KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 13 February 2025
Revised 23 March 2025
Accepted 04 April 2025
Published online 10 April 2025

Journal of Adolescent and Youth Psychological Studies

Volume 6, Issue 4, pp 97-107

E-ISSN: 2821-2526

Analyzing the Social Mechanisms Regulating the Use of Dietary Supplements and Performance Enhancers Among Young Iraqi Weightlifters

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A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Mukheef Fatlawi, S. M., Zahedi, H., Shaboot Ibrahim, A., & Badami, R. (2025). Analyzing the Social Mechanisms Regulating the Use of Dietary Supplements and Performance Enhancers Among Young Iraqi Weightlifters. *Journal of Adolescent and Youth Psychological Studies, 6(4),* 97-107.
http://dx.doi.org/10.61838/kman.jayps.6.4.11

A B S T R A C T

Objective: The aim of this study was to analyze the social mechanisms associated with the use of dietary supplements and performance enhancers among young Iraqi weightlifters.

Materials and Methods: This research utilized a descriptive-correlational design conducted through a survey method. The statistical population consisted of 376 active weightlifters from 17 cities in Iraq during 2023–2024, out of which 324 participants were selected using proportional stratified random sampling. To measure the variables under investigation, a researcher-designed questionnaire based on Bandura's Social-Cognitive Theory was used. Data were analyzed using SPSS version 25 and Smart PLS software.

Findings: The results indicated significant positive relationships between self-efficacy ($\beta = 0.413$, $p = 0.001$), moral disengagement ($\beta = 0.596$, $p = 0.001$), and attitudes ($\beta = 0.653$, $p = 0.001$) with the use of dietary supplements and performance enhancers among young Iraqi weightlifters.

Conclusion: These athletes are influenced by a complex set of social-cognitive factors, including individual beliefs, social pressures, and misperceptions regarding the consequences of using dietary supplements and performance enhancers. Organizing educational and awareness programs focusing on the negative consequences of performance enhancers, ethical dimensions of their use, and healthier methods to enhance athletic performance appears to be essential.

Keywords: *Social-Cognitive Theory, Moral Disengagement, Self-Efficacy, Dietary Supplements, Performance Enhancers, Attitudes, Weightlifting.*

1. Introduction

The philosophy of winning in professional sports has expanded to such an extent that many athletes and organizations justify the means to achieve it. The use of various sciences in this regard, as well as the production and distribution of energy-enhancing drugs, further delineates the ethical boundaries between professional and amateur sports. Achieving national and global recognition, preserving past accomplishments, and standing on the championship podium compel athletes to resort to any means—ethical or unethical—when they perceive a decline in their physiological power and ability to avoid stagnation. Most male-dominated sports require high levels of strength and power (Grist, 2023).

The effects of specific types of performance-enhancing substances are directly related to their ergogenic properties (enhanced power, greater energy production, and better recovery), anabolic potential (increased protein synthesis, especially in muscles), and/or stimulant characteristics (enhanced focus and decreased fear), providing athletes with a competitive advantage (Habeeb et al., 2012). Weightlifting is among the sports typically classified within the realm of elite athletics, and athletes in this discipline are primarily assessed and evaluated based on their performance (Ali & Ali, 2018).

Weightlifting, as one of the most prominent strength sports, is commonly classified among elite sports, where athletes are often evaluated based on their competition and training performances. In recent years, the focus on dietary supplement use in this discipline has increased as athletes seek ways to improve their performance and physical strength. Research conducted over the past decade indicates that the use of dietary supplements, particularly in weightlifting, may be associated with a tendency to use performance-enhancing substances. This association may stem from athletes' efforts to gain a competitive edge, as dietary supplements, although legally recognized, can sometimes act as a gateway to the use of illegal and dangerous substances. For instance, some athletes may progress from using dietary supplements to prohibited drugs in pursuit of quicker and more effective performance enhancement (Ali & Ali, 2018).

This trend highlights the need for more extensive education and stricter monitoring of supplement and performance-enhancer use in this sport (Maughan et al., 2018). Researchers have reported that dietary supplement users, motivated by the desire to win and outperform others (Barkoukis, Lazuras, et al., 2020), and believing in the efficacy of supplements for performance enhancement, are more likely to use performance-enhancing substances (Hurst, 2023; Hurst et al., 2019; Hurst et al., 2021).

Most studies show that athletes, particularly in strength-based sports, are more vulnerable to using performance-enhancing substances. These findings suggest that strength athletes, such as weightlifters, are more inclined toward performance enhancers due to their high physiological demands and the pressure to achieve higher levels of strength and performance. Such consumption often results from efforts to gain a competitive edge and rapidly increase muscle strength. In these sports, physical ability and strong performance are directly linked to competition outcomes, driving athletes to seek quicker and more effective ways to enhance their performance. This situation places strength athletes at greater risk of using these substances (Hoffman & Ratamess, 2006).

Weightlifters in Iraq have been identified as forerunners in the misuse of performance-enhancing substances, a phenomenon rapidly escalating from a sports problem to a serious health and medical crisis. The misuse of these substances, particularly in strength-based sports like weightlifting, not only jeopardizes athletes' physical health but also raises ethical and cultural issues. In Iraq, the pressure to achieve success on national and international levels, especially in areas where physical strength plays a critical role, has led to a widespread inclination toward using performance-enhancing substances. While these substances may temporarily improve athletic performance, they carry severe and destructive consequences for athletes' physical and mental health. Cardiovascular issues, hormonal disorders, and psychological harm are just some of the recognized side effects of performance-enhancer misuse (Westmattelmann et al., 2020).

