Original Article

Physical education students' understanding level About the rice method for sports injuries

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Abstract: The research was carried out to investigate how high the level of students' understanding of the RICE method was, where before this research, students had already studied the First Aid course. Therefore, following up on how well students understand the RICE method is crucial. Moreover, research has emerged regarding students' understanding of the RICE method for sports injuries. Thus, this research aimed to explore how much students understand the RICE method in dealing with injuries during sports. This research applied descriptive, and a survey was used as the data collection technique. Data obtained from research results on 27 students' understanding of the RICE method in treating injuries was measured based on a questionnaire that had been distributed with 30 questions with a score range of 0-1. The results show that the class of 2020 Physical Education students need a predominantly better understanding of the RICE Method for treating sports injuries. Specifically, 0% of students fell into the very good, good, or sufficient categories, while 93% were classified as poor and 7% as very poor. This indicates that all students' comprehension level of the RICE method needs more improvement.

Keywords: Students' understanding levels, RICE method, sport injuries
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INTRODUCTION

This research aimed to assess the level of students' understanding of the RICE method, building on their prior study of first aid courses. As athletes, encountering injuries during exercise is inevitable; thus, it is crucial to know the initial steps to take when an injury occurs. Evaluating how well students comprehend the RICE method is essential, leading to this study on their understanding of this approach for managing sports injuries.

Health sports education is a type of learning that is taught by focusing on physical activity and human movement (Nurrokhmah & Anggita, 2024). Sports education or what is usually referred to as PJOK is a curriculum that has been designed to deliver physical education programs at primary and secondary school levels. Sport is an activity that uses physical and mental strength to become stronger, which means that every individual or athlete who likes to exercise will have a physically and mentally stronger body compared to someone who rarely does sports activities (Sakti, et al., 2022).

Sports education itself is learning that has been taught from elementary school level to higher levels, the learning that is usually taught is physical education, sports and health (PJOK) (Masgumelar & Mustafa, 2021). And physical education, sports and health are part of integral physical education which aims to develop aspects of fitness both physically and spiritually (Supriyadi, 2018). In the world of sports, we will certainly encounter incidents that occur while exercising, one example is injury. Injuries that occur in children are very difficult for us to avoid because injuries occur significantly (Sudirman , Mahyuddin, & Asyhari, 2021).

Injuries are a very common thing we encounter in sports education. An injury is an abnormality that occurs in the body which will result in pain, bruising, heat and redness. A sports injury can be said to be an event that occurs physically while doing sports which results in bruising (Setyaningrum, 2019). Sports injuries are injuries that occur in the deep muscles when doing sports (Fahrizki, marsheilla, & Aguss, 2021), a person who has an injury will experience swelling or redness in the part affected by the injury. To treat injuries, first aid is given using the RICE method. The novelty in this research is the level of understanding of the RICE method for sports injuries. However, research on this is still limited and is needed for sports students. Therefore, it is very important to carry out this research.

Injuries like this can occur due to movements that are often repeated quickly or are called overuse injuries and due to collisions during movements which are called traumatic injuries. There are many factors that cause a person to experience injury when doing sports. It is said that there are two factors that cause a person to experience injury when doing sports, namely internal and extrinsic (Oktavian & Roepajadi, 2021).

The RICE method is a method of treating injuries using ice, which aims to prevent further injury and reduce pain. Where R=Rest (rest), I=Ice (ice), C=Compression (compress), E=Elevation (elevation) RICE is a generally accepted method for treating inflammation after trauma, such as acute ankle sprains (Ferdianto & Noor, 2018). The RICE method is an abbreviation of Rest, Ice, Compression, and Elevation and must be done as soon as possible after an injury occurs (Herlina, Burhan, & Ashari, 2023).

Apart from that, RICE can heal injuries including; stops or reduces bleeding and swelling that occurs in injured blood vessels and can also reduce pain. Handling injuries using the RICE method is an action that is very easy for anyone to do, especially for teachers and students with simple or easy-to-find equipment, just by using ice shards wrapped in cloth (Ita, Ibrahim, Hasan, & Cs, 2022).

