# THE FREQUENCY OF MISUSE IN EGYPTIAN GYMNASIUMS FOR PERFORMANCE-ENHANCING PURPOSES: A TOXICOLOGICAL AND FORENSIC PERSPECTIVE CROSS-SECTIONAL STUDY

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## ABSTRACT

**Background:** The misuse of over the counter (OTC) and prescription medications for performance-enhancing purposes is a growing concern in gym settings globally, including Egypt. These substances, including anabolic-androgenic steroids (AAS) and stimulants, are often used without professional guidance, posing significant health risks. Despite their prevalence, systematic research on this issue in Egyptian gymnasiums is limited. **Aims:** This study aims to assess the frequency, motivations, and patterns of OTC and prescription medication misuse among Egyptian gym-goers, with a focus on identifying demographic factors, sources of knowledge, and associated adverse effects. **Methods:** A cross-sectional observational study was conducted using an anonymous online questionnaire distributed among 500 gym members via social media. The survey captured data on demographics, drug types used, misuse frequency, motivations, sources of information, and reported side effects. Data were analysed using SPSS software, with statistical significance determined at $p \leq 0.05$. **Results:** Of the 500 participants, 30% admitted to misusing substances, with anabolic steroids being the most common (60%), followed by creatine (50%) and protein supplements (40%). Misuse was more prevalent among males (36.9%) compared to females (17.1%) and highest among the 18–24 age group (45%). Social media (40%) and gym trainers (35%) were the primary sources of information. Motivations included increasing muscle mass (70%) and enhancing workout performance (50%). Adverse effects, such as acne (40%), mood swings (30%), and liver/kidney issues (10%), were commonly reported. **Conclusions:** The findings highlight significant misuse of performance-enhancing substances in Egyptian gymnasiums, driven by social influences and a lack of professional guidance. Public health interventions targeting awareness and regulatory enforcement are urgently needed to mitigate health risks and promote safer practices.

**Keywords:** Performance-enhancing drugs (PEDs); Over-the-counter medications; Prescription drug misuse; Anabolic steroids; Gym drug use; Egypt; Toxicity.

## INTRODUCTION

The use of performance-enhancing drugs (PEDs) and the misuse of over the counter (OTC) and prescription medications have become significant concerns within the fitness and bodybuilding communities globally, including in Egypt. Gymnasiums often serve as hotspots for individuals seeking rapid physical and performance enhancements through pharmaceutical means. This trend is particularly concerning, given the documented adverse effects and ethical implications associated with such practices **(Birzniece, 2014; Watson et al., 2022).**

Motivations behind PED use include improving muscle mass, strength, and endurance; however, many users remain unaware of associated health risks such as cardiovascular, renal, and hepatic complications **(Davani-Davari et al., 2019; Eskandarani et al., 2022).** Reliance on non-professional advice further compounds the issue, leading to misinformation and unsafe usage patterns **(Ali et al., 2024).**

Globally, the pursuit of improved athletic performance and physical appearance has fueled the misuse of PEDs, including anabolic-androgenic steroids (AAS) and growth hormones **(Pope et al., 2014; Alkebbeh et al., 2022).** Despite regulatory measures, the accessibility and perceived benefits of these substances continue to drive their popularity among recreational and professional athletes alike **(Dhar et al., 2005; Anderson et al., 2018).** In Egypt, where self-medication and pharmaceutical misuse are common, gyms have emerged as critical environments for PED consumption **(Abo Ali and Elgamal, 2016; Alkebbeh et al., 2022).**

The health risks associated with PED use in Egypt are consistent with global findings, including cardiovascular, endocrine, and psychological complications **(Chong et al., 2024; Nagata et al., 2020).** Lack of public awareness exacerbates the problem, as many individuals rely on misinformation from social media or gym peers **(Wazaify et al., 2014; Alkebbeh et al., 2022).** Social and economic factors, such as income level and peer influence, further contribute to the patterns of PED use **(Wazaify et al., 2014; Abo Ali and Elgamal, 2016).**

Despite the growing prevalence of PED use, systematic research specific to Egypt remains scarce. Existing studies highlight the need for targeted interventions to address the health risks associated with PED misuse, as well as the promotion of healthier, evidence-based fitness practices **(Holt and Sonksen, 2008; Ali et al., 2024).** This study aims to bridge this gap by assessing the prevalence, determinants, and patterns of PED misuse among gym-goers in Egypt. By identifying the underlying factors driving this issue, the findings aim to inform public health strategies and foster safer fitness practices.

