

EXAMINATION OF ELITE VOLLEYBALL PLAYERS' DOPING KNOWLEDGE LEVELS AND THEIR OPINIONS ON DOPING

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(Original scientific paper)

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Abstract

This study was conducted in order to examine the elite volleyball players' doping knowledge levels and their opinions on doping. The research group was consisted of 200 volleyball players playing in the 2019-2020 season 1st and 2nd league of men's and women's teams (male (n: 100), female (n: 100)). Questionnaire technique, which is one of the quantitative research methods, was used in the study. "Doping Knowledge Level and Opinion Questionnaire" created by Sargin (2007) was used in this study. The answers of the questionnaire were analyzed via SPSS 23 package program using descriptive statistics (frequency / percentage) and chi-square tests. According to the research findings; the volleyball players have not had adequate information about doping (n: 130, 65%). Athletes reported that stimulants; the most used doping agent (n: 34, 17%), have been believed in the use of psychological doping in sports (n: 92, 46%) and that athletes have not had adequate information about gene doping (n: 176, 88%). In addition, according to the educational status of volleyball players, there have been no significant difference in the level of knowledge about performance enhancing drug (doping) ($p > 0.05$), but a significant difference has been found in the level of knowledge of the volleyball players about performance enhancing drug (doping) according to their experience in sports ($p < 0, 05$). The results have revealed that elite volleyball players have had inadequate information about doping knowledge and gene doping; they are aware of psychological doping and that the use of doping should not be in sports, and athletes who use doping should be punished. In the light of this information, it is seen that elite volleyball players should be informed more about doping.

Key Words: Volleyball, Sports, Doping, Competition

Introduction

At the present time, sport is undoubtedly one of the the most significant cultural and social activity that the people mostly take interest in and ensure participation. The most important dimension of the sports phenomenon arising from the instincts of people to play, compete and contest is performance (Göral, 2002). In every terms between the range of premeval days and the modern era, people have tried many herbal formulas to increase their power in unnatural (artificial) ways (Ertaş ve Petek, 2005). The main purpose of athletes to use these paths is to increase their performance to a submaximal level rather than to increase their performance optimally (Atasü, 2004). The desire of the athletes to increase their performance in this way is a strong desire for success and this causes disruption both to the economic and social benefits and the moral rules, as well as the health rules (Akgün, 1991). Unfortunately, human beings have not been able to beat their egos for centuries on these issues. Accordingly, leaving aside all ethical values and health, human beings use various ways for the sake of winning. In the world of sports, this unethical and anti-health phenomenon appears as doping (Baysaling, 2000). Doping is the use or finding an evidence of the use of a substance; threatening health unnecessarily, being anti-sports spirit that has the potential to increase sports performance of an athlete (Yüceşir, 2007). Doping agents used to increase performance in sports vary according to sports disciplines. Used to increase endurance, strength, fatigue resistance in some sports, and as to reduce nervous tension in some disciplines (Akgün, 1993). These days, athletes are in search of all kinds of ways that can increase their performance such as special training, high-tech clothing, scientific and medical support including also nutritional support. Especially high performance athletes may tend to use doping from time to time by ignoring their careers, health and sports values. While the sporty

performance obtained artificially through doping takes the athlete to the top, it distances him from being virtuous, his honor to be offended, losses his athletic identity and the consciousness of fair-play. For this reason, athletes must not use the method of artificial ways, in other word doping, as to stay at the top; owning sports morality and sports training, based on sports skills, through training, improving his performance according to the essence of sports, should act with the fact of sports virtue in every athlete. (Öngel 1997). Within this context, in this study, it was aimed to analyze the future elite volleyball players' doping knowledge levels and thoughts about doping.

Material and Method

Model of Study

In this study a survey model was used. This study is a descriptive research that aims to determine the level of knowledge of doping and examine the ideas in this regard of the players at 1st and 2nd league of men's and women's teams in Turkey Voleyball Federation.

Population and Sample

The research group of this study, which was designed by using the survey technique, which is one of the quantitative research methods, consisted of 200 volleyball players playing in the 2019 and 2020 season, 1st and 2nd league of men's and women's teams (male (n: 100), female (n: 100)).

Preparation and Application of the Data Collection Tool

To achieve the goal of the research, the literatures were scanned and the "Doping Knowledge Level and Thought Questionnaire" created by Sargın (2007) was used in this study. The questions prepared to measure the demographic information, doping knowledge levels and thoughts of the athletes included in the questionnaire were applied to the athletes. 250 questionnaires were distributed to the athletes by hand. The returned questionnaires were checked again and 200 questionnaires were evaluated and 50 questionnaires were not evaluated.

