

Determining the Knowledge Levels and Opinions of Athletes who is age Under-16 in Different Branches about Doping and Ergogenic Aids

Abdil Ceylan¹, Fehmi Calik², Serdar Geri³, Murat Sen², Cuma Ece², Mehmet Sumer¹

¹Graduate Education Institute, Sakarya University of Applied Sciences, Sakarya, Turkey; ²Faculty of Sports Sciences, Sakarya University of Applied Sciences, Sakarya, Turkey E-mail: cumaece@hotmail.com; ³School of Physical Education and Sports, Mardin Artuklu University, Mardin, Turkey

Abstract. *Study Objectives:* The study aimed to evaluate the knowledge levels and opinions of athletes under 16 years of age about doping and ergogenic aids in different branches. The fact that there are no studies in the literature on the knowledge and opinions of athletes under the age of 16 on doping and ergogenic aids has encouraged us to the study. *Methods:* The sample of the study consists of 392 athletes under 16 years of age in different sports branches. In the study, a questionnaire consisting of 5 likert and 26 questions about doping substances and ergogenic aids was applied to the athletes by Eröz (2007). *Results:* As a result of the analysis of the obtained findings with the Chi-square test, it was determined that as the age of the athletes increased, the belief that the athlete used doping increased with the fear of losing. It has been determined that as the family income increases, the tendency to try every way to be successful does not decrease significantly, and athletes with low family income are more willing to try every way to be successful. As the education of the athlete's parents increased, the belief that the use of doping harmed the Fair-Play spirit in sports and that doping leads to unfair competition has been increased. *Conclusion:* The study revealed that there is a need to reinforce the doping knowledge of athletes. It has been concluded that certain socio-economic conditions are determinants in the use of doping by athletes and that they shape their tendency towards doping. Therefore, it is thought that the trainers, managers, athlete families and athletes about the negative effects of doping use on athlete health is of great importance.

Keywords: Athlete Health, Fair Play, Parental Education, Family Income

Introduction

Although sports are an occupation of people to have a healthy life and have a good time, today it is an activity in order to gain financial gain for them in a professional context (1). Athletes pursue various ways in order to increase their success, to obtain medals in the competitions they participate, and to surpass their current performance (2). The most important aspect of the phenomenon of sports arising from the human instincts and impulses to play and compete is performance (3). Performance can be increased by many factors such as technical-tactical, social, cognitive, psychological, conditioning and physi-

cal factors. Both economic and social benefits of sportive success direct athletes to increase their performance (4). The desire of athletes to increase their performance is a strong desire, and the economic and social benefits of sportive success cause the desire to be successful to break the moral rules as well as the health rules (5). For many years, human beings have tried to find ways to increase their performance, achieve successes and gain victories, and they have tried to achieve the desired goals in unnatural ways. Through the sports performance achieved by artificial means, the athlete easily achieves the success and victory he aims for (6,7). The use of doping in competition and recreational sports continues to be an important

problem in terms of public health, and the negative effects of doping use on health are increasing in studies (8). Although health problems arising due to doping use are known by many people, it is served as a savior in front of athletes for the sake of success in a short time (3). People try all ways (good or bad) for the sake of gaining ambition and disregard their health for the sake of gaining unfair gain (9). It has been a matter of controversy that some coaches recommend doping to their athletes for quick success. Despite all the negativities, it is thought that there is an increasingly tight relationship between doping and professionalism with the irresistible attraction of records and victories and the increasing commercialization of sport (10).

Doping is defined by the International Olympic Committee as the conscious or unconscious use of substances or methods that have the potential to increase their sportive performance, threaten our health and contradict the main purpose of the sport (11). According to the World Anti-Doping Law of the World Anti-Doping Association (WADA) established by the International Olympic Committee (IOC) in 1999; in order for the substances used to be criminalized, the methods applied must have the potential to increase performance, threaten human health or have the potential to do so. At the same time, if the athlete fulfills two of these three rules the substances used are considered as doping on the grounds that it is against the spirit of the sport (12).

