

## RECOVERY OF KNEE AND ANKLE INJURY IN PASUNDAN BANDUNG PBV VOLLEY BALL ATHLETE

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### Abstract

Injury is a risk that cannot be avoided by athletes, especially in sports that involve a lot of physical movement in activities such as volleyball. Injury causes an athlete to be unable to participate in sports. Injuries to volleyball athletes often occur in the leg area, this incident causes the offspring of athletes' performance, the purpose of this study was to find out how the description of sports injuries in volleyball. The purpose of this study was to see how many volleyball athletes had experienced knee and ankle injuries. This type of research is descriptive. Respondents in this study were 20 junior male volleyball athletes who had experienced injuries and had recovered from their injuries, aged 16-20 years and still active in competitions. The data was obtained by using a questionnaire that was compiled based on a Likert scale. This questionnaire measures about knee and ankle injuries. Data processing was carried out using the SPSS statistical program for Windows release 9.0. The results showed that the most common injuries to junior volleyball athletes were 11% knee, 3% ankle. Injuries that often occur in junior volleyball athletes are still mostly in the knee. Based on the results of the analysis in the recovery and handling of injuries carried out by athletes, future coaches must pay special attention to athletes who experience injuries in order to avoid and excel.

### Keyword:

*Sports injuries, Knee, Ankle, Volleyball*

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### Introduction

The introduction of knee and ankle rehabilitation for PBV Pasundan Bandung volleyball athletes which prompted requests from coaches, parents, and PBV Pasundan Bandung clubs that this device be used for all youth volleyball athletes. Since the introduction of rehabilitation, research on rehabilitation for those who have actually experienced an injury and are still dealing with an injury who carry out various rehabilitation and healing processes, at most they do massage. Warnings about the negative aspects of handling rehabilitation or healing that are unfamiliar to science when exposed to injuries such as

muscle tears, sprains. This concern culminates with questions from athletes who have not returned to good performance, the appropriate rehabilitation process for healing and preventing knee and ankle injuries from reoccurring and being able to restore athlete performance again, perhaps even related to an increase in the frequency and severity of injuries. Despite the uncertainty regarding the quality of knee and ankle sprain rehabilitation that often occurs in volleyball athletes, the use of rehabilitation for knee and ankle sprains must be appropriate so that athletes can return to their performance. By using a questionnaire for all athletes, it is possible to find out the concerns that have been felt by athletes, and coaches can shape the appropriate stages of rehabilitation in the future for what athletes. The questionnaire given to the athletes showed that the distribution of this questionnaire could provide additional information for the rehabilitation of knee and ankle sprain injuries. The descriptive research project became an initial study, based on the experience of descriptive studies, as well as the results of research on a questionnaire given to the effectiveness of the rehabilitation carried out by athletes so far for knee and ankle sprain injuries that are ready to be used for recovery.

## Methods

This research belongs to the type of descriptive research using descriptive techniques where the sample is part of the population (Moleong, 2016). From the questionnaire data used to provide more detailed descriptive research results regarding the stages of rehabilitation of knee ligament and ankle ligament injuries carried out by athletes at PBV. Pasundan Bandung. The club's data system retrieved through a questionnaire to track the injury recovery process includes data on the process, as well as the Utilization of Health Services resources carried out during injuries, in particular knee and ankle ligament injuries (sprains). Knee ligament injuries are categorized as nonsurgical (NS), anterior ligament surgery (ACLS) and other knee ligament surgery (OKLS) as well as ankle sprains and ankle ligament injuries. In the group that has the criteria, the ankle that has experienced an injury is analyzed for the healing process. In the case of more symptomatic clarity is evaluated. For a group of adolescent atlet the ankle selection was analyzed (Suda et al., 2009). Incidence rates were calculated using population estimates. Selection criteria were injuries involving knee ligaments, ankle ligament injuries, knee sprains, ankle sprains, other ligament injuries. Identified that data was extracted for the age level of athletes between 16 and 20 years for adolescent athletes. All costs of injuries incurred as well as the recovery process carried out by the athlete during the injury and are included. The questionnaire is a choice questionnaire filled out by athletes with information on sentence choices that refer to the injuries experienced by the athletes and the injury recovery process that has been carried out, the questionnaire is here to find out where the injuries that often occur or are currently occurring that occurs in adolescent athletes is PBV. Pasundan Bandung. So that in the future the process of providing club services for rehabilitation is better without errors.