Analysis of Data

SPSS 23 package program was utilized in the evaluation of the questionnaires. The data was analyzed by using descriptive statistics (frequency / percentage) and k-square tests with the help of SPSS 23 package program.

Results

Table 1: Distribution of Participants' Demographic Information

FACTOR	VARIANT	FEMALE (N)	MALE (N)	F	%
Age	15-19	27	29	56	28
	20-24	41	39	80	40
	25-29	25	30	55	27,5
	30 and Over	7	2	9	4,5
Education Information	High School	27	25	52	26
	Associate Degree	25	23	48	24
	Undergraduate	35	45	80	40
	Graduate	13	7	20	10
Monthly Income Information	750-1000	10	11	21	10,5
	1000-1500	18	15	33	16,5
	1500-2000	35	33	68	34
	2000 and Over	37	41	78	39
Sports Age	0-4 Years	3	2	5	2,5
	5-10 Years,	48	45	93	46,5
	11-15 Years	38	44	82	41
	16 Years and Over	11	9	20	10
Weekly Training Period	2 Hours	1	1	2	1
	3-4 Hours	9	11	20	10
	5-6 Hours	10	15	25	12,5
	7-8 Hours	39	37	76	38
	9 Hours and Over	41	36	77	38,5

According to Table 1, 40% of volleyball players are between the age of 20-24, 40% of them are undergraduate or equivalent, 39% of them have monthly personal income of 2000 and over, 46.5% of the players' sports age are 5-10 years and 38.5% of the weekly training volume is over 9 hours.

Table 2: Findings Related to Their Answers to the Question 'If the Answer of the Surveyed Athletes is Yes, Please Mark Among the Options Below?'

FACTOR	VARIANT	F	%
Were there any positive or negative effects that you observed in those using doping?	High Performance	34	17
	Fatigue	8	4
	Muscle Joint Injury	14	7
	Acne On The Skin	10	5
	Behavioral Disorder	12	6
	Sound Thickening	12	6
	Liver and Kidney Disorder	4	2
	Total	94	47

The athletes who marked yes according to Table 2; responded of 17% high performance, 4% fatigue, 7% muscle and joint injuries, 6% behavioral disorder, 5% Acne On The Skin, 2% liver and kidney disorders and 6% sound thickening.

Table 3: Findings Related to Their Answers to the Question 'Which type of doping do athletes generally use in your opinion?'

FACTOR	VARIANT	F	%
Which Doping Type Do Athletes Usually Use?	Stimulants	34	17
	Narcotic Analgesics	10	5
	Anabolic Agents	12	6
	Beta Blockers	4	2
	Peptide Hormone And Analogues	6	3
	Cannabinoids	4	2
	I do not Have Knowledge On This Subject	130	65
	Total	200	100

According to Table 3, it's seen that 17% stimulants, 5% narcotic analgesics, 6% anabolic agents, 2% beta-blockers, 3% peptide hormone analogues, 2% cannabinoids, and 65% responded with "I do not have knowledge on this subject athletes".

Table 4: Findings about the answers to the question of the surveyed athletes 'Which Doping Method Do Athletes Usually Use?'

FACTOR	VARIANT	F	%
Which Doping Method Do Athletes Usually Use?	Blood Doping	48	24
	Intestinal Swelling	10	5
	Intravenous Vitamin Supplement	44	22
	Gene Doping	24	12
	Psychological Doping	4	2
	I do not Have Knowledge On This Subject	70	35
	Total	200	100

According to Table 4, 24% Blood Doping, 5% Intestinal Swelling, 22% Intravenous Vitamin Supplement, 12% Gene Doping, 2% Psychological Doping and 35% responded with I do not Have Knowledge On This Subject.

Table:5 Findings About the answers to the question of surveyed athletes 'What Are The Psychological Reasons For Athletes Using Doping?'

FACTOR	VARIANT	F	%
What Are The Psychological Reasons For Athletes Using Doping?	Soothe the Excitement	20	10
	To Concentrate	10	5
	Over-winning Ambition	90	45
	Eliminating Anxiety	12	6
	All	48	24
	Other	20	10
	Total	200	100

In Table 5, it is seen that 10% of athletes marked down Excitement, 5% Concentrate, 45% Over-winning Ambition, 6% Eliminate Anxiety, 24% All and 10% Other options.