The role of sports in modern societies and its impact on social and cultural successes, particularly in elite sports, has been increasingly significant. Today, the ultimate goal for many athletes and coaches is victory in competitions and achieving outstanding results. Understanding the factors that can influence athletes' success or failure helps them reach their goals while avoiding unethical behaviors. Research shows that multiple factors, including sports psychology, social support, and physical condition, can affect athletes' performance. In elite sports, success is consistently a primary objective, and examining behaviors that lead to failure can help coaches and athletes design effective training programs (Woods & Moynihan, 2009).

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E-ISSN: 2981-2526

Recent studies on the motivations of elite athletes in using performance-enhancing drugs indicate that their motivations are related to maintaining and improving physical performance, coping with psychological or social pressures, and achieving psychological and social goals. Additionally, the use of performance-enhancing substances may increase due to the specific conditions of elite sports, where athletes are exposed to environments of high psychological and social pressure.

The concept of attitudes toward performance-enhancing substances is among the most important topics in this area. Attitude has been defined as individuals' readiness to use performance enhancers and prohibited methods (Petróczi, 2007, 2013; Petroczi & Aidman, 2009), which may be associated with behavioral potential for using these substances and sports orientation (Petróczi, 2007). The use of performance-enhancing substances is a complex, multidimensional issue due to its illegality and the social interactions among athletes, necessitating an investigation of the mechanisms behind this behavior.

A review of various statistics shows that the consumption of sports and dietary supplements continues to rise. This trend has led experts to examine the mechanisms related to supplement consumption. In this regard, various theories have been proposed, with Bandura's Social-Cognitive Theory being among the most significant. The use of performance-enhancing substances is a multifaceted and complex issue that, due to social interactions among athletes and its illegality, requires deeper examination.

Statistics indicate that the consumption of sports and dietary supplements is steadily increasing, raising significant concerns that may be influenced by social, cognitive, and media-related factors.

Social factors: Interactions with teammates, coaches, and social role models can influence individual decisions. Many athletes may turn to performance-enhancing substances due to social pressures and the need to conform to others' standards.

Cognitive factors: Bandura's Social-Cognitive Theory emphasizes that behaviors are influenced by cognition, emotions, and social experiences. This theory is particularly useful in understanding how attitudes toward the consumption of sports and dietary supplements and their consequences are formed.

Role of media: Media and advertisements can significantly impact athletes' attitudes and behaviors regarding the use of sports and dietary supplements.

Despite efforts to identify and control the use of performance-enhancing substances, research on the mechanisms underlying their use, especially among athletes, remains limited (Luszczynska & Schwarzer, 2015).

Given the limited information on dietary supplement and performance-enhancer consumption among young Iraqi weightlifters within the framework of Bandura's Social-Cognitive Theory, the researcher aims to address the question: What social mechanisms drive the desire to consume dietary supplements and performance enhancers among young Iraqi weightlifters?

Athletes interested in pursuing weightlifting in Iraq require muscle mass and strength development to participate in intensive training programs. They may misuse performance-enhancing substances due to a lack of proper nutritional knowledge, unawareness of the adverse effects of banned substances, and ignorance of laws and regulations regarding their use. Therefore, identifying the factors leading to dietary supplement and performance-enhancer consumption among young Iraqi weightlifters can help coaches and officials plan necessary interventions.

The potential findings of this research could contribute significantly to advancing knowledge in this domain. Furthermore, the information obtained from the target population could provide valuable insights for athletes, coaches, and sports officials in Iraq's weightlifting community. Consequently, analyzing the social mechanisms underlying the use of dietary supplements and performance enhancers appears to be a critical necessity.

2. Methods and Materials

2.1. Study Design and Participants

The aim of this study was to analyze the social mechanisms regulating the use of dietary supplements and performance enhancers among young Iraqi weightlifters. This research employed a descriptive-correlational design conducted through a survey method. The statistical population consisted of 376 active weightlifters from 17 cities in Iraq during 2023–2024. A total of 324 participants were included in the research process, while 26 individuals were excluded due to incomplete or invalid data and lack of cooperation.

After the proposal was approved and relevant information on young weightlifters' performance was gathered, a coordination session was held with weightlifting coaches through the Iraqi Weightlifting Federation. During this session, the details and methodology of the research were

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explained, and information such as participants' names, training schedules, locations, and contact numbers were collected for further coordination.

The researcher obtained an ethical approval code from the university before proceeding. Following consultations with supervisors and advisors, the questionnaires were finalized for measuring the intended variables. The questionnaire was translated into Arabic and reviewed by 10 academic experts to ensure validity. A back-translation approach (decentralized translation allowing for adjustments to align with universal understanding) was conducted by two faculty members at Baghdad University unfamiliar with the original text. This process ensured alignment with the cultural context of Iraqi athletes and clarity in phrasing.

For technical adjustments, the questionnaire was shared with five active weightlifting coaches in Iraq, and their feedback was incorporated to improve question clarity. Content validity was assessed by providing the questionnaire to 10 experts in physical education and sports sciences to evaluate question simplicity, clarity, and alignment with research objectives. The structure and grammar of the questions were also reviewed and approved.