## Participant

In this study, researchers used adolescent athletes at the PBV Pasundan Bandung club, with a total of 40 athletes, with indications that they had undergone the process of recovering from

knee and ankle injuries. This study aims to determine the location of injuries that often occur in adolescent athletes at the PBV Pasundan Bandung club so that the athlete's injury healing process can focus and in the future there will be no athletes who survive when injured and remain productive.

#### *Population & Sample*

This study uses a descriptive research method where the population is junior athletes at the PBV Pasundan Bandung club, and the sample is 40 junior athletes aged 16-20 years who have experienced the process of healing injuries.

#### *Instruments*

In this study, the researcher used a questionnaire where the researcher made a questionnaire using a Likert scale system. The Likert scale is a psychometric scale commonly used in questionnaires and is the most widely used scale in survey research. This scale is named after Rensis Likert, who published a report describing its use. The researcher made several sub-questions where the validity and reliability of the questionnaire consisted of several questions and the results of the questionnaire actually came out of 36 questions to be distributed to PBV Pasundan Bandung athletes who had experienced injuries or were injured, as well as to find out how the healing process was done by athletes so far and determine or survey how many answers from athletes to find out which part of the injury is still common in junior athletes PBV Pasundan Bandung.

#### *Procedure*

In this study, the researchers planned a research design to find out how many injuries were often experienced by junior athletes of the PBV Pasundan Bandung club, especially in the legs, such as knees and ankles. In this study, it becomes the answer for coaches, achievement coaches, administrators and athletes for teenagers at PBV Pasundan Bandung. At the beginning of the research, the researcher designed a questionnaire or questionnaire with several sub-questions that would be asked to adolescent athletes at the PBV Pasundan Bandung club, the question was in the form of a questionnaire where the athletes gave real answers, the researcher used a Likert scale to make a questionnaire which would later be distributed to athletes. When compiling the questionnaire, the researcher processed the reliability and validity of the questions to be given to athletes, the researchers compiled the statement to get 36 sub-questions to be answered by valid athletes. The population used is the junior athletes of PBV Pasundan Bandung, the sample used is adolescent athletes aged 16-20 years who have experienced knee and ankle injuries, in this study using descriptive methods and calculations with the SPSS application. This research will get the results of the answers that are questioned by several coaches, administrators, performance coaches at the PBV Pasundan Bandung club, how much injury often occurs in junior athletes aged 16-20 years at the PBV Pasundan Bandung club so that in the future the appropriate rehabilitation process can be seen. junior athletes so that the rehabilitation process can be effective and athletes can be productive, and can gain knowledge for the correct and appropriate way or process of rehabilitation.

