



## **Knowledge Level of Junior High School Teachers in North Morowali Regency Central Sulawesi on Early Treatment of Injury**

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### **Abstract**

When doing sports can not be separated from the name injury. Most sports injuries occur in schools. Therefore, sports teachers play an essential role in handling injuries in schools. The purpose of this study was to find out how high the level of knowledge about early injury management using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) method of PJOK teachers at junior high schools in North Morowali Regency, Central Sulawesi. This type of research is descriptive and quantitative. This research uses the survey method, and in the process of collecting data using a questionnaire technique. The population in this study were PJOK junior high school teachers in North Morowali Regency, Central Sulawesi, amounting to 56 people. Sampling in this study using total sampling. The collected data is then analyzed using descriptive techniques with percentages. The results of this study show the level of knowledge of PJOK teachers of junior high school teachers in North Morowali Regency is in the high category. However, in implementation, it is seen that the factors of applying, analyzing, and evaluating the percentage are still lacking.



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## INTRODUCTION

Sport is a form of planned and structured physical activity, including repetitive body movements, aiming to increase physical fitness. Improving functional abilities with planned and regular movements, namely by exercising, so that exercise itself has become a need for everyone. In exercising itself, we must perform every movement according to existing rules, such as in terms of technique, physicality, tactics and strategy, and mental readiness (Kolehmainen & Sinha, 2014).

When doing physical activities such as exercising cannot be separated from the name of sports injuries. Sports injuries or Sports Injuries are various injuries that occur during training, competing, or after competing (Podlog & Eklund, 2006). Sports injuries occur due to a collision or physical activity that exceeds the training load, physical stress, and technical errors (Drew et al., 2016). Most sports injuries occur in schools. Therefore, sports teachers play an essential role in handling injuries in schools, so it is very important to see the level of teacher knowledge regarding methods of handling injuries (Abernethy & MacAuley, 2003). As a teacher, of course, you must master this knowledge, especially physical education teachers. Based on the Big Indonesian Dictionary (KBBI), knowledge is everything that is known or everything that is known regarding (subjects). The impact of lack of knowledge about the basics of exercise often leads to injury (Jones et al., 1994). Injuries are caused by two factors, namely internal and external factors. Internal factors are caused by a lack of muscle stretching, improper exercise methods, and excessive activities that cause pain 24-28 hours after exercise. An unsafe training environment causes external factors, errors in the use of sports equipment, unsuitable equipment

conditions, and the sport's characteristics (Ogiński et al., 2000).

Proper handling when someone has an injury is critical because, for the injured, it is a determining factor for the length of the recovery process (Chang et al., 2020). When the first aid action is inappropriate, the injury recovery process takes longer than it should (Wang et al., 2012). Proper techniques must be applied in dealing with injuries when exercising, such as a general management plan for sports injury cases that initially use the Protection, Rest, Ice, Compression, Elevation (PRICE) technique (Christoforidis et al., 2018).

The PRICE (Protection, Rest, Ice, Compression, Elevation) method is intended for first aid during sports injuries. The PRICE method was created to make it easier to deal with injuries without waiting for the team (Bleakley, 2009). After the PRICE method, a new method was developed by the BEM IKM medical assistance team through a learning module, namely the Protect, Rice, Ice, Compression, Elevation, Support (PRICES) method. Handling injuries using the PRICES method itself is considered ideal with the addition of preventive measures with continued support so that injured patients do not experience ongoing injuries (BEM IKM FK UI, 2015). According to Riskesdas 2018 data, the age most injured is 15-24 years (12.2%) and 5-14 years (12.1%), which are school age, with the gender having the most injuries, namely male (11%) and most occur in schools (13%) with the proportion of body parts affected by injuries, namely the lower limbs (67.9%) (Kemenkes RI, 2018). Riskesdas 2018 shows the prevalence of injuries in Central Sulawesi Province, namely (13.8%), the province with the highest injury rate in Indonesia (Kemenkes RI, 2018).