To prevent ambiguity and inconsistencies, feedback from additional experts and specialists was collected before finalizing the questionnaire. Questions deemed unclear or problematic were revised or replaced based on their suggestions. The revised questionnaire was then pilot-tested on 20 young weightlifters who were not part of the study sample. Cronbach's alpha was calculated to determine reliability, yielding a value of 0.84. All components of the questionnaire achieved a Cronbach's alpha above 0.70, confirming its reliability for the study.

Following confirmation of the questionnaire's reliability and coordination with coaches, the researcher distributed the final version during training sessions. The study's importance for Iraqi athletes was emphasized, and participants were assured of confidentiality. It was clarified that the collected information would only be shared with individual athletes upon request. Written informed consent was obtained, and participants were asked to respond patiently and select options reflecting their current conditions. Completed questionnaires were collected in the researcher's presence.

2.2. Measures

To measure the research variables (attitude, self-efficacy, moral disengagement, and tendency toward dietary supplement consumption), a researcher-designed questionnaire was utilized. Since no standardized or normed questionnaire existed for this topic in the weightlifting community, the researcher developed a checklist and questionnaire based on previous research tools, expert opinions, and theoretical frameworks. The self-reported, anonymous questionnaire was designed in alignment with theoretical foundations, literature reviews, and consultations with experts, tailored to the socio-cultural context of Iraq's weightlifting community.

To assess the level of dietary supplement and performance enhancer consumption, the Dietary Supplement and Performance Enhancer Consumption Questionnaire, designed by Nakhai and Pakrovan (2014), was used. This questionnaire consists of 20 items, with items 1–4 addressing demographic and contextual factors such as age, gender, experience, supplement usage history, and reasons for use. Items 5–20 focused on assessing dietary supplement and performance enhancer consumption using a 5-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." The validity of this questionnaire was reported as 0.87, and its reliability was 0.75 (Nakhai & Pakrovan, 2014).

2.3. Data Analysis

For statistical analyses, SPSS (version 25) and Smart PLS software were used.

3. Results

In this study, the youngest participants were 17 years old, while the majority were 18 years old. Participants with education below a high school diploma represented the smallest group, whereas those holding a high school diploma formed the largest group. The average height of participants across weightlifting categories was relatively consistent, with the lowest average height observed in the 61 kg weight class. It was revealed that 52.96% of participants reported using dietary supplements and performance enhancers, and 83% were aware of the adverse effects of such substances.

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Table 1

Descriptive Statistics of Research Variables

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Tendency toward Substance Use	3.628	0.892	-0.722	0.358
Attitude	3.923	0.876	-0.973	1.355
Self-Efficacy	3.687	0.939	-0.851	0.573
Moral Disengagement	3.488	1.021	-0.323	0.592

Based on the values in the table above:

a. The mean values of research variables (tendency toward substance use, attitude, subjective norms, perceived behavioral control, and intention) in the study sample were above the average threshold (3). In other words, participants rated the research variables higher than average.

b. The standard deviation values indicate a moderate level of data dispersion from the mean for these variables.

c. The negative skewness values suggest that data for these variables are inclined toward higher-than-average values, closer to zero. The positive kurtosis values indicate relatively flat distributions of these variables. The results of skewness and kurtosis tests within the acceptable range of -3 to 3 confirm a normal distribution of the data.

Table 2

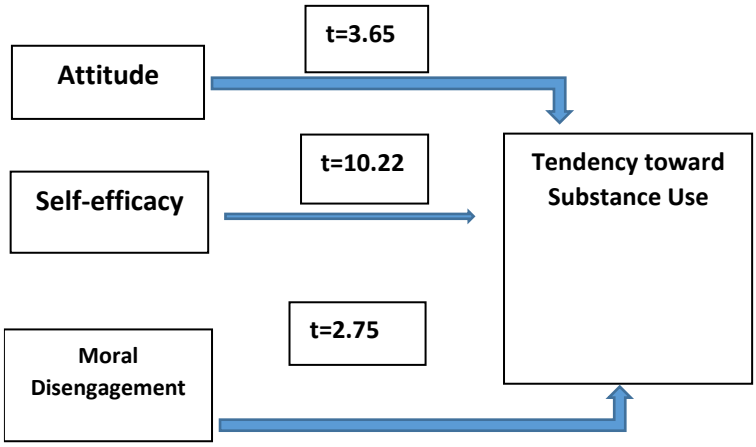
Multicollinearity Assessment Using Tolerance Index and Variance Inflation Factor (VIF)

Variable	Tolerance Index	Variance Inflation Factor (VIF)
Moral Disengagement	0.539	1.277
Self-Efficacy	0.530	1.030
Attitude	0.509	1.427

The results in Table 2 show that the tolerance index values exceed 0.40, and the VIF values are below 2.5. Therefore, the multicollinearity assumption for the independent variables is not violated, and multicollinearity is not a concern in this study.

Figure 1

Structural Equation Model (Significance Mode)



According to figure above, the proposed model demonstrates sufficient validity. This is indicated by the significance values (t-statistics or z-values) exceeding the threshold of 1.96. When the estimated values surpass the set threshold, the model is deemed valid, and no structural adjustments are necessary for interpreting the results.

