Evaluation of ergogenic matter and doping usage knowledge of Turkish national athletes

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Abstract. The aim of this study is to investigate evaluation of ergogenic matters and doping usage knowledge levels of national athletes in Turkey. In the research, questionnaire method is used to collect data. The validity and reliability of questionnaire research aimed to identify the intelligence level of athletes about ergogenic and doping matters is done by Eröz (2007). The questionnaire used in reliability test is found reliable in level of 0.797 in which alpha level is accepted as 0,05. The participants of this research are n=270 students of Physical Education and Sport Department who are national (n=161), not national (n=91) athletes. To examine the difference between every dependent variable and independent variables Chi-Square Independence Test is used. Statistically importance level is considered as 0.05. It is seen that 270 athletes that have sport education in Turkey do not have enough knowledge about doping and ergogenic help. In result of the research, it is determined that informing and awareness raising is important to prevent doping issues in the country recent years.
Key words: *ergogenic matters, doping usage, national athletes.*

Introduction

Doping word is derived from the word "dop" and it comes from a drink that was used in South African tribe ceremonies in 18th century. As for doping entering the literature firstly in 1889 as a narcotic medicine for increasing the performance of racing horses (1). Also foreign matter usage with the purpose of increasing the performance of athletes artificially is done by doping (2). Doping in sports is not a new fact; athletes have been using performance increasing matters since the beginning of time (3). As it is unknown that usage time of doping, it is known that doping usage is not a new fact. It is understood that athletes in ancient olympic games had used performance increasing matters as it is seen in the documents from BC to now. On the contrary, it is not reached to a detailed information about the used matters (4). Doping is a problem in sport competitions lasting for long years (5). Doping that is a forerunner for the ethics crimes is a serious threat for modern sports that depends on outstanding success (6).

The term that is accepted in Lausanne doping in sports conference by Medical commission of International Olympic Committee is defined as; matters or methods that are unnatural and unhealthy for athletes or increasing performance or using matters existing in the list "Doping Fight Olympic Principles" (IOC 2000). The first known doping caused death is that an English biker had overdose of trimethyl in 1886. In 1967, International Olympic Committee (IOC) had banned doping usage. World Anti Doping Agency (WADA) which is established by International Olympic Committee announces doping matters and methods ever year (7-9).

World Doping Agency (WADA) was established in 1999 to pursue the fight with provoking and coordinating sport drugs. Over 600 sport organizations including WADA International Olympic Committee pursue the subject. World Anti-Doping Code is responsible. World Anti-Doping Code, beyond routine tests made for athletes whether they use the mentioned illegal drugs, WADA is now improved to pursue intelligence shared by efforts of every country show for anti-doping, coach / athlete approach to improve a universal relation, suspected athletes, software for tracking performance and biological passport/algorithm and system of detecting where the athletes are (10).

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As for doping methods are blood doping, pharmacological and physical manipulations. Some restraint matters are alcohol, marijuana, local anesthetics, corticosteroids (11).
Developing technology, while making sports equipment fit better to high performance, provide intimacy of societies, more free space, increase in welfare level and attention to sports either by athletes or spectators. Of course, the performances take important roles for increasing attention. "The higher performance means the more attention and the more attention means higher performance" vicious circle is occurred. Athletes tend towards doping for being famous, breaking records and with results of these earning more financial income. Trainers, doctors, and other experts that help athletes using doping are as responsible as athletes are (12). It is observed that the factors that make athletes tend towards using doping are the gaining a particular status in society, the professionalism, the ambition of winning, the breaking records, the earning huge amount of income etc. (13).
It is accepted that negative outcomes depending on doping usage are known by many athletes. Despite this fact, it gives an opinion that the insistence on doping usage depends on irresistible charm and attraction of winning. Interest and motivation for doping are seen as other factors that derives from everyday spreading and not compatible to anything social and economical award of sports. Factors such as team level, love of jersey, ignorance, laziness of training and lack of enough preparing lead athletes to find easy solutions and this leads them to interest of doping (13). Awarding athletes that are successful in Olympics with medals and good life conditions instead getting olive branch in ancient times affect success constantly. It is seen that special interest of sports has an intimate relation with growing of sports industry. Since sports and trade relation engage, sport ethics begun to appear. The reason of immorality in sports is to assume the vehicle one, money as purpose. Dirt more appears when sport is in the hands of economical functioning (15). Doping in sport is a well-known phenomenon that has been studied mainly from a biomedical point of view, even though psychosocial approaches are also key factors in the fight against doping. This phenomenon has evolved greatly in recent years, and greater understanding of it is essential for developing efficient prevention programmes (16). It is seen that trainers that train athletes in a sportive lifestyle, physical education teachers and other institutions choose sportive success as their first aim. It is observed that an athlete who is conditioned to sportive success is appealing to unhonest ways for success. It is clear that we have a deficiency of education and organization for doping and its consequences in trainers, managers, spectators and sports media (17).

