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DOPING ABUSE TO INCREASE STAMINA IN ATHLETES

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ABSTRACT

Doping abuse remains a significant challenge in the world of sports, particularly due to its use by athletes to enhance physical performance, endurance, and stamina. Despite its perceived benefits in improving athletic performance, the misuse of prohibited substances may pose serious risks to athletes' health and undermine the principles of fair competition and sports integrity. This study aims to examine the prevention of doping abuse among athletes, identify commonly used doping substances, and analyse their potential effects on athletes' health and sporting performance. This research employs a descriptive qualitative method by examining relevant literature, scientific publications, and other supporting sources concerning doping practices in sports. The collected information is analysed descriptively to provide a comprehensive understanding of the causes, types, consequences, and preventive measures associated with doping abuse. The findings are expected to improve awareness and understanding among athletes, coaches, and sports stakeholders regarding the health risks and ethical implications of doping. Furthermore, effective prevention requires education, regular doping tests, strict enforcement of anti-doping regulations, and cooperation among sports organisations, medical professionals, and relevant authorities. These measures are essential to protect athletes' health, uphold fair competition, and promote integrity in sports.

Keywords: *Doping abuse; Athletes; Sports Integrity; Prevention; Anti-Doping*

1. Introduction

According to the Big Indonesian Dictionary (KBBI), there are two definitions of sports. The first definition of sport is the movement of the body to strengthen and nourish thebody (such as soccer, swimming, javelin throwing). The next definition of sport is an activitythat involves the physicality and skill of an individual or team, performed for entertainment.

In general, the definition of sport is an activity that involves physical and mental exertion carried out to train the human body, both physically and spiritually. Exercise is an important activity needed by the body. Sports are usually done by moving all or part of the body, both upper and lower limbs. In Indonesia, there are various types of sports that peopleare interested in, ranging from gymnastics, jogging, cycling, to playing soccer.

As time goes by, sport is not only a means of maintaining human health, but also a competition that is the pride of the nation. Related to the idea of sports, answers and statements can be obtained about the skills, advantages, and competitiveness possessed

through sports. Various sports events are increasingly being held at regional, national and international levels. The existence of various competitions has encouraged someone to become an athleteand take part in championships in sports events as an interesting and challenging arena. Because the parties who take part in the Sports Championship have one goal, namely to winin the sport they are interested in. To achieve this victory, various things are done such as proving skills and physical strength, winning titles, positions, recognition, medals, awards inthe form of material, so that inner satisfaction is achieved. However, it is not easy for an athlete to win the whole match. Of course, this includes the mental and material things neededto develop good athletes and strong in order to be able to achieve the expected success, giventhe increasingly fierce competition faced by athletes.

Currently, the challenges faced by athletes are increasingly complex, especially considering their potential, fear of opponents, pressure to win from coaches, parents, sponsors, and others, as well as increasingly complex emotional problems. Such as panic, irritability, and various other problems that arise both from within and outside the athlete. Anxiety in athletes can cause a crisis of confidence and affect the athlete's concentration ability during competition.[1] These challenges are exacerbated by the desire to immediately overcome the challenges faced by athletes, such as problems related to the use of doping byathletes who change the techniques used in competition, and problems related to sponsorshipof competitive events. The use of doping in competitive sports is one of the most hotly debated topics today.[2]

The use of doping is prohibited because it has a negative impact on the career and future of an athlete such as causing dependence, nerve damage to the body, susceptibility todisease, and loss of career in the world of sports. This is as stated in Law Number 11 of 2022 concerning sports Article 1 Paragraph 21 which says that "doping is the use of prohibited substances and / or methods to improve sports performance as well as all forms of violation of anti-doping regulations". Doping is nothing new in the world of sports, but behind the frequent doping among athletes in various sports there is a strong desire to win and athlete anxiety.[3] This is certainly caused by various factors, one of which

