



Student knowledge level: Handling sports injuries using the R.I.C.E method

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Abstract:

The purpose of this study was determine the level of student knowledge of handling injuries using R.I.C.E method in the physical education study program FKIP University of Bengkulu. The problem in this study was that it was not yet know hiow high the level of student knowledge about handling sport injuries using the R.I.C.E method in the physical education study program FKIP University of Bengkulu. The type of research was descriptive research with a qualitative approach with survey method. The subject of research was a physical education student of the FKIP University of Bengkulu. Using data collection technique questionnaires, interview and documentation. Data analysis used in this research was data reduction, data display, conclusion/verification. The result of percentage of all aspects in the very high category were 61.39% (54 student) in the high category 39.64% (34 student) thus the data concluded that the level of student knowledge of handling sports injuries with the R.I.C.E method can be concluded that student have a very high level of knowledge.

Keywords: Handling Injuries, Knowledge, Method, RICE

1. INTRODUCTION

Sport is a very useful physical activity and is closely related to human life (Malm et al., 2019). They consider sport to be a way to relieve tension and stress and as an effort to maintain physical fitness which will support daily life. Every time you carry out physical activities, especially sports, whether in education, training or fitness activities, you are always faced with the possibility of injury and ultimately this can have an impact on disrupting your physical, psychological and performance activities. The impact of sports injuries can also be fatal for an athlete, where the athlete must stop training completely. For students and people who experience injuries due to sports, it can be traumatic if the injury they experience disrupts their daily routines and activities (Bácsné-Bába et al., 2021).

For an athlete or sports player, injuries that occur can limit and stop their steps from carrying out activities and achieving higher achievements (Kujala, 2018). Injuries that occur must receive help and treatment as early as possible, so that athletes and sports practitioners do not experience more severe pain and

can cause disability, so that they can immediately participate in physical activities, train and compete again.

Injury is damage to the structure and function of the body caused by physical or chemical force or pressure. Sports injuries are physical traumas to the musculoskeletal system that result from participation in sports, whether during preparation, competition, or recovery from sports (Makorohim et al., 2022). Many factors cause a person to experience injury while exercising. One of them comes from within. One reason is not doing enough warm-up movements. When performing movements, the body may be injured due to insufficiently trained flexibility. other external factors. Such as the environment, lack of facilities and infrastructure. Another factor is excessive activity. This factor is an injury caused by someone who ignores rest time.

Curiosity through sensory processes (mostly the eyes and ears of specific items) leads to knowledge. A critical area for developing an open mindset to comprehend an item is knowledge (Cakir & Adiguzel, 2020). Knowledge is an important factor in knowing various types of injuries and the factors that cause injury to a person and also ways to treat injuries quickly and appropriately according to the injury experienced by the sufferer. The general guideline for treating injuries is to carry out RICE (Rest, Ice, Compression, dan Elevation) and the injury condition will get worse if the action is wrong, such as doing HARM (Heat, Alkcohol, Running, Massage) (Pristianto et al., 2023).

The treatment method to help injuries as early as possible is to use the R.I.C.E method (Rest, Ice, Compress, Elevation). This method can help heal

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injuries, including: stopping or reducing bleeding and swelling in the injured person, reducing or eliminating pain due to the influence of ice. Apart from helping heal sports injuries, the R.I.C.E method is also a simple method. Each method component has its own role, because it has a specific function, so they can complement each other to treat injuries. Injury as early as possible has a very important role and is a determining factor in the length of time for wound healing. If the first treatment is not appropriate it will have an impact on the injured person and result in a long healing process, therefore the R.I.C.E principle in treating injuries is very important for sports injuries, work injuries and other activity injuries. The R.I.C.E injury management method aims to provide treatment for inflammation at the time of injury during the first 24-48 hours at the time of injury. During this time, sufferers should not be given massage or heat the injured part because it can make the injury worse, so the first treatment of the injury must be done is RICE (Gita et al., 2020).

Students in the Physical Education study program at the Faculty of Teacher Training and Education, one of the study programs at Bengkulu University, are expected to become sports practitioners by having professional competence as physical educators, coaches or sports instructors. Professional competence is one of the competencies that physical education students must have as prospective teachers, coaches and sports instructors (Raibowo et al., 2019). To create graduates with the expected competencies, lecturers in the Physical Education Study Program are required to prepare their students with scientific knowledge and skills related to sports. One of the skills that must be possessed is knowledge about sports injuries and how to treat and prevent injuries.