#### *Data Analysis*

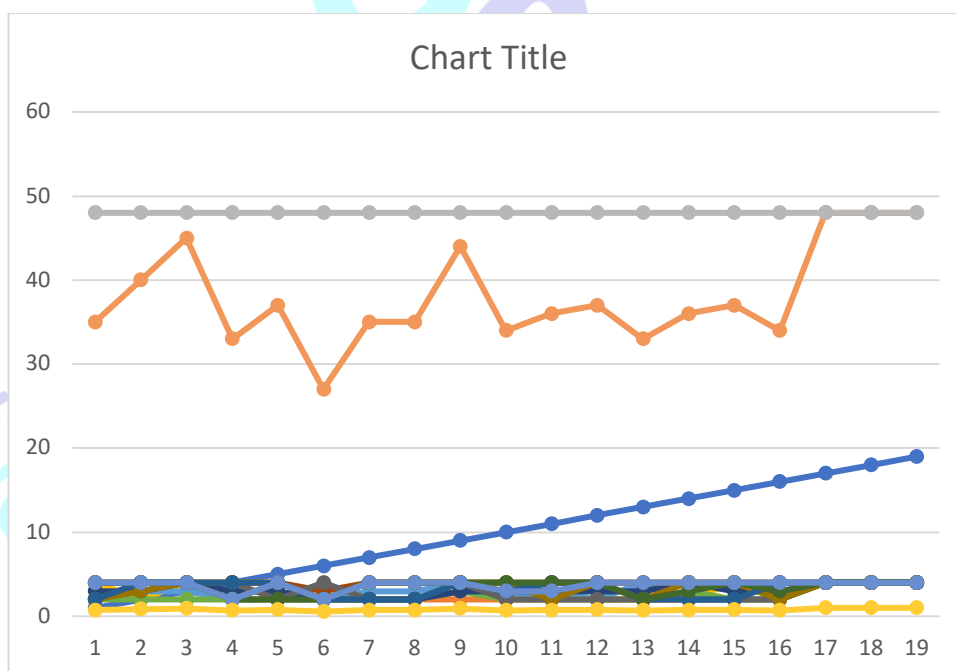
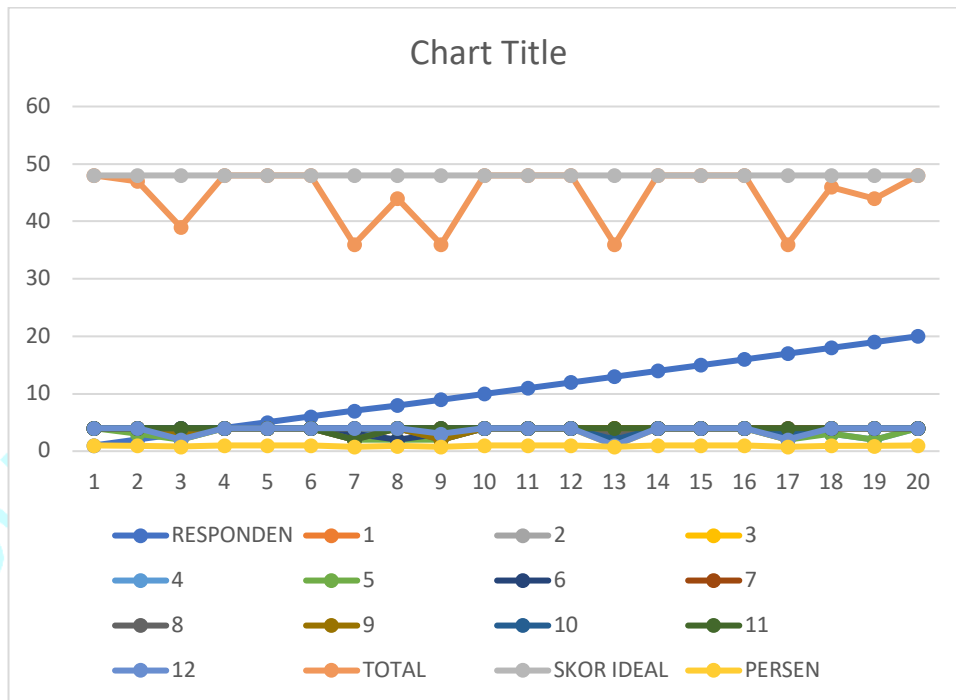
The statistical analysis carried out by the researcher here uses the SPSS application, where the researcher makes a sub-questionnaire or questionnaire that is tested for reliability and validity. After getting the results of the sub-questionnaire that have been validated, the test can be given to the athlete to be answered, and answer all the questions that are asked by the researcher.