Since the early ages, people have tried many herbal formulas to increase their power artificially (13). It is known that Chinese physicians recommended the cough medicine "Ma Huang" to improve performance five thousand years ago. It is known that during the Ancient Greek Olympics, athletes used stimulants such as dried figs, mushrooms and strychnines to increase their performance (11,14). Medieval knights and Roman colosseum warriors are known to use stimulant substances to increase their stamina and minimize the signs of fatigue. Athletes have used numerous performance enhancing substances since ancient times, and this practice continues today (15). The main purpose of doping is not only to increase the optimal performance, but to exceed it at all costs (16).

In parallel with the development of international sports activities in recent years, it has been observed

that the proliferation and spread of sports competitions, increasing the awards in competitions, and the use of doping by athletes in order to increase performance (3). Doping has become a growing problem for all countries in the 20th century. Increases in the use of unconscious doping in many sports branches attract attention. Due to the substances used, sport moves away from its real purpose and harms the ethics and amateur spirit of sports (7). In most of the studies in the literature, it has been found that the age of doping use decreases to high school student athletes and the students used it without a prescription during strength training (17). Moreover, even before the age of 10 (18) or at some point in their lives, those students used anabolic androgenic steroids (19,20). High performance of athletes in lower age groups is not a situation desired by training scientists. The important thing is that athletes can be successful in the adult categories. Taking some ergogenic aids to increase performance at younger ages causes athletes to show top performance at an early age. Athletes who cannot show the same performance in adult categories are disappointed and end their sports life. In addition, it is known that some of the athletes who use these substances die due to diseases caused by the use of these substances during their sports life or after quitting sports (8).

It is thought that some athletes who disregard their health for the sake of excessive desire to win, financial incentives, social status and achieving high performance are highly likely to use doping. Despite the determination of athletes' doping tendencies in different demographic characteristics, the reason for the study is that there is no study targeting athletes under the age of 16, which constitutes the subject of the study. In this respect, the study is original. The study aims to examine the views and opinions of athletes under the age of 16 in athletics, basketball, ice skating, gymnastics, fencing, football, wrestling, folk dances, judo, karate, table tennis, taekwondo, volleyball and swimming on ergogenic aid and doping.

Material and Method

Participants

Convenience Sampling Method was used in the study. Research group consisted of total of 392 (209

males and 183 women) athletes under 16 years of age participating in local and national competitions like basketball, ice skating, gymnastics, fencing, football, wrestling, folk dance, judo, karate, table tennis, taekwondo, volleyball and swimming.

Data Collection Instruments

During the data collection process of the study, a questionnaire consisting of two stages, whose validity and reliability ($\alpha = 0.797$) was tested by Eröz (2007) regarding the personal information form and the knowledge levels and attitudes of athletes about doping agents and ergogenic aids, were applied. In the personal information form, questions were asked about gender, age, education status of the parents and income status of the family. In the questionnaire form, there are 26 items consisting of 3 separate parts for determining the knowledge levels and attitudes of athletes about doping and ergogenic aids. In the questionnaire, there are 8 items about the reasons for choosing doping in sports, 11 items about their views on doping use in sports, and 7 items about the degree of factors that lead athletes to doping.

Data Analysis

Spearman's ranking correlation coefficient was used to determine the relationship between the participants' views on their knowledge and attitudes about doping agents and ergogenic aids, and the age of the athlete, the monthly income of the family, and the educational status of the athlete and his parents. The distribution analysis of the answers given to the questions about the knowledge levels and attitudes about doping substances and ergogenic aids was analyzed with the Chi-square test on the basis of gender and sports branch. Data were analyzed with IBM SPSS Statistics v.25 package program. Significance level was accepted as $\alpha = 0.05$.

Results

Information on the research results is given below.

"Successful athlete wants to use doping for attractive financial incentives", 9% of the athletes answered "I strongly agree", 8.7% answered "I agree", 13.5% "I

am undecided" and it is observed that the distribution of the answers given to this issue on the basis of gender is not homogeneous ($\chi^2 = 39.802$, $p < 0.0$). While 11.7% of the athletes answered "I strongly agree" with the item "Successful athlete wants to use doping to achieve high performance", the rate of those who answered "I agree" was 20%. On the item "Successful athlete wants to use doping to maintain social status", 12.8% of the athletes answered "I am undecided", 10.1% "I agree" and 5.1% "I absolutely agree". As for the item of "Successful athlete wants to use doping for a good standard of living", 4.6% of the athletes answered "I absolutely agree", 9.3% "I agree" and 13.1% "I am undecided". It was determined that the distribution of the answers given to the questions about the reasons for the preference of doping use in sports, except for the question "The successful athlete wants to use doping to calm his excitement", was not homogeneous on the basis of gender ($p < 0.01$). The answers given by the athletes to the questionnaire about the reasons for choosing doping are given in Table 1.