Knowledge about sports injuries can be an anticipation for students and graduates in carrying out activities as sports practitioners, so that they can provide first aid for injuries quickly and precisely, and can prevent injuries to themselves and others. The importance of having knowledge and expertise in handling and preventing sports injuries for sports

practitioners is the reason for conducting research on the knowledge of sports injuries possessed by Physical Education students at FKIP, Bengkulu University.

2. MATERIAL AND METHOD

Descriptive research is the kind of study that this is. Research reports that describe the circumstances, conditions, or other items under investigation are the output of descriptive research. Existing phenomena are defined in descriptive research as forms, activities, qualities, changes, and similarities and distinctions among phenomena. This research uses a qualitative approach. Using survey methods, so it is also called survey research. The subjects in this research were 88 students from the class of 2019 who were still actively studying. The object of this research was the level of students' knowledge regarding the treatment of sports injuries in learning using the RICE method in the Physical Education Study Program, FKIP, Bengkulu University.

Utilizing closed-ended surveys, interviews, and documentation were the methods of data gathering. Meanwhile, research instruments are tools or objects used by researchers to collect data, in the sense of being more accurate, complete and systematic so that it is easier to work and has better results (Kumar & Chong, 2018). So in this research the instrument used by researchers is a questionnaire (questionnaire). Data analysis techniques According to Kusumarsdyati (2016), the steps taken in qualitative research are in the form of data reduction, display data, and the last is drawing conclusions and verification.

Furthermore, it can be used as a discussion of the problems raised in the form of percentages. According to Yasri & Sari (2019) Formula for calculating relative frequency (percentage) as follows:

$$p = \frac{f}{n} \times 100\% \dots\dots\dots 1)$$

Table 1. Categorization Norms

No	Percentage	Category
1	81% - 100%	Very Good
2	61% - 80%	Good
3	41% - 60%	Enough
4	21% - 40%	Less
5	0 - 20%	Very Less

3. RESULT AND DISCUSSION

3.1 Results of the Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method

method in the Physical Education Study Program FKIP Bengkulu University as a whole was measured using a questionnaire totaling 34 questions.

Data from research on the level of student knowledge regarding handling sports injuries using the R.I.C.E

Table 2. Results of the Student Knowledge Level Questionnaire regarding Handling Sports Injuries using the R.I.C.E Method

No	Interval	Category	Frequency	Percentage
1	81% - 100%	Very Good	54	61.36%
2	61% - 80%	Good	34	38.64%
3	41% - 60%	Enough	0	0%
4	21% - 40%	Less	0	0%
5	0 – 20%	Very Less	0	0%
Amount			88	100%

Based on Table 2 of the questionnaire results above, it is known that the level of student knowledge regarding handling sports injuries using the R.I.C.E method in the FKIP Physical Education Study

Program at Bengkulu University is "Very High" totaling 54 students, the result of "High" is 34 students.

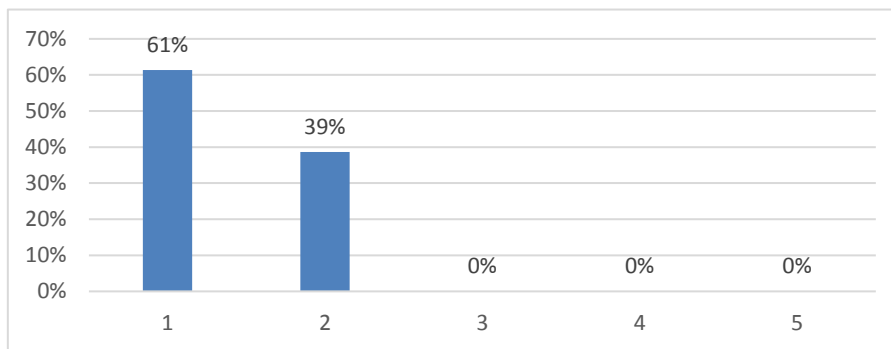


Figure 1. Percentage of Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method

Based on Figure 1, it can be concluded that students who have a high level of knowledge regarding handling sports injuries using the R.I.C.E method are very high with a percentage of 61.36%, students who

have a high level of knowledge 38.64%, students who have a sufficient level of knowledge 0%, students who have a knowledge level of less than 0%, students who have a very less knowledge level of 0%, so that students' knowledge can be categorized as very high.

Table 3. Results of the Student Knowledge Level Questionnaire regarding the Management of Sports Injuries using the R.I.C.E Aspect "Rest"

No	Interval	Category	Frequency	Percentage
1	81% - 100%	Very Good	67	76.14%
2	61% - 80%	Good	21	23.86%
3	41% - 60%	Enough	0	0%
4	21% - 40%	Less	0	0%
5	0 – 20%	Very Less	0	0%
Amount			88	100%

Based on Table 3, the results of the questionnaire above show the level of students' knowledge regarding handling sports injuries using the R.I.C.E method in the FKIP Physical Education Study

Program at Bengkulu University. Rest "Very High" was 67 students, "High" results were 21 student.