## AIMS OF THE CURRENT WORK

The current work aimed to evaluate the prevalence, types, and patterns of performance-enhancing drug misuse among Egyptian gym-goers, identify associated demographic factors, motivations, and health risks, and provide evidence to inform public health interventions.

## METHODOLOGY

### Study Design and Setting

This cross-sectional observational study was conducted among gym-goers in Egypt. Data were collected using an anonymous online questionnaire distributed via social media platforms targeting gym members from various regions.

### Participants

A total of 500 gym members participated in the study. Participants were eligible if they were at least 18 years old, regularly attending a gym, and provided informed consent to participate in the survey. The sample included both males and females across different age groups and socioeconomic backgrounds.

### Data Collection Tool

The study utilized a structured questionnaire designed to capture data on participants' demographics, including age, gender, educational level, marital status, income, and gym membership duration. It also addressed substance misuse by investigating the types of substances used, their frequency, and patterns of misuse. Additionally, the questionnaire explored motivations for substance use and primary sources of information while assessing self-reported side effects and health risks associated with misuse. The questionnaire was pilot-tested for clarity and reliability before distribution.

### Data Collection Process

The questionnaire was distributed electronically via social media groups frequented by gym-goers through the gym trainers. Participation was voluntary, and no monetary incentives were provided. Informed consent was obtained online as a part of the questionnaire before participants accessed the survey.

### Statistical Data Analysis

Data were analyzed using SPSS software version 24.0. Descriptive statistics, including frequencies and percentages, were used to summarize the data. Chi-square tests were performed to assess associations between demographic variables and substance misuse, with statistical significance set at $p \leq 0.05$.

### Ethical Considerations

Ethical approval for the study was obtained from the institutional review board of the Faculty of Medicine, Alexandria University. Participation was voluntary, and confidentiality was maintained throughout the study. All data were anonymized to protect participants' identities. Ethical approval Number: Code # 4214-2022.

This methodology ensured a robust assessment of the prevalence, determinants, and

patterns of performance-enhancing drug misuse among gym-goers in Egypt.

## RESULTS

The study included a total of 500 participants, with 325 males (65%) and 175 females (35%). Most participants were aged 18–24 years (40%), followed by 25–34 years (35%), 35–44 years (15%), and 45+ years (10%). The majority were single (70%), had a bachelor's degree (63.3%), and were students (39.1%). Monthly income levels showed that 51.7% of participants had no fixed income, reflecting the significant proportion of students, while 10.8% earned more than 25,000 EGP. Gym membership duration varied, with 40% attending for 1–2 years, 30% for 6 months to 1 year, and only 10% for more than 2 years. **(Table 1)**

**(Table 2)** displayed the sports practice and training levels among participants. 79.5% were amateur athletes, while 18.5% identified as professionals, and only 2% were national team members. The frequency of weekly training was highest for those training 3–4 days per week (35%), followed by 5–6 days per week (32%), and 18% trained daily. The primary purposes for training included fitness (30%), muscle building (25%), and weight loss (20%). Bodybuilding was the most popular sport (33%), followed by machines/aerobics (30%) and swimming (10%).