Material and Method

The participants of this research were students of Physical Education and Sport Department, n=270, who are athletes of Turkey national teams. In the research, questionnaire method is used to collect data. The validity and reliability of questionnaire research aimed to identify the intelligence level of athletes about ergogenic and doping matters is done by Eröz, 2007 (18). The questionnaire used in reliability test is found reliable in level of 0.797 in which alpha level is accepted as 0.05. The questionnaire is consist of two sections. In the first section general information occurs. In the second section there are questions to determine about the knowledge level of athletes about doping and ergogenic help and their opinions.
Data Analysis. To evaluate the acquired data, frequency and percent (%) values are used. To examine the difference between every dependent variables and independent variables Chi-Square Independence Test is used. Statistically importance level is considered as 0.05.

Results

Below indications are reached after the research.
It is seen that the majority of the athletes that are involved in the research are males (n=140; 51.9%). It is seen that the minority of the athletes that are involved in the research are females (n= 130; 48.1%) (Table I). The majority of the athletes that are involved in the research are between the ages of 17-19 (n=173; 64.1%). There are 90 athletes between the ages of 20-24 (33.3%) and over the age of 7 (2.6%) athletes occur.

Table I. Gender and age divisions of athletes

Gender		**Frequency**	**Percent**
Valid	Female	130	48.1
	Male	140	51.9
	Total	270	100.0
Age		**Frequency**	**Percent**
Valid	Aged 17-19	173	64.1
	Aged 20-24	90	33.3
	Over 24	7	2.6
	Total	270	100.0

Table II. Education level of athletes

Education Level		**Frequency**	**Percent**
Valid	High School	2	0.7
	University	267	98.9
	Master Degree	1	0.4
	Total	270	100.0

In table II, it is seen that athletes reported their education level the percent of high school as 0.7% (n=2) , 98.9% (n=267) as university and 0.4% (n=1) as master degree. Income level of athletes are seen: 5.6% (n=15) as less than 500 TL, 14.1% (n=38) as 501–999 TL, 43.2 % (n=118) as 1000–1500 TL, 22.6% (n=61) as 1501–3000 TL, 10.4% (n=28) as 3001-5000 TL and 3.7% (n=10) 5001 and more.
It is seen in the table III that the distribution of athletes according to their sport age and status of being national athletes. Athletes participated in the questionnaire have reported their sport age: 16.7% (n=45) as 1-3 years, 29.3% (n=79) as 4-7 years, 30.7% (n=83) as 7-11 years, 30.7% (n=46) as 12-15 years, 5.6% (n=15) as 16-19 years and 0.7% (n=2) as over 20 years.

Table III. Athletes' sport age table

SPORT AGE		**Frequency**	**Percent**
Valid	Aged 1-3	45	16.7
	Aged 4-7	79	29.3
	Aged 7-11	83	30.7
	Aged 12-15	46	17.0
	Aged 16-19	15	5.6
	Aged 20 and over	2	0.7
	Total	270	100.0

It is seen that the applied group of School of Physical Education and Sports are involved in sports as in percent such as: football (n=84; 31.1%), basketball (n=28; 10.4%), handball (n=17; 6.3%) handball, voleyball (n=27; 10.0%), swimming (n=10; 3.7%), weight lifting (n=11, 4.1%) and other sport branches (n=93, 34.4%) (Table IV).
Most of the athletes stated to become national athletes in senior category (20,4%; n=55), this percent in youth category is 17,4% (n=47) and in under 18 category, 13.0% (n=35). Students of School of Physical Education and Sports are mostly become national athletes (59.6%; n=161), on the other hand who do not become national are 40.4% (n=109). It is seen that the athlete group who is applied questionnaire are tended towards sports through: their own will (42.6%), physical education and sports teacher (21.9%), a friend (8.9%), a trainer (4.1%), media (3.3%), other individuals (1.1%). It is seen that the athlete group who is applied questionnaire stated that they study: teaching (38.1%). recreation (32.2%), coaching (17.0%) other (12.6%) and other ones (4.1%) (Table V).