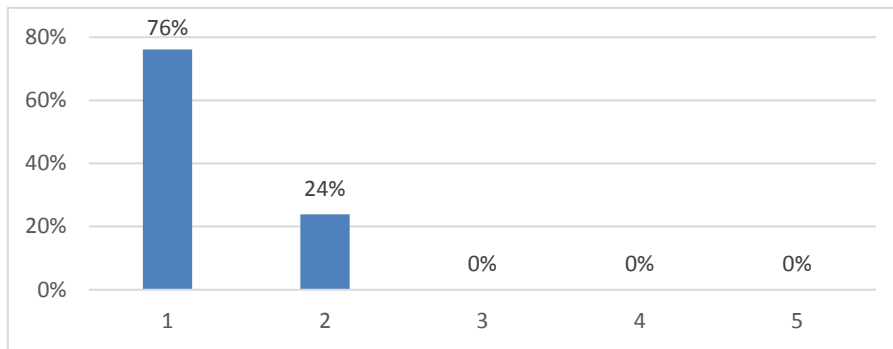


Figure 2. Percentage of Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method Aspect “Rest”

Based on Figure 3, it can be concluded that students who have a level of knowledge regarding handling sports injuries using the R.I.C.E aspect method *rest* very high with a percentage of 76.14%, Students who have a high level of knowledge 23.86%, Students who have a sufficient level of knowledge 0%,

Students who have a low level of knowledge 0%, Students who have a very low level of knowledge 0%, So knowledge students can be categorized as very high.

Table 4. Questionnaire Results on Student Knowledge Level Regarding Sports Injury Management Using the R.I.C.E Aspect Method “Ice”

No	Interval	Category	Frequency	Percentage
1	81% - 100%	Very Good	53	60.2%
2	61% - 80%	Good	35	39.8%
3	41% - 60%	Enough	0	0%
4	21% - 40%	Less	0	0%
5	0 – 20%	Very Less	0	0%
Amount			88	100%

Based on Table 4, the results of the questionnaire above show the level of students' knowledge regarding handling sports injuries using the R.I.C.E

method in the FKIP Physical Education Study Program at Bengkulu University. Ice "Very High" was 53 students, "High" results were 35 students.

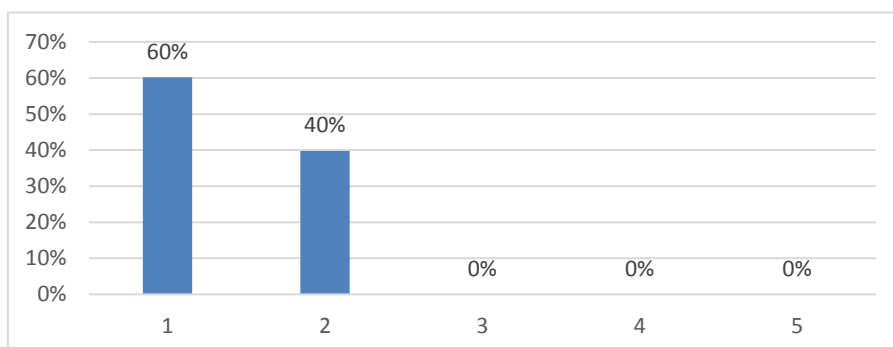


Figure 3. Percentage of Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method Aspect “Ice”

Based on Figure 3, it can be concluded that students who have a level of knowledge regarding handling

sports injuries using the R.I.C.E aspect method Ice very high with a percentage of 60.2%, Students who

have a high level of knowledge 39.8%, Students who have a sufficient level of knowledge 0%, Students who have a low level of knowledge 0%, Students who have a very low level of knowledge 0%, So knowledge students can be categorized as very high.

Table 5. Questionnaire Results on Student Knowledge Level Regarding Sports Injury Management Using the R.I.C.E Aspect Aspect “Compression”

No	Interval	Category	Frequency	Percentage
1	81% - 100%	Very Good	48	54.54%
2	61% - 80%	Good	40	46.46%
3	41% - 60%	Enough	0	0%
4	21% - 40%	Less	0	0%
5	0 – 20%	Very Less	0	0%
Amount			88	100%

Based on Table 5, the results of the questionnaire above show the level of students' knowledge regarding handling sports injuries using the R.I.C.E

method in the FKIP Physical Education Study Program at Bengkulu University.Compression "Very High" was 48 students, "High" results were 40 students.