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Table 3

Model Evaluation Indices

Variable	Average Variance Extracted (AVE)	Composite Reliability	Cronbach's Alpha	Communality	Redundancy
Tendency toward Substance Use	0.874	0.856	0.852	0.169	-
Attitude	0.896	0.799	0.874	0.159	0.147
Self-Efficacy	0.889	0.789	0.865	0.230	0.125
Moral Disengagement	0.863	0.786	0.832	0.218	0.123

Table 4

Discriminant Validity Matrix (Fornell-Larcker Criterion)

Variables	Moral Disengagement	Self-Efficacy	Tendency toward Substance Use	Attitude
Moral Disengagement	0.693	-	-	-
Self-Efficacy	0.573	0.602	-	-
Tendency toward Substance Use	0.678	0.758	0.568	-
Attitude	0.563	0.455	0.522	0.701

The evaluation indices suggest that the structural equation model is well-supported by the data. In other words, the model demonstrates a good fit, and all indices indicate its adequacy.

High correlations among moral disengagement, self-efficacy, tendency toward substance use, and attitude indicate good discriminant validity and a well-fitted measurement model.

The R-squared value for the variable "Tendency toward Substance Use" was 0.73, further supporting the structural model's adequacy.

Figure 2

Structural Equation Model (Standardized Mode)

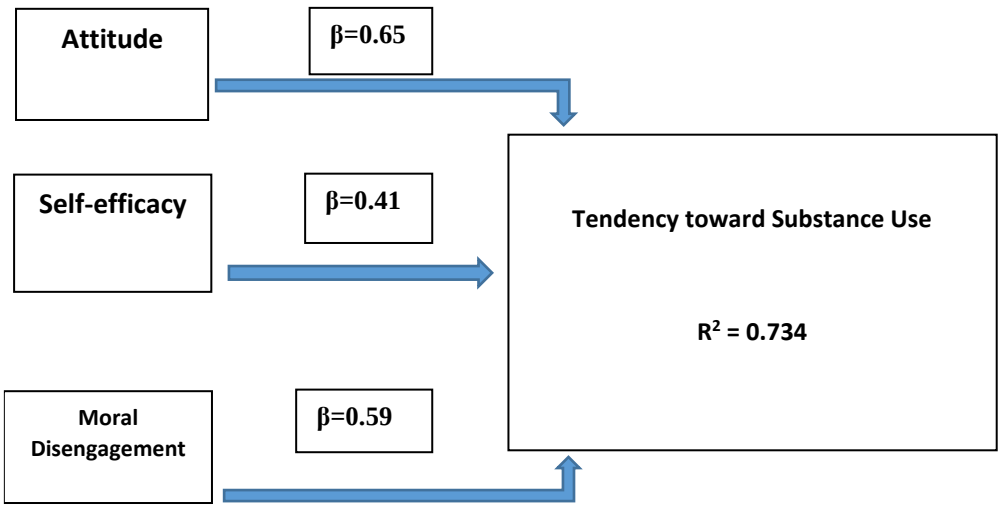

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Table 5

Summary of Direct Effects Between Latent Variables

Hypothesis	Path	Path Coefficient	t-Value	Significance Level	Result
There is a significant relationship between moral disengagement and the use of dietary supplements and performance enhancers among young weightlifters.	Moral Disengagement → Tendency toward Substance Use	0.59	2.75	0.001	Confirmed
There is a significant relationship between self-efficacy and the use of dietary supplements and performance enhancers among young weightlifters.	Self-Efficacy → Tendency toward Substance Use	0.41	10.22	0.001	Confirmed
There is a significant relationship between attitude and the use of dietary supplements and performance enhancers among young weightlifters.	Attitude → Tendency toward Substance Use	0.65	3.65	0.001	Confirmed

4. Discussion and Conclusion

The aim of this study was to analyze the cognitive mechanisms regulating the use of dietary supplements and performance enhancers among young Iraqi weightlifters. The results indicated positive and significant relationships between attitude ($\beta = 0.65$, $p = 0.001$), self-efficacy ($\beta = 0.41$, $p = 0.001$), and moral disengagement ($\beta = 0.59$, $p = 0.001$) with the use of dietary supplements and performance enhancers.

Athletes—from professionals to high school students—use performance-enhancing substances (Habeeb et al., 2012). Most men's sports require a high level of power and strength. The effects of any specific type of performance-enhancing substance are generally directly linked to its ergogenic properties (increased strength, greater energy production, and better recovery), anabolic potential (increased protein synthesis, especially in muscles), and/or stimulant properties (enhanced focus and reduced fear), providing athletes with a competitive advantage (Habeeb et al., 2012).

Among sports, strength athletes exhibit higher rates of such substance use (Benjamin & Flynn, 2006). The use of dietary supplements is very common among athletes (including weightlifters) (Knapik et al., 2016). Weightlifters in Iraq are pioneers in the improper use of anabolic steroids, and nowadays, misuse of these substances has evolved from a mere sports issue into a serious health and medical problem (Westmattelmann et al., 2020).