Injuries are still common in Central Sulawesi, where most community groups who suffer injuries are school-age, and most injuries occur in the school environment, so physical education teachers have a vital role in dealing with injuries themselves (Sudijandoko, 2000). Based on the background of the problem above, several existing problems were found, namely, improper handling of injuries, lack of knowledge about prevention and treatment of early injuries, and the unknown level of knowledge of physical education teachers about handling early injuries in junior high schools throughout North Morowali Regency, Central Sulawesi. Based on the identification of these problems, the following problems can be formulated, namely looking at the percentage level of knowledge about handling early injuries using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) of physical education teachers for junior high schools in North Morowali Regency, Central Sulawesi.

This study aimed to determine the knowledge level about early injury treatment using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) physical education teacher at a junior high school in North Morowali Regency, Central Sulawesi.

## METHODS

This type of research is descriptive quantitative. The method used in this study is a survey method, and in the process of collecting data using a questionnaire technique to find out how high the level of knowledge of PJOK teachers about early injury treatment is using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) PJOK teachers in junior high schools throughout the world. North Morowali Regency, Central Sulawesi. The population in this

study were PJOK junior high school teachers in North Morowali Regency, Central Sulawesi, amounting to 34 people. Sampling in this study was carried out by total sampling. The questionnaire instrument in this study used a questionnaire with statement items by providing two (2) alternative answers that had been prepared, namely true and false, using the Guttman Scale. Each answer was given a correct score of 1 or 0. The data collection technique was carried out by giving questionnaires to respondents to fill in the guru pendidikan jasmani level of knowledge about early injury treatment using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) method. The instrument in this study used a questionnaire adopted from research (Susanti et al, 2018) with the title "Knowledge of Physical Education Teachers About Early Handling of Sports Injuries Using the Protect Rest Ice Compression Elevation Support (Prices) Method in High School Countries in Kulon Progo Regency in 2017". The instrument in this study has been tested for validity using the SPSS program with a calculated  $r$  value  $r$  table (0.729) with a significant level of 5% or 0.05, and a reliability test was also carried out using the SPSS program with the Cronbach Alpha formula so that a reliability value of 0.987 was obtained. The results of the validity and reliability tests conducted by the researchers found that 52 items were valid from the 60 questions tested.

The results of the data obtained will be analyzed descriptively with percentages that aim to determine the knowledge of physical education teachers about the early handling of sports injuries using the PRICES method in junior high schools throughout North Morowali Regency, Central Sulawesi. This study uses the 100% criteria. The conversion guidelines used in converting the raw score into a standard score on the absolute norm

of a scale of five (5) (Arifin, 2016) are as follows:

No	Mastery Level	Category
1	90% - 100%	Very high
2	80% - 89%	Tall
3	70% - 79%	Currently
4	60% - 69%	Low
5	> 59%	Very low

How to calculate the mastery level percentage:

Mastery level = (Number of correct answers)/(Number of questions) x 100%

After conversion, the percentage of each category is calculated using the formula Sudijono (2000) as follows:

$$P = F/N \times 100\%$$

Information:

P = Percentage searched

F = Frequency

N = Number of Case

## RESULT

Table 1. Description of Physical Education Teacher Knowledge Research on Early Handling of Sports Injuries using the PRICES . Method

Knowledge level		
Category	F	%
Very high (90-100 %)	0	0%
Tall (80-89 %)	14	41,17 %
Currently (70-79 %)	6	17,64 %
Low (60-69 %)	9	26,47 %
Very low (< 59 %)	5	14,70 %

Based on table 1, the results show that the level of knowledge of respondents to the PRICES method as a whole is that there are 14 respondents (41.17%) in the high category, 6 respondents (17.64%) in the medium category, and 9 respondents (26.47%) and 5 respondents (14.70%) fall into the deficient category.