Table 6: Findings About the answers to the question of surveyed athletes 'What Are Your Opinions about What Sholud Be Done to the Athlete who Is Determined to Use Doping?'

FACTOR	VARIANT	F	%
What Are Your Opinions about What Should Be Done to the Athlete who Is Determined to Use Doping?	Should be Banned from Competitions for a Lifetime.	104	52
	1-2 Year Competition Penalty Should be Given	66	33
	Only To be Removed from the Current Competition	30	15
	Total	200	100

According to Table 6, 52% of them should be banned from competitions for a lifetime, 33% of them should be given a penalty and be baned for competing for 1-2 years, and 15% of them stated that they should be removed from the current competition only athletes expressed the opinion. The majority of athletes reported that the penalty for 1-2 years is to low and that they should be banned from competitions for a lifetime.

Table 7: Findings About the Information on Athletes' Doping Knowledge Level and Thoughts

FACTOR	VARIANT	F	%
Is There Any Doping Medicine You Know?	YES	70	35
	NO	130	65
Were There Any Positive Or Negative Effects That You Observed In Those Using Doping?	YES	94	47
	NO	106	53
Do You Have Any Information About Performance Enhancing Drug (Doping)?	YES	70	35
	NO	80	40
	PARTLY	50	25
Do You Think That High Performance Can Only Be Achieved By Using Doping?	YES	20	10
	NO	120	60
	PARTLY	60	30
Do You Believe In Psychological Doping?	YES	92	46
	NO	72	36
	PARTLY	36	18
Do You Think The Use Of Doping Leads To Unfair Competition?	YES	140	70
	NO	38	19
	PARTLY	22	11
Do You Have The Thought I Try Every Way To Succeed?	YES	36	18
	NO	144	72
	PARTLY	20	10
Do You Think The Use Of Doping Harms The Fair-Play (Sportmanship) Spirit?	YES	146	73
	NO	32	16
	PARTLY	22	11
Do You Know That Doping Has Major Side Effects?	YES	102	51
	NO	58	29
	PARTLY	40	20

Do You Think Doping Is Well Known By Athletes, Managers And Coaches?	YES	40	20
	NO	100	50
	PARTLY	60	30
Do You Think There Is An Effective Policy Of The State On Anti Doping?	YES	56	28
	NO	88	44
	PARTLY	56	28
In Your Opinion, Should Continuous Trainings Be Organized By State On The Issues Of The Damages Of Doping That Contradict Sports Morality And Lead To Unfair Competition?	YES	140	70
	NO	36	18
	PARTLY	24	12
Are There Athletes Or Athletes Using Doping Around You?	YES	76	38
	NO	106	53
	PARTLY	18	9
Do You Think That The Use Of Doping In Sports Will Affect Success And Performance Positively?	YES	42	21
	NO	120	60
	PARTLY	38	19
Do You Think The Use Of Doping Should Be Released?	YES	26	13
	NO	158	79
	PARTLY	16	8
Is There A Course Or Information About The Use Of Drugs (Doping) During Education And Training In Your School?	YES	32	16
	NO	138	69
	PARTLY	30	15
Do You Have Adequate Information About Useful And Hazardous Drugs Used Among Athletes?	YES	42	21
	NO	130	65
	PARTLY	28	14
Do You Have Any Information About Gene Doping?	YES	24	12
	NO	130	65
	PARTLY	46	23
Should The Method Called As Gene Doping Become A Doping Classification?	YES	130	65
	NO	24	12
	PARTLY	46	23
Can The Athlete Use Drugs (Doping) Unless He Is Caught?	YES	36	18
	NO	150	75
	PARTLY	14	7
Should The Country Protect The Athlete Determined To Be Doping?	YES	44	22
	NO	146	73
	PARTLY	10	5

According to Table 7, 35% of the athletes answered Yes, 65% of the athletes answered No, to the question 'Is There Any Doping Medicine You Know?' 47% of the athletes answered Yes and 53% answered No to the question 'Were There Any Positive Or Negative Effects That You Observed In Those Using Doping?' 35% of the athletes answered Yes, 40% No, and 25% Partially answered the question "Do You Have Any Information About Performance Enhancing Drug?" 10% of the athletes answered Yes, 60% No and 30% Partially answered the question 'Do You Think That High Performance Can Only Be Achieved By Using Doping?' 46% of the athletes answered Yes, 36% No, and 18% Partially answered the question 'Do You Believe In Psychological Doping?' 70% of the athletes answered Yes, 19% No, and 11% Partially answered the question 'Do You Think The Use Of Doping Leads To Unfair Competition?' 18% of the athletes answered Yes, 72% No, and 10% Partially answered the question 'Do You Have The Thought I Try Every Way To Succeed?' 73% of the athletes answered Yes, 16% No, and 11% Partially answered the question 'Do You Think The Use Of Doping Harms The Fair-Play (Sportsmanship) Spirit?' 51% of the athletes answered Yes, 29% No, and 20% Partially answered the question 'Do You Know That Doping Has Major Side Effects?' 20% of the athletes answered Yes, 50% No, and 30% Partially answered the question 'Do You Think Doping Is Well Known By Athletes, Managers And Coaches?' 28% of the athletes answered Yes, 44% No, and 28% Partially answered the question 'Do You Think There Is An Effective Policy Of The State On Anti Doping?' 70% of the athletes answered Yes, 18% No, and 12% Partially answered the question 'In Your Opinion, Should Continuous Trainings Be Organized By State On The Issues Of The Damages Of Doping That Contradict Sports Morality And Lead To Unfair Competition?' 38% of the athletes answered Yes, 53% No, and 9% Partially answered the question 'Are There Athletes Or Athletes Using Doping Around You?' 21% of the athletes answered Yes, 60% No, and 19% Partially answered the question 'Do You Think That The Use Of Doping In Sports Will Affect Success And

Performance Positively?’ 13% of the athletes answered Yes, 79% No, and 8% Partially answered the question ‘Do You Think The Use Of Doping Should Be Released?’ 16% of the athletes answered Yes, 69% No, and 15% Partially answered the question ‘Is There A Course Or Information About The Use Of Drugs (Doping) During Education And Training In Your School?’ 21% of the athletes answered Yes, 65% No, and 14% Partially answered the question ‘Do You Have Adequate Information About Useful And Hazardous Drugs Used Among Athletes?’ 12% of the athletes answered Yes, 65% No, and 23% Partially answered the question ‘Do You Have Any Information About Gene Doping?’ 65% of the athletes answered Yes, 12% No, and 23% Partially answered the question ‘Should The Method Called As Gene Doping Become A Doping Classification?’ 18% of the athletes answered Yes, 75% No, and 7% Partially answered the question ‘Can The Athlete Use Drugs (Doping) Unless He Is Caught?’ 22% of the athletes answered Yes, 73% No, and 5% Partially answered the question ‘Should The Country Protect The Athlete Determined To Be Doping?’

Table 8: Findings about the answers to the question of the surveyed athletes ‘What Do You Think About the Use Of Doping?’

What Do You Think About The Use Of Doping?	Status	Variant	Anyone Can Use		Contrary To Sport Ethics		Should Be Used If Necessary		It Should Definitely Not Be Used		I Do Not Think Anything		Other		Total
			F	%	F	%	F	%	F	%	F	%	F	%	
			Education Status	High School	2	1	20	10	1	0,5	24	12	4	2	
Under Graduate	2	1		16	8	1	0,5	22	11	6	3	1	0,5	24%	
Graduate	2	1		38	19	6	3	31	15,5	1	0,5	2	1	40%	
Post Graduate	0	0		6	3	2	1	11	5,5	1	0,5	0	0	10%	
Total	6	3		80	40	10	5	88	44	12	6	4	2	100%	
Lisence Year	0-4 Years	0	0	2	1	0	0	2	1	1	0,5	0	0	2,50%	
	5-10 Years	2	1	40	20	4	2	41	20,5	5	2,5	1	0,5	46,50%	
	11-15 Years	2	1	34	17	4	2	36	18	4	2	2	1	41%	
	16+ Years	2	1	4	2	2	1	9	4,5	2	1	1	0,5	10%	
	Total	6	3	80	40	10	5	88	44	12	6	4	2	100%	

According to Table 8, 3% of athletes marked ‘Anyone Can Use’, 40% of them ‘Contrary To Sport Ethics’, 5% of them ‘Should Be Used If Necessary’, %44 of them ‘It Should Definitely Not Be Used’, %6 of them ‘I Do Not Think Anything’, %2 of them marked ‘Other’ option. In addition, there is no significant difference between the athletes' educational status ($X^2 = 10,762$ Sd = 12 p = 0,186 p> 0.05) and their duration of doing sports ($X^2 = 17,657$ Sd = 16 p = 0.614 p> 0.05) about thoughts of using doping.