Result

DATA TARGET ATLET CEDERA LUTUT																
RESPC	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	SKOR IDEAL	PERSEN	
1	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
2	4	4	4	4	4	3	4	4	4	4	4	4	47	48	0,97917	
3	3	4	2	4	2	3	4	4	3	4	4	2	39	48	0,8125	
4	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
5	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
6	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
7	2	4	2	3	2	3	4	2	4	4	2	4	36	48	0,75	
8	4	4	4	4	2	2	4	4	4	4	4	4	44	48	0,91667	
9	2	4	4	2	2	3	4	2	2	4	4	3	36	48	0,75	
10	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
11	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
12	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
13	2	4	1	4	4	3	4	3	4	2	4	1	36	48	0,75	
14	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
15	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
16	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
17	2	4	3	3	2	3	4	3	3	3	4	2	36	48	0,75	
18	4	4	4	3	3	4	4	4	4	4	4	4	46	48	0,95833	
19	4	4	4	2	2	4	4	4	4	4	4	4	44	48	0,91667	
20	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	

SPONDE	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	SKOR IDEAL	PERSEN	
1	2	4	4	4	2	2	3	4	2	2	4	4	35	48	0,72917	
2	3	4	2	3	2	3	4	4	3	4	4	4	40	48	0,83333	
3	4	4	4	3	2	4	4	4	4	4	4	4	45	48	0,9375	
4	2	2	4	2	2	3	4	4	2	4	2	2	33	48	0,6875	
5	2	4	4	2	2	3	4	2	4	4	2	4	37	48	0,77083	
6	2	2	2	2	2	2	3	4	2	2	2	2	27	48	0,5625	
7	2	4	2	3	2	2	4	2	4	2	4	4	35	48	0,72917	
8	2	4	2	3	2	2	4	2	4	2	4	4	35	48	0,72917	
9	2	4	4	4	3	3	4	4	4	4	4	4	44	48	0,91667	
10	2	2	3	2	2	3	4	2	4	3	4	3	34	48	0,70833	
11	2	4	3	3	2	3	4	2	2	4	4	3	36	48	0,75	
12	2	4	2	2	2	3	4	2	4	4	4	4	37	48	0,77083	
13	2	4	2	4	2	3	4	2	2	2	2	4	33	48	0,6875	
14	2	4	2	2	3	4	4	2	4	2	3	4	36	48	0,75	
15	2	4	4	2	2	3	4	2	4	2	4	4	37	48	0,77083	
16	2	4	2	2	2	3	4	2	2	4	3	4	34	48	0,70833	
17	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
18	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
19	4	4	4	4	4	4	4	4	4	4	4	4	48	48	1	
20	3	4	2	4	2	3	4	4	2	4	4	4	40	48	0,83333	

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Discussion

In this study, it was found that there were still many wrong processes during the rehabilitation carried out by adolescent athletes when they had not entered the official club where there were coaches who had training and already had the ability in several things such as training programs, injury rehabilitation processes etc. Anterior cruciate ligament (ACL) tear is prominent as an indication of an athlete's injury but is a much more serious injury

(Eerkes, 2012). Ankle sprains are a common injury in volleyball, with one study showing it is responsible for: all volleyball-related injuries. This usually occurs when landing at the feet of another player, often a player from the opposing team, so it is more common in positions playing around the net (Majewski et al., 2006). Ankle sprains are usually caused by sudden movements to the outside/side (lateral) or inside/middle (medial) of the ankle. Inversion sprain is the leg turns and or bends inward and upside down. Type When evaluating a sprained ankle in volleyball players, there is usually evidence of injury to the lateral ankle with swelling and tenderness (Sumartiningsih, 2012). Athletes who have suffered a sprain injury. Prevention efforts if after the sprain rehabilitation program must be considered, this study aims to find out the answers to the recovery or rehabilitation process for adolescent athletes that have been carried out before entering the official club, as well as provide answers to how many injuries are often or how many athletes who suffered knee and ankle injuries as a teenager at the age of 16-20 years in athletes from the PBV Pasundan Bandung club.

### Conclusion

In this study, the researchers wanted answers from the results of the questionnaire test given to a number of junior athletes aged 16-20 years at the PBV Pasundan Bandung club regarding the healing process carried out by athletes while they were injured, especially before they entered the official club where it was already there are special coaches or coaches who already understand the needs of athletes both from their knowledge, in this way, what is observed in the results of the questionnaire can be an individual prediction which is to find out which athletes often suffer from recurrent ankle sprains and, thus, can be one of the possible causes of unproductive athletes (Vasconcelos et al., 2020), and researchers want information on what injuries often occur in adolescent athletes, such as knee and ankle injuries.

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