

## Physical Education Students' Perceptions Of The Use Of Supplements And Drugs In The World Of Sports

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**Abstract:** *The use of supplements and medications in the world of sports has become an increasingly prominent issue, including among Physical Education students. A lack of proper understanding regarding the content, benefits, and risks of these substances can lead to dangerous misconceptions in sports practice. This study aims to examine the perceptions of Physical Education students at Nahdlatul Ulama Sunan Giri University regarding the use of supplements and medications in sports, as well as the factors that influence those perceptions. The research employs a descriptive qualitative approach with a field study method. Data were collected through in-depth interviews, observations, and documentation involving six purposively selected informants. The results show that students tend to be permissive toward the use of supplements and morally reject the use of medications; however, their understanding remains limited in terms of scientific and regulatory aspects. Factors influencing their perceptions include personal experience, peer influence, social media, and the limited coverage of the topic in academic courses. These findings highlight the need to strengthen the curriculum and health education to foster critical understanding and responsible attitudes regarding the use of performance-enhancing substances in sports.*

**Keywords:** *Perception, Supplements, Medications, Students, Physical Education.*

## INTRODUCTION

Education is a vital process in shaping intelligent, healthy, and well-rounded individuals (Akhmedianova et al., 2019; Chakraborty, 2009). Through education, people are equipped not only with academic abilities but also with lifelong values. Today, education does not solely focus on cognitive aspects, but also on developing affective and psychomotor potentials. In higher education, the formation of competent professionals is expected to be achieved through a curriculum that is relevant and responsive to the demands of the times. Therefore, education must be able to keep up with social dynamics, including issues related to health, sports, and lifestyle (Alexandr et al., 2016; Lawson, 2005; Mekhed & Nosko, 2021). As part of the younger intellectual generation, university students are expected to have a critical understanding of various phenomena related to health and their own bodies. One issue that has emerged among students,

particularly in the field of sports, is the use of supplements and medications to enhance performance.

Physical education, as part of the national education system, plays a crucial role in fostering awareness of a healthy and active lifestyle (Arifin, 2017; Muzakki et al., 2024; Sari et al., 2024). Students in the Physical Education program are prepared not only as educators but also as promoters of health and fitness. In the learning process, they are introduced to various aspects of physical training, anatomy, sports physiology, as well as nutrition and diet. However, in practice, the demands of physical performance often push individuals to seek instant solutions through the use of supplements or performance-enhancing drugs. This phenomenon has become increasingly common among students, both as active users and observers of the trend in their surroundings (Cassidy et al., 2014; Hussain, 2012). A lack of accurate knowledge about supplements can lead to harmful misunderstandings, including justifying the use of substances without proper indications (Bookari et al., 2017; Dores et al., 2023; Sabir et al., 2024). Therefore, it is essential to examine the perceptions of Physical Education students regarding supplement use.

In addition to supplements, the use of medications such as analgesics, steroids, or even doping substances has become a serious concern in the sports world. Physical Education students, who will one day become educators or coaches in schools or sports clubs, need to have a clear understanding of the limits and risks of such drug use. In many cases, drugs are used without medical consultation or proper ethical consideration, solely to pursue rapid physical performance enhancement. This not only endangers the user's health but also undermines the core values of sportsmanship. If future Physical Education teachers have misguided or permissive views about drug use, there is a risk that they will pass on the wrong values to their students. Therefore, understanding this issue is critical for establishing a healthy and responsible foundation for sports education.

Several previous studies have highlighted the phenomenon of supplement and drug use in sports. For instance, Suryawan (2020) found that many sports students use supplements without sufficient understanding of their contents and side effects. Another study by Ratnasari (2018) revealed that some students hold permissive attitudes toward doping when it is done for the sake of achievement. Meanwhile, Fadillah (2019) found that students' perceptions are strongly

influenced by peer environment and social media information. However, these studies typically focus on students in general and not specifically on those in the Physical Education program. Additionally, most of the research only measures knowledge or attitudes, without exploring how perceptions are formed in context. Thus, further research is needed to investigate these perceptions more specifically and in greater depth.

To date, few studies have explicitly examined the perceptions of Physical Education students toward the use of supplements and drugs in sports. In fact, they are the group who will serve as the future drivers of sports education. If their perceptions of this issue are not entirely accurate, they may unintentionally spread misinformation in educational and coaching practices. Most previous research has also not explored the social, cultural, and academic dimensions that influence students' perceptions comprehensively. This creates a gap that needs to be filled with contextual and experience-based studies. Therefore, this research seeks to address that gap with a more in-depth and specific approach.