Participants' views on doping use in sports

While 12.5% of the athletes replied "I agree", 7.3% "I strongly agree" to the item "I will try every way to be successful in sports", 37.7% of the athletes said "I strongly disagree" On the item "Doping is well known by athletes, trainers and administrators", 12.4% of the athletes said "I definitely disagree", 19% "I do not agree" and 32.1% "I am indecisive". While 50.8% of the athletes answered "I absolutely agree" to the item "Doping use in sports is an important problem", 35.7% of them said "I agree" and 5.6% "I am undecided". On the item "I read publications about doping", 15.3% of the athletes said "I absolutely disagree", 32.9% of them said "I do not agree" and 22.6% of them "I am indecisive". Only 6.6% of the athletes answered "I absolutely agree" to this item. Among the questions about the use of doping in sports, "Doping causes unfair competition", "Use of doping in sports harms the spirit of Fair Play", "Doping use in sports is an important problem", "I read doping-related publications" is not homogeneous in terms of gender ($p < 0.01$), the others were determined to be homogeneous ($p > 0.05$). The answers given to the questionnaire about the opinions of the athletes on doping use are given in Table 2.

Table 1. Participants' responses to the questionnaire about the reasons for choosing doping in sports.

Variables	Strongly Dis-agree	Disagree	Unsure	Agree	Strongly Agree	χ^2	p
Successful athlete wants to use doping to eliminate fear of losing							
Male (%)	61,7	17,7	5,3	11,0	4,3	8,621	0,003**
Female (%)	57,9	29,0	6,6	6,0	0,5		
General (%)	54,6	24,1	6,8	10,7	3,9		
Successful athlete wants to use doping to relieve excitement							
Male (%)	68,5	21,1	3,3	5,7	1,4	0,950	0,330
Female (%)	56,9	31,1	8,2	3,8	0,0		
General (%)	56	29,7	6,9	6,6	0,8		
Successful athlete wants to use doping due to excessive desire of win							
Male (%)	42,1	19,1	5,3	20,6	12,9	35,957	0,000**
Female (%)	52,5	26,2	9,8	9,3	2,2		
General (%)	43,9	23,8	8,3	14,8	9,3		
Successful athlete wants to use doping for attractive financial incentives							
Male (%)	44,5	18,2	12,0	8,1	17,2	39,802	0,000**
Female (%)	55,7	25,1	12,6	5,5	1,1		
General (%)	45,6	23,2	13,5	8,7	9		
Successful athlete wants to use doping to maintain social status							
Male (%)	44,0	29,2	10,5	11,0	5,3	17,562	0,000**
Female (%)	54,1	27,9	11,5	6,0	0,5		
General (%)	43,9	28,1	12,8	10,1	5,1		
Successful athlete wants to use doping for a good standard of living							
Male (%)	45,0	24,4	8,6	16,3	5,7	26,885	0,000**
Female (%)	54,6	29,0	12,6	3,3	0,5		
General (%)	45,9	27,1	13,1	9,3	4,6		
Successful athlete wants to use doping to get club support							
Male (%)	52,6	26,3	11,5	8,6	1,0	7,012	0,008**
Female (%)	55,2	27,9	12,0	4,9	0,0		
General (%)	48,5	27,4	14,2	9,3	0,6		
Successful athlete wants to use doping to achieve high performance							
Male (%)	41,6	15,8	4,3	18,2	20,1	30,812	0,000**
Female (%)	49,7	20,9	8,7	16,9	3,8		
General (%)	41,5	18,8	8	20	11,7		