Table IV. Sport branches of athletes table

Branch		**Frequency**	**Percent**
Valid	Football	84	31.1
	Basketball	28	10.4
	Handball	17	6.3
	Volleyball	27	10.0
	Swimming	10	3.7
	Others	93	34.4
	Weight Lifting	11	4.1
	Total	270	100.0

Table V. Becoming national athlete level of athletes

National Level		**Frequency**	**Percent**
Valid	Under 18	35	13.0
	Youth	47	17.4
	Senior	55	20.4
	None	133	49.3
	Total	270	100.0

In the table VI it is seen that the preferences of doping reasons' distribution and comparison of being national or not of athletes that are participated in the research. When the answers that participants gave to the question "A successful athlete wants to use doping to increase performance" are evaluated there are no significant difference according to sport branches ($X2 = 2.960$; $p > 0.05$).Answers that are given to "A successful athlete wants to use doping to overcome his/her excitement" question show no significant difference according to Chi-Square Test in between sport branches ($X2 = 4.911$; $p < 0.05$). When the answers that participants gave to the question "A successful athlete want to use doping to provide a social status and to protect it" are evaluated there are no significant difference according to sport branches ($X2 = 5.137$; $p<0.05$).

It is shown in table VII that the knowledge levels about doping in sports and doping (banned matter) varieties and their distribution and comparison according to national level. When the knowledge level about doping in participated athletes are evaluated there could not been detected that there is a significant difference according to the status of being national or not statistically ($X2=2.139$; $p<0.05$). When the opinions about doping's great damage to health of participated athletes are evaluated there could not been detected that there is a significant difference according to the status of being national or not statistically ($X2=2.410$; $p<0.05$). When the opinions about the most used stimulants, such as cocaine, caffeine etc, of participated athletes are evaluated through the comparison with Chi-Square Test, there could not been detected that there is a significant difference according to the status of being national or not statistically ($X2=8.024$; $p<0.05$). When the opinions about the narcotic analgesics are used mostly, there are significant differences have been detected according to the status of being national or not statistically ($X2=13.396$; $p < 0.01$). When the opinions about the situation "Mostly anabolic steroids are used in sports", there are significant differences have been detected according to the status of being national or not statistically ($X2=28.670$; $p<0.01$). When the opinions about the usage of beta blockers are mostly used in sports are evaluated, there could not been detected a significant difference ($X2=5.683$; $p>0.05$).

Another subject that the opinions of athletes had been asked was the use of peptide hormones mostly in sports. In comparison research on this subject, it has been detected a significant difference statistically in athletes according to the status of being national or not (13.000; $p<0.05$).

When knowledge level of athletes about the usage of masking agents mostly in sports are evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not ($X2$ 9.312; $p>0.05$). When opinions of athletes about the usage of cannabinoids (Marijuana etc.) mostly in sports are evaluated, it has been detected a significant difference statistically in athletes according to the

status of being national or not (X2=10.912; p<0.05). When the opinions of athletes about the usage of corticosteroids mostly in sports are evaluated, it has been detected a significant difference statistically in athletes according to the status of being national or not (X2=20.020; p < 0.01). When opinions of athletes about the usage of anti-estrogenic mostly in sports are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2 = 1.439; p<0.05).

Table VI. Why Successful Athletes wants to use doping?

A successful athlete wants to use doping to increase performance. (Question 1)									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	P
NATIONAL	Count	29	54	34	33	11	161	2.960[a]	.564
	%within QUESTION 1	58.0%	64.3%	57.6%	62.3%	45.8%	59.6%		
NOT NATIONAL	Count	21	30	25	20	13	109		
	%within QUESTION 1	42.0%	35.7%	42.4%	37.7%	54.2%	40.4%		
Total	Count	50	84	59	53	24	270		
	%within QUESTION 1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
A successful athlete wants to use doping to overcome his/her excitement.(Question 5)									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I Agree	I totally agree	Total	Chi-Square	P
NATIONAL	Count	24	31	50	43	13	161	4.911	.297
	%within QUESTION 5	70.6%	64.6%	61.7%	51.2%	56.5%	59.6%		
NOT NATIONAL	Count	10	17	31	41	10	109		
	%within QUESTION 5	29.4%	35.4%	38.3%	48.8%	43.5%	40.4%		
Total	Count	34	48	81	84	23	270		
	%within QUESTION 5	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
A successful athlete want to use doping to provide a social status and to protect it. (Question 6)									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally disagree	Total	Chi-Square	p
NATIONAL	Count	27	23	61	38	12	161	5.137[a]	.274
	%within QUESTION 6	67.5%	47.9%	64.9%	56.7%	57.1%	59.6%		
NOT NATIONAL	Count	13	25	33	29	9	109		
	%within QUESTION 6	32.5%	52.1%	35.1%	43.3%	42.9%	40.4%		
Total	Count	40	48	94	67	21	270		

According to their status of being national or not, athletes' knowledge and usage level about ergogenic level is shown in Table VIII. When status of getting ergogenic help of participant athletes is evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2=7.202; p>0.05). When opinions of athletes about getting ergogenic help situation are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2 = 3.823; p>0.05).

Table VII. Knowledge level of athletes about doping

I have enough knowledge about doping.									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	37	36	44	29	15	161	2.139	.710
	%within QUES. 1	52.9%	60.0%	63.8%	60.4%	65.2%	59.6%		
NOT NATIONAL	Count	33	24	25	19	8	109		
	%withinQUES.1	47.1%	40.0%	36.2%	39.6%	34.8%	40.4%		
Total	Count	70	60	69	48	23	270		
	% within QUES.1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
Doping cause great damage to health.									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	28	31	55	27	20	161	2.410	.661
	%with QUES.2	62.2%	52.5%	59.8%	60.0%	69.0%	59.6%		
NOT NATIONAL	Count	17	28	37	18	9	109		
	% within QUES.2	37.8%	47.5%	40.2%	40.0%	31.0%	40.4%		
Total	Count	45	59	92	45	29	270		
Mostly stimulants such as caffeine, cocaine etc are used in sports.									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	30	41	52	25	13	161	8.024	.091
	% within QUES.3	50.0%	53.9%	71.2%	59.5%	68.4%	59.6%		
NOT NATIONAL	Count	30	35	21	17	6	109		
	% within QUES.3	50.0%	46.1%	28.8%	40.5%	31.6%	40.4%		
Total	Count	60	76	73	42	19	270		
	% within QUES.3	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

Table VIII. Table of knowledge and usage level of athletes about ergogenic help

I get ergogenic help									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	26	29	38	54	14	161	7.202	.126
	% within QUES.1	76.5%	55.8%	50.7%	62.8%	60.9%	59.6%		
NOT NATIONAL	Count	8	23	37	32	9	109		
	% within QUES.1	23.5%	44.2%	49.3%	37.2%	39.1%	40.4%		
Total	Count	34	52	75	86	23	270		
	% within QUES.1	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		
I get ergogenic help before competition									
BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	11	26	68	29	27	161	3.823	.430
	% within QUES3	55.0%	66.7%	59.6%	50.9%	67.5%	59.6%		
NOT NATIONAL	Count	9	13	46	28	13	109		
	% within QUES.3	45.0%	33.3%	40.4%	49.1%	32.5%	40.4%		
Total	Count	20	39	114	57	40	270		

I use drugs without questioning that my trainer gives.

BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	18	19	67	35	22	161	17.048	.002
	% within QUES.5	78.3%	59.4%	48.6%	72.9%	75.9%	59.6%		
NOT NATIONAL	Count	5	13	71	13	7	109		
	% within QUES.5	21.7%	40.6%	51.4%	27.1%	24.1%	40.4%		
Total	Count	23	32	138	48	29	270		
	% within QUES.5	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

I get dietary helpers of ergogenic help (creatine, carnitine, other aminoacids etc.)

BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	13	19	98	28	3	161	.969[a]	.914
	% within QUES.8	68.4%	59.4%	59.8%	57.1%	50.0%	59.6%		
NOT NATIONAL	Count	6	13	66	21	3	109		
	% within QUES.8	31.6%	40.6%	40.2%	42.9%	50.0%	40.4%		
Total	Count	19	32	164	49	6	270		
	% within QUES.8	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

I am exposed to the side effects of the drugs I used.

BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	14	13	113	17	4	161	2.802	.591
	% within QUES.11	66.7%	48.1%	60.1%	58.6%	80.0%	59.6%		
NOT NATIONAL	Count	7	14	75	12	1	109		
	% within QUES.11	33.3%	51.9%	39.9%	41.4%	20.0%	40.4%		
Total	Count	21	27	188	29	5	270		
	% within QUES.11	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

BECOMING NATIONAL		I totally disagree	I disagree	I hesitate	I agree	I totally agree	Total	Chi-Square	p
NATIONAL	Count	14	13	113	17	4	161	2.802	.591
	% within QUES.11	66.7%	48.1%	60.1%	58.6%	80.0%	59.6%		
NOT NATIONAL	Count	7	14	75	12	1	109		
	% within QUES.11	33.3%	51.9%	39.9%	41.4%	20.0%	40.4%		
Total	Count	21	27	188	29	5	270		
	% within QUES.11	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%		

When opinions of athletes about "I use drugs without questioning that my trainer gives" situation are evaluated, it has been detected a significant difference statistically in athletes according to the status of being national or not ($X2=17.048$; $p<0.05$). When opinions of athletes about "I get dietary helpers of ergogenic help (creatine, carnitine, other aminoacids etc.)" situation are evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not ($X2=969^a$; $p>0.05$).

When opinions of "I am exposed to the side effects of the drugs I used" situation are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2=2.802; p>0).

Discussion

Other studies have similar indications that are in accordance with the indications that are found in our research. In the research Eröz (2007) (18) made upon national athletes also, it occurred that 72.55% of participants say "I totally disagree" about their lack of knowledge about doping. It is understood in the research that despite 52.5% of participants having university education and being national athletes, they don't have enough knowledge about doping. In the research that Çetinkaya et al. 2007 (19) did, the evaluation of the knowledge level and behavior about doping of the students in Physical Education and Sports, the questionnaire is applied to the students and it is detected that 1.4% of the students had had education about doping and majority of the students, 98.6%, had not had education about doping. This result leads us to the consequence that trainers who have an important role for athlete education cannot have enough knowledge about doping from universities. According to a research, especially in the branches body building and weight lifting, athletes stated that they take drugs that include rebuilding matters 5-29 times more than it is needed. It is shown that in individual sports, it is taken more doping matters (20). In the research that is applied to 563 athletes in USA, there occurred interesting answers about why use doping.

Among the answers, 94% of the athletes stated that they believe it is the only way to reach improvement power and success (21). According to a result of a research that is about doping usage and knowledge in athletes, solution to the problem lies in the positive attribution of education and this attribution is proportional with the education level (22).

It is seen that the majority of the athletes that are involved in the research are males (n=140; 51.9%), the minority of the athletes that are involved in the research are females (n= 130; 48.1%). The majority of the athletes that are involved in the research are between the ages of 17-19 (n=173; 64.1%). There are 90 athletes between the ages of 20-24 (33.3%) and over the age of 7 (2.6%) athletes occur. It is seen in the table that the distribution of athletes according to their sport age and status of being national athletes. Athletes participated in the questionnaire have reported their sport age: 16.7% (n=45) as 1-3 years, 29.3% (n=79) as 4-7 years, 30.7% (n=83) as 7-11 years, 30.7% (n=46) as 12-15 years, 5.6% (n=15) as 16-19 years and 0.7% (n=2) as over 20 years.

Most of the athletes stated to become national athletes in senior category (20.4%; n=55). This percent in youth category is 17.4% (n=47) and 13.0% (n=35) in under 18 category. Students of School of Physical Education and Sports are mostly become national athletes (59.6%; n=161). On the other hand, who do not become national athletes are 40.4% (n=109).

It is seen that the athlete group who is applied questionnaire are tended towards sports through; their own will (42.6%) physical education and sports teacher (21.9%), a friend (8.9%), a trainer (4.1%), media (3.3%), other individuals (1.1%).

It is seen that the athlete group who is applied questionnaire stated that they study, teaching (38.1%), recreation (32.2%), coaching (17.0%), other (12.6%) and other ones (4.1%).