Table 2. Description of Research Results Given Factors

Knowledge Level Remember		
Category	F	%
Very high (90-100 %)	15	44,11 %
Tall (80-89 %)	7	20,58 %
Currently (70-79 %)	1	2,94 %
Low (60-69 %)	5	14,70 %
Very low (< 59 %)	6	17,64 %

Based on table 2, it is found that the level of knowledge of respondents to the PRICES method on the remembering factor, namely there are 15 respondents (44.11%) in the very high category, 7 respondents (20.54%) in the high category, 1 respondent (2.94 %) is in the medium category and 5 respondents (14.70%) are in a low category and 6 respondents (17.64%) are in the deficient category.

Table 3. Description of Research Results Understanding Factors

Knowledge Level Understanding		
Category	F	%
Very high (90-100 %)	14	41,17 %
Tall (80-89 %)	0	0%
Currently (70-79 %)	8	23,52 %
Low (60-69 %)	5	14,70 %
Very low (< 59 %)	7	20,58%

Based on table 3, it was found that the level of knowledge of the respondents to the PRICES method on the understanding factor, namely, there were 14 respondents (41.17%) in the very high category, 8 respondents (23.52%) in the medium category and 5 respondents (14, 70%) are in a low category and 7 respondents (20.58%) are in the deficient category.

Table 4. Description of the Research Results Factors Applying

Level of Applied Knowledge		
Category	F	%
Very high (90-100 %)	0	0%
Tall (80-89 %)	0	0%
Currently (70-79 %)	13	38,23 %

Low (60-69 %)	16	47,05 %
Very low (< 59 %)	5	14,70 %

Based on table 4, the results show that the level of knowledge of the respondents to the PRICES method on the applying factor, namely there are 13 respondents (38.23%) in the medium category and 16 respondents (47.05%) in the low category and 5 respondents (14.70 %) is in the deficient category.

Table 5. Description of Research Results Analyzing Factors

<b>Knowledge Level Analyzing</b>		
Category	F	%
Very high (90-100 %)	14	0%
Tall (80-89 %)	0	17,64 %
Currently (70-79 %)	8	23,52 %
Low (60-69 %)	5	52,94 %
Very low (< 59 %)	7	5,88 %

Based on table 5, the results show that the level of knowledge of respondents to the PRICES method on analyzing factors, namely there are 6 respondents (17.64%) in the high category, 8 respondents (23.52%) in the medium category, and 18 respondents (52.94%) ) is in a low category, and 2 respondents (5.88%) are in the deficient category.

Table 6. Description of Research Results Evaluating Factors

<b>Knowledge Level Evaluating</b>		
Category	F	%
Very high (90-100 %)	0	0%
Tall (80-89 %)	8	23,52 %
Currently (70-79 %)	12	35,29 %
Low (60-69 %)	7	20,58 %
Very low (< 59 %)	7	20,58 %

Based on table 6, the results show that the level of knowledge of respondents to the PRICES method on analyzing factors, namely there are 8 respondents (23.52%) in the high category, 12 respondents (35.29%) in the medium category, and 7 respondents

(20.58%) ) is in a low category, and 7 respondents (20.58%) are in the deficient category.

## DISCUSSION

A physical education teacher must know how to deal with injuries to students. Therefore, physical education teachers must know and understand handling sports injuries (abernethy & macauley, 2003). Based on the results of this study, it is known that the level of knowledge of respondents on the prices method, in general, is in the high category with the results (41.17%). Most of the respondents fall into the high category. In addition to looking at the knowledge of physical education teachers about handling early injuries in general, this study also looked at the knowledge of physical education teachers about handling early injuries through several factors, namely remembering, understanding, applying, analyzing, and evaluating factors.

