



## Level of Understanding of Sports Injury Management With T.O.T.A.P.S METHOD Among Members of the Student Activity Unit Futsal at Universitas Mercu Buana Yogyakarta

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### ABSTRACT

This study aims to determine the level of understanding of handling sports injuries using the T.O.T.A.P.S method among members of the Futsal Student Activity Unit (UKM) at Mercu Buana University, Yogyakarta. This type of research uses qualitative descriptive research conducted using a survey method distributed via Google Form. There were 51 members of UKM Futsal UMBY who were the samples in this research. To calculate the percentage included in the category in each aspect, the formula is used, namely:  $P = F/N \times 100\%$ . The results of this study concluded (1) understanding of the factors that cause sports injuries in the "Understand" category amounted to 31 people (60.8%) in the "Very Understand" category 16 people (31.4%) in the "Don't Understand" category 4 people (7.84%), (2) understanding of basic sports injury management in the "Understand" category totaling 31 people (60.8%) in the "Understand" category totaling 31 people (60.8%) in the "Very Understand" category 18 people (35.3%) in the "Don't Understand" category 2 people (3.92%), (3) understanding of handling sports injuries using the T.O.T.A.P.S method in the "Understand" category totaling 32 people (62.7%) in the "Very Understand" category 18 people (35.3%) category "Don't Understand" 1 person (1.96%). The research results show that the level of understanding of handling sports injuries using the T.O.T.A.P.S method among members of the Futsal Student Activity Unit (UKM) at Mercu Buana University, Yogyakarta is "understand".

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## INTRODUCTION

Sport is an activity that involves physical exertion and body movements performed in a structured, repetitive, and planned manner, serving to enhance both physical and mental well-being and contributing to the personal development of an individual. There is a variety of sports branches in Indonesia, including swimming, football, archery, futsal, and others. Currently, futsal is gaining significant popularity

among children, adolescents, and adults in Indonesia, making it a favored sport among university students in Student Activity Units (UKM) at universities. Lhaksana (2012) states that futsal is a sport played by two teams, each consisting of five players. Futsal is played on a flat-surfaced court, either indoors or outdoors. A person playing futsal must have good physical fitness and health as it requires strong energy and strength. This is because, during futsal matches, players need to constantly move and run to attack by scoring goals and defend to prevent opponents from scoring.

In this context, futsal activities are not exempt from accidents or collisions between players, leading to injuries. Graha and Bambang (Satya Graha, 2015) state that injuries result from incidents causing damage due to accidents affecting the body's structural parts through physical pressure or collisions, leading to dysfunction in muscles and joints due to excessive activity. Injuries to futsal players often occur during both intentional and unintentional training and competition, caused by technical errors, excessive physical activity, accidents, collisions, and physical pressure from opponents (Setiawan, 2011). The causes can be internal, stemming from incorrect training movements, poor body posture, inadequate physical fitness, weak muscles, excess muscles, or ligaments, and inadequate safety procedures for athletes. External factors, such as collisions, tackles, impacts, inadequate equipment, and poor-quality field conditions, can also contribute to injuries.

The Central Statistics Agency (2015) states that the number of injuries resulting from futsal matches throughout Indonesia amounted to 6,936 cases, with 655 cases in East Java. Athletes or futsal players experiencing mild or moderate injuries should promptly cease playing. This aims to prevent severe injuries that could significantly impact the injury healing process, requiring an extended period (Marom & Drs. Fatkur Rohman K., 2014). According to Wahyu (2013:78), accidents and futsal injuries experienced by junior high school futsal players in Central Java in 2013 had a percentage of 31.8% for head injuries. Furthermore, accidents and injuries also occurred in the upper body, particularly the wrist, at 33.3%. There were also accidents and injuries to the lower body, specifically the knee, at 36%. Overall, injuries most frequently occurred in the body's extremities at 47.18%, primarily in the knee at 36%. One commonly occurring injury on the field is the anterior cruciate ligament (ACL) injury. ACL injuries are the most common ligament injuries, causing knee instability, pain, joint structure damage, and potential disruption to daily activities. This aligns with research conducted by Wibowo (Wibowo, 1994), stating that ACL injuries are a musculoskeletal problem frequently reported in primary care, accounting for 9%.