Substance misuse was reported by 30% of participants (n = 150). Anabolic steroids were the most commonly misused substance (60%), followed by creatine (50%), protein supplements (40%), and fat burners (35%). Other substances, such as SARMs and insulin, were used by 10% of misusers. Notably, 30% of misusers engaged in mixed substance use, combining multiple substances. **(Table 3)**

Patterns of drug misuse showed that occasional misuse (less than once a week) was the most common (65%), followed by weekly misuse (25%) and daily misuse (10%). These findings indicate that most misuse is intermittent rather than habitual **(Table 4).**

Social media was the leading source of information for drug misuse (40%), followed by gym trainers or peers (35%). Health professionals and online articles or blogs were consulted by only 10% each, while other sources, such as books and videos, were rare (5%). **(Table 5)**

Motivations for Drug Misuse were displayed in **(Table 6)** The primary motivations for drug misuse were increasing muscle mass and strength (70%) and enhancing workout performance (50%). Other motivations included faster recovery from workouts (40%), peer pressure (25%), and body image concerns (20%). A lack of knowledge about risks was reported by 15% of misusers.

Participants reported several side effects from drug misuse, with acne and skin issues being the most common (40%), followed by mood swings and aggression (30%). Other side effects included liver or kidney problems (10%) and issues such as insomnia or appetite changes (20%). **(Table 7)**

Gender and Drug Misuse are given in **(Table 8)**. Drug misuse was significantly more prevalent among males (36.9%) compared to females (17.1%). This disparity highlights gender differences in the prevalence of substance misuse within gym settings.

The highest prevalence of drug misuse was observed in the 18–24 years age group (45%), with much lower rates among participants aged 25–34 years, 35–44 years, and 45+ years (20% each). This suggests that younger gym-goers are more likely to misuse performance-enhancing substances. **(Table 9)**

Chi-square analysis revealed significant associations between gender and drug misuse ($\chi^2 = 10.68$, $p = 0.001$) and between age group and drug misuse ($\chi^2 = 12.98$, $p = 0.01$). Males and younger individuals (particularly those aged 18–24 years) were significantly more likely to misuse drugs compared to other groups. **(Table 10)**

**Table (1):** Participant Demographics

| Category | Frequency (n) | Percentage (%) |
|---|---|---|
| **Total Participants** | 500 | 100% |
| **Gender** | | |
| - Male | 325 | 65% |
| - Female | 175 | 35% |
| **Age Distribution** | | |
| - 18-24 years | 200 | 40% |
| - 25-34 years | 175 | 35% |
| - 35-44 years | 75 | 15% |
| - 45+ years | 50 | 10% |
| **Gym Membership Duration** | | |
| - Less than 6 months | 100 | 20% |
| - 6 months to 1 year | 150 | 30% |
| - 1-2 years | 200 | 40% |
| - More than 2 years | 50 | 10% |
| **Marital Status** | | |
| - Single | 350 | 70% |
| - Married | 100 | 20% |
| - Divorced/Separated | 50 | 10% |
| **Educational Level** | | |
| - Bachelor's Degree | 316 | 63.3% |
| - Postgraduate Degree | 49 | 9.7% |
| - High School | 96 | 19.2% |
| - Less than High School | 40 | 7.9% |
| **Work Nature** | | |
| - Full-Time | 159 | 31.8% |
| - Part-Time | 89 | 17.8% |
| - Unemployed | 56 | 11.3% |
| - Student | 196 | 39.1% |
| **Monthly Income (EGP)** | | |
| - No Fixed Income | 258 | 51.7% |
| - <5,000 | 50 | 10% |
| - 5000-7500 | 61 | 12.3% |
| - 7500-10,000 | 30 | 6% |
| - 10,000-15,000 | 34 | 6.8% |
| - 15,000-20,000 | 12 | 2.4% |
| - >25,000 | 54 | 10.8% |
| **Health Problems** | | |
| - Yes | 113 | 22.6% |
| - No | 387 | 77.4% |
| **If Yes, What Are the Health Problems? (N=113)** | | |
| - Hypertension | 7 | 6.5% |
| - Ligaments and Tendons Problems | 22 | 20.8% |
| - Depression | 23 | 22% |
| - Anxiety | 25 | 23.4% |
| - Dyslipidemia | 1 | 1.3% |
| - Other (Kidney, Heart, Skin Problems) | 14 | 13% |
| - Diabetes | 14 | 13% |