*p < 0,05; **p < 0,01

Participants' views on the factors that direct the athlete to doping

While on the item "Doping is mostly caused by written visual media" 26.6% of the athletes answered "I agree" and 37% said "I am undecided" and 39% of the athletes answered "I agree", 27% said "I am indecisive", on the item "Social environment causes doping mostly", 10% said "I strongly disagree". While 34.6% of the athletes answered "I am indecisive" on the item "Coaches cause mostly doping", 28.1% of the athletes said "I do not agree" and 23.8% of them "I strongly

disagree". As for the item "Mostly friends cause doping", 23.2% of the athletes said "I agree", 34.5% "I am indecisive", 15.2% "I strongly disagree". It was determined that the distribution of the answers given to the questions other than the question of "Mostly family causes doping", which is one of the questions about the degree of factors that direct athletes at doping, is not homogeneous on the basis of gender ($p < 0.05$). The responses of the participants to the questionnaire about the factors that direct the athlete at doping are given in Table 3.

Table 2. Participants' responses to the questionnaire about their views on doping use in sports.							
Variables	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	χ^2	P
Doping leads to unfair competition							
Male (%)	3,3	0,5	1,4	20,6	74,2	16,420	0,000**
Female (%)	3,8	3,8	4,9	29,0	58,5		
General (%)	3,7	2,1	3,9	25,3	65		
I try any way to be successful in sports							
Male (%)	48,3	27,8	6,7	10,0	7,2	0,143	0,705
Female (%)	32,2	31,1	14,8	13,7	8,2		
General (%)	37,7	31,1	11,4	12,5	7,3		
Using doping in sports damages the spirit of fair play							
Male (%)	5,3	1,9	7,7	21,1	64,0	17,668	0,000**
Female (%)	4,4	3,3	16,9	33,3	42,1		
General (%)	4,1	2,3	13,4	27,8	52,4		
Doping should be released in sports							
*p < 0,05; **p < 0,01							
Male (%)	81,3	13,4	3,3	1,0	1,0	0,633	0,426
Female (%)	74,8	18,6	4,4	1,1	1,1		
General (%)	74,7	17,6	5,2	1,4	1,1		
I use doping unless I'm caught							
Male (%)	82,3	13,9	1,4	0,5	1,9	1,052	0,305
Female (%)	78,7	16,9	1,1	1,1	2,2		
General (%)	76,8	18,3	1,8	1,1	2		
Doping is well known to athletes, trainers and managers							
Male (%)	23,4	16,7	25,0	25,8	9,1	0,008	0,930
Female (%)	8,2	16,4	36,6	26,2	12,6		
General (%)	12,4	19	32,1	24,8	11,7		
The state carries out its duties in doping							
Male (%)	19,1	12,4	27,8	29,7	11,0	0,020	0,888
Female (%)	3,8	9,3	39,9	36,1	10,9		
General (%)	8,3	12,9	37	32,5	9,3		
I use doping for my country in international races							
Male (%)	75,6	15,8	4,8	2,4	1,4	0,299	0,584
Female (%)	61,8	30,6	3,3	3,8	0,5		
General (%)	64,1	26,2	5,3	3,5	0,9		
Use of doping in sports is an important problem							
Male (%)	5,3	3,3	3,3	27,8	60,3	11,695	0,001**
Female (%)	3,3	4,4	6,6	41,0	44,7		
General (%)	3,1	4,8	5,6	35,7	50,8		
I use doping to make a world champion							
Male (%)	73,2	18,2	5,3	1,9	1,4	0,111	0,739
Female (%)	59,5	30,6	5,5	3,3	1,1		
General (%)	62	27,1	6,6	3,2	1,1		
I read doping related publications							
Male (%)	14,4	29,6	21,1	27,2	7,7	12,782	0,000**
Female (%)	20,2	31,1	21,9	21,3	5,5		
General (%)	15,3	32,9	22,6	22,8	6,4		
*p < 0,05; **p < 0,01							

Table 3. The responses of the participants to the questionnaire questions about the factors that lead the athlete to doping