Injuries in futsal games result from extrinsic factors, or external influences, including collisions, blows, and impacts. Inadequate field conditions, such as the use of cement covered with synthetic grass, rough materials and equipment, and damaged shoes, contribute to injuries. Intrinsic factors, or internal influences, such as initiating

sports movements incorrectly, poor body condition, inadequate athlete safety, and poor posture, also contribute to injuries. In this context, it is hoped that extracurricular sports activities will adhere to regulations because failing to do so may lead to activities taking place without students' knowledge, posing risks to their safety. Common causes of injuries to the anterior cruciate ligament include abrupt changes in futsal players' movements, such as sudden running and stopping, or when knee collisions are severe. Consequently, such situations can lead to the tearing of the anterior cruciate ligament.

Several studies have found that injuries to the anterior cruciate ligament (ACL) are one of the most common knee injuries, contributing to 40% of all injuries in the world of sports. According to information from the royalprogress.com website, the ACL, or anterior ligament, is one of the four main ligaments in the knee joint, crucial for maintaining rotational stability. In line with this, Wijayasurya and Setiadi (Wijayasurya & Setiadi, 2021) state that the ACL is one of the knee ligaments most frequently prone to injury.

Kyritsis & Witvrouw (Kyritsis P, 2014) mention that the inability of the knee, due to a torn ACL, to function optimally is a primary indication that an individual needs knee injury treatment. In some cases, ACL injuries cause instability in the knee joint, hindering individuals from performing activities effectively. Therefore, appropriate injury treatment is required, considering various aspects such as anatomy, biomechanics, and athlete psychology. These considerations will determine the final outcome of the treatment process, whether it will be successful or not. The treatment will also reduce inflammation and immobilization effects, expediting the healing process (Anderson & Barnum, 2017).

Having knowledge about the causes of futsal sports injuries can assist athletes in providing appropriate initial treatment. Palumean (Palumean, 2022) states that sports injuries experienced by athletes result from specific movements, such as zig-zag, changes in direction, and sudden changes in speed (acceleration-deceleration), as seen in sports like soccer, basketball, volleyball, and futsal. Ikhwan (Ikhwan Zein, 2015) adds that these movements occur when athletes dribble the ball or change positions from jumping to landing.

Smith (Smith et al., 2012) associates several risk factors, such as anatomical and neuromuscular factors, with an increased risk of futsal sports injuries, including female gender and specific bone geometry measurements in the knee joint. Further research is needed to explore the effect of knee geometry on the risk of futsal sports injuries. Therefore, the treatment of futsal sports injuries must be tailored to the symptoms experienced by athletes and their severity. If the injury is still mild, first aid can be administered to reduce pain and swelling in the affected area (royalprogress.com, 2022).

However, many athletes still receive inadequate treatment when experiencing sports injuries while playing futsal. As a result, the healing process may proceed slowly or even lead to more severe injuries. The incidence of futsal sports injuries exceeds 200,000 cases, with 100,000 knees undergoing reconstruction each year. References indicate that amateur sports groups generally have a higher incidence of knee injuries compared to professional athletes (Gusma, 2022).

There are several techniques for managing injuries in sports, and one of them is the T.O.T.A.P.S. method. The totaps method stands for Talk (communication), Observation (observation), Touch (physical examination), Active movement (active movement), Passive movement (passive movement), and Skill (skill). This method can be used to handle athletes experiencing sports injuries, including those in futsal.

The Student Activity Unit (Unit Kegiatan Mahasiswa or UKM) Futsal at UMBY serves as a platform for students who enjoy futsal. These students come from various academic disciplines, and most of them are not professional athletes. Consequently, when futsal sports injuries occur, the treatment received from peers may be inadequate. A lack of understanding of how to handle injuries means that students experiencing injuries may not immediately receive appropriate on-field treatment.

Based on the observations above, considering the numerous cases of futsal sports injuries among athletes and references supporting the existing issues, researchers aim to conduct a more in-depth investigation into the factors causing and the understanding of handling futsal sports injuries in the Student Activity Unit (UKM) Futsal at Universitas Mercu Buana Yogyakarta.