First aid in dealing with injuries when doing sports is very important and must be considered appropriately and quickly. In dealing with injuries, whether in serious or minor conditions, we must not do things that will cause more harm to the person or athlete who is experiencing the injury. We can treat injuries using the RICE method, handling injuries that can be identified based on sports science, better known as RICE, namely Rest, Ice, Compress, Elevation is the main modality for treating a sports injury (Widhianti, Ariawati, & Bagia, 2019). Apart from the RICE method, teachers and even students must also understand and comprehend the sports massage method as another example for treating injuries apart from using the RICE method. According to (Sidik & Nugroho, 2022) The RICE method is an injury management method used by coaches for athletes which aims to reduce pain in the athlete before the athlete returns to training or competing.

This research was previously carried out by (Kinanti, Abdullah, Raharjo, & Nur, 2020) understanding of the RICE concept among aerobics instructors in the medium category has a percentage of 72.70% and the low category has a percentage of 27.30%. Research conducted by (Sakti, et al., 2022) in PUSLATCAB Surabaya 2022 athletes the level of knowledge of handling sports injuries using the PRICES method is in the medium category. The similarities

between the research described above and this research have been carried out previously and here the researcher will examine the understanding that students have experienced during first aid learning, namely the level of understanding of first aid for sports injuries using the RICE method. Meanwhile, the respondents the researchers used were STKIP PGRI Bangkalan students. So the novelty in this research is the level of understanding of STKIP PGRI Bangkalan sports education students regarding the RICE method for sports injuries. Therefore, this research is entitled a survey of STKIP PGRI Bangkalan sports education students' understanding of the RICE method for sports injuries.

METHOD

The design in this research is descriptive research. Descriptive research is intended to collect information regarding the status of a symptom according to the situation as it was at the time the research was conducted. Data collection in the research used survey methods. Then the data obtained is presented to the players and coaches. The method used in this research uses a questionnaire or selected type of questionnaire as a data collection technique (Pinanditto, 2016). The population to be studied is STKIP PGRI Bangkalan sports education students class of 2020 who have studied the P3K course, with a total of approximately 27 students. The population is all subjects or objects that will be studied in a study by determining the characteristics to be studied (Rukmana, 2021). Research Sample, is part of the population that will be studied based on the number of characteristics that exist in that population. The sampling technique in this study used saturated sampling so that the total sample used in this study was 27 STKIP PGRI Bangkalan sports students, class of 2020, totaling 27 students. The variables in this study were to determine the level of understanding among STKIP PGRI Bangkalan students regarding handling sports injuries using the RICE method. This knowledge is something that will be known from the results of observations or learning from STKIP PGRI Bangkalan students regarding their understanding of treating early injuries using the RICE (Rest, Ice, Compress and Elevation) method which will be explained through the distribution of a questionnaire. The instrument in this research is a questionnaire. An instrument is a tool or facility that will be used by researchers to collect data (Pinanditto, 2016). The data collection technique in this research is using Google forms. In this research, the data analysis technique uses descriptive analysis which is then interpreted to determine

the level of understanding of the analysis (Robiatul, Azis, Shabrina, & Chueamchaitrakun, 2019). The calculation technique for each item in the questionnaire uses a percentage, using a formula to find the relative frequency (percentage). Next, the results are adjusted to the norms in table 1.

Tabel 1. RICE Method Norms (Oktavian & Roepajadi, 2021)

No.	Category	Point
1.	Very good	81-100
2.	Good	61-80
3.	Enough	41-60
4.	Less	21-40
5.	Very less	0-20

RESULTS

The description of the data from the research results aims to provide a general overview of the distribution of data, both in the form of measuring the location of the frequency distribution of values presented after processing the data using descriptive statistics(Rosita, Hernawan, & Fachrezzy, 2019). herefore, below will be presented descriptive statistics.

Table 2. Descriptive statistics of the results of understanding the RICE method

N	Mean	Median	Min	Max
27	23,44	23	19	28

Based on the results above, the average value is 23.44, the median is 23, the minimum is 19 and the maximum is 28. Next, the percentage results will be presented. Based on the data in the table obtained from research results, students' understanding of the RICE Method among STKIP PGRI Bangkalan students in treating sports injuries was measured based on a questionnaire that had been distributed with 30 questions with a score range of 0-1.