This study offers novelty in terms of its target population and analytical approach. Unlike previous studies that are mostly quantitative and general in nature, this research focuses on the perceptions of Physical Education students as future sports educators regarding the use of supplements and medications. It will also examine the factors influencing these perceptions, such as personal experiences, media exposure, and learning materials on campus. With a contextual and descriptive qualitative approach, the study aims to present a more complete and in-depth understanding. The findings are expected to serve as a foundation for designing curriculum content, educational modules, or policies that are more targeted and relevant. By instilling accurate perceptions from an early stage, students are expected to become agents of change in combating substance abuse in the sports world. This research also highlights the importance of collaboration between physical education and pharmaceutical sciences in building comprehensive health awareness.

This study aims to identify and describe the perceptions of Physical Education students toward the use of supplements and medications in the world of sports. In addition, the study also seeks to uncover the internal and external factors that influence the formation of these perceptions. Thus, the research is expected to provide a comprehensive overview of students' knowledge,

attitudes, and views on this issue. The study also aims to contribute to the development of learning materials related to health and ethics in sports. Practically, the results of this research can serve as input for educational institutions in designing educational programs that prevent the misuse of supplements and drugs. Moreover, the study seeks to strengthen students' awareness that health and integrity in sports must be maintained through responsible and appropriate means.

## **METHOD**

This study employs a descriptive qualitative approach with a focus on gaining an in-depth understanding of the perceptions of Physical Education students at Nahdlatul Ulama Sunan Giri University(Hardani, Helmina Nadriani, 2020). The research is designed as a field study that explores students' views, experiences, and understanding regarding the use of supplements and medications in a sports context. The primary data were obtained directly from active Physical Education students in semesters 4 to 8 who had taken courses related to sports physiology and health. Informants were selected purposively, taking into account their involvement in campus sports activities or sports organizations.

Data collection was carried out through in-depth interviews using semi-structured interview guides, as well as direct observation of campus sports activities and informal student discussion forums(WIjaya, 2019). In addition, documents such as posters, campus leaflets, and learning materials were also analyzed to support the findings. The data collected were analyzed using the Miles and Huberman model, which involves data reduction, data display, and conclusion drawing/verification. Data reduction was conducted by sorting relevant information from interviews and field notes, which were then organized into matrices to facilitate thematic mapping. Verification was carried out through triangulation across data sources to ensure the validity of the findings.

## **RESULT AND DISCUSSION**

### **Student Perceptions of Sports Supplements**

Students of the Physical Education Study Program at Nahdlatul Ulama Sunan Giri University generally view the use of supplements in sports as common and unproblematic, as long as it is within reasonable limits. Most informants stated that supplements are seen as support for physical

activity, particularly to boost stamina, speed up recovery, and maintain endurance. The supplements most commonly known among students include vitamin C, isotonic drinks, multivitamins, and whey protein. They obtain this information from friends, coaches, and social media content. However, they tend not to differentiate between supplements and medications, as both are perceived simply as "body enhancers."

Some students admitted to using supplements, particularly during intensive fitness programs or in preparation for campus sports competitions. They consider supplements as part of a healthy lifestyle. Nevertheless, their understanding of contents, dosage, and indications remains very limited. Some mentioned that as long as a product is available at a pharmacy or sports store, it is assumed to be safe and legal. In reality, not all supplement products have undergone proper clinical testing or are officially registered with the national regulatory agency (BPOM), indicating a significant knowledge gap.

From the interviews, it was observed that students' perceptions tend to be permissive toward supplement use, even without a clear medical need. They view supplement consumption as a personal choice, not something that requires consultation with a professional. Several informants said that taking supplements is more practical than maintaining a consistent diet. This reflects a tendency among students to choose instant solutions to support physical performance, without considering long-term side effects or interactions with their body conditions.

One of the main reasons students consume or trust supplements is due to social influence. Informants acknowledged that recommendations from peers, coaches, or social media influencers strongly impact their product choices. Unfortunately, the information they receive is often one-sided and not science-based. This indicates that their perceptions are not yet grounded in solid scientific understanding, but are instead shaped by popular promotional narratives.

