Original Article

UTILIZATION OF PERFORMANCE-ENHANCING SUPPLEMENTS BY GYM USERS IN ABBOTTABAD CITY

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ABSTRACT

Objective: *To determine the frequency of supplement use among those who work out often in Abbottabad, Pakistan, and to talk about the variables that affect this consumption.*

Study design : *a cross sectional study*

Duration and place of study : *Department of Biochemistry, Nowshera Medical College from jan 2016 to jan 2017*

Methods: *This cross-sectional research included 100 registered people who worked out in 8 different gyms across the city. All participants were at least 15 years old, and both men and women were recruited. In writing, participants were asked to answer questions on their supplement usage. Four months were spent gathering the data. Chi-square tests and descriptive statistics were performed.*

Results: *Of the subjects, 51% reported using nutritional supplements. Men made up the largest intake (51.6%). Whey proteins (34.5%), protein shake bars (13.8%), creatine (20.7%), multivitamin/mineral supplements (6.9%), and mixed supplements (13.8%) were the five items that were almost always eaten. The majority (93%) said they used dietary supplements mostly on the advice of their gym trainers and self-prescription, without seeking any specific expert advice. Individuals younger than 30 years, mainly men ($P < 0.05$), took supplements rich in proteins ($P < 0.05$). In contrast, older participants (>30 years) reported taking mixed supplements and natural/Phytotherapeutic agents ($P < 0.05$).*

Conclusion: *Our results show that supplement intake in people exercising in gyms is high and is usually self-prescribed. We emphasize that dietary and performance-enhancing supplements must always be used under the supervision of a specialist (physician or nutritionist).*

Keywords: *Performance-enhancing nutritional supplements, Exercise, Serotonin, Natural/ Phytotherapeutic agents, FDA*

INTRODUCTION

The usage of nutritional supplements by athletes and other physically active people has drawn much attention lately. Dietary supplements are defined by the United States Dietary Supplement Health and Education Act (DSHEA) as items that include a variety of ingredients, such as vitamins, minerals, amino acids, botanicals, herbs, metabolites, components, extracts, or mixes of these [1]. These substances are often promoted as ways to improve general health and physical performance. Because of this, a sizable section of the populace—especially athletes—now includes these items in their regular regimens. The use of performance-enhancing substances in sports and physical fitness has also gained popularity. Athletes

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often seek drugs that may improve an athlete's physical appearance and athletic performance [2]. Numerous reasons, such as the desire for greater strength and performance, social pressure, self-esteem, academic success, body image issues, and gym attendance, might impact a person's choice to take such substances [3, 4]. Concerns have been expressed about the long-term health implications of some of these medicines, such as anabolic androgenic steroids (AAS) [5]. The regulatory environment that controls dietary supplements is complex. The Food and Drug Administration (FDA) was given less authority to regulate these goods by the DSHEA of 1994, which treated them more like foods than medications [6]. As a result, unlike medicines, dietary supplements are not subject to the same stringent testing and safety regulations. This raises concerns over their effectiveness and safety, especially because they are advertised as tools for improving performance. This introduction lays the groundwork for a thorough investigation of dietary supplements and medications intended to enhance performance in the context of sports. It draws attention to the wide variety of accessible items, the purposes for which they are used, the legal framework that controls them, and any possible health risks connected to their usage. In the following sections, we will detail certain supplement categories, how they affect sports performance, and why using them requires evidence-based recommendations.

MATERIALS AND METHODS

This cross-sectional research in Abbottabad, Pakistan, chose eight gyms with a range of training gear. Participants might be of any gender, skin tone, socioeconomic class, or group as long as they were over 15 and engaged in at least two hours of weekly exercise. Men who only engaged in one kind of exercise were also considered. Those who were over 60 or under 15 were excluded. Data on demographics, supplement use, exercise motives, and information sources were gathered using a self-administered questionnaire. Data collection took place over four months, with participants reviewing questionnaires to ensure they were full. Data was analyzed using IBM SPSS Statistics v23, which used frequency distribution, chi-square tests for categorical variables, odds ratios to assess relationships ($P < 0.05$), and descriptive statistics.

RESULTS

Several significant results are presented by this research conducted in Abbottabad, Pakistan:95% of participants in the study were men, compared to 5% who were women. This indicates a significant masculine presence. Age and Smoking Patterns: With a mean age of 25, most participants (79%) were in the 15–29 age range. Of those surveyed, almost 44% smoked.BMI Distribution: 14% were underweight, 19% overweight, and 3% obese, while a substantial share (74%) had a normal BMI.93% of the participants had some degree of education but at different academic success.Gym Routines: 57% reported going to the gym every day, and 54% spent one to two hours there.Usage of Supplements: Approximately half (51%) reported using supplements, with whey protein being the most popular (31.4%). Information Sources: Friends (27.5%) and the internet (41.2%) are the two main sources to get further information. Motivations: The two main reasons people used supplements were to gain muscle mass (64.7%) and to improve performance (17.6%). The above table shows that the association between age groups and supplements taken is not significant ($p > 0.5$) The above table shows that the association between marital status and supplements taken is not significant ($p > 0.5$) The above table shows that the association between BMI and supplements taken is not significant ($p>0.5$)

Table 1: Frequency of Gender of the Patients

	Frequency	Percent
Male	60	55.6
Female	48	44.4
Total	108	100.0

Table 2: Frequency of H. Pylori Patients

	Frequency	Percent
Positive	45	41.7
Negative	63	58.3
Total	108	100.0

Table 3: Frequency Distribution of Gender with H. Pylori

		H. Pylori		Total
		Positive	Negative	
Gender	Male	30	30	60
		27.8%	27.8%	55.6%
	Female	15	33	48
		13.9%	30.6%	44.4%
Total		45	63	108
		41.7%	58.3%	100.0%