Table 9: Findings of the Surveyed Athletes' Answers to the Questions According to Their Educational Status

Factor	Education Status	YES		NO		PARTLY		TOTAL %
		F	%	F	%	F	%	
Do You Have Enough Information About Useful And Hazardous Drugs Used Among Athletes?	High School	10	5	33	16,5	9	4,5	26%
	Under Graduate	14	7	31	15,5	3	1,5	24%
	Graduate	16	8	49	24,5	15	7,5	40%
	Post Graduate	2	1	17	8,5	1	0,5	10%
	Total	42	21	130	65	28	14	100%
Do You Have Any Information About Performance Enhancing Drug (Doping)?	High School	11	5,5	30	15	11	5,5	26%
	Under Graduate	22	11	19	9,5	7	3,5	24%
	Graduate	31	15,5	21	10,5	28	14	40%
	Post Graduate	6	3	10	5	4	2	10%
	Total	70	35	80	40	50	25	100%

According to Table 9, there is no significant difference on the levels of knowledge about performance enhancing drug (doping) between the education status of athletes ($X^2 = 6,164$ Sd = 5 p = 0,269 p > 0,05) and the duration of doing sports ($X^2 = 1,627$ Sd = 5 p = 0,679 p > 0,05).

Table 11: Findings About the Answers of the Surveyed Athletes to the Questions According to the Duration of Doing Sports

Factor	License Year	YES		NO		PARTL Y		TOTAL %
		F	%	F	%	F	%	
Do You Have Enough Information About Useful And Hazardous Drugs Used Among Athletes?	0-4 years	1	0,5	2	1	2	1	2,50%
	5-10 years	15	7,5	68	34	10	5	46,50%
	11-15 years	20	10	54	27	8	4	41%
	16+ years	6	3	6	3	8	4	10%
	Total	42	21	130	65	28	14	100%
Do You Have Any Information About Performance Enhancing Drug (Doping)?	0-4 years	1	0,5	3	1,5	1	0,5	3%
	5-10 years	28	14	40	20	25	12,5	47%
	11-15 years	34	17	26	13	22	11	41%
	16+ years	7	3,5	11	5,5	2	1	10%
	Total	70	35	80	40	50	25	100%

According to Table 10, there is no significant difference between the training levels of athletes ($X^2 = 8,564$ Sd = 9 p = 0,300 p > 0.05) and adequate information levels about beneficial and hazardous drugs used among athletes. However, there is a significant difference between athletes' duration of sports ($X^2 = 22,982$ Sd = 6 p = 0.003 p < 0.05 *) and their knowledge levels about performance enhancing drug (doping).

Discussion

When the body of literature about doping is examined; the preference of doping use among professional athletes and the gradual increase of use, poses the question of why both national and worldwide athletes prefer doping and how much knowledge do they have about doping. Özdemir et al., studied the rate of doping use among athletes in 2003 and reported that the use of doping was at the rate of 14.5% among the research group. In this study, it was aimed to measure the knowledge levels of elite volleyball players about doping and to examine their opinions on this subject.

According to the findings, 17% of the most used doping agent among the athletes responded as stimulants and 65% of the athletes answered that I am not informed of doping. In her study in 2001, Şirin reported that the most preferred doping agent by athletes is anabolic agents and stimulants. Güner, in 2006 reported that the use of stimulating doping in athletes is more common in athletes.

Although the rate of No is very high (40%) in their answers to the question of 'Do you have any information about athlete's performance-enhancing drug (doping)?', when we think that the Partial (25%) answer also represents a deficiency, the survey participants did not have any information about the subject of doping and it can be said that the athletes of the future receive a training devoid of this information. Eröz (2007), whether the athletes have enough information about doping, Ağırbaş (2002) asked athletics young national athletes "Do you know what is doping?" and received the answer of No from 75% of respondents and Yes from 25%. Dinçer (2010) also reported that athletes do not have exact information about doping and doping use.

79% of athletes reported that they did not have enough information about useful and hazardous drugs used among athletes. Failure to know what kind of damage the doping agent can cause of individuals, may cause serious problems to future athletes. A large proportion of athletes, such as 88%, reported that they did not have enough information about gene doping. Aladağ, in 2014 reported that athletes did not have adequate information about gene doping in his study. However, gene doping method is on the agenda as a method that has quite a reputation in the modern era and it is difficult to be detected when used (Zülal, 2004).