**Table (2):** Summary of Sports Practice and Training Levels

| Characteristic | Frequency (%) |
|---|---|
| **Level of Training** | |
| Professional and National Team Member | 2.0% |
| Professional | 18.5% |
| Amateur | 79.5% |
| **Last Continuous Training** | |
| Less than 3 months | 35% |
| 3-6 months | 22% |
| 6-12 months | 15% |
| 1-3 years | 10% |
| More than 3 years | 17% |
| No Answer | 1% |
| **Frequency of Weekly Training** | |
| Daily | 18% |
| 5-6 days per week | 32% |
| 3-4 days per week | 35% |
| 1-2 days per week | 15% |
| **Purpose of Training** | |
| Build up muscles | 25% |
| Weight gain | 5% |
| Weight loss | 20% |
| Fitness | 30% |
| Strength and power | 12% |
| More than one purpose | 8% |
| **Main Sport** | |
| Bodybuilding | 33% |
| Machines, Aerobics | 30% |
| Swimming | 10% |
| Athletics | 4% |
| Basketball | 6% |
| Football | 7% |
| Taekwondo | 5% |
| Other (e.g., Tennis, Cycling, etc.) | 5% |

**Table (3):** Prevalence and Types of Drug Misuse (Including Mixed Substance Use)

| Substance Type | Frequency (n) | Percentage (%) |
|---|---|---|
| **Total Drug Misuse** | 150/500 | 30% |
| **Anabolic Steroids** | 90 | 60% |
| **Creatine** | 75 | 50% |
| **Protein Supplements** | 60 | 40% |
| **Fat Burners (e.g., ephedrine)** | 52 | 35% |
| **Stimulants (e.g., caffeine, amphetamines)** | 37 | 25% |
| **Other Substances (SARMs, insulin)** | 15 | 10% |
| **Mixed Substance Use** | 45 | 30% |

**Table (4):** Frequency of Drug Misuse

| Frequency of Misuse | Frequency (n) | Percentage (%) |
|---|---|---|
| **Daily Misuse** | 15 | 10% |
| **Weekly Misuse** | 37 | 25% |
| **Occasional Misuse** (less than once a week) | 98 | 65% |

**Table (5):** Sources of Knowledge About Drug Misuse

| Source of Information | Frequency (n) | Percentage (%) |
|---|---|---|
| **Social Media (Influencers, Forums, Fitness Pages)** | 60 | 40% |
| **Gym Trainers/Peers** | 52 | 35% |
| **Health Professionals (Doctors, Nutritionists)** | 15 | 10% |
| **Online Articles/Blogs** | 15 | 10% |
| **Other Sources (Books, Videos)** | 8 | 5% |

**Table (6):** Motivations for Drug Misuse

| Reason for Drug Use | Frequency (n) | Percentage (%) |
|---|---|---|
| **To Increase Muscle Mass and Strength** | 105 | 70% |
| **To Enhance Performance During Workouts** | 75 | 50% |
| **To Recover Faster From Workouts** | 60 | 40% |
| **Peer Pressure** | 37 | 25% |
| **Body Image Concerns** | 30 | 20% |
| **Lack of Knowledge About Risks** | 22 | 15% |

**Table (7):** Reported Side Effects of Drug Misuse

| Side Effect | Frequency (n) | Percentage (%) |
|---|---|---|
| **Acne and Skin Issues** | 60 | 40% |
| **Mood Swings and Aggression** | 45 | 30% |
| **Liver or Kidney Issues** | 15 | 10% |
| **Other Side Effects (e.g., insomnia, appetite changes)** | 30 | 20% |

**Table (8):** Gender and Drug Misuse

| Gender | Misuse Drug (n) | Total (n) | Percentage of Misuse |
|---|---|---|---|
| **Male** | 120 | 325 | 36.9% |
| **Female** | 30 | 175 | 17.1% |
| **Total** | 150 | 500 | 30% |

**Table (9):** Age Group and Drug Misuse

| Age Group | Misuse Drug (n) | Total (n) | Percentage of Misuse |
|---|---|---|---|
| **18-24 years** | 90 | 200 | 45% |
| **25-34 years** | 35 | 175 | 20% |
| **35-44 years** | 15 | 75 | 20% |
| **45+ years** | 10 | 50 | 20% |
| **Total** | 150 | 500 | 30% |