When the answers that participants gave to the question "A successful athlete wants to use doping to increase performance" are evaluated there are no significant difference according to sport branches (X2 = 2.960; p> 0.05). Answers that are given to "A successful athlete wants to use doping to overcome his/her excitement" question show no significant difference according to Chi-Square Test in between sport branches (X2 = 4.911; p< 0.05).

When the answers that participants gave to the question "A successful athlete want to use doping to provide a social status and to protect it" are evaluated there are no significant difference according to sport branches (X2 = 5.137; p<0.05). In this study it is shown that the knowledge levels about doping in sports and doping (banned matter) varieties and their distribution and comparison according to national level. When the knowledge level about doping in participated athletes are evaluated there could not been detected that there is a significant difference according to the status of being national or not statistically (X2=2.139; p<0.05). When the opinions about doping's great damage to health of participated athletes are evaluated there could not been detected that there is a significant difference according to the status of being national or not statistically (X2=2.410; p<0.05).

When the opinions about the most used stimulants, such as cocaine, caffeine etc., of participated athletes are evaluated through the comparison with Chi-Square Test, there could not been detected that there is a

significant difference according to the status of being national or not statistically (X2=8.024; p<0.05). When the opinions about the narcotic analgesics are used mostly, there are significant differences have been detected according to the status of being national or not statistically (X2=13.396; p < 0.01). When the opinions about the situation "Mostly anabolic steroids are used in sports", there are significant differences have been detected according to the status of being national or not statistically (X2=28.670; p<0.01). When the opinions about the usage of beta blockers are mostly used in sports are evaluated, there could not been detected a significant difference (X2=5.683; p>0.05).

Another subject that the opinions of athletes had been asked was the use of peptide hormones mostly in sports. In comparison research on this subject, it has been detected a significant difference statistically in athletes according to the status of being national or not (13.000; p<0.05). When knowledge level of athletes about the usage of masking agents mostly in sports are evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2 9.312; p>0.05). When opinions of athletes about the usage of cannabinoids mostly in sports are evaluated, it has been detected a significant difference statistically in athletes according to the status of being national or not (X2=10.912; p<0.05). When opinions of athletes about the usage of corticosteroids mostly in sports are evaluated, it has been detected a significant difference statistically in athletes according to the status of being national or not (X2=20.020; p < 0.01). When opinions of athletes about the usage of anti-estrogenic mostly in sports are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2 = 1.439; p<0.05).

According to their status of being national or not, athletes' knowledge and usage level about ergogenic level is shown in Table VII. When status of getting ergogenic help of participant athletes is evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2=7.202; p>0.05). When opinions of athletes about getting ergogenic help situation are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2 = 3.823; p>0.05). When opinions of athletes about "I use drugs without questioning that my trainer gives" situation are evaluated, it has been detected a significant difference statistically in athletes according to the status of being national or not (X2=17.048; p<0.05). When opinions of athletes about "I get dietary helpers of ergogenic help (creatine, carnitine, other aminoacids)" situation are evaluated, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2=969[a]; p>0.05).

When opinions of "I am exposed to the side effects of the drugs i used" situation are evaluated and compared with Chi-Square Test, it has not been detected a significant difference statistically in athletes according to the status of being national or not (X2=2.802; p>0).

Laure P et al. suggested that some psycho-sociological factors shows that the quality of the relations that adolescent "doping agent" users maintain with their parents is sharply degraded. These adolescents, more often than non-doping agent users, are neither happy nor healthy, while, paradoxically, they have more self-confidence (13).

Psychosocial programmes must be carefully planned and developed, and should include middle-to long-term objectives (e.g. changing attitudes towards doping and the doping culture). Some institutions have developed or started prevention or educational programmes without the necessary resources, while the majority of the budget is spent on anti-doping testing. Controls are obviously needed as well as more efficient educational strategies. Therefore, we encourage sporting institutions to invest in educational programmes aimed at discouraging the use of banned substances (16).

It is seen that 270 athletes that have sport education in Turkey do not have enough knowledge about doping and ergogenic help. In result of the research, it is determined that informing and awareness raising is important to prevent doping issues in the country recent years. The data that is taken from the experimental subjects that have their education in sports higher education which is rightest place to have is important. Within the scope of these information. it is needed to follow different strategies to fight doping.

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