Variables	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	χ^2	p
Mostly Printed Visual Media Causes Doping							
Male (%)	9,1	17,7	33,0	23,0	17,2	18,578	0,000**
Female (%)	8,7	27,9	36,6	22,4	4,4		
General (%)	7	21,7	37	26,6	7,7		
Mostly Families Cause Doping							
Male (%)	51,6	32,5	14,4	1,0	0,5	0,115	0,734
Female (%)	36,1	39,3	19,7	3,8	1,1		
General (%)	37	36,6	22,1	3,5	0,8		
Mostly Friends Cause Doping							
Male (%)	21,1	23,0	30,1	22,0	3,8	9,733	0,002**
Female (%)	20,8	30,1	30,5	17,5	1,1		
General (%)	15,2	24,6	34,5	23,2	2,5		
Mostly Social Environment Causes Doping							
Male (%)	13,4	14,8	22,5	39,3	10,0	19,100	0,000**
Female (%)	15,3	24,6	27,3	29,5	3,3		
General (%)	10	18,4	27	39	5,6		
Mostly Club Managers Cause Doping							
Male (%)	27,3	28,7	29,7	10,5	3,8	8,457	0,004**
Female (%)	28,4	32,8	30,1	7,1	1,6		
General (%)	16,6	30,1	37	11,8	4,5		
Mostly Coaches Cause Doping							
Male (%)	38,7	20,6	30,6	7,2	2,9	6,096	0,014*
Female (%)	35,5	33,3	22,4	6,6	2,2		
General (%)	23,8	28,1	34,6	10,1	3,4		
Mostly Sport Education Teachers Cause Doping							
Male (%)	46,4	28,7	20,6	2,4	1,9	5,233	0,022*
Female (%)	42,1	40,4	15,3	2,2	0,0		
General (%)	24,5	37,7	30	5,1	2,7		

*p < 0,05; **p < 0,01

The influence of age, family income and education level in Participants' opinions on the factors that direct the athlete at doping

The answer given by the participants to the item "Successful athlete wants to use doping to eliminate fear of losing" was determined that as the age of the athletes increased, the belief that the athlete was using doping with the fear of losing increased ($r = 0.139$; $p = 0.006$). It has been determined that there is a positive and significant relationship between the response given by the athletes to the item "Doping leads to unfair competition" and the education of the mother (r

$= 0,152$; $p = 0,002$), the education of the father ($r = 0,178$; $p = 0,000$) and the income level of the family ($r = 173$; $p = 0,001$). Oddly enough, there seems to be less perception that doping leads to unfair competition among athletes from families with lower parental education and income. The answer given by the athletes to the item "Use of doping in sports harms the spirit of Fair-Play" and the income level of the family ($r = 0.259$; $p = 0.000$), the education of the mother ($r = 0.257$; $p = 0.000$), the education of the father ($r = 0.353$; $p = 0.000$) was found to be positively significant relationship between. While it were found to be

negatively correlated between the answer given by the athletes to the item "I try every way to be successful in sports" with the income level of the family ($r = -0,118$; $p = 0,019$), the education of the mother ($r = -0,194$; $p = 0,000$), and the education of the father ($r = -0,152$; $p = 0,003$), and it were found to be positively correlated with the age of the athlete ($r = 0,234$; $p = 0,000$). It has been determined that there is a negative relationship between the answer given by the athletes to the item "The state carries out its duties about doping" and the income level of the family ($r = -0,175$; $p = 0,000$), the education of the mother ($r = -0,128$; $p = 0,012$) and the education of the father ($r = -0,109$; $p = 0,031$). It was determined that the age of the athlete was not determinant in the answers given to this question. It was determined that there is a positive relationship between the response of the athletes to the item "I use doping for my country in international competitions" and the age of the athlete ($r = 0,192$; $p = 0,000$), and a negative relationship between the education of the mother ($r = -0,150$; $p = 0,003$) and the education of the father ($r = -0,111$; $p = 0,028$). In the answers given to this question, it was determined that the income status of the family was not determinant. With the answer given by the athletes to the item "I will use doping to make the world champion", it was determined that there was a positive relationship with the athlete's age ($r = 0,144$; $p = 0,004$), and a negative relationship with the education of the mother ($r = -0,116$; $p = 0,022$) and the education of the father ($r = -0,113$; $p = 0,025$). In the answers given to this question, it was determined that the income status of the family was not determinant. It was determined that there is a positive and significant relationship between the response given by the athletes to the item "I read publications about doping" and the education of the mother ($r = 0,122$; $p = 0,016$) and the education of the father ($r = 0,141$; $p = 0,005$). In this case, it is seen that the opinion that the publications about doping are read in athletes with low parental education is formed at a lower level. In the responses of the athletes to this item, no significance level could be determined regarding the age of the athlete and the income level of the family. A positive and significant relationship was found between the answer given by the athletes to the item "Doping use in sports is an important problem" and the income level of the family

