by filling out the questionnaire after being given treatment or post-respondents showed that almost most of the respondents had understood knowledge C1, C2 understanding, C3 application, with an increased value from before being given treatment.

The results of data analysis used in this study was the Wilcoxon test with a significance level of 0.05. The results of statistical tests using the Wilcoxon test showed $P = 0.003$ (p value < 0.05). This shows that there is an effect of First Aid Training on Accidents (P3K) on Knowledge of Fracture Handling in Pagar Nusa Pencak Silat Trainers in Semanding District.

Based on these data, it shows that there is an increase in knowledge of handling fractures from moderate to good. From the results of the research and the theory that first aid training in accidents (P3K) is very effective, the pencak silat trainer from the fence of Nusa to increase knowledge of handling fractured victims and has an interest in helping victims according to the knowledge gained during the training. According to Sukiarko (2007) training is defined as an effort to increase knowledge, change behavior and develop skills.

According to Kaswana (2011) the purpose of training is to improve the technical, theoretical, conceptual and moral abilities of employees so that later employees are able to achieve optimal work results so that employees are eager to work for the company. To achieve these goals, it is supported by training so that they still have the abilities and skills in accordance with their field of duty. Training for employees is one of the most important investments made by an organization in facilitating the course of development activities. According to Veithzal Rivai (2004) the factors that support the effectiveness of training include: training material or content, training methods, trainers, training participants, training evaluation facilities.

According to the researcher, the changes that occurred in the pre-post showed that there was an increase in the trainer's knowledge in understanding the handling of fractures, which was very effective given to increase the trainer's knowledge in handling fracture victims, this was due to several factors including training materials and methods as well as training facilities.

This training proves that providing early training can improve first aid knowledge in accidents. The more often the trainer gets training, the better the handling of accidents for victims, especially pencak silat athletes.

CONCLUSION

From the results of this study it can be concluded that:

1. Prior to the PPPK training, some pencak silat trainers had a level of knowledge about fracture treatment in the enough category
2. Prior to the PPPK training, some pencak silat trainers had a good level of knowledge about handling fractures
3. There is an effect of first aid training on the knowledge of the Pagar Nusa pencak silat trainers regarding the treatment of fractures in Semanding District.

REFERENCES

1. Bruhmann, B., & Schneider, S. (2011). Risk groups for sports injuries among adolescents-representative German national data. *Child: care, health and development*. doi:10.1111/j.1365-2214.2011.01209.x.
2. Damayanti, Ida, 2016, Pengaruh Pemberian Pelatihan Pertolongan Pertama Pada Kecelakaan (P3K) Terhadap Pengetahuan Penanganan Fraktur Pada Siswa Anggota PMR di SMA Negeri 1 Binangun. Binangun
3. Mallina, R., & Giannoudis, P. V. (2011). Sports Injuries in Children And Adolescents: Classification, Epidemiology, And Clinical Examination. Dalam A. H. Karantanas (ed.), *Sports injuries in children and adolescents* (hlm. 3-4). New York: Springer.
4. Nilam, M. Y. (2019). Analisis Gambaran Kualitas Hidup Pada Pasiendiabetes Mellitus Tipe 2 Di Puskesmas Kota Padang Tahun 2019 (Doctoral dissertation, Universitas Andalas).
5. Notoadmodjo, S. (2007). *Pengetahuan dan Sikap*. Jakarta: Rineka Cipta.
6. Notoeadmojo, S. 2010. *Promosi Kesehatan: Teori Dan Aplikasi*. Jakarta: PT Rineka Cipta
7. Santi, G., & Pietrantoni, L. (2013). Psychology of sport injury rehabilitation: a review of models and interventions. *Journal of Human Sport and Exercise*, 8(4), 1029-1044.
8. Sheu, Y., Chen, L. H., & Hedegaard, H. (2016). Sports-and recreation-related injury episodes in United States, 2011-2014 (National Health Statistic Report No.99). Diakses dari U.S. Departement of Health and Human Services, Centers for Disease Control and Prevention National Center for Health Statistic website: <https://www.cdc.gov/nchs/data/nhsr/nhsr099.pdf>
9. Sudijandoko, A. (2000). *Perawatan dan Pencegahan cedera*. Jakarta: Depdiknas.