**Tabe (10):** Chi-Square Test for Drug Misuse by Gender and Age

| Variable | Chi-Square Value | p-value |
|---|---|---|
| **Gender vs. Drug Misuse** | 10.68 | 0.001** |
| **Age Group vs. Drug Misuse** | 12.98 | 0.01* |

***$X^2$: Chi-square test***
***P: Significant if ≤ 0.05***
**** Significant difference***

## DISCUSSION

Performance-enhancing drug (PED) use has long been associated with elite athletes, but findings from this study suggest that misuse extends far beyond professional sports. Gym-goers, particularly younger males, appear to be increasingly turning to PEDs for muscle gain, performance enhancement, and accelerated recovery. However, these substances come with significant health risks, often underestimated by users. This discussion explores the demographic patterns, motivations, health implications, and necessary interventions to curb PED misuse in gym environments.

A striking pattern in this study is the higher prevalence of PED use among males (36.9%) compared to females (17.1%). This aligns with previous research in Jordan and Syria that found similar gender disparities in PED misuse **(Alkebbeh et al., 2022; Wazaify et al., 2014).** Additionally, younger individuals (18–24 years) were most likely to use PEDs (45%), a trend that has been linked to social media exposure and body image pressures **(Nagata et al., 2020).** The increased prevalence among young adults highlights the urgent need for targeted prevention strategies.

The primary motivations for PED use in this study were increasing muscle mass and strength (70%), enhancing workout performance (50%), and faster recovery (40%). Similar motivations have been documented in Jordan and Syria, where gym-goers commonly misuse steroids, protein supplements, and fat burners **(Wazaify et al., 2014; Alkebbeh et al., 2022).** Peer pressure (25%) and body image concerns (20%) were also significant factors, demonstrating the social and psychological aspects of PED use **(Pope et al., 2014).** The influence of gym culture, where users may feel pressured to maintain a certain physique, further exacerbates this trend.

The current study identified that the primary motivation for drug misuse was increasing muscle mass and strength (70%), followed by performance enhancement (50%) and faster recovery (40%). These motivations are consistent with findings in the literature, indicating that many gym-goers, including amateur athletes, seek PEDs to improve their strength, endurance, and physical appearance **(Watson et al., 2022).** Moreover, peer pressure (25%) and body image concerns (20%) highlight the social and psychological factors that influence PED use **(Nagata et al., 2019).**

Social media was found to be the most common source of information about drug use (40%), followed by gym trainers and peers (35%). This raises concerns as misinformation is prevalent on social platforms, and many fitness influencers lack medical expertise **(Pope et al., 2014).** This reliance on unverified sources is concerning, as misinformation about PED safety is widespread online **(Alkebbeh et al., 2022).** Previous studies have highlighted the role of social networks in normalizing PED use, making it more accessible and seemingly acceptable **(Wazaify et al., 2014).** Strengthening the role of evidence-based information from health professionals is crucial to addressing this issue. Studies indicate that self-medication and supplement use often stem from unverified sources, increasing the risk of adverse effects **(Birzniece, 2014).**

The prevalence of drug misuse (30%) aligns with global trends, highlighting the increasing pattern of substance use among gym users **(Eskandarani et al., 2022).** Among the substances misused, anabolic steroids (60%) were the most commonly reported, followed by creatine (50%), protein supplements (40%), and fat burners (35%). These findings are consistent with previous research, indicating that bodybuilders and athletes frequently use a combination of anabolic agents and protein-based supplements for performance enhancement **(Ganson et al., 2020).** However, the majority of users engaged in occasional misuse (65%) rather than daily (10%) or weekly (25%) misuse, suggesting that while PED experimentation is widespread, sustained and intensive misuse remains less common. These trends align with studies in Syria and Jordan that found widespread use of these substances, often in dangerous combinations **(Wazaify et al., 2014; Alkebbeh et al., 2022).**

Participants reported various adverse effects, including acne and skin issues (40%), mood swings and aggression (30%), and hepato-renal problems (10%). These effects align with documented side effects of anabolic steroids, growth hormones, and other PEDs, which have been linked to cardiovascular risks, endocrine disturbances, and mental health issues **(Dhar et al., 2005; Pope et al., 2014).** Studies have also highlighted the potential for kidney damage and long-term organ

dysfunction due to prolonged PED consumption **(Chong et al., 2024).** The cardiovascular complications associated with anabolic steroids, including hypertension, stroke, and sudden cardiac death, are particularly concerning **(Dhar et al., 2005; Alkebbeh et al., 2022).**

The chi-square test confirmed significant differences in drug misuse rates based on gender ($p = 0.001$) and age ($p = 0.01$). This reinforces the idea that younger men are the most at-risk demographic for PED misuse, a trend supported by previous research **(Pope et al., 2014; Alkebbeh et al., 2022).** This aligns with studies that suggest males are more inclined to use PEDs due to body image concerns and performance enhancement goals **(Abo Ali & Elgamal, 2016).** Additionally, young individuals (18–24 years) had the highest drug misuse rate (45%), reflecting research that younger populations are more susceptible to supplement use due to social pressures and media influence **(Nagata et al., 2020).** Given these findings, intervention efforts should specifically target young male gym-goers who are most susceptible to PED use. The high prevalence of PED misuse among gym-goers calls for immediate action. Several intervention strategies could help curb this growing issue.

Many gym users, particularly younger individuals, are misinformed about PED risks. Implementing targeted educational campaigns in schools, gyms, and social media platforms could provide accurate information and counteract misinformation. Research suggests that awareness programs can significantly influence attitudes toward drug misuse **(Wazaify et al., 2014).** The easy availability of PEDs, particularly through online platforms and gyms, remains a challenge. Stricter regulations on supplement sales, prescription-only access for certain substances, and better enforcement mechanisms could help curb unauthorized distribution **(Alkebbeh et al., 2022).**

Gym trainers and fitness influencers often provide guidance on supplement use, yet many lack the necessary medical knowledge. Encouraging collaboration between gym staff, sports physicians, and nutritionists could improve access to reliable, evidence-based information. Research has shown that professional guidance reduces the likelihood of unsafe PED use **(Pope et al., 2014).**

Testimonials from former PED users who have suffered adverse effects could serve as powerful deterrents for potential users. Peer-led programs and mentorship initiatives targeting young gym-goers could help foster a more informed and health-conscious fitness culture. Programs that integrate counseling and peer support have been successful in substance abuse prevention efforts **(Dhar et al., 2005).**

## CONCLUSIONS

This study highlights the high prevalence of performance-enhancing drug (PED) misuse among Egyptian gym-goers, particularly young males aged 18–24 years. Anabolic steroids were the most commonly misused substances, often influenced by non-professional guidance from social media and gym trainers. The findings reveal a lack of awareness about associated health risks, including acne, mood swings, and organ damage.

The motivations for use extend beyond athletic performance to include social and psychological influences. However, the long-term health consequences far outweigh the perceived benefits. Addressing this issue requires a collaborative effort from policymakers, health professionals, fitness industry stakeholders, and the general public. By implementing targeted education, regulation, professional involvement, and community engagement, it is possible to curb the rising trend of PED misuse and promote a safer gym culture.

## LIMITATIONS

This study has limitations, including reliance on self-reported data prone to biases, a cross-sectional design that limits causal analysis, and potential sampling bias due to online questionnaire distribution. The findings may not fully represent the broader Egyptian gym-goer population, and self-reported side effects lack clinical verification. Additionally, the absence of longitudinal data prevents the assessment of long-term trends in PED misuse. Future research should address these limitations for a more comprehensive understanding.

