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RESEARCH ARTICLE

ANABOLIC SUPPLEMENTS ABUSE AMONG ATHLETES IN BABYLON GOVERNORATE GYMS.

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Key words:-

Anabolic, supplement, Gym, knowledge.

Abstract

Background: Over the past decade it has been obvious that the prevalence of anabolic androgenic steroid abuse is increasing rapidly amongst amateur athletes and for aesthetic purposes. As a result, the adverse events related to their use are being seen more frequently.

Objectives: To uncover the extent of use of anabolic supplement among gymnasium attendants and their attitude towards it.

Methods: The study was done during a period of (6 months), starting from first September 2018 till the end of February 2019. A convenient, non-randomized study sample was chosen from the athletes attending thirteen gyms in deferent regions (district) in Babylon governorate. Data were collected by a questionnaire filled by the participants.

Results: The mean age of participants was (25.4 ± 6.1) . The users were (73.8%) and non-users (26.2%). Out of the total study group 338(73.8%) believes that these supplements carry a risk. Among the users (49.1%) had mood changes. The study showed (53%) are not sure about the correct use, while (47%) claim that they use supplements in a correct way. Most of the anabolic users in the sample (78.7%) reported that they are able to stop using the anabolic supplements, while (21.3%) reported that they can't stop.

Conclusion: In conclusion most of the gym attendees were young most of them used anabolic supplements

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Introduction:-

Over the past decade it has been obvious that the prevalence of Anabolic Androgens Steroid (AAS) abuse is increasing rapidly ⁽¹⁾. Equally alarming and less well known is the fact that, of these athletes only around one half are known to have illegal prescription by health care system provides ⁽²⁾. physicians are involved in illegal prescription of (AAS) and monitoring of (32.1%) of AAS abuse ⁽³⁾ recent studies shows that the prevalence continues to rise globally and that (3-12%) of male adolescents and about (1-2%) female adolescent use AAS at some time during their lives. The use of anabolic steroid and vitamins supplement has reached alarming proportions in the last decades ⁽⁴⁾. The excessive doses and long-term use of anabolic steroids produce health risks ⁽⁵⁾⁽⁶⁾, hyperlipidemia manifest itself as changes in cholesterol levels, increased low-density lipoprotein and decreased high-density lipoprotein. Also acne, high blood pressure was reported ⁽⁷⁾. Alteration in fasting blood sugar, and testicular atrophy, cardiovascular disease ⁽⁸⁾, coronary artery disease and myocardial hypertrophy ⁽⁹⁾. The Aim of this study is to uncover the extend of use anabolic supplements among gymnasium attendants and their attitude towards these supplements in Babylon governorate.

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Methodology:-

The study was done during a period of (6 months), starting from first September 2018 till the end of February 2019. The study conducted in many gyms centers distributed in Babylon governorate. Total population of Babylon Governorate is (1,824,251) persons. Those gyms or fitness centers are halls contains several sports equipment, it is under supervision of an experienced athlete (The coach). The coach providing the training services to the attendees of these gyms, prescribing the type and doses of anabolic supplements, my help in the injection of the supplements to the gym's members and manage all the other administrative aspects. The services that are provided to these athletes include: preparation of sports instruments; equipment's information; training courses; and purchasing the anabolic supplements to gym participants.

A convenient, non-randomized study sample was chosen from the athletes attending thirteen gyms in deferent regions (district) in Babylon governorate. These are Hilla, Muhaweel, Mussayib and Hashymia region during the study period.

A self-administered questionnaire form was designed for the purpose of the study; it was revised by experts before application. The instrument covered the demographic factors, and other variables to explore knowledge, belief and attitude of the athletes towards anabolic supplements. The gym's manager (coach) was asked to distribute the questionnaire among gym's attendees after taking their permission to participate. Privacy was considered through anonymous questionnaire and not to mention the name of the gyms. The participants fill in the study tool by themselves.

Statistical issue: The SPSS (Statistical Package for the Social Science) program, version 11.5 was used for data grouping and statistical analyses. The results were expressed as mean (\pm standard derivation) or proportion. Categorical variables were tested by using Chi-square (χ^2) tests, P-value equal or less than (0.05) was considered as significant.

Result:-

This study had enrolled (452) athletes who are engaged in gyms. The mean age of respondents was (25.4 ± 6.1), range (15-44 years). Fifty percent (49.7%) of registrants are seated in the age group (15-24 years), 40.8 % in the age group (25-34), and (9.5%) of them older than (34) years.

The sample was classified according to the usage of anabolic supplements into: users (73.8%) and non-users (26.2%) as shown in (Table-1). The route of using these supplements is either oral (43.4%), intramuscular (21.5%) and both routs (35.1%) (Fig-1).

The belief that anabolic supplements are risky was shown in table-2. Out of the total study group 338(73.8%) believes that these supplements carry a risk and the remaining 26.2% do not believe in that.

Table-3 represented the mood change among the users and non-users; Among the users (49.1%) had mood changes but (50.9%) had no such changes in mood. The difference between users and non-users was significant ($P=0.014$). Regarding the correct use of these supplement table-4 was constructed, it revealed (53%) are not sure about the correct use, while (47%) claim that they use supplements in a correct way. Most of those who claim correct usage obtained their knowledge from the coach in (38.6%), followed by those who gain knowledge from friends (12.9%). Most of the anabolic users in the sample (78.7%) reported that they are able to stop using the anabolic supplements, while (21.3%) reported that they can't stop. Besides, (68.5%) of anabolic supplements users had previous attempt to stop the use of anabolic supplements while the remaining (31.5%) did not try at all. Table-5 showed this information.

Anabolic users seek medical advice when they complain because of these supplements were (46.1%), while (53.9%) did not. Many reasons were giving for seeking medical advice listed in (table-6).

Table 1:-Distribution of participants according to using of anabolic supplements and age

Age groups	Using anabolic supplement			Chi-Sq test P value
	Yes	No	Total	
	n (%)	n (%)	N	

15 – 24	163(72.4)	62(27.6)	225	0.5107
25 – 34	139(75.5)	45(24.5)	184	0.7746
35 – 44	32(74.4)	11(25.6)	43	
Total	334(73.9)	118(26.1)	452	

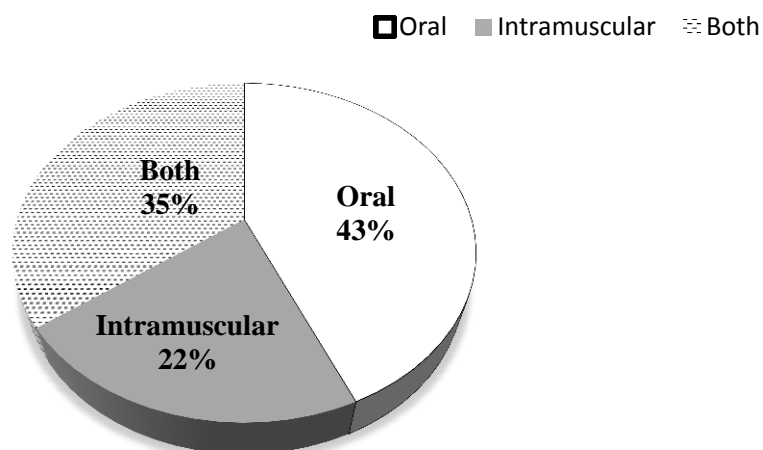


Fig 1: Routs of taking the anabolic

Table 2:-Belief of the participants about the risk of anabolic supplements in different age group.

Age group	Belief that anabolic are risky			Chi-Sq test P value
	Yes n(%)	No n(%)	Total n(%)	
15 – 24	155(68.4)	70(31.1)	225	8.5643 0.014
25 – 34	149(81.2)	34(18.8)	188	
35 – 44	34(77.2)	10(22.8)	44	
Total	338(73.8)	116(26.2)	452	

Table 3:-Mood changes among the study group

Using anabolic	Mood changes			Chi-Sq test P value
	Yes N(%)	No N(%)	Total N(%)	
Yes	164(49.1)	170(50.9)	334	50.6471 0.0001
No	14(11.9)	104(88.1)	118	
Total	178	274	452	

Table 4:-knowledge about anabolic among participants

Knowledge about correct usage of anabolic			
Not sure	177(53%)		
Yes	157(47%)		
		Source of knowledge	n(%)
		coach	60(38.2)
		doctors	15(9.6)
		friends	20(12.7)
		experience	17(10.8)
		other*	16(10.2)
		more than one	24(15.3)
		no response	5(3.2)

		total	157(100)
Total	334(100)		
* Other: sport magazine, net and TV			

Table 5:-Ability and previous trial to stop anabolic supplements

	Yes	No	total
	N(%)	N(%)	N(%)
Can stop	263(78.7)	71(21.3)	334
Previously stopped	229(68.5)	105(21.5)	334