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1 Nikos Ntoumanis et al., "Psychosocial Predictors of Doping Intentions and Use in Sport and Exercise: A Systematic Review and Meta-Analysis," British Journal of Sports Medicine 58, no. 19 (2024): 1145–1156, https://doi.org/10.1136/bjsports-2023-107910

2 Ntoumanis et al., "Psychosocial Predictors of Doping Intentions and Use," 1145–1156.

3 Shalender Bhasin et al., "Adverse Health Consequences of Performance-Enhancing Drugs: An Endocrine Society Scientific Statement," Endocrine Reviews 35, no. 3 (2014): 341–375, https://doi.org/10.1210/er.2013-1058

is the lack of knowledge and understanding of doping among sports team administrators and athletes.

2. Methods

This research employs a descriptive qualitative method to examine doping abuse among athletes, particularly its use to enhance physical performance and stamina, its potential health consequences, and the preventive measures that can be implemented in the sporting environment. Descriptive qualitative research aims to provide a comprehensive and systematic description of a particular phenomenon based on the collected information without manipulating the research conditions.[4]This method emphasises understanding and interpreting the meaning of the phenomenon rather than measuring it through statistical procedures.[5] The research is conducted through library research by examining secondary data obtained from scientific journals, academic books, research reports, official publications, and relevant legal instruments concerning doping in sports. The legal materials include Law Number 11 of 2022 concerning Sports and the World Anti-Doping Code 2021, particularly the provisions governing anti-doping violations, prohibited substances and methods, and preventive measures. Data are collected through documentary studies by identifying, selecting, and reviewing relevant literature and legal documents related to doping abuse, its health implications, and anti-doping policies. The collected data are subsequently analysed using descriptive qualitative analysis. This process involves classifying the information, identifying relevant themes, interpreting the findings, and presenting them systematically to explain the types of doping substances, their potential effects on athletes' health, and the role of education, testing, and regulatory enforcement in preventing doping abuse.[6]

3. Result and Discussion

3.1 Doping in sports competitions

The term doping is widely used by various organizations that govern sports competitions around the world. Doping is a term that refers to the use of stamina-

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4 Margarete Sandelowski, "Whatever Happened to Qualitative Description?," Research in Nursing & Health 23, no. 4 (2000): 334–340, https://doi.org/10.1002/1098-240X(200008)23:43.0.CO;2-G

5 Sharan B. Merriam and Elizabeth J. Tisdell, Qualitative Research: A Guide to Design and Implementation, 4th ed. (San Francisco: Jossey-Bass, 2016).

6 Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña, Qualitative Data Analysis: A Methods Sourcebook, 3rd ed. (Thousand Oaks, CA: SAGE Publications, 2014).

enhancingdrugs or substances in athletes. What this means is that athletes will take boats or substancesin order to improve their athletic performance in competitive sports. This is something that is prohibited for athletes, and is considered cheating in sport. The term doping was first usedin the UK in 1869 for British horse racing, where horses were doped to help them become champions. The value of sportsmanship in various sports is often eroded by the use of dopingsubstances consumed by athletes. Competition for success in sports is becoming increasinglyfierce, so some athletes often use different methods. In addition, some coaches try to improvethe performance of their athletes in various ways. For example, by training harder, utilizing technological advances, or even taking shortcuts, namely by providing doping to improve athlete performance[7].

According to Sports Medicine Specialist Dr. Michael Triang to who has been covered by Kompas.com, Sp.KO said that doping is everything both substances and methods that canintentionally improve performance, but not through the training process.[8] "So there are certainways that can improve a person's performance or cover existing deficiencies, so that the person concerned can win," Michael said when contacted by Kompas.com, Monday(18/10/2021). He explained, actions that include doping, for example using steroids to help increase muscle mass, so that someone will get greater strength. "Of course that is unfair, because for those who really practice it takes a long time to get big muscles," he continued. One of the most common types of doping used by athletes is anabolic drugs, including androgenic steroid hormones (androstenedione, nandrolone and stanozolol).[9] These substances allow an athlete to train harder, recover faster and build more muscle. However, the use of it can cause damage to the kidneys and increased aggression. According to Kompas.com, the use of drugs in doping is prohibited in the world of sports because it has an impact and dangerous side effects on athletes. Quoted from The American Medical Society for Sports Medicine the side effects or dangers of using doping are:

- Cardiovascular: irregular heart rhythm, high blood pressure, heart attack,

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7 Andrea A. Conti, "Doping in Sports: A Historical and Conceptual Overview," *Medicina nei Secoli: Arte e Scienza* 22, nos. 1–3 (2010): 181–190.