## **RESEARCH METHOD**

The researcher adopts a qualitative approach based on the problem formulation. From observations, the researcher describes the field conditions. Wahid Pure's claim (Strauss & Corbin, 1998) states that the qualitative approach to research involves researchers collecting and analyzing data as participants, providing data as part of the research process.

The qualitative approach is chosen because the data consists of sentences collected through observation, interviews, and documentation, which are used to present the research learning data.

### **Research Location and Time**

This research is conducted at Universitas Mercu Buana Yogyakarta, located on Jl. Raya Wates-Jogjakarta, Karanglo, Argomulyo, Kec. Sedayu, Kabupaten Bantul, Daerah Istimewa Yogyakarta. The research is carried out in the even semester of 2023. Universitas Mercu Buana Yogyakarta is selected for this research due to its commendable achievements related to its Futsal Student Activity Unit (UKM Futsal).

### **Research Population and Sample**

1. Population According to Pargono (2017), the population is the entire set of data that is the focus of a researcher within a specified scope and time. Population is related to data; if a person provides data, the size or quantity of the population will be equal to the number of individuals. The population for this research is all members of the Futsal Student Activity Unit (UKM Futsal) at Mercu Buana Yogyakarta with an average age of 20-24 years.
2. Sample According to Sugiono (2018), a sample is a portion of the quantity and characteristics possessed by the population. The sample taken from the population must be truly representative or represent the population being studied. The total population in this research (total sampling) consists of members of the UKM Futsal Mercu Buana who have participated in tournaments and regularly attended training sessions.

### **Instruments and Data Collection Techniques**

1. Instruments:
  - Questionnaire Guide (question items): A set of questions designed to gather information from the participants.
  - Documentation: Collection of relevant documents that provide additional insights into the research.

The collected questionnaire and documentation data will be analyzed and processed. Qualitative descriptive analysis will be employed by the researcher to conduct an analysis aligned with the research objectives.

2. Data Collection Techniques:

Questionnaire (Google Form): Data is gathered through a questionnaire in the form of an online form (Google Form), filled out by all members of the Futsal Student Activity Unit (UKM Futsal) at Mercu Buana Yogyakarta. The questionnaire has undergone validity and reliability testing by experts in the field of sports injuries, ensuring it is a valid and reliable instrument for data collection.

### **Data Validity**

Validity, Dependability, and Objectivity these are essential criteria for qualitative research data. In this context, validity is tested to ensure that the reported data aligns with the actual occurrences in the research subjects. Credibility tests are utilized to examine the authenticity of the data. Triangulation, This involves examining information from various strategies and sources. Triangulation of sources involves checking data obtained from various sources, including futsal players and coaches. Technical triangulation uses different methods to verify the authenticity of data by comparing it with the same source.

### Data Analysis:

This qualitative descriptive research aims to understand the level of understanding of sports injury management among members of the Futsal Student Activity Unit at Mercu Buana Yogyakarta. Data analysis employs qualitative descriptive techniques to elucidate and describe the obtained data. After collecting all research data, the analysis ensures that the results are not misinterpreted (Miles et al., 1994).

## RESULTS AND DISCUSSION

### Research Results Description

#### Location and Sample Research Description

- a. Research Location: The research was conducted within the Futsal Student Activity Unit (UKM Futsal) at Mercu Buana University, Yogyakarta. Data collection took place from early December 2023 to the end of December 2023.
- b. Research Sample: The sample for this research comprised active members of the Futsal Student Activity Unit at Mercu Buana University, Yogyakarta, who regularly participated in training sessions and various leagues or tournaments. A descriptive study was conducted using the Survey Method, implementing data collection through a questionnaire distributed via Google Form to 50 active members of UKM Futsal UMBY. The questionnaire aimed to gather data on the level of understanding of sports injury management using the TOTAPS method. The distribution percentage from the frequency was calculated using the following formula:

$$P = \frac{F}{N} \times 100\% N$$

Information :