Table 6:-Seeking medical advice and reasons for that among users

Seek medical advice				
No	180 (53.9)			
Yes	154(46.1)	Reasons		
		check up	60(38.9)	
		uro-genital tract	14(9.2)	
		cardiovascular system	9(5.8)	
		dermatology	2(1.3)	
		other*	3(1.9)	
		no response	66(42.9)	
		total	154	
Total	334(100)			
*Others: masses at injection sites, and extra ordinary flu				

Discussion:-

During recent years, the use of anabolic androgenic Steroids (AAS) has received an increased attention, not only as a doping issue inside, but also outside the elite word of sport ⁽¹²⁾. The current study showed that the age of participants were mostly in the age group (15-34) years and it decreases with the increase in age. This finding may be explained by the changes in aims and interests of subjects in different age group, those in the late teens and twenties and early thirteen are usually more concerned about their body image to increase their own self esteem while those who are older have no such interest. A study conducted by Parkinson et al found that widespread use of (AAS) during adolescence is a significant concern, and most of the users begin these supplements in their teens or early twenties ⁽¹⁴⁾. The Anabolic supplements users form three quarters of the study sample; this reflect the extent of use of these supplements among gym's attendants.

Yet, this finding does not explore the exact limits of this problem, because of the small size study. It agrees with many other studies; some of which regard this phenomenon as a significant concern ⁽¹⁵⁾, while others regard it as a potential public health in future years ⁽¹⁶⁾. Nelson et al. stated that epidemiological studies on this topic are clearly difficult to conduct in reliable manner since anabolic supplements usage is largely in secret, partly because the drugs are illegal and partly because usage tends to take place in closed subcultural setting ⁽¹³⁾, so it is usually underestimated ⁽¹⁷⁾.

Oral rout is the most common rout of taking these supplements, this could be due to convenience or to a belief that oral forms are safer for the users. Still oral forms may cause serious side effects since they are metabolized by the liver and high doses may damage it. In a study conducted by Cohen et al. in 2007 argued that the injectable form was the common route ⁽¹⁸⁾.

Regarding the risk of anabolic supplements about three quarts of respondents believe that these supplements are risky (yet they still use it) this is consistent with the results of an article published in 2004 by Pope et. al. which revealed that (AAS) continue to be used despite knowledge of the potentially serious side effects of these supplements ⁽¹⁹⁾, another study had found that (AAS) users often do not consider use of these supplements as a pathological concept, and may even perceive (AAS) as a positive athletic life style ⁽²⁰⁾. A study conducted by Hildebrandt et. al. related the rises in the use of (AAS) despite the risk, to an interesting benefit in spite of the possibility of negative health consequences ⁽²¹⁾.

Mood changes when considered in the current study revealed significant difference between users and non-users, this result agrees with the survey of male users versus non users of (AAS) conducted by Ip Ej et. al. in California that revealed (AAS) users were more likely than non-users to meet criteria for mood disorder and an anxiety disorder ⁽²²⁾, the mood changes in the current study were increasing with time of use and are consistent with D' Errico et. al. study that was conducted in Italy and noticed that the chronic use of (AAS) has been known to cause serious adverse effect ⁽²³⁾.

The current study figured out that the knowledge regarding the correct use of these materials is not increasing with age and no significant difference had been demonstrated. More than half of the users do not have enough knowledge about (AAS). Among those who had knowledge: coach was the most accountable source of the knowledge, while friends, doctors, sport magazine, net and T.V, contribute to the other part, this disagree with a survey of anabolic steroid used in weight lifters and body builders which revealed that literatures (books, Magazines) and web sites were the main sources of information ⁽²⁴⁾.

Slightly less than one quarter of the users' had no ability to stop these supplements; this was an important indicator regarding the future dependence on these supplements. A study conducted in Belmont by Gen Kanayama et al demonstrated that (AAS) dependence may be a rising public health problem in future years, but remains a little studied ⁽²⁵⁾.

Conclusion and recommendation:-

In conclusion most of the gym attendees were young most of them used anabolic supplements. Although they know about the risk of these supplements still they use them and some found it difficult to stop them. It is recommended to start a community based health education program to increase the knowledge about the use of these materials.

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