8 United Kingdom, House of Commons, Culture, Media and Sport Committee, *A London Olympic Bid for 2012: The Government's Response to the Committee's Seventh Report of Session 2002–03*, Seventh Report, section 3, "Drugs in Sport: The History" (2004).

9 Shalender Bhasin et al., "Anabolic-Androgenic Steroid Use in Sports, Health, and Society: A Joint Position Statement of the American College of Sports Medicine," *Medicine & Science in Sports & Exercise* 53, no. 8 (2021): 1778–1794, https://doi.org/10.1249/MSS.0000000000002670

suddendeath.

- Central nervous system: insomnia, anxiety, depression, aggressive behavior, suicide,headache, withdrawal addiction, psychosis, tremor, dizziness, stroke.
- Respiratory: nosebleeds, sinusitis.
- Hormonal: infertility, gynecomastia (enlarged breasts), decreased testicular size, lowsex drive, acromegaly, and cancer.

The mention of the word doping can be seen in Law No. 11 of 2022 concerning sports. Article 1 number 21 states: "doping is the use of prohibited substances and/or methods to improve sports performance as well as all forms of violation of anti-doping regulations."

The above provisions make it clear that the use of doping in various forms for the purpose of performance enhancement is prohibited. This means that the legislation has strictprovisions regarding the misuse of certain doping to achieve unlawful results. Perpetrators who violate the above provisions will be held legally responsible. Further provisions will beregulated by national sports authorities/organizations by obliging the relevant authorities to implement anti-doping regulations in accordance with Article 98 of Law No. 11 of 2022 on Sports.[10]

3.2. The types of drugs that are categorized as accidental doping

How much the body needs doping and banned substances, whether consciously or unconsciously ingested in everyday life If doping is deliberately used to enhance athletic performance or endurance, it is considered a serious offense. It is classified as a gross violation of sporting regulations. However, there are cases where athletes unknowingly ingestsubstances classified as doping while exercising. Quoted from Cracked: There are six categories of drugs that contain doping elements intended to increase endurance. In the abuse of drugs, the government has treated the law for drug abuse, namely Law No. 5 of 1997 on Psychotropic and Law No. 22 of 1997 on Narcotics. The grouping ofdoping and drugs can be seen in six groups as follows:

- Stimulants
  Stimulants are drugs used to increase physical activity and alertness by increasing heart and respiratory rate and improving brain function. By acting on the central nervous system, stimulants can stimulate the body both mentally and physically.

[10] American Orthopaedic Society for Sports Medicine, "Anabolic Steroids," accessed November 4, 2026, https://www.sportsmed.org/anabolic-steroids.

Examples are adrafinil, cocaine, modafinil, pemoline, selegiline It is prohibited because it can stimulate the mind or body, thereby improving performance and giving athletes an unfair advantage. Athletes use them to enhance their ability to train at an optimal level, suppress combat fatigue and appetite. Stimulants are a type of caffeine that is widely found in coffee. Its effect is to make thedrinker more alert,commonly used by vehicle drivers.