($r = 0,111$; $p = 0,028$) and the education of the father ($r = 0,169$; $p = 0,001$). In the responses of the athletes to this item, no significance level could be determined regarding the athlete's age and the mother's education. There was a significant negative correlation between the response given by the athletes to the item "Doping is well known by athletes, trainers and administrators" and the income status of the family ($r = -0,151$; $p = 0,003$) and the education of the mother ($r = -0,114$; $p = 0,024$). No significance level could be determined regarding the age of the athlete and the educational status of the father. It was determined that there is a positive and significant relationship between the response given by the athletes to the item "Successful athlete wants to use doping to achieve high performance" and the income level of the family ($r = 0,122$; $p = 0,016$) and the education of the father ($r = 0,108$; $p = 0,033$). In the answers given by the athletes to this question, no significance level could be determined regarding the athlete's age and the mother's education. The correlation between the opinions of the participants about the factors that direct the athlete to doping and the age, income and education levels of their families are given in Table 4.

Discussion and Conclusion

The use and emulate of performance-enhancing drugs and methods by young athletes poses a major problem for the sports community (8). It is aimed to measure the level of knowledge athletes who participate in domestic and national competitions (athletics, basketball, ice skating, gymnastics, fencing, football, wrestling, folk dance, judo, karate, table tennis, Teakwondo, volleyball), under 16 years old about doping ergogenic aid. In addition, it was thought that the determination of the reasons that led athletes to doping could be continued by revealing some scientific data and it was aimed to contribute to the better analysis and management of the process by sports organizations. It was thought that the determination of the reasons that led athletes to doping could be continued by revealing some scientific data, and it was aimed to contribute to the better analysis and management of the process by sports organizations with the data obtained in the

Table 4. Correlation between the participants' opinions on the factors that direct the athlete at doping and age, family income and education levels

Dependent Variable	Parameter	Independent variables			
		Age	Family Income Status	Mother's Education Status	Father's Education Status
Successful athlete wants to use doping to eliminate fear of losing	r	,139**	0,001	0,038	0,08
	p	0,006	0,977	0,458	0,112
Successful athlete wants to use doping to relieve excitement	r	0,083	-0,092	-0,082	0,012
	p	0,101	0,07	0,104	0,81
Successful athlete wants to use doping due to excessive winning	r	0,045	,121*	0,065	0,083
	p	0,374	0,016	0,201	0,1
Successful athlete wants to use doping for attractive financial incentives	r	0,003	,126*	0,021	0,055
	p	0,96	0,013	0,678	0,277
Successful athlete wants to use doping to maintain social status	r	0,078	0,069	0,018	0,09
	p	0,125	0,175	0,724	0,074
Successful athlete wants to use doping for a good standard of living	r	0,02	0,071	0,011	0,05
	p	0,688	0,163	0,831	0,328
Successful athlete wants to use doping to get club support	r	,121*	-0,013	-0,035	0,048
	p	0,016	0,805	0,485	0,341
Successful athlete wants to use doping to achieve high performance	r	0,061	,122*	0,088	,108*
	p	0,226	0,016	0,081	0,033
Doping leads to unfair competition	r	-0,062	,173**	,152**	,178**
	p	0,224	0,001	0,002	0,000
I try any way to be successful in sports	r	,234**	-,118*	-,194**	-,152**
	p	0	0,019	0,000	0,003
Using doping in sports damages the spirit of fair play	r	-,169**	,259**	,257**	,353**
	p	0,001	0,000	0,000	0,000
Doping should be released in sports	r	0,05	-0,07	-0,006	-0,07
	p	0,322	0,166	0,906	0,167
I use doping unless i'm caught	r	0,013	-0,049	-0,051	-0,078
	p	0,794	0,333	0,31	0,125
Doping is well known to athletes, trainers and managers	r	0,013	-,151**	-,114*	-0,084
	p	0,802	0,003	0,024	0,096
The state carries out its duties about doping	r	-0,009	-,175**	-,128*	-,109*
	p	0,865	0,000	0,012	0,031
I use doping for my country in international races	r	,192**	-0,058	-,150**	-,111*
	p	0,000	0,249	0,003	0,028
Use of doping in sports is a major problem	r	-0,068	,111*	0,09	,169**
	p	0,177	0,028	0,075	0,001
I use doping to make a world champion	r	,144**	-0,08	-,116*	-,113*
	p	0,004	0,115	0,022	0,025
I read doping related publications	r	-0,098	0,091	,122*	,141**
	p	0,052	0,071	0,016	0,005