50% of the athletes reported that the issue of “doping” was not well known by athletes, administrators and coaches. Yüce, 1992, Bozkurt et al., 2006 and Sargın reported that athletes, coaches and administrators did not have enough knowledge about doping in their work in 2007. Therefore, these findings are directly proportional to the results in the study. It was observed that athletes had the idea of not using doping throughout in general about the opinion on doping. 40% of athletes are on the thought of using doping (medicine) is contrary to sports ethics and 44% absolutely think that it must not be used. "According to the result of the study conducted by the National Committee on Drug Abuse over 1001 United Americans aged 18 and over in 1986, 73% of respondents identified drug use as the country's most serious problem." (Kurdak, 1996).

45% of the athletes remarked that the psychological reason for using doping is over-winning ambition. In his study, Sargın (2007) reported over the answers given by the athletes that over-winning ambition as the psychological reasons. This result supports our study. He argues that a large percentage of athletes, such as 90%, high performance cannot be achieved by simply just doping. 46% of athletes believe in psychological doping and 70% think that doping use causes unfair competition. 72% of answered No to the thought that I would try every way to be successful. In addition, 73% think that doping is contrary to the fair-play spirit. In line with these answers, it shows that athletes are very knowledgeable and harmonious about sports ethics. Eröz stated in 2007; athletes, wrestlers, judoists and weightlifters who do sports at the national level give the answer of Absolutely Agree with the total of 81.7% on the issue of whether the use of doping in sports harmed the fair-play (Sportsmanship) spirit.

51% of the athletes participating in the survey reported that they knew that doping had side effects. In his study, Şirin (2001) reported that they answered less informed about the side effects of doping with a rate of 18.3% at most, and informed with a rate of 15.4%. It is seen that 44% of the athletes think that the state does not have an effective policy on the use of doping, and it should be represented by holding seminars and conferences. 87% of the athletes reported that the use of doping should not be released. Yüce (1992), reported similar results to the results of our study. As long as not caught, 75% of the athletes said No to the opinion that they should use doping. Eröz (2007), also reported that national team athletes in the branches of Athletics, wrestling, judo and weightlifting, gave the answer of absolutely must not be used at the 35.8% ratio. 52% of the athletes determined to use doping responded that they should be banned from competitions for a lifetime and 33% replied that they should be banned of competition for 1-2 years. Also, according to the survey results, 73% of the athletes think that their country should not protect the athlete doping. The findings obtained in Bozkurt et al., 2006, and the findings in our study show parallelism with.

There is no significant difference between the thoughts of the athletes about the use of doping according to their educational status and the duration of doing sports ($p > 0.05$). Dinçer ve Demir (2013), in their studies, in which the distribution of doping use according to their educational status was examined, they determined that high school graduate athletes had low doping knowledge levels. Demircan (2012), also detected that athletes do not consider themselves adequate in doping regardless of how high their education levels are.

There is a significant difference between athletes' duration of sports and their knowledge level about performance enhancing drug (doping) ($p < 0,05^*$). Şirin (2001), states that there is no statistical significance between education levels, adequacy of knowledge of doping and educational status. Again, in another study conducted to determine the rate of doping usage of active athletes in different branches, the difference in the level of training of athletes was found to be insignificant (Yıldız, 2006); shows parallelism with this study. In addition, in another study on doping knowledge levels of athletes, coaches and administrators, it is seen that the level of knowledge of doping increases as the duration of training and service increases. This status is important in terms of proving the gains of education and experience (Saltık, 2014). In addition, Sargın 2007, his study shows parallelism with our findings regarding the importance of education.

As a result, it is stated that elite voleyball players have inadequate knowledge about doping and gene doping, believe in psychological doping, the use of doping should not be in sports, and athletes who do doping should be punished. In the light of this information, it is seen that elite voleyball players should be informed more about doping. Rather than encouraging information such as in which sports branches doping and doping substance will benefit, broader information on the damages of doping drugs to the human body and psychology should be handled ethically. For this reason, it is thought that it would be beneficial to provide information about the harms of doping on sports ethics. Also, the best way to keep athletes away from doping is education. Anti-Doping education should be given seriously to individuals and organizations

covering a wide area, including athletes, families, coaches, administrators, teachers, government officials, pharmacists, sports federations and sports organizations.

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