- Tranquilizers
  This drug is used by people who have high activity that drains their energy and mind.
- Anti-nausea medicine
  This type of medication is used to reduce the symptoms of nausea in those taking it. It is more commonly used by people working on ships, divers, and ground transportation passengers to avoid the risk of nausea.
- Beta Blocker
  Beta blockers are drugs used medically to treat heart disease and high blood pressure. The same drug is also used to treat anxiety as it can reduce extreme restlessness and shaking. beta blockers are often used by professionals who require calmness and dexterity, such as musicians, actors, and surgeons. However, similar drugs are banned by the International Olympic Committee for archers.
- Diuretics
  Diuretics are drugs that aim to mask the use of doping because they cause the body to waste large amounts of water and cause urine production to exceed the normal threshold capacity.

Although these five categories are unwittingly referred to as doping categories because their main component is to increase endurance, the people taking them do not realize that all six groups of drugs are actually doping. Clear evidence includes laboratorytesting using scientific methods. According to the World Anti-Doping Agency (WADA), there are six types of dopingcategories that are prohibited for use in the world of sports, namely:

1. Anabolicsteroids
   Anabolic steroids are drugs that mimic the effects of testoterone. For information, testoterone is a hormone that plays a role in muscle building in men. In the world of sports, anabolic steroids are often used to build muscle in athletes.
2. Hormones and *growthfactors*
   In the world of sports, this type of doping is used with the aim of increasing the numberof red blood cells in charge of transporting oxygen in the body. The abuse of this typeof doping also has the purpose of modulating the formation of muscles, tendons, and vascularization.
3. Metabolic and modulators hormones
   This type of doping is used by female athletes to improve performance. Whereas, in male athletes they are used to reduce the side effects of *gynecomastia*.
4. Diuretics
   Diuretics are a type of doping that can help to reduce body weight and remove the remains of other doping drugs through urine. In addition, diuretics will make other doping undetectable during screening.
5. Beta-2 agonists
   This type of doping is usually used to open the airway and is used to improve

breathingperformance.

6. Othertypes
   There are several substances that are suspected of doping and are still in the testing phase that fall into this type. After a series of tests, WADA can decide whether the substance is doping or not.

The use of doping has several impacts, both positive and negative. In general, the positive effects of doping use can increase endurance, increase self-confidence, increase physical strength, increase courage, and reduce pain when approaching menstruation. In addition, it improves concentration by increasing calmness, reducing hand tremors, and lowering heart rate. The negative effects of doping can cause muscle spasms, nausea, headaches, and fainting. If used too frequently, it can cause kidney and heart problems. Changes that occur in women include irregular menstrual periods, hair distribution patterns,breast size reduction, and increased aggression.

Sports and competitions are interpreted consciously and seriously in the spirit ofsportsmanship, and athletes realize all their potential in sports activities that violate laws andregulations and the sports code of ethics without relying on external support. Therefore, prevention can be done in the first place (doping). Preventive participation is not only the conscious responsibility ofthe athletes themselves, but this participation must also be carried out by:

- Coach
  The coach in this case is the person who is responsible for the skills or other talents of an athlete. The coach is the person who is used as a role model for athletes in the implementation of discipline development and becomes a good model for the athlete.
- Branch officials
  Officials are one or more people involved in the ownership, management or organization of a sport, whose purpose is to provide motivation and direction, and must be based on the standards of the sport and are responsible for creating success by maintaining the commitment of the sport organizer as a sanctuary for athletes.
- Local Government
  Local governments, both through city and district national-level regional sports committees, play an important role in implementing the support system by providing policy guidelines regarding sanctions for athletes who violate sporting standards.

4. Conclusion

Although sports are closely related to competition to achieve success, the realityis that some athletes use methods that are not in accordance with applicable regulations. Especially in the case of doping, some athletes, although not athletes, have the potential

to further develop their abilities. On that basis, it is necessary to socialize the dangers of using dangerous doping substances, the effects of doping, the positive and negative things from doping to coaches, organizations that organize sports parties and athletes themselves.

Suggestion:

1. For the organizing organization, in the future continue to provide guidance for athletes,especially in the use of prohibited objects such as doping;
2. For athletes, in the future to be able to utilize objects that do not harm the physical andmental when competing, and prioritize honesty not to use Doping

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