Turkish Journal of Sport and Exercise /
Türk Spor ve Egzersiz Dergisi
http://dergipark.gov.tr/tsed
Year: 2023 - Volume: 25 – Issue 3 - Pages: 319-325
10.15314/tsed.1377463

Turkish Journal of Sport and Exercise
Türk Spor ve Egzersiz Dergisi
ISSN: 2147-5652
https://dergipark.org.tr/tr/pub/tsed

Examination Of The Doping Knowledge Levels Of Natural Sled Athletes İn Terms Of Some Variables

Ünsal SEVİNDİK[1A], Ufuk APUR[2B], Mehmet İNAN[3C],

Fatih AKGÜL[4D], Erol BAYKAN[5E]

[1] Ministry of Youth and Sports, Turkey Olympic Preparation Center, Ankara, Turkey
[2]Ankara Gazi Üniversity, Faculty of Sports Sciences, Doctoral student, Ankara, Turkey
[3]Yozgat Bozok Üniversity, Faculty of Sports Sciences, Coaching Department, Yozgat, Turkey
[4]Konya Selçuk Üniversity, Doğanhisar Vocational School, Sports Management Program, Konya, Turkey
[5]Yozgat Bozok Üniversity, Faculty of Sports Sciences, Sports Management Department, Yozgat, Turkey

Address Correspondence to Fatih AKGÜL: e-mail: faith.akgul@selcuk.edu.tr

Conflicts of Interest: The author(s) has no conflict of interest to declare.
Copyright & License: Authors publishing with the journal retain the copyright to their work licensed under the ***CC BY-NC 4.0.***
Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

(Date Of Received): 18/10/2023 (Date of Acceptance): 15.12.2023 (Date of Publication): 31.12.2023
A: Orcıd ID: 0000-0001-7066-2761 B: Orcıd ID: 0000-0002-9161-6315 C: Orcıd ID: 0000-0002-6483-4704
D: Orcıd ID: 0000-0003-2400-8683 E: Orcıd ID: 0000-0002-7429-3446

Abstract

This study; It was conducted to measure the doping knowledge levels of athletes in the natural luge branch who continue their active training in Turkey. For this purpose, the personal information form and the "Attitude Scale Towards Doping Use" developed by the researcher to measure the doping knowledge levels of natural luge athletes were applied to 55 athletes participating in the Natural Luge Turkey Championship in 2020. The collected data were initially entered into the SPSS 26 statistical program. Descriptive statistics, independent samples t-test, and one-way analysis of variance (ANOVA) were used for data analysis. Additionally, the Mann Whitney U test was used for the scores of the international medal variable. In one-way analysis of variance, the Scheffe Post Hoc multiple comparison test was used to determine which groups had significant differences. As a result of the statistics conducted, it was concluded that male athletes participating in the research had higher doping knowledge levels than female athletes, and the knowledge levels of athletes who were not subjected to doping tests were lower than those of athletes who were subjected to doping tests.

Keywords: Knowledge Levels, Athletes, Sled, Doping

Özet

Natürel Kızak Sporcularının Doping Bilgi Düzeylerinin Bazı Değişkenler Bakımından İncelenmesi

Bu çalışma; Türkiye'de faal olarak çalışmalarını sürdüren natürel kızak branşındaki sporcuların doping bilgi düzeylerini ölçmek amacıyla yapılmıştır. Bu amaç kapsamında natürel kızak sporcularının doping bilgi düzeylerini ölçmek için araştırmacı tarafından geliştirilen kişisel bilgi formu ve "Doping Kullanımına Yönelik

Tutum Ölçeği" 2020 yılında Natürel Kızak Türkiye Şampiyonasına iştirak eden 55 sporcuya uygulanmıştır. Toplanan veriler ilk olarak SPSS 26 istatistik programına girişi yapılmıştır. Verilerin analizinde; betimsel istatistik, bağımsız örneklemler için t-testi ve tek yönlü varyans analizi (ANOVA) kullanılmıştır. Ayrıca uluslararