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Survey of sports injuries in young football athletes in soccer competitions

M. Akbar Husein Allsabah[1*]
[1]Study Program of Physical Education, Health and Recreation, Health Science Faculty, Universitas Nusantara PGRI Kediri, East Java, Indonesia
[*]Corresponding Author. Email: akbarhusein@unpkediri.ac.id

Abstract
Sports injuries are a big problem when coaching young athletes to prepare to become professional players. Therefore, it is necessary to know the incidence and type of injury in sports or football matches so that coaches and players can anticipate injury events. This study aimed to determine the incidence of injuries and types of injuries of young football players in a youth football coaching competition. This research method is a survey with an interview approach and filling out a questionnaire about sports injuries after the game; validators have validated the questionnaire according to their fields. The subject of this research is 360 football players who participated in the Kediri Cup 2022 football event. The results of this study were that of the 360 players who participated in the Kediri Cup 2022 football match, 121, or 33.6%, did not experience injuries, while 239, or 66.4%, suffered injuries. Meanwhile, the type of injury that most affects players is 79 or 33.1% muscle cramps. From the results of this study, players and coaches can find out and minimize the incidence of injuries in football matches. Minimizing these injuries can be done by preparing players in shape so that players are ready during the game.
Keywords: sport injuries, football, young age, youth competition

PENDAHULUAN

Sport is an activity or activity carried out by an individual with specific intentions; in sports activities, it can be used as a means of competition activity to achieve achievements (Weda, 2021). Football in Indonesia is still achieving achievements in the national team and clubs that play in the AFC (Weda & Kurniawan, 2022). All efforts to increase the quantity and quality of human resources continue to be carried out by coaching players at a young/early age, which is expected to produce athletes who can achieve optimally (Kbarek & Endah Nuffida, 2017). The soccer game is in great demand by most of the world's communities because this sport is exciting to watch and play (Watson & Mjaanes, 2019). In soccer, victory can be obtained by scoring as many goals as possible compared to the opposing team (Rohman, 2017).

Football sports are included in achievement sports, which are carried out with a coaching process carried out in a planned, processed, and tiered manner. Besides going through such a long process, football coaching needs to be developed with the support of science and technology in sports (Schulenkorf et al., 2016). The Football Organization in Indonesia is managed by the Indonesian Football Association (PSSI). This organization aims to develop and improve achievements in the sport of football. Several ways are taken to develop and improve, such as holding championships and competitions in football at various age levels. The provision of competitions that aim to conduct coaching is to find talented players, who later, from the competition, can see the skills possessed by the players who play in the competition (Larsen et al., 2012). Activities to improve the quality of Indonesian football will be more effective if coaching is done well, starting in the regions. Kediri has developed a lot of football coaching through football schools (SSB) and participates in football coaching programs in the surrounding areas. In sports, especially in football, the regulator and the most responsible is the coach; the coach is responsible for training programs and player development so that the potential of athletes can develop (DiSanti et al., 2019). At present, the coach must have broad competence and be more responsible for athletes; the demands of a coach can bring out the best potential for athletes so that the coach knows the characteristics of his athletes so that athletes can be organized in carrying out the

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competence of his athletes.

Football cannot be separated from injuries due to weak physical conditions or weak player fitness. Injuries can be experienced by all people who do strenuous activities or exceed their best abilities so that the body cannot support their activities. Injury is damage or injury experienced or suffered by someone due to collisions with objects or anything (Setyaningrum, 2019). Injury is a scourge and is often experienced by an athlete; the most common injuries that befall soccer players, especially at a young age, are abrasions, bruises, and tears, and the most severe are fractures and dislocations (Aicale et al., 2018; Whittaker et al., 2015). Injury knows no age limit; this occurs because of the inability of the body to support the activities carried out by the human body when doing work (Büttner et al., 2021). In terms of age, 20% of children in the United States who are involved in physical activity are injured each year (Whittaker et al., 2015), further injuries such as cuts, strains, sprain, dislocations, and fractures (Luke et al., 2011).

In children, sports injuries in football cause several things, such as the provision of physical activity that lacks techniques and tactics that need to be mastered correctly. The occurrence of injuries in children as an object for football coaching in football competency coaching in the city of Kediri needs to be a serious concern, especially for young football coaches. Knowing children's injuries can be an evaluation material in training and preventive procurement in overcoming injuries experienced by children in football. When experiencing an injury event, young athletes generally feel tremendous pain in the sport they are doing (Hausken-Sutter et al., 2021). Young athletes who have been injured are traumatized when doing their sports activities again; this is when reviewed at the young athletes feel fear of experiencing the pain they have suffered, so they fear for their future in the sport (Friesen et al., 2018; Olsen et al., 2005).

Soccer is a sport with severe physical contact that involves the risk of relatively large injury rates in professional, amateur, and youth players during training and matches (Hägglund et al., 2005; Sprouse et al., 2024). Injuries in soccer games can occur because soccer games play faster and more aggressively in today's games (Ekstrand et al., 2011). Soccer injuries are related to the age of the player, training load during practice, level of play, and training standards (Price et al., 2004). Most researchers studying injuries have focused on the case of professional soccer players (Ekstrand et al., 2011; Wrigley et al., 2012). To prevent soccer players from potential injuries, medical staff will carry several incentives, such as finding the safest and most successful methods to help young players get in shape and avoid injuries (Artanayasa & Putra, 2014; Mandorino et al., 2023). Avoiding such injuries requires identifying existing injury cases so players can understand the risks that can lead to injury. Currently, no research is available to improve the injuries that befall youth soccer players. This research tries to describe some injury cases of youth soccer players. It is expected to present a picture of youth soccer players' injuries in a youth soccer competition that is useful to provide an overview for young players to know injury cases in soccer games.

Therefore, it is essential to know the injuries experienced by youth football in a competition, so it is essential to review what injuries are experienced by youth football athletes when participating in youth coaching competitions so that after being known by athletes or being able to know the kinds of injuries so that this knowledge can make preventive when experiencing an injury.

METHOD

This study uses a quantitative research design using a survey approach whose research design is to determine the percentage of injury types of young soccer athletes in the 2022 Kediri Cup soccer competition in Kediri City. Data was collected during the competition, from August 28 until October 1, 2022, with the number of subjects studied by the Kediri Cup 2022 ball participants, namely 16 teams that participated in the competition. The sampling technique uses purposive sampling with criteria consisting of 1) filling out the consent sheet to become a respondent and 2) Following the Kediri Cup Ball Competition 2022. From the sampling technique, researchers have obtained 360 research subjects.

This study used structured interview questions to assess the research variables. The

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interview questions were validated by a team of validators in sports injuries, and then small-scale pilot tests were conducted on relevant participants in the field. Subsequently, the data was evaluated, and further modifications and refinements were made to make the instrument more suitable for the participants. The study used a systematic process to collect the actual data. After validating and assessing the reliability of the research instruments, the researchers sought permission from the participants' coaches and parents. They engaged in discourse to provide direction and coordination regarding the research. Informed consent forms were presented and completed, and signed forms were collected from parents and participants. In-person interviews lasted between 30 and 45 minutes after conducting a match or after participants finished a match session. Before answering, the researchers checked whether the participants understood the questions. Audio recordings and field notes were used to ensure the accuracy of data collection.

The data analysis carried out is that the data collected from the results of data collection is then processed with the following stages; the data collected and checked for correctness and completeness are then given coding by the researcher manually before using SPSS 25. Scoring is carried out to provide an assessment of the questionnaire results with their indicators; if, in checking, it is known that the answer is incomplete or there is an error, the data must be completed by clarifying the subject concerned again. The following table is a range of answer criteria in taking answers to the data obtained.

Tabel 1. Scoring Criteria for Likelihood of Injury

Questionnaire	Questionnaire Results	Criteria
Sampel-00	71 – 105	Not injured
Sampel-00	35 - 70	injured
Jumlah		

From the table above, the range of values 71-105 is a criterion for not experiencing the possibility of injury, and values 35-70 are criteria for possible injury. Next, move the data from the questionnaire into the tables used to facilitate the results of taking research answers. Furthermore, the percentage of the results of the data found so that it can easily explain the amount of results obtained in percentage form.

Prosentase

$$P = \frac{n}{N} x100\%\text{P}$$

Keterangan:
P= percentage (final score)
n= number of reality scores obtained
N= number of samples
(Maksum,2007)

RESULT AND DISCUSSION

This study aims to determine the incidence and types of injuries during the Kediri Cup 2022 soccer match. The data in this study is the percentage of injuries experienced and the type of injury during the Kediri Cup 2022 ball activities organized. Each piece of data will be described to facilitate the research presentation. This data is obtained from Kediri Cup ball participants in 2022 after competing according to the schedule set by the committee. The percentage of injuries is recorded by interviewing subjects to explain how they suffered injuries after playing during the performance at the Kediri Cup ball competition in 2022.

After learning about the injuries during the match played by young players during the

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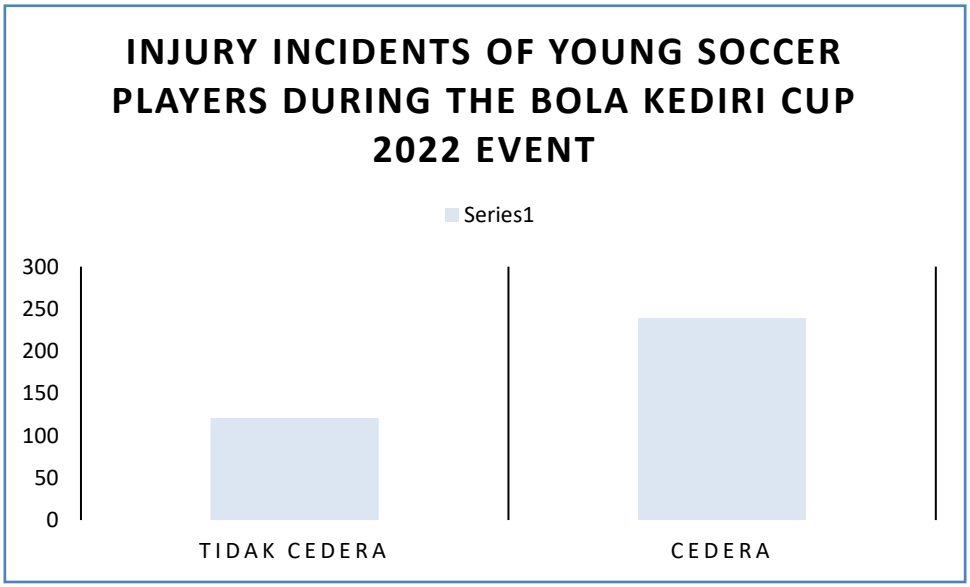
football competition Bola Kediri Cup 2022, we analyzed the injuries these players suffered more deeply. The study's results obtained the percentage of injuries to young soccer players after the match schedule was also in the Bola Kediri Cup 2022 match. The results of descriptive data analysis on each data are as follows:

Table 2. Percentage of Injury Events of Young Soccer Players During the 2022 Bola Kediri Cup Performance

Criteria	Frequency	Percentage
Not Injured	121	33,6%
Injured	239	66,4%
Total	360	100%

The percentage of injury incidents experienced in 360 players who competed during the Bola Kediri Cup 2022 event had a percentage of injuries as many as 239 young players or (66.4%), while the percentage who did not experience injuries was 121 young players or (33.6). Based on the table above, it can be concluded that young soccer players suffered injuries during the organization of the Bola Kediri Cup 2022, as many as 239 or 66.4% of young players. The following is a diagram of the results of the injury incidence interview during the Bola Kediri Cup match 2022:



Figures 1. Injury incidence of young soccer players during Kedir Cup 2022 soccer matches

Furthermore, after knowing the occurrence of injuries or not during the youth soccer match Bola Kediri Cup 2022, the types of injuries experienced by young soccer players during the match according to the match schedule are obtained; the results of descriptive data analysis on each data are as follows:

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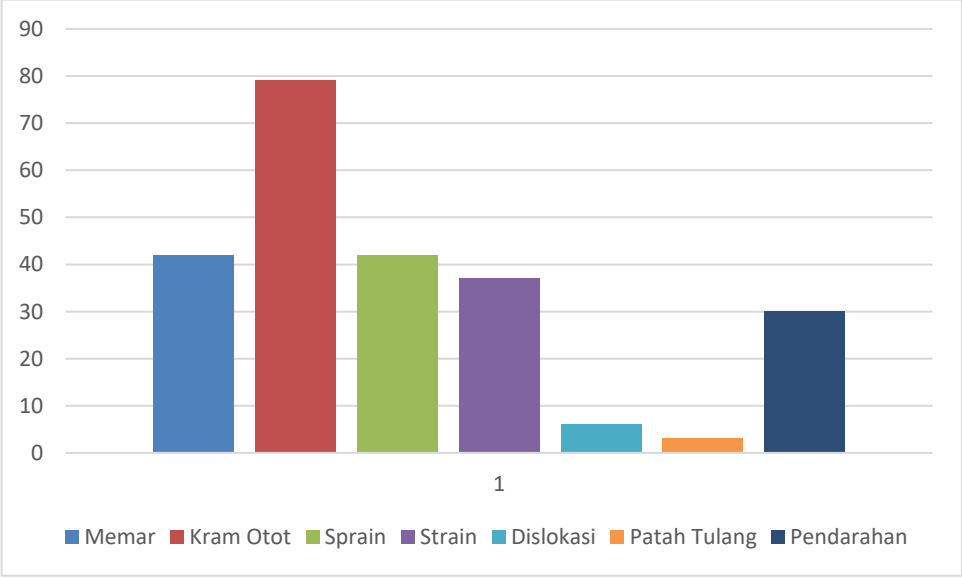
Table 3. Percentage of Injury Types During the Kediri Cup 2022 Football match

Type of injured	Frequency	Percentage (%)
Bruises	42	17,6%
Muscle Cramps	79	33,1%
Sprain	42	17,6%
Strain	37	15,5%
Dislocation	6	2,5%
Fraktur	3	1,3%
Bleeding	30	12,6%

The percentage of types of injuries experienced by 239 players who competed during the Bola Kediri Cup 2022 event on respondents who were injured during the match, types of injuries such as bruises as many as 42 players or 17.6%, muscle cramps as many as 79 players or 33.1%, muscle sprain as many as 42 players or 17.6%, strains as many as 37 players or 15.5%, dislocations as many as six players or 2.5%, fractures as many as three players or 1.3%, and bleeding as many as 30 players or 12.6%. Based on the table above, it can be concluded that the type of injury to young soccer players participating in the Bola Kediri Cup 2022 mostly experienced muscle cramps in as many as 79 players or 33.1%. The following is a diagram of the types of injuries experienced by young soccer players participating in the Bola Kediri Cup 2022:



Figures 2. Types of Injuries of Youth Soccer Players During the 2022 Kediri Cup Ball Competition

The results of the above research state that the incidence of injuries that occurred in the 2022 Kediri Cup Ball competition showed there were 239 cases of injury during the match. Football athletes who perform activities including running, walking, jumping, throwing, and playing with the ball all use football techniques during a football match. Doing some of these activities causes some limbs to experience fatigue, resulting in injury. So, with so many match schedules that require players to display the best skills, they experience fatigue, and it is known that most injuries occur due to muscle cramps.

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The occurrence of various injuries in a sports match is caused by fatigue of the limbs due to the many activities carried out (Setyaningrum, 2019). Injuries such as muscle cramps can occur because the body's response is experiencing fatigue due to the activities carried out, especially soccer cramps are a response to body fatigue, especially the dominant part in performing movements in these activities. In addition, the hard activity load due to prolonged activity in sports injuries is a response to the body not being able to do further work in each activity. Sports injury is a disorder or pain caused by physical activity, from these activities that require a large physical (Read et al., 2019). Injuries in sports are caused by defects, wounds, and damaged body parts such as damage to muscles or joints and other body parts (Frizziero et al., 2014; Guermazi et al., 2017). In every sporting event including soccer injuries can befall the athletes involved in it, at a young age soccer injury is a terrible thing because it can be a factor inhibiting the future of the young player (Aicale et al., 2018). The severity of the injury can hinder the development of players, especially young players, because there is a trauma factor, and the level of healing that takes a long time so that the continuation of the child's age can be at stake (Barden et al., 2021; Whittaker et al., 2015). This underlines the importance of proper training and injury prevention in youth soccer development, as it can significantly impact the future of young players.

From the results of this study, the types of injuries obtained from field reviews are the types of injuries that are usually encountered in sports, including football. The occurrence of injuries in football really requires handling quickly according to the right healing method, such as immediate ice application and rest, because the nature of the injury that must be treated immediately and must be appropriate treatment makes the injury manageable and does not damage the body parts more severely (O'Brien et al., 2019). Treatment and recovery of sports injuries must be handled properly and perfectly so that the injury does not get worse and does not cause further injury.

Various kinds of injuries to young soccer athletes obtained in soccer activities usually come from collisions or conditions from the body that cause injuries to players. The results of the review of this study showed that cramping injury is the most common injury suffered by players during the Kediri Cup 2022 football event. A cramping injury is an injury that indicates the body has done maximum work and the body feels unable to continue the next activity (Baskoro et al., 2018). This study also describes various other types of injuries experienced by young players during the competition.

The results of this study indicate that the identification of injuries to young soccer athletes during the competition can draw further attention from athletes and coaches. The coach needs to pay attention to the cause of the injury and use it as study material to prepare the right training program for football players so that the right program can prepare the player's condition for the match (Hebestreit & Bar-Or, 2008). Performance-ready conditions for soccer players are critical to ensure players can compete with maximum ability.

Injuries to young players: A coach must be of particular concern because young athletes are in a coaching period to train peak abilities so that skills can be appropriately mastered and these players can be prepared at the senior level. Therefore, the coach must adequately prepare the player's condition so that the coaching carried out on young players can be done optimally. The incidence of injury in sports matches needs to be minimized for a player when competing; minimizing the incidence of injury can be done by preparing and fostering the condition of athletes when player coaching is carried out (Guermazi et al., 2017; Semperboni et al., 2021). Coaches and athletes need to minimize the incidence of injuries in sports so that players who carry out sports activities prepare their conditions as much as possible to be ready for sports competitions.

CONCLUSION

The incidence of injury in a youth coaching event is known to have several cases of injury, with the most common being muscle cramps, ligament sprains, and bone fractures. These injuries, particularly cramping injuries, are prevalent among young players. The results of this study are a concern for the future of football coaches and players, as they highlight the need to minimize the incidence of these injuries in a football match. Injury is a significant factor that can hinder a player's future. The hope is that the results of this study can serve as a reference for researchers to develop preventive techniques or strategies to avoid these types of injuries in sports.

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Based on the research that has been conducted, the limitation of this study is the limited amount of research data collection that does not represent the national scope. In the future, these limited results can make more attention to follow up on these results because the impact provided by this problem is essential to follow up. The contribution of this study is to describe injuries in young soccer players so that young soccer players can get an overview of injuries in soccer sports. The unity of this research lies in mapping the types of injuries of young soccer players, and until now, few studies have discussed this. The selection of the survey method can contain all forms of player injury data obtained on the research subjects. In the future, with this research for youth teams, coaches must always identify or record injuries to find solutions and problems to prevent injuries to their players. Young soccer players should pay attention to various injury countermeasures to understand how actions must be taken in dealing with injuries. For further research, it should take preventive actions or actions that can overcome injuries in soccer sports in young players.

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