Table 3. Data obtained from the RICE method as a whole

Frequency Interval Percentage Category

Frequency	Interval	Percentage	Category
0	81-100	0%	Very good
0	61-80	0%	Good
0	41-60	0%	Enough
25	21-40	93%	Less
2	0-20	7%	Very less

Based on the table above, the results are presented in a table with frequency, interval, percentage and indicator columns. Based on the results, the interval value 81-100 (very good) has a frequency of 0, the interval value 61-80 (good) also has a frequency of 0, the interval value 41-60 (enough) also has a frequency of 0. Meanwhile, the interval 21-40 (less) has a very high frequency of 25, and the interval value 0-20 (very less) namely with a frequency of 2. These results will be explained in the diagram below so that they can be read clearly.
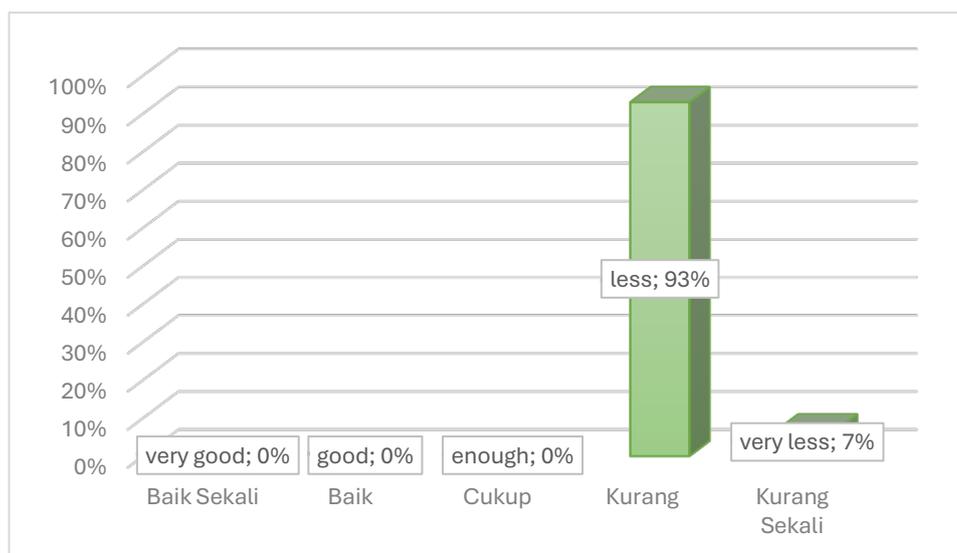

Figure 1 Students understanding of the RICE method

Figure 1 shows that the understanding of the 2020 STKIP PGRI Bangkalan Sports Education students regarding the RICE method for understanding injuries is in the very good, good and fair categories, namely with a percentage of 0%, the poor category is 93%, and the very poor category is 7%.

DISCUSSION

The research results indicate that students' understanding of the RICE Method falls into the categories of very good, good, and enough at 0%, with 93% in the less category, and 7% in the very less category. This suggests that students, particularly those in sports education who have studied first aid for sports injuries, generally have a poor grasp of the RICE method. Previous research was conducted by (Kinanti, Abdullah, Raharjo, & Nur, 2020) understanding of the RICE concept among aerobics instructors falls into the medium category at 72.70% and the low category at 27.30%. These findings suggest that students may not be receiving optimal instruction on the RICE method. Apart from that, it is possible that students lack the practice of applying the RICE method during lectures, and also after completing lectures students do not practice the RICE method which is understood continuously so that students forget. Additionally, the teaching methods might not be effective, and students might not be practicing the RICE method after lectures, leading to forgetfulness. Therefore, it is essential for students to review and practice the RICE method regularly, as it is crucial for managing sports injuries and can be beneficial in everyday situations (Pinanditto, 2016). Treatment based on the RICE principle offers quick, precise, and safe initial care for inflammatory reactions due to injuries. The use of ice in this method helps prevent further damage and alleviates pain. Additionally, RICE can aid in healing by stopping or reducing bleeding and swelling in injured blood vessels, as well as minimizing pain (Ita, Ibrahim, Hasan, & Cs, 2022).

CONCLUSION

The research concluded that the Class of 2020 Sports Education students have a predominantly poor understanding of the RICE Method for treating sports injuries. Specifically, 0% of students fell into the very good, good, or sufficient categories, while 93% were classified as poor, and 7% as very poor. This indicates that the overall comprehension of the RICE Method among these students is largely inadequate. The recommendation from this research is that further research needs to be carried out on the effectiveness of learning methods to increase sports students' understanding of the RICE method for sports injuries.

Conflicts of Interest: The authors declare no conflict of interest.

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