Attitude toward performance-enhancing substances is defined as individuals' readiness to use performance enhancers and prohibited methods (Petroczi & Aidman, 2009), which may be related to the behavioral potential for using performance enhancers and sports orientation (Petróczi, 2007). Athletes' motivations to use performance-enhancing drugs are associated with maintaining and improving physical performance, coping with psychological and/or social pressures, and striving to achieve their psychological and social goals. Moreover, using performance enhancers can be intensified by the specific conditions of elite sports, in which athletes are exposed to environments characterized by high performance and pressure.

No direct empirical study was found that fully aligns with the present findings; however, regarding attitude, prior results (Ali & Ali, 2018; Bagheri Sheikhan Gafsheh & Alizadeh, 2021; Hurst, 2023; Hurst et al., 2019; Hurst et al., 2021; Petróczi, 2007, 2013; Petroczi & Aidman, 2009; Petróczi et al., 2008) are consistent with the findings here. In a meta-analysis of studies assessing dietary supplement use and attitudes toward performance-enhancing substances, Horst et al. (2023) reported a positive correlation between dietary supplement use and attitudes toward performance-enhancing substances (Hurst, 2023). In summary, there is a possibility that using dietary supplements may shape athletes' attitudes about performance enhancers, thereby influencing the likelihood that they will use them.

Athletes who use dietary supplements typically receive advice from those closest to them, such as friends, family, and coaches, and they are more likely to discuss the use of such substances with these individuals, who may recommend and encourage their use (Mettler et al., 2021). Ali and Ali (2018) investigated various scenarios related to supplement use among Iraqi athletes and found a positive and significant relationship between attitudes and the use of dietary and performance-enhancing supplements (Ali & Ali, 2018).

Petróczi (2013) reported that athletes' attitudes are critical in deviant behaviors associated with performance-enhancing substances (Petróczi, 2013). In fact, attitude toward performance-enhancing substances is defined as individuals' readiness to use prohibited performance enhancers and methods (Petroczi & Aidman, 2009), and it

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may be associated with the potential for performance-enhancing drug use and sports orientation (Petróczi, 2007).

Garey and DiPasquale (2016) examined the effect of attitudes and social norms on the consumption of sports supplements among weightlifters and found a positive and significant relationship between attitudes and the use of supplements and enhancers (Garey & DiPasquale, 2016). In a study aimed at determining the role of the "dark triad" of personality and mental toughness in predicting attitudes toward performance-enhancing substances among male bodybuilders, Bagheri Sheikhan Gafsheh et al. (2021) reported that bodybuilders with dark personality traits showed a more positive attitude toward the use of banned drugs and performance-enhancing substances. Athletes who exhibit higher mental toughness over the course of their professional sports career are less inclined to use performance enhancers (Bagheri Sheikhan Gafsheh & Alizadeh, 2021).

To explain these findings, it can be posited that young Iraqi weightlifters may view supplements as tools to improve athletic performance, increase energy, and speed up post-exercise recovery. Such an attitude is typically influenced by various factors, such as scientific information, personal experiences, and the influence of professional athletes and coaches. Many weightlifters may believe these substances can significantly enhance their performance. Positive attitudes toward these supplements could stem from available information in the media, personal experiences, or beliefs about their benefits.

According to Fish and Ajzen, attitudes are shaped by beliefs. In other words, an individual's belief about the outcomes of a behavior and the evaluation of those outcomes lead to the formation of attitudes. If a person believes that the outcome of a behavior is positive, they develop a positive attitude toward that behavior.

Another explanation for how one's environment (in interaction with human development) influences overall behavior, and possibly the use of supplements and performance enhancers in particular, is provided by theory of mind. Theory of mind posits that an individual's mental states (e.g., intentions, beliefs, and goals) result from changes in specific brain structures (Saxe, Carey, & Kanwisher, 2004). These structural changes in the brain are influenced by interactions with one's environment (Nelson et al., 2003; Thompson, 2006). The social-cognitive factors examined by theory of mind include a person's parents (Thompson, 2006), language (Peterson, Wellman, & Liu, 2005), culture (Winden & Astington, 2000), and mental perceptions of social interactions (social cognition). Some of these factors involved in the development of schemas can be examined directly, whereas others may be highly complex (for example, cultural norms may partially dictate this process).

Social-Cognitive Theory posits that human behavior results from dynamic interactions between individual, behavioral, and environmental factors. Individuals' thoughts and emotions represent key components of personal factors. Behavioral factors include knowledge and skills related to health—collectively referred to as behavioral capability. External factors that can impact health behaviors, such as physical and social environments, are referred to as environmental factors. Thus, Social-Cognitive Theory provides a comprehensive framework for understanding the determinants of behavior and describes potential mediators and procedures for behavior change (Bandura, 2004).

The most important construct in this theory is self-efficacy, regarded as the primary driver of action and an essential mediator for behavior change. "Self-efficacy" is individuals' confidence in their ability to execute a specific action or overcome barriers associated with a given behavior (Schwarzer & Luszczynska, 2005, 2008). In other words, self-efficacy is defined as a person's belief in their ability to respond to a particular situation (Zeinivanmoghadam et al., 2020). Research shows that high perceived self-efficacy strongly predicts whether individuals choose or avoid certain unhealthy or antisocial behaviors. Notably, beliefs about self-efficacy do not necessarily align with general or non-distinct genetic traits; rather, they refer to domain-specific regulation of performance and behavior (Lucidi et al., 2008).