When asked about the risks or side effects of supplements, most students gave general answers like "it can damage the kidneys if consumed too much," without further explanation. This shows that their understanding is still superficial and not based on formal education. Some informants admitted that they had never received specific instruction about supplement classification, functions, or differences from medications. This points to a lack of in-depth

discussion in their coursework, particularly regarding the ethics and regulations of supplement use in sports.

Although most students hold positive attitudes toward supplement use, there are also some who are more cautious. These individuals choose not to consume supplements due to concerns about side effects or dependency. This group typically obtains information from family members with a health background or from personal negative experiences after using certain supplements. Although fewer in number, this group demonstrates that perceptions among Physical Education students are not entirely homogeneous.

The students' perceptions of sports supplements indicate openness and a permissive tendency, but are not yet supported by adequate knowledge. They have not critically evaluated the information they receive and do not fully understand the line between need, safety, and potential harm. This highlights the important role of educational institutions in providing comprehensive instruction on supplements and medications in the context of sports. Without proper education, there is a risk that these students will unknowingly become agents of misinformation in the future when they become teachers or coaches.

### **Perceptions of Drugs and Inappropriate Use**

The perceptions of Physical Education students toward the use of medications in sports show a tendency to be more cautious compared to their views on supplement use (Jovanov et al., 2019; Stanojević-Ristić et al., 2017; Yager & O'Dea, 2014). In general, informants consider medications as substances that are "dangerous if used carelessly" and "should be taken with a doctor's prescription." Nevertheless, many of them do not fully understand which drugs fall into the performance-enhancing category, such as steroids, analgesics, or stimulants. Most only recognize the term "doping" without being able to explain its contents or dangers. They tend to view drug use as something done by "professional athletes" and rarely occurring among students. This reflects a narrow perception that has yet to touch on the potential misuse of medications within the context of physical education.

Some students admitted to having seen or heard about the use of certain medications, such as painkillers (NSAIDs) taken before or after intense training. However, they did not view it as a violation, but rather as a necessary response to muscle pain. A lack of understanding regarding

medication regulations in sports leads to the justification of such practices. Students believe that as long as the medication is legal and available in pharmacies, its use is permissible. In fact, drug use in sports is governed by strict rules, including dosage, medical indication, and the risk of dependency. This lack of understanding indicates that students have not yet grasped the difference between medical use and abuse.

When asked about steroids or other performance-enhancing substances, most informants stated that such practices are “against sports ethics,” but their reasoning was more moral than scientific. They responded with statements like “it’s cheating” or “it’s unnatural,” without being able to explain how steroids work or their long-term effects on the body. This demonstrates that their knowledge remains shallow and is not grounded in physiological or pharmacological studies. While negative perceptions of doping do exist, they are not supported by a comprehensive understanding of the substances classified as doping. This is particularly important, as future physical education teachers must be able to distinguish between legal supplements and substances prohibited by anti-doping agencies.

In some cases, students even felt that competitive pressure justified the use of certain drugs. Two informants mentioned that during championships, “sometimes people are forced to use something” just to keep up. While they did not explicitly condone the behavior, there was a tendency to understand or even tolerate it. This suggests that students’ ethical perceptions are not yet fully formed. In physical education, tolerance of substance abuse can be dangerous, as it risks being passed on to future students. Therefore, education about sportsmanship must be instilled alongside scientific understanding.

Social environment once again appears as a dominant factor influencing students’ perceptions. The information they receive often comes from peers, sports media content, or indirect observations of professional athletes. When this information is not critically examined, students easily form permissive opinions. Some students even believe that many professional athletes use “performance boosters” despite bans, leading to the perception that “as long as you don’t get caught, it’s fine.” This mindset is dangerous if not corrected through strong educational approaches. Thus, it is essential to strengthen students’ critical literacy regarding health and sports pharmacology information.



Students also expressed that discussions on doping or drug misuse have not been a focus in their coursework. They noted that subjects like Sports Nutrition or Sports Health only touch on supplements in general, without detailing banned substances or anti-doping procedures. This lack of coverage contributes to limited awareness of the importance of pharmacological understanding in sports contexts. Students acknowledged the issue's relevance but felt that their classes lacked materials or deep discussions on the topic. This reveals a gap in the curriculum that has not yet fully addressed contemporary issues in sports. As future educators, they need a comprehensive understanding to prevent deviations from ethical practice at an early stage.