## LIST OF ABBREVIATIONS

| Abbreviation | Full Meaning |
|---|---|
| **DOA** | Drugs of Abuse |
| **PEDs** | Performance-Enhancing Drugs |
| **OTC** | Over-The-Counter |
| **AAS** | Anabolic-Androgenic Steroids |

| | |
|---|---|
| **SARMs** | Selective Androgen Receptor Modulators |
| **EGP** | Egyptian Pound |
| **SPSS** | Statistical Package for the Social Sciences |
| $\chi^2$ | Chi-Square Test |

**ETHICAL CONDUCT:** All procedures performed in this research followed the ethical standards of the Ethical Institutional Review Board of Saudi MOH, Alexandria University, Egypt, and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

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**AUTHOR CONTRIBUTION DECLARATION:**

**The first author** is the Corresponding Author and principal investigator who contributed to conceptualizing research ideas, data collection, analysis, data interpretation, manuscript writing, revision and submission.

**The second author** contributed to statistical analysis, data interpretation, manuscript preparation, writing, and revision.

**DATA AVAILABILITY STATEMENT:** The data supporting this study's findings are available upon reasonable request and with the permission of all authors.

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**الملخص العربي**

**معدل إساءة الاستخدام في صالات الألعاب الرياضية المصرية لأغراض تحسين الأداء: دراسة مقطعية من منظور علم السموم والطب الشرعي**

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**الملخص**: الخلفية: يُعدّ إساءة استخدام الأدوية التي تُصرف بدون وصفة طبية (OTC) والأدوية التي تُصرف بوصفة طبية لأغراض تحسين الأداء مصدر قلق متزايد في صالات الألعاب الرياضية عالميًا، بما في ذلك مصر. غالبًا ما تُستخدم هذه المواد، بما في ذلك المنشطات البنائية الأندروجينية (AAS) والمنشطات، دون إشراف طبي، مما يُشكّل مخاطر صحية جسيمة. وعلى الرغم من شيوعها، إلا أن البحث المنهجي حول هذه القضية في صالات الألعاب الرياضية المصرية محدود.

**الأهداف**: تهدف هذه الدراسة إلى تقييم وتيرة ودوافع وأنماط إساءة استخدام الأدوية التي تُصرف بدون وصفة طبية والأدوية التي تُصرف بوصفة طبية بين رواد الصالات الرياضية المصريين، مع التركيز على تحديد العوامل الديموغرافية ومصادر المعرفة والآثار الجانبية المرتبطة بها.

**المنهجية**: أُجريت دراسة رصدية مقطعية باستخدام استبيان إلكتروني مجهول الهوية وُزّع على 500 عضو في الصالات الرياضية عبر وسائل التواصل الاجتماعي. جمع الاستطلاع بيانات حول التركيبة السكانية، وأنواع المخدرات المستخدمة، ومعدل إساءة الاستخدام، والدوافع، ومصادر المعلومات، والآثار الجانبية المبلغ عنها. حُلّلت البيانات باستخدام برنامج SPSS، مع تحديد الدلالة الإحصائية عند $p \leq 0.05$.

**النتائج**: من بين 500 مشارك، أقرّ 30% منهم بإساءة استخدام المواد، وكانت المنشطات البنائية الأكثر شيوعًا (60%)، تليها الكرياتين (50%)، ثم مكملات البروتين (40%). كان سوء الاستخدام أكثر شيوعًا بين الذكور (36.9%) مقارنةً بالإناث (17.1%)، وكان أعلى معدل بين الفئة العمرية 18-24 عامًا (45%). كانت وسائل التواصل الاجتماعي (40%) ومدربو الصالات الرياضية (35%) المصادر الرئيسية للمعلومات. وشملت الدوافع زيادة كتلة العضلات (70%) وتحسين أداء التمارين الرياضية (50%). وكانت الآثار الجانبية، مثل حب الشباب (40%)، وتقلبات المزاج (30%)، ومشاكل الكبد/الكلى (10%)، من بين أكثر الآثار شيوعًا. الاستنتاجات: تُسلّط النتائج الضوء على سوء استخدام كبير للمواد المُحسّنة للأداء في الصالات الرياضية المصرية، مدفوعًا بالتأثيرات الاجتماعية ونقص التوجيه المهني. هناك حاجة ماسة إلى تدخلات في مجال الصحة العامة تستهدف التوعية وتطبيق اللوائح للحد من المخاطر الصحية وتعزيز الممارسات الآمنة.