According to McAuley et al. (2011), self-efficacy plays an important role in athletes' physical activities, interacting with protective factors and obstacles that significantly affect their functional performance (McAuley et al., 2011). Legrayoux (2021) stated that increased self-efficacy is also associated with greater self-determination, which significantly impacts how athletes behave when confronted with barriers (Legreaux, 2021). Dionigi (2007) identifies self-efficacy and social interaction as important mechanisms for enhancing the various dimensions of athletes' physical, psychological, and social well-being (Dionigi, 2007). Additionally, self-efficacy boosts the effect of facilitators as a mediating variable for athletes' physical activity (Nematollahi & Eslami, 2019). Taking action increases feelings of self-efficacy and mastery, and the resulting satisfaction from reaching one's goals helps sustain the behavior (Bagherniya et al., 2015).

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It has been suggested that regularly using dietary supplements in sports contexts could increase users' tendency to consider performance-enhancing substance use, based on a shared desired outcome of maximizing performance (Hurst, 2023; Hurst et al., 2019). It is possible that athletes may turn to unconventional or illegal substances to escape the stress of winning and success (raising hope) or losing (and despair) (Braun, 2013). Athletes may also objectively or subjectively turn to substances or drugs to aid their performance.

With respect to the finding regarding self-efficacy, prior results (Gacek, 2016; Kurata et al., 2023) align with this study, while some findings (Ntoumanis et al., 2014) do not. Kurata et al. (2023) aimed to identify and evaluate factors influencing perceived behavioral patterns to improve fitness and healthy lifestyle practices using the Theory of Effort Minimization in Physical Activity (TEMPA) and Protection Motivation Theory (PMT). They explained how self-efficacy, or one's ability to perform a specific behavior, is related to response efficacy (an individual's perception of the effectiveness of a task), in this case including health-promotion practices. They also highlighted the influence of others on an individual's behavior (Kurata et al., 2023).

Gacek (2016) analyzed the relationship between general self-efficacy and dietary supplement use among Polish American football athletes. Results showed that athletes with lower levels of general self-efficacy used dietary supplements significantly more often than those with higher levels of self-efficacy (Gacek, 2016). By contrast, in a meta-analysis of 63 studies, Ntoumanis et al. (2014) reported a significant negative effect of self-efficacy on refraining from using performance-enhancing substances and a task-focused achievement orientation (Ntoumanis et al., 2014).

One explanation for this finding may be that young Iraqi weightlifters who possess high self-efficacy may confidently turn to supplement and performance enhancer use. They might believe these substances can help improve their athletic performance. Additionally, self-efficacy could motivate athletes to seek more information about dietary supplements and performance enhancers, helping them better cope with social and competitive pressures. From this perspective, using dietary supplements and performance enhancers could boost their self-confidence, as they feel equipped with effective tools to enhance performance.

Iraqi youth who experience positive outcomes from supplement use likely feel more capable of performing athletic activities and may benefit from reduced stress and anxiety during competitions. Athletes who experience less stress are more inclined to trust in their self-efficacy. On the other hand, supplement use among young Iraqi weightlifters could also lead to the formation of positive social norms that further reinforce an individual's sense of self-efficacy.

A deep understanding of the social and cultural conditions that encourage using supplements and performance enhancers must be prioritized. Kavussanu et al. (2016) found that moral disengagement had a significant positive relationship with athletes' tendency to use performance enhancers. Internal ethical standards do not establish a permanent control mechanism within an individual. If they are inactive or inhibited via self-justification, individuals may not feel satisfied when making decisions that deviate from widely accepted ethical standards (Kavussanu et al., 2016). These findings align with prior studies (Judge, 2012; Kavussanu et al., 2016; Kavussanu et al., 2020; Ntoumanis et al., 2014), and they diverge from some other findings (Erickson et al., 2017).

A positive attitude toward dietary supplements and performance enhancers plays a significant role in shaping athletes' willingness to use these substances. Young Iraqi weightlifters who believe that such products can enhance athletic performance, boost physical abilities, or produce better outcomes are more likely to want to consume them. These attitudes are often influenced by information from various sources, including media, coaches, and personal experiences.

In environments where peak performance is highly valued, a positive outlook on supplements can be crucial for reinforcing the intention to use them. Young athletes may initially only hear about the benefits of these substances, remaining uninformed about their potential negative consequences, such as health issues and moral dilemmas. Young Iraqi weightlifters might only receive information about the positive aspects of these substances while remaining unaware of their potential drawbacks, such as health problems and ethical infractions.

Young weightlifters may believe they cannot reach the highest level of athletic performance without using supplements. Those who feel they can easily access and use these substances tend to have a stronger intention to do so, particularly if their self-efficacy is high. In this context, self-efficacy reflects the belief that dietary supplements and performance enhancers will help athletes achieve favorable training and competition results.

Young Iraqi weightlifters with minimal concern about the ethical or health consequences of supplements are likely to consume them without hesitation. This moral disengagement

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E-ISSN: 2981-2526

may be exacerbated by intense competitive pressures and expectations for improved performance, while inadequate education on the adverse effects of these substances also plays a crucial role.

Based on this analysis, it can be concluded that young Iraqi weightlifters are driven toward consuming dietary supplements and performance enhancers by a complex set of social and ethical factors. Positive attitudes, self-efficacy, and moral disengagement collectively contribute to a higher likelihood of using these substances.