Although students generally reject the use of illegal drugs in sports, there remains ambiguity in its real-life application. Some express neutrality toward the use of painkillers for intense training, while others believe that “supplements with drug-like effects” are still safe. This ambiguity arises because the boundaries between drugs, supplements, and doping substances have not been clearly explained in their learning experiences. This lack of clarity can lead to future misperceptions if not corrected early on. Students must be trained to differentiate between therapeutic use and manipulative use, and to understand the ethical and health consequences of each option.

The findings show that student perceptions of medications in sports are fragmented and lack depth. While they normatively reject doping, they do not yet understand the technical, medical, or regulatory aspects. The low level of sports pharmacology literacy and the limited discussion in their curriculum are the primary causes of these incomplete perceptions. If left unaddressed, this could lead to a generation of physical education teachers who are not critical of substance abuse in sports practice. Therefore, there is a need for integration between health sciences, sports education, and sports ethics in the curriculum, so students can become knowledgeable and responsible agents of change.

### **Factors Influencing Student Perception**

Physical Education students' perceptions regarding the use of supplements and medications in sports are not formed in isolation but are influenced by a variety of internal and external factors. One of the most dominant factors is personal experience. Students who have personally consumed supplements tend to hold more permissive views, considering them a routine part of training.



Conversely, those who have never used supplements or have had negative experiences tend to be more cautious. These experiences may stem from personal workouts, competitive activities, or recommendations from training peers. The more frequently students are exposed to supplement use, the more likely they are to perceive it as normal.

The second contributing factor is the influence of the social environment, particularly peers and campus sports communities. In interviews, most informants admitted that they became aware of supplements or heard stories about performance-enhancing drug use through friends. Social pressure or the desire to conform within competitive environments often leads students to adopt similar perceptions, even without questioning their validity. These environments can also establish unwritten norms that normalize the use of certain substances. In the absence of accurate information control, students tend to accept the majority opinion at face value.

In addition to social environments, media and the internet are powerful influences on students' perceptions. Many students access information about supplements and medications through platforms like YouTube, Instagram, TikTok, and online articles. Unfortunately, not all content is produced by qualified experts. As a result, students are frequently exposed to product promotional narratives without adequate scientific explanations. Some even regard fitness influencers as their primary reference, rather than lecturers or health professionals. This easily accessible digital media becomes a double-edged sword: informative yet prone to spreading misleading perceptions.

A fourth factor is the limited coverage of relevant topics in the academic curriculum, particularly concerning sports pharmacology and drug abuse. Students noted that current courses on nutrition and health primarily focus on basic theoretical concepts and not on sensitive issues such as doping or the use of prohibited substances. This creates a significant knowledge gap, leaving students without a solid foundation to critically assess real-world phenomena. The lack of curricular content also makes it difficult for them to distinguish between substances that are allowed and those that violate health and sportsmanship standards.

Another factor is the limited involvement of healthcare professionals or pharmacists in sports education. Students mentioned that they had never attended guest lectures or received specific training involving experts from outside their department, especially on the dangers of

performance-enhancing substances. Yet, collaboration between Physical Education programs and disciplines such as pharmacy or sports medicine is crucial for forming a holistic perspective. The absence of this professional viewpoint means that students only understand the issue from a sports perspective, lacking a comprehensive understanding of its medical and ethical dimensions.

Personal values and religious beliefs also play a role in shaping students' perceptions. Several informants expressed rejection of certain substances because they considered them violations of sportsmanship or religious teachings. Although this approach is not scientifically based, it contributes positively to a cautious attitude in decision-making. These moral values serve as a final safeguard when academic or media-based information is insufficient to influence their understanding. Therefore, value-based education must continue to be maintained as a foundation for shaping student character in facing ethical dilemmas in the sports world.

## **CONCLUSION**

Based on the research findings, it can be concluded that the perceptions of Physical Education students at Nahdlatul Ulama Sunan Giri University regarding the use of supplements and medications in sports tend to be permissive, yet are not fully grounded in in-depth scientific understanding. Students generally view supplements as common and safe to use, while the use of medications such as steroids or doping is morally rejected, although they lack comprehensive knowledge of the medical and ethical aspects. These perceptions are shaped by personal experiences, peer influence, social media, limited curriculum coverage, and individual values. These findings highlight the importance of enhancing health and sports pharmacology literacy in physical education to enable students to develop critical thinking, act responsibly, and serve as educational agents who promote healthy and ethical sports practices.

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