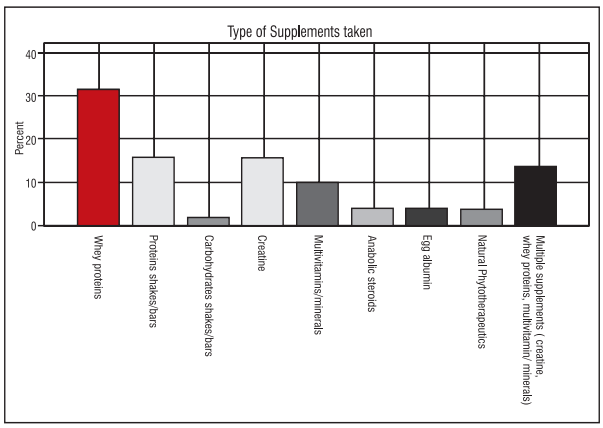

Fig 1: Showing different supplements taken by Gym users

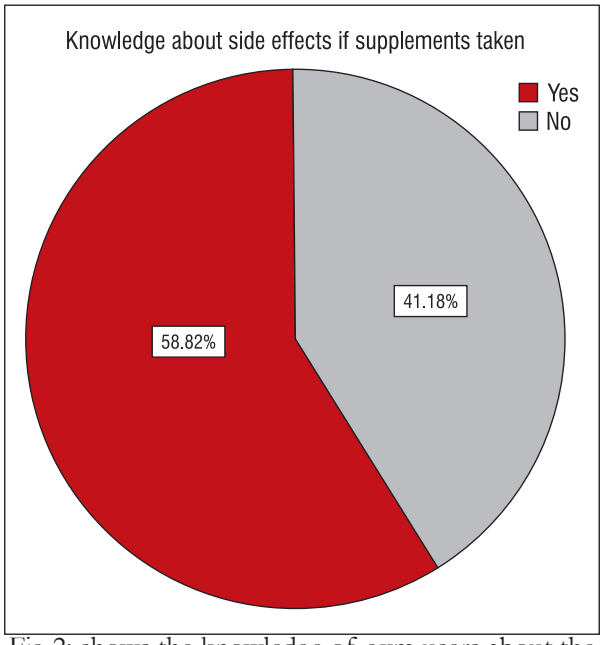

Fig 2: shows the knowledge of gym users about the side effects of supplements taken

DISCUSSION

Important new information on the region's gym-goers' workout routines and use of dietary supplements. The findings highlight a few important topics that need further consideration. The discovery that more than half (51%) of Abbottabad gym patrons use nutritional supplements points to an important trend. This is consistent with other research that found different rates of supplement usage in fitness environments (64). Things like different conditions of suym kinds and demographics inside the gym might cause these discrepancies. Given that supplement usage may affect people's health and fitness objectives in good and bad ways, it is important to acknowledge how common it is. The most popular supplement was found to be whey protein (31.4%), which was followed by protein drinks and bars (15.7%) and creatine (15.7%). These results highlight the need for protein supplementation in gym-going individuals' fitness regimens to encourage muscle development and recovery.

Nonetheless, there are worries about possible abuse and health hazards due to the extensive use of supplements, which include anabolic steroids (3.9%). It emphasizes the importance of spreading knowledge and understanding regarding safe supplement use. Demographics and Exercise Habits: The survey found that young individuals, with a mean age of 25, made up the majority of gym-goers, with an age range of 15 to 29.

This is consistent with the worldwide trend that younger people are increasingly drawn to fitness-related activities (67). Moreover, the questioned population's daily gym attendance (57%) and one to two-hour sessions (54%) show high dedication to fitness and exercise. Attendance at the gym was motivated by various factors, with the two main goals being fitness (28%) and muscle mass (38%). Loss of weight (26%) was another important factor.

These motives demonstrate the diverse nature of fitness goals as people pursue various aims to enhance their physical health. Remarkably, friends, the media, and personal trainers at the gym are excellent sources of supplement knowledge. The internet (41.2%) surfaced as a significant source, highlighting the impact of digital platforms on people's choices about using supplements. It emphasizes the importance of using trustworthy internet sources and critical thinking while sifting through information on supplements.

In conclusion, this research emphasizes the intricate relationships between supplements, workout routines, and demographic characteristics among Abbottabad gym patrons. Supplements may be useful tools for reaching fitness objectives, but people should exercise care while using them. They should be led by reliable information and keep their long-term health and well-being in mind. Furthermore, gym facilities must promote education and appropriate supplement practices to guarantee the security and effectiveness of supplement usage.

CONCLUSION

We find that exercisers in Abbottabad City's gyms may be using excessive amounts of nutritional supplements on their initiative or at the recommendation of friends and gym instructors. Since this pattern is being followed with little to no expert oversight, it raises major concerns about public health. It is vital to spread accurate and scientifically sound information about the proper use, potential advantages, and potential side effects of nutritional supplements in the sports environment because these products do not make up for bad food choices and inadequate dietary habits or pose no risks. To give exercisers more complete nutrition services, health professionals—physicians, dietitians, and pharmacists—should pool their knowledge with that of coaches and athletic trainers.

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CONFLICT OF INTEREST: Authors declare no conflict of interest

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