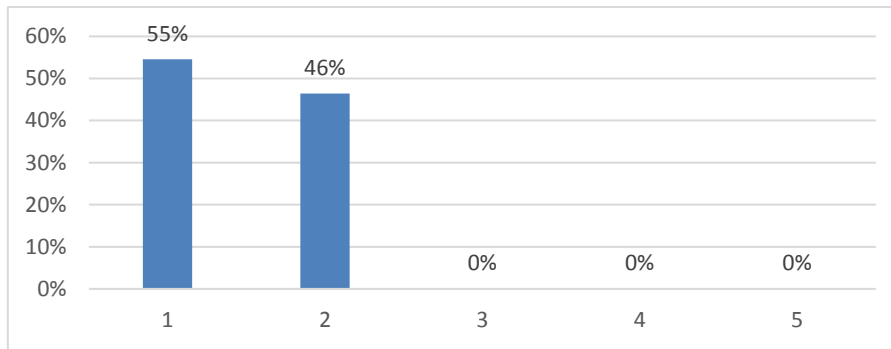


Figure 4. Percentage of Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method Aspect “Compression”

Based on Figure 4, it can be concluded that students who have a level of knowledge regarding handling sports injuries using the R.I.C.E aspect methodCompression very high with a percentage of 54.54%, Students who have a high level of

knowledge 45.45%, Students who have a sufficient level of knowledge 0%, Students who have a low level of knowledge 0%, Students who have a very low level of knowledge 0%, So knowledge students can be categorized as very high.

Table 6. Questionnaire Results on Student Knowledge Level Regarding Sports Injury Management Using the R.I.C.E Aspect Aspect “Elevation”

No	Interval	Category	Frequency	Percentage
1	81% - 100%	Very Good	32	36.36%
2	61% - 80%	Good	56	54.54%
3	41% - 60%	Enough	0	0%
4	21% - 40%	Less	0	0%
5	0 – 20%	Very Less	0	0%
Amount			88	100%

Based on Table 6, the results of the questionnaire above show the level of students' knowledge regarding handling sports injuries using the R.I.C.E

method in the FKIP Physical Education Study Program at Bengkulu University.Elevation "Very High" was 32 students, "High" results were 56 students.

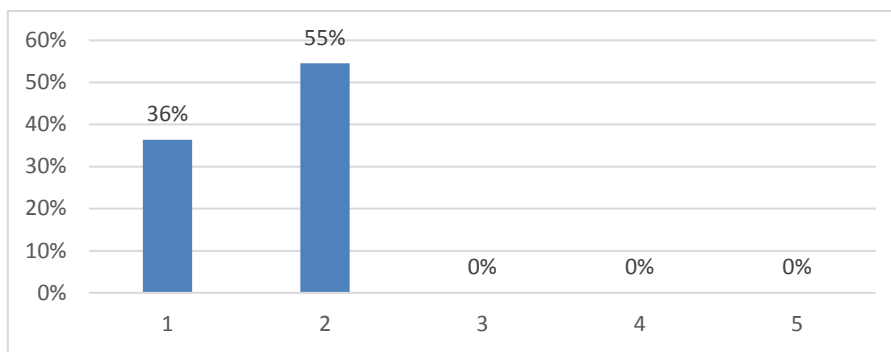


Figure 5. Percentage of Student Knowledge Level Questionnaire on Handling Sports Injuries using the R.I.C.E Method Aspect "Elevation"

Based on Figure 5, it can be concluded that students who have a level of knowledge regarding handling sports injuries using the R.I.C.E aspect method Elevation very high with a percentage of 36.36%, Students who have a high level of knowledge 63.63%, Students who have a sufficient level of knowledge 0%, Students who have a low level of knowledge 0%, Students who have a very low level of knowledge 0%, So knowledge students can be categorized as high.

3.2 Interview Results of Students' Level of Knowledge Regarding Sports Injury Management using the R.I.C.E Method

Apart from observation, the questionnaire in this research also uses interviews to strengthen the results of the research data. Interview results on students' knowledge of handling sports injuries using the R.I.C.E method in the Physical Education study program, FKIP, Bengkulu University. The total number of subjects was 88 students. All question items in the interview were answered directly by students according to the knowledge they had.