Table 4. Correlation between the participants' opinions on the factors that direct the athlete at doping and age, family income and education levels

Dependent Variable	Parameter	Independent variables			
		Age	Family Income Status	Mother's Education Status	Father's Education Status
Mostly printed visual media causes doping	r	-,151**	,159**	0,05	0,082
	p	0,003	0,002	0,321	0,105
Mostly families cause doping	r	-0,019	-0,004	0,002	0,023
	p	0,706	0,942	0,975	0,644
Mostly friends cause doping	r	-0,057	0,029	0,007	0,096
	p	0,257	0,571	0,89	0,057
Mostly social environment causes doping	r	-0,088	0,064	0,073	0,083
	p	0,081	0,208	0,149	0,102
Mostly club managers cause doping	r	-0,032	0,012	0,093	,144**
	p	0,53	0,819	0,066	0,004
Mostly coaches cause doping	r	-0,021	-0,025	0,071	,105*
	p	0,683	0,621	0,162	0,037
Mostly physical education teachers cause doping	r	0,018	0,009	0,012	,139**
	p	0,729	0,855	0,816	0,006

*p < 0,05; **p < 0,01

study. When the answers given to the participants' questions regarding the reasons for their preference for doping use were examined, it was determined that the distribution of the answers given to those other than the question "The successful athlete wants to use doping to calm his excitement" is not homogeneous on the basis of gender ($p < 0.01$). It has been found that they can use doping to achieve victory by achieving maximum performance and to have the opportunities that victory brings. Among the athletes participating in the study, it is seen that the options that the athletes want to doping to achieve high performance, excessive desire to earn and attractive financial incentives are preferred more than other options. Yücel et al. (2016), in his study on examining handball players' views on doping and ergogenic aids in terms of some variables, determined that the athlete would prefer the use of doping for many reasons such as high performance, excessive desire to win, and financial incentives (21). Yalçın et al. (2019) found in another study that U23 Turkish national team athletes had high performance and attractive financial incentives as the main factors that directed athletes at doping in relation to their knowledge levels and preference reasons (7). In their study on elite

wrestlers (22), Yıldırım and Şahin (2019) concluded that doping can be used to reach a better standard of living (%36,6), to eliminate fear of losing (%26,9), to gain excessive desire to win (%25,2), to provide social status(%24,4), to achieve higher performance (%23,6), financial incentives (%19,5), to calm the excitement of getting club support(%8,1). Özel (1995), in a study investigating the methods and prevalence of doping use by weightlifters, stated that athletes wanted to use doping due to the desire to earn excessively with a rate of 65% and that they used doping with the increase of financial incentives with a rate of 47.5% (23). When the answers given to the questions of the athletes on doping use are examined, athletes said "Absolutely I agree" to doping leads to unfair competition, the use of doping harms the spirit of Fair Play, and the use of doping in sports is an important problem, they said "I do not agree" to doping in sports should be released, I use doping as long as I am not caught, I do doping for my country in international competitions, I use doping that will make it a world champion, and I will try every way to be successful in sports and said "I am indecisive" to doping is well known to athletes, trainers, and administrators, and the state plays its part in doping.