P: percentage

F : the frequency the percentage is being searched for

N: the number of respondents

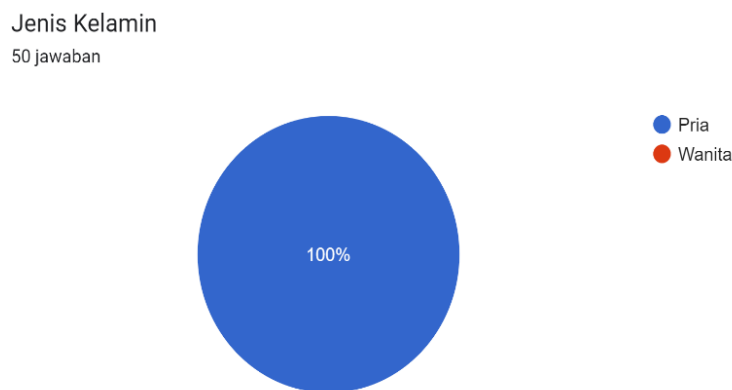
#### Respondent's Identity

The identity of the respondents in this research were members of the UMBY Futsal UKM who came from several study programs from Mercu Buana University, Yogyakarta. The identity of the respondent can be determined from gender, age and study program.

**Table 1.**  
**Gender of Respondents**

Jenis Kelamin	Jumlah	Presentase
Laki-laki	50	100%
Perempuan	0	0%
<b>Total</b>	<b>50</b>	<b>100%</b>

Based on the table above, it can be seen that the number of male respondents was 100% or 50 respondents, and the number of female respondents was 0% or there were no female respondents. This can be explained in the following graphic diagram:



**Figure 1.**  
**Graphic diagram of the gender of UMBY Futsal UKM members**

### Data Description of the Research

After the data collection process, the researcher proceeded with calculations following the data processing techniques. In order to understand the results of the conducted research, the next step involved data analysis and processing based on the survey questionnaire responses. Below is the complete data on the understanding of members of the Futsal Student Activity Unit (UKM Futsal) at Mercu Buana University Yogyakarta regarding the handling of sports injuries using the TOTAPS method.

### Factors Causing Injury

Each set of data will be described with the aim of facilitating the presentation of the research findings. The results of the study are described as follows:

The research results on the level of understanding among members of the Futsal Student Activity Unit at Mercu Buana University, specifically regarding the factors causing sports injuries, are presented as follows:

**Table 2.**  
**Intervals and Categories**

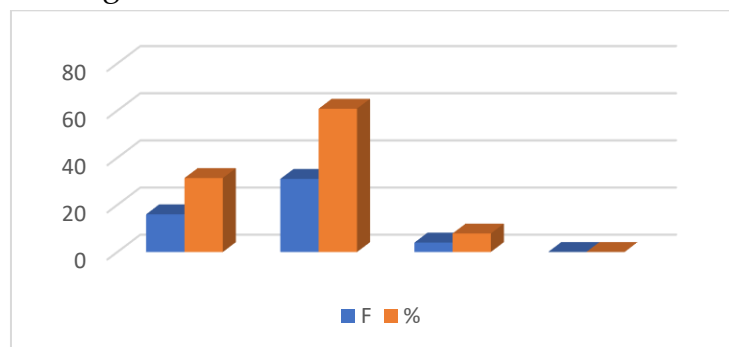
Interval	Categories	F	%
40 - 48	Very Understand	16	31,4
31 - 39	Understand	31	60,8
22 - 30	Do not understand	4	7,84
12 - 21	Very Misunderstood	0	0
<b>Total</b>		<b>51</b>	<b>100</b>

The table above is the distribution of data from the results of the questionnaire that was filled in by respondents. There are 12 statements categorized as follows:

- Strongly Agree = 4
- Agree = 3
- Disagree = 2
- Strongly Disagree = 1

There were 51 respondents and each score they got can be categorized as in the interval and category table below:

The Very Understand category has a score with an interval of 40-48, the Understand category has an interval of 31-39, the Don't Understand category has an interval of 22-30, and the Strongly Don't Understand category has an interval of 12-21. The results of the distribution of data on understanding the factors that cause injuries to members of UKM Futsal UMBY are 16 or 31.4% of respondents have an understanding of the factors that cause injuries in the Very Understand category, 31 or 60.8% of respondents have a level of understanding of injury factors in the Understand, 4 or 7.84% of respondents had a level of understanding of injury factors in the Don't Understand category, and 0 or 0% of respondents were in the Very Don't Understand category. The level of understanding of members of Mercu Buana University Futsal UKM regarding the factors that cause sports injuries is dominantly "Understand". For more details, see the image below.



**Figure 2.**  
**Distribution data diagram for understanding the factors that cause injuries to UMBY Futsal UKM members**



### Understanding Sports Injury Management

The results of research on the level of understanding of members of Mercu Buana University's Futsal UKM, especially regarding the handling of sports injuries, are presented as follows:

**Table 3.**  
**Intervals and Categories**

Interval	Categories	F	%
44 - 53	Very Understand	18	35,3
34 - 43	Understand	31	60,8
24 - 33	Do not understand	2	3,92
13 - 23	Very Misunderstood	0	0
<b>Total</b>		<b>51</b>	<b>100</b>

The table above is the distribution of data from the results of the questionnaire that was filled in by respondents. There are 13 statements categorized as follows:

- Strongly Agree = 4
- Agree = 3
- Disagree = 2
- Strongly Disagree = 1

There were 51 respondents and each score they got can be categorized as in the interval and category table below:

The Very Understand category has a score with an interval of 44-53, the Understand category has an interval of 34-43, the Don't Understand category has an interval of 24-33, and the Strongly Don't Understand category has an interval of 13-23. The results of the distribution of data on understanding the handling of sports injuries among UMBY Futsal UKM members were that 18 or 35.3% of respondents had an understanding of the factors that cause injuries in the Very Understand category, 31 or 60.8% of respondents had a level of understanding of injury factors in the Understand, 2 or 3 category. .92% of respondents had a level of understanding of injury factors in the Don't Understand category, and 0 or 0% of respondents were in the Very Don't Understand category. The level of understanding of members of Mercu Buana University's Futsal UKM regarding handling sports injuries is dominantly "Understand". For more details, see the image below.

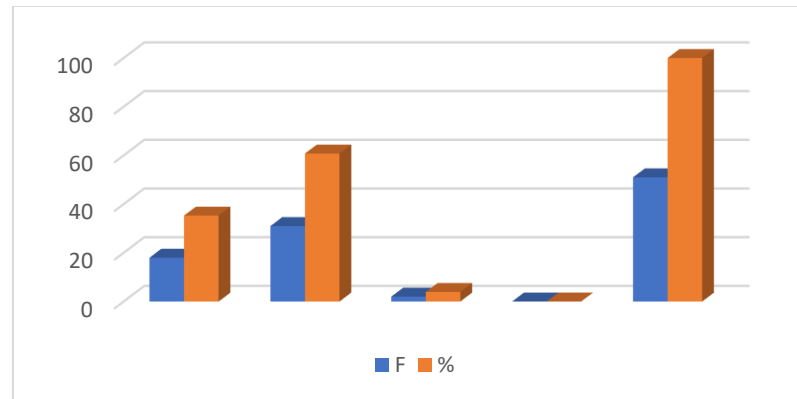


Figure 3.

Distribution data diagram of understanding of injury management for UMBY Futsal UKM members

### Injury Treatment Using the T.O.T.A.P.S Method

The results of research on the level of understanding of members of Mercu Buana University's Futsal UKM, especially regarding handling sports injuries using the TOTAPS method, are presented as follows:

Table 4.

#### Intervals and Categories

Interval	Categories	F	%
48 - 56	Very Understand	18	35,3
35 - 47	Understand	32	62,7
26 - 36	Do not understand	1	1,96
14 - 25	Very Misunderstood	0	0
<b>Total</b>		<b>51</b>	<b>100</b>

The table above is the distribution of data from the results of the questionnaire that was filled in by respondents. There are 14 statements categorized as follows:

- Strongly Agree = 4
- Agree = 3
- Disagree = 2
- Strongly Disagree = 1

There were 51 respondents and each score they got can be categorized as in the interval and category table below:

The Very Understand category has a score with an interval of 48-56, the Understand category has an interval of 35-47, the Don't Understand category has an interval of 26-36, and the Strongly Don't Understand category has an interval of 14-25. The results of the distribution of data on the understanding of sports injury management among UMBY Futsal UKM members were that 18 or 35.3% of respondents had an understanding of the factors that cause injuries in the Very Understand

category, 32 or 62.7% of respondents had a level of understanding of injury factors in the Understand, 1 or 1 category. .96% of respondents had a level of understanding of injury factors in the Don't Understand category, and 0 or 0% of respondents were in the Very Don't Understand category. The level of understanding of members of Mercu Buana University's Futsal UKM regarding handling sports injuries using the TOTAPS method is dominantly "Understand". For more details, see the image below.

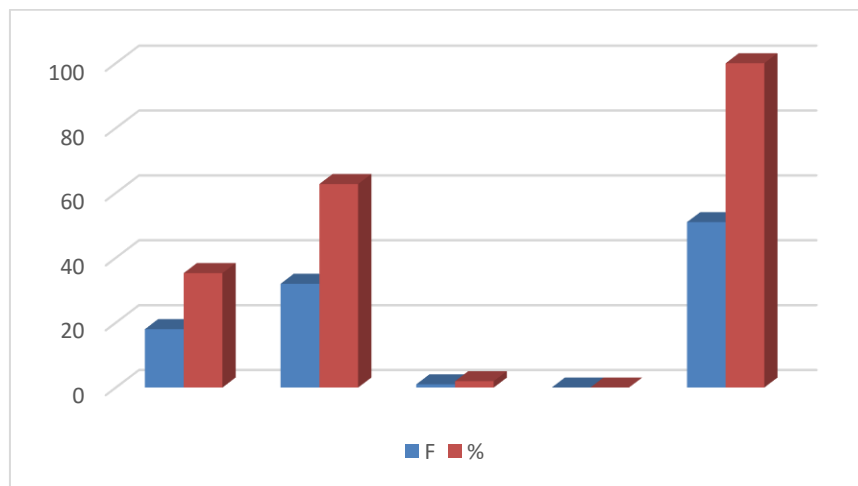


Figure 4.

**Distribution data diagram of understanding of injury management using the TOTAPS method for UKM UMBY members**

## Discussion

Discussion of the research results will address the problem formulation and research objectives. Three key points will be explained in the discussion of these research findings:

1. The first problem formulation is about the knowledge of Mercu Buana University Yogyakarta Futsal Student Activity Unit (UKM Futsal) members regarding the factors and causes of sports injuries. The objective is to understand the basic knowledge of the factors causing injuries. From the questionnaire survey results, it can be observed that the level of understanding of the factors causing injuries among UKM Futsal UMBY members is predominantly "Understanding," with a percentage result of 60.8% or 31 respondents.
2. The second problem formulation is about the level of knowledge regarding the understanding of sports injury management among Futsal Student Activity Unit members from various study programs. The objective is to understand the basic knowledge of futsal sports injury management. Based on the questionnaire survey results, it is evident that the level of knowledge regarding the understanding of futsal sports injury management among UKM Futsal UMBY

members is predominantly "Understanding," with a percentage result of 60.8% or 31 respondents.

3. The third problem formulation is about the level of understanding of sports injury management with the T.O.T.A.P.S. method among Mercu Buana University Yogyakarta Futsal Student Activity Unit members. The objective is to determine the level of understanding of futsal sports injury management with the TOTAPS method among UKM Futsal UMBY members. According to the questionnaire survey results, the level of knowledge regarding the understanding of futsal sports injury management with the TOTAPS method among UKM Futsal UMBY members is predominantly "Understanding," with a percentage result of 62.7% or 32 respondents.

## CONCLUSION

Understanding the Level of Sports Injury Management with the T.O.T.A.P.S Method Among Members of the Student Activity Unit (UKM) Futsal at Mercu Buana University Yogyakarta," it is evident that the members of UKM Futsal UMBY fall into the "Understanding" category. This high level of knowledge can anticipate the occurrence of injuries and enables individuals to understand how to manage injuries using the TOTAPS method, which stands for Talk (Speak), Observe (Observation), Touch (Touch), Active Movement (Active Movement), Passive Movement (Passive Movement), Skill Test (Sports Movement). When someone comprehends what to do regarding sports injuries, they are also likely to engage in actions that reduce the occurrence of sports injuries.

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