5. Limitations & Suggestions

To reduce the improper use of these substances and promote athletic health, it is recommended to organize educational and awareness programs that provide comprehensive and accurate information on the negative consequences of using performance enhancers, address ethical concerns, and present healthier alternatives for improving sports performance. Sports organizations and coaches must also take a more active role in reshaping attitudes and alleviating social pressures in athletic environments so that young weightlifters, rather than depending on supplements, turn to safer and more effective methods for achieving their sports objectives.

For future research, it is recommended to conduct a study on the "Analysis of Cultural, Social, and Religious Mechanisms Regulating the Use of Dietary Supplements and Performance Enhancers with the Moderating Role of Social Class in Young Iraqi Weightlifters."

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

Authors' Contributions

All authors equally contributed to this article.

References

Ali, M. A., & Ali, N. (2018). Prevalence and Attitudes of Supplement Use among Bodybuilders and Weightlifters in Iraq. *Journal of Sports Sciences*, *36*(8), 1234-1241.

Bagheri Sheikhan Gafsheh, F. S. K. S. S. F., & Alizadeh. (2021). The role of the dark triad of personality and mental toughness in predicting body builders' attitude towards doping. *Journal of Sports Psychology*, *13*(2), 1-13.

Bagherniya, M., Sharma, M., Mostafavi, F., & et al. (2015). Application of social cognitive theory in predicting childhood obesity prevention behaviors in overweight and obese Iranian adolescents. *International Quarterly of Community Health Education*, *35*, 133-147. https://doi.org/10.1177/0272684X15569487

Benjamin, L., & Flynn, F. (2006). Leadership style and regulatory mode. *Organizational Behavior and Human Decision Processes*, *99*, 216-230. https://doi.org/10.1016/j.obhdp.2006.01.008

Braun, H. (2013). Dietary supplement use among elite young German athletes. *International Journal of Sport Nutrition and Exercise Metabolism*, *19*, 97-109. https://doi.org/10.1123/ijsnem.19.1.97

Dionigi, R. (2007). Resistance training and older adults' beliefs about psychological benefits: The importance of self-efficacy and social interaction. *Journal of Sport and Exercise Psychology*, *29*, 723-746. https://doi.org/10.1123/jsep.29.6.723

Erickson, K., Backhouse, S. H., & Carless, D. (2017). "I don't know if I would report them": Student-athletes' thoughts, feelings and anticipated behaviours on blowing the whistle on doping in sport. *Psychology of Sport and Exercise*, *30*, 45-54. https://doi.org/10.1016/j.psychsport.2017.01.005

Gacek, M. (2016). Association between general self-efficacy level and use of dietary supplements in the group of American football players. *Roczniki Państwowego Zakładu Higieny*, *67*, 31-36.

Garey, J. B., & DiPasquale, D. (2016). Attitudes and Social Norms Predicting the Use of Supplements among Strength Athletes. *Journal of Strength and Conditioning Research*, *30*(10), 2840-2846.

Grist, P. (2023). *The Relationship between the World Anti-doping Agency's Spirit of Sport Values & Anti-doping Beliefs among Elite US Athletes: Direct-Based Measures Using the Theory of Planned Behavior* The University of North Carolina at Greensboro].

Habeeb, M. B., Kasim, W. J., Khamees, L. A., Hawi, M. M., & Khashoom, Q. N. A. (2012). Athletes' perceptions toward

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substance use in Baghdad City. *American Journal of Men's Health*, *6*(6), 462-471. https://doi.org/10.1177/1557988312446508

Hoffman, J. R., & Ratamess, N. A. (2006). Medical Issues Associated with Anabolic Steroid Use: Are They Exaggerated? *Journal of Sports Science and Medicine*, *5*(2), 182-193.

Hurst, P. (2023). Are dietary supplements a gateway to doping? a retrospective survey of athletes' substance use. *Substance Use and Misuse*. https://doi.org/10.1080/10826084.2022.2161320

Hurst, P., Kavussanu, M., Boardley, I., & Ring, C. (2019). Sport supplement use predicts doping attitudes and likelihood via sport supplement beliefs. *Journal of Sports Sciences*. https://doi.org/10.1080/02640414.2019.1589920

Hurst, P., Ring, C., & Kavussanu, M. (2021). Athletes using ergogenic and medical sport supplements report more favorable attitudes to doping than non-users. *Journal of Science and Medicine in Sports*. https://doi.org/10.1016/j.jsams.2020.09.012

Judge, L. W. (2012). The attitude and perceptions of adolescent track and field athletes toward PED use. *Performance Enhancement & Health*, *1*, 75-82. https://doi.org/10.1016/j.peh.2012.04.002

Kavussanu, M., Hatzigeorgiadis, A., Marie Elbe, A., & Ring, C. H. (2016). The moral disengagement in doping scale. *Psychology of Sport and Exercise*, *24*, 188-198. https://doi.org/10.1016/j.psychsport.2016.02.003

Kavussanu, M., Hurst, P., Yukhymenko-Lescroart, M., Galanis, E., King, A., Hatzigeorgiadis, A., & Ring, C. (2020). A moral intervention reduces doping likelihood in British and Greek athletes: Evidence from a cluster randomized control trial. *Journal of Sport & Exercise Psychology*, *43*, 125-139. https://doi.org/10.1123/jsep.2019-0313

Knapik, J. J., Steelman, R. A., Hoedebecke, S. S., Austin, K. G., Farina, E. K., & Lieberman, H. R. (2016). Prevalence of dietary supplement use by athletes: Systematic review and meta-analysis. *Sports medicine*, *46*(1), 103-123. https://doi.org/10.1007/s40279-015-0387-7

Kurata, Y. B., Ong, A. K., Cunanan, A. L., Lumbres, A. G., Palomares, K. G., Vargas, C. D., & Badillo, A. M. (2023). Perceived behavior analysis to boost physical fitness and lifestyle wellness for sustainability among gen z Filipinos. *Sustainability*, *15*(18), 13546. https://doi.org/10.3390/su151813546

Legreaux, S. J. (2021). *Examining the Roles of Self-Efficacy, Self-Determination, and Faced Barriers of Individuals with Disabilities and Their Participation in Physical Activity* Miami University]. Oxford, OH, USA.

Lucidi, F., Zelli, A., Mallia, L., Grano, C., Russo, P. M., & Violani, C. (2008). The social-cognitive mechanisms regulating adolescents' use of doping substances. *Journal of Sports Sciences*, *26*(5), 447-456. https://doi.org/10.1080/02640410701579370

Luszczynska, A., & Schwarzer, R. (2015). Social cognitive theory. *Fac Health Sci Publ*, 225-251.

Maughan, R. J., Burke, L. M., & Dvorak, J. (2018). IOC consensus statement: dietary supplements and the high-performance athlete. *British Journal of Sports Medicine*, *52*(7), 439-455. https://doi.org/10.1136/bjsports-2018-099027

McAuley, E., Szabo, A., Gothe, N., & Olson, E. A. (2011). Self-Efficacy: Implications for Physical Activity, Function, and Functional Limitations in Older Adults. *American Journal of Lifestyle Medicine*, *5*, 361-369. https://doi.org/10.1177/1559827610392704

Mettler, S., Lehner, G., & Morgan, G. (2021). Widespread Supplement Intake and Use of Poor Quality Information in Elite Adolescent Swiss Athletes. *International Journal of Sport Nutrition and Exercise Metabolism*. https://doi.org/10.1123/ijsnem.2021-0043

Nakhai, M. R., & Pakrovan, M. (2014). Studying the frequency and causes of nutritional supplements consumption among athletes in Kerman city gyms, 2013. *Scientific Journal of Rafsanjan University of Medical Sciences*, *12*(11), 873-880.

Nematollahi, M., & Eslami, A. A. (2019). A survey of social-cognitive determinants of physical activity among Iranian women using path analysis method. *Journal of Preventive Medicine and Hygiene*, *60*, E43-E49.

Ntoumanis, N., Ng, J. Y., Barkoukis, V., & Backhouse, S. (2014). Personal and psychosocial predictors of doping use in physical activity settings: A meta-analysis. *Sports medicine*, *44*(11), 1603-1624. https://doi.org/10.1007/s40279-014-0240-4

Petróczi, A. (2007). Attitudes and doping: a structural equation analysis of the relationship between athletes' attitudes, sport orientation and doping behavior. *Substance Abuse Treatment, Prevention, and Policy*, *2*, 34. https://doi.org/10.1186/1747-597X-2-34

Petróczi, A. (2013). The doping mindset-Part I: Implications of the functional use theory on mental representations of doping. *Performance Enhancement & Health*, *2*(4), 153-163. https://doi.org/10.1016/j.peh.2014.06.001

Petroczi, A., & Aidman, E. (2009). Measuring explicit attitude toward doping: Review of the psychometric properties of the performance enhancement attitude scale. *Psychology of Sport and Exercise*, *10*, 390-396. https://doi.org/10.1016/j.psychsport.2008.11.001

Petróczi, A., Naughton, D. P., Pearce, G., Bailey, R., Bloodworth, A., & McNamee, M. (2008). Nutritional supplement use by elite young UK athletes: fallacies of advice regarding efficacy. *Journal of the International Society of Sports Nutrition*, *5*, 1-8. https://doi.org/10.1186/1550-2783-5-22

Schwarzer, R., & Luszczynska, A. (2005). Social cognitive theory. *Predicting Health Behaviors*, *2*, 127-169.

Schwarzer, R., & Luszczynska, A. (2008). How to overcome health-compromising behaviors: The health action process approach. *European Psychologist*, *13*(2), 141-151. https://doi.org/10.1027/1016-9040.13.2.141

Westmattelmann, D., Sprenger, M., Hokamp, S., & Schewe, G. (2020). Money matters: The impact of prize money on doping behaviour. *Sport Management Review*, *23*(4), 688-703. https://doi.org/10.1016/j.smr.2019.09.005

Woods, C. B., & Moynihan, A. (2009). General practitioners knowledge, practice and training requirements in relation to doping in sport. *Irish Medical Journal*, *102*.

Zeinivanmoghadam, L., Jalilian, M., & Mirzaei, A. (2020). Predictors of Fruits and Vegetable Consumption in Adolescent Girls Based on Social Cognitive Theory. *Journal of Education and Community Health*, *7*(4), 285-291. https://doi.org/10.29252/jech.7.4.285

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E-ISSN: 2981-2526