This study found that physical education teachers' knowledge of the prices method based on the remembering factor was in the very high category (44.11%). Previous research that can support the results of this study is research conducted (yuliana tri susanti & indah prasetyawati tri purnama sari, 2018) which obtained the results that the knowledge of physical education teachers on remembering factors was in the high category with the result of 45.83%. Based on the results obtained, the knowledge of physical education teachers about handling early injuries is based on the fact that most fall into the very high category. Remembering is the knowledge needed from long-term memory. This required knowledge may be factual, conceptual, procedural, metacognitive, or a combination of this knowledge (krathwohl & anderson, 2010) the study

results concluded that the physical education teachers of junior high schools in north morowali regency could remember the material for handling injuries using the prices method well. This knowledge is shown by the teacher's ability to correctly answer all questions about the prices method according to the questions given.

The results show that in terms of understanding, most of the respondents are in the very high category (37.5%). These results mean that the teacher can connect old knowledge, namely the rice method of handling injuries, with new knowledge, namely the prices method of handling injuries. Understanding is the process of connecting new knowledge and old knowledge. More precisely, new knowledge is combined with cognitive schemas and frameworks. Conceptual knowledge becomes the basis for understanding.

Based on the applied factors, the research results obtained that most of the respondents were in a low category (47.05%). This study is in line with the results of research conducted by susanti (2018). Her research also found that in applying factors, most of the respondents were in the deficient category (29.17%). Based on these results, it was concluded that physical education teachers in applying the prices method of injury management were still low. This can be fatal if a sports injury is not treated quickly and adequately. It can result in physical impairment or limitations. Applying is using specific procedures to practice questions or solve problems. The study results mean that teachers have low abilities in carrying out and practicing the implementation of handling injuries using the prices method. The teacher cannot apply the principle of early handling of sports injuries that occur with this method. This is indicated by the teacher

providing inappropriate handling of injured students.

The study results show that teacher knowledge based on analyzing factors is low (52.94%). The results obtained are not in line with the research conducted by susanti (2018), where most of the respondents in analyzing factors fall into the very high category with a percentage of 45.83%. Based on the study results, the knowledge of physical education teachers based on analyzing factors is still low. Analyzing is a process of breaking down material into small parts and determining the relationship between the parts and between each part and the whole structure. The study results mean that teachers have not been able to carry out injury management using the prices method successfully. In addition, the teacher has not been able to explain and provide knowledge to students regarding handling injuries using the prices method, in part and as a whole, so that it can be appropriately applied.

Based on the evaluating factors, the research results obtained that there were 12 respondents (35.29%) in the medium category. The results of this study are contrary to the results of research obtained by susanti (2018), where most of the respondents in evaluating factors fall into the very high category with a percentage of 45.83%. Based on the study results, teacher knowledge based on evaluating factors is in the medium category. Evaluating is making decisions based on criteria and standards. The most often used criteria are quality, effectiveness, efficiency, and consistency. In addition, evaluation is a structured process to determine what should be assessed based on specific criteria. In assessing something by comparing criteria, someone who evaluates can directly compare with general criteria. Another definition of evaluation is measurement and

assessment, a final and hierarchical activity (mahiran, 2017).

Most respondents on the factor of remembering and understanding early treatment when an injury using the prices method obtained a high percentage but in applying, analyzing, and evaluating, it was in a low category. Why is the application in the low category due to the lack of adequate facilities so that most pjok teachers understand how to handle it, but in practice, it is not optimal (porsanger & magnussen, 2021). This causes early treatment when the injury is not maximized, so it is hoped that further research will be more in-depth to see the factors that cause pjok junior high school teachers in north morowali regency, central sulawesi, to understand the material for handling injuries using the prices method but in implementing it is still lacking.

## CONCLUSION

Based on the results obtained, it was concluded that the level of knowledge of junior high school physical education teachers in North Morowali Regency, Central Sulawesi, regarding early injury treatment using the PRICES (Protection, Rest, Ice, Compression, Elevation, Support) method was in the high category. However, implementing the factors of applying, analyzing, and evaluating the percentage is still lacking.

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