In similar to the findings of the study, Eröz (2007) stated that 80.8% of athletes, wrestlers, judoists and weightlifters who do sports at the national level strongly agree that the use of doping in sports causes unfair competition, the use of doping in sports harms the spirit of Fair Play. It was reported that 81.7% strongly agree and 50.8% strongly disagree with the option that I use doping unless I am caught (24). Bozkurt et al. (2006) asked the athletes in their study, «Do you think doping is well known by athletes, managers and coaches?» and it was reported that the opinions of the participants were no (56%) and partially (28.4%) (25). It was interviewed that the answers given to the questions about the degree of factors that direct the athlete at doping were as follows; 37% said «I strongly disagree» with the option that mostly families cause doping and 34.5% of the athletes undecided about friends cause doping and 37% of them undecided about club managers cause doping and 34.6% of them undecided about coaches cause doping. Also it is seen that 39% of athletes agree with the option «mostly social environment causes doping», while 37.7% do not agree with the option «mostly physical education teachers cause doping». Among the athletes participating in a study conducted by Cirelli et al., 83.3% of the women and 32% of the men reported that they were directed to use drugs by their trainers (26). Orhan et al. (2006) stated that 56.8% of the sports students using drugs were influenced by their trainers, 31.8% by doctors, 4.5% by their friends, and 6.8% were self-medicating (20). In another study, it was emphasized that the majority of athletes strongly disagree with the view that physical education teachers are effective in the use of doping (24). Kargılı (2002) reported that the drug called Beyazıt, which contains amphetamine, was administered to athletes by 97% of trainers and managers (27). When the answers given to the questions about the opinions of the athletes about doping substances and ergogenic aids like «Doping causes unfair competition» and «Use of doping in sports harms the spirit of Fair-Play», mother's education, father's education and family income are examined according to demographic variables, it seems to be positively decomposed with the situation.

When the responses of the athletes to the items «I try every way to be successful in sports» and «The

state is doing its duties in doping», it is seen that the family income is negatively differentiated with the educational status of the mother and father. The item of «Doping is well known by athletes, trainers and administrators» has been found to be negatively correlated with the income status of the family and the education status of the mother. It was determined that the responses given by the athletes to the items «I use doping for my country in international competitions» and «I will use doping to make the world champion» have a positive relationship with the age of the athlete and a negative relationship with the educational status of the mother and father. When the responses of the athletes to the items «I try every way to be successful in sports» and «The state is doing its part in doping», are examined, it is seen that the family income is negatively differentiated with the educational status of the mother and father. Yıldırım and Şahin (2019) stated in their study on elite wrestlers that there was a statistically significant negative relationship between their thoughts on the item «I try every way to be successful in sports» and sports ages. Yıldırım and Şahin (2019) also stated that they encountered a statistically significant negative correlation level between their opinions about the item «Doping is well known by athletes, trainers and administrators» and their education levels and sports ages (22). Considering the factors related to the level of knowledge and opinions about doping and ergogenic aids according to the income level of the athletes participating in the study conducted by Yücel et al. (2016), it was reported that there is a significant difference between the knowledge levels of doping use in sports. He stated that the highest difference in preferring the use of doping in sports is in the income group between 1000-1500 Turkish Lira (21). As a result, this study revealed that there is a need to reinforce the doping knowledge of athletes. It has been concluded that certain socio-economic conditions are determinant in the use of doping by athletes and that they shape their tendency towards doping. It can be said that the main factors that lead athletes to doping are the social environment, friend environment and the written visual media. The reasons why athletes prefer doping are thought to be due to excessive desire to earn, financial incentives, social status and high performance in sports. It is known that the use of dop-

ing for the sake of achieving these goals harms health and even causes deaths. One of the factors that lead athletes to doping should be aimed to reach more people by organizing programs on the harms of doping by experts in the written and visual media. The reasons for choosing doping can be eliminated by minimizing the financial and moral dissatisfaction of elite athletes. For this reason, it is thought that training the trainers, managers, athlete families and athletes by considering the demographic variations about the negative effects of doping use on athlete health will contribute to the prevention of moral collapse. This study clearly revealed that families' income and education levels are determinant variables in athletes' views on doping. It is recommended that this finding should be taken into consideration by decision-making and implementing units at the state level, and that scientific studies and socio-economic projects that address this issue in detail should be conducted in the future.

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Correspondence:
Cuma Ece
Faculty of Sports Sciences, Sakarya University of Applied Sciences, Sakarya, Turkey
E-mail: cumaece@hotmail.com