From the results of the interviews, it was found out how students' knowledge about handling injuries using the R.I.C.E method is simple and easy to carry out when someone or themselves suffers an injury during activities. The R.I.C.E method is a simple technique for reducing swelling, reducing pain or soreness, helping to speed up the injury healing process. Method Rest Immediately rest the injured part to reduce the risk of the injury getting worse. Method Ice, this method using ice can reduce pain and swelling. Method Compression, apply an elastic bandage or use gauze. This method aims to stop bleeding and reduce swelling. Elevation, position the injured part higher than the position of the heart. This will reduce blood flow to the injured area, thereby minimizing pain and swelling. The right time is as soon as possible after getting injured without delay. The time required for this treatment is 48 hours to 72

hours from the start of this method. These methods are interrelated and very important to each other.

The aim of this research is to find out the level of student knowledge regarding the treatment of sports injuries using the R.I.C.E method in the physical education study program, FKIP, Bengkulu University. The data used in this research uses a questionnaire consisting of 34 items which are divided into 4 sub sections, namely, Rest, Ice, Compression, Elevation.

Based on the research results, it is known from table 4 that the knowledge of physical education students at FKIP Bengkulu University, semester 4 class of 2019, who are in the Very High category is 61.36% (54 students), in the High category is 39.64% (34 students), while in the moderate category , less and very less 0% (0 students). From these results, it can be obtained that the level of knowledge of physical education students at FKIP, Bengkulu University, semester 4 of 2019 regarding the treatment of sports injuries using the R.I.C.E method (Rest, Ice, Compression, Elevation) is very high.

Table. 5. shows that the level of student knowledge is based on aspects Rest (rest) namely Very High amounting to 76.14% (67 students), High results 23.86 (21 students). while the categories sufficient, less and very less are 0% (0 students). From these results it can be obtained that the level of knowledge of Bengkulu University FKIP physical education students semester 4 of 2019 regarding the treatment of sports injuries using the R.I.C.E aspect method Rest is very high. Rest (resting) means that when someone experiences a minor or serious injury, they are required to rest. This action is taken because it is important to prevent further damage. These results are supported by research conducted namely R.I.C.E (Rest, Ice, Compress, Elevation) based on the rest factor there were 4 people (16.67%) in the good category. A person's perception shows a good category for handling injuries using the rest method

because they have a good understanding of resting an injured body (Ortiz-Padilla et al., 2022).

Based on aspects Ice (cold therapy) showed that the students' knowledge level was Very High, amounting to 60.8% (53 students), High results 39.2% (35 students). Meanwhile, the categories sufficient, insufficient and very insufficient are 0% (0 students). From these results it can be obtained that the level of knowledge of Bengkulu University FKIP physical education students semester 4 of 2019 regarding the treatment of sports injuries using the R.I.C.E aspect method Ice (cold therapy) is very high. Knowledge about ice (cold therapy) is in the good category, where research explains that administering ice aims to: (1) reduce bleeding or stop bleeding, (2) reduce swelling, and (3) reduce pain. Injuries are characterized by an inflammatory reaction, treatment can be done by applying ice to the part of the body that is injured (Chimera & Warren, 2016).

Based on aspects Compression (emphasis) shows that the level of student knowledge is Very High, amounting to 54.54% (48 students), High results 46.46% (40 students). Meanwhile, the categories sufficient, insufficient and very insufficient are 0% (0 students). From these results it can be obtained that the level of knowledge of Bengkulu University FKIP physical education students semester 4 of 2019 regarding the treatment of sports injuries using the R.I.C.E aspect method Compression (emphasis) is very high. From this explanation it can be concluded that knowledge is good in handling injuries, this is proven by the number of respondents in the very high and high percentage categories.

Based on aspects Elevation (Raising) shows that the student's knowledge level is Very High, amounting to 36.36% (32 students), High results 54.54% (56 students). From these results it can be obtained that the level of knowledge of Bengkulu University FKIP physical education students semester 4 of 2019 regarding the treatment of sports injuries using the R.I.C.E aspect method Elevation (Raising) is high.

According to Rashid et al. (2019), someone who understands the object or material can explain, give examples, conclude, and so on about the object being studied. Research results T. U. et al. (2022) show that health education has a greater influence and is more effective in increasing knowledge compared to using practical methods. Thus, the data concludes that the level of student knowledge regarding handling sports injuries using the R.I.C.E method can be concluded that students have a very high level of knowledge.

4. CONCLUSION


From the results of the research and discussion described in the previous section, it can be concluded

that the level of student knowledge regarding handling sports injuries using the R.I.C.E method in the Physical Education Study Program FKIP Bengkulu University totaled 88 students for the class of 2019 through a questionnaire totaling 34 statements and interviews which were given and have been completed. answered. Thus, the data concludes that the level of student knowledge regarding handling sports injuries using the R.I.C.E method can be concluded that students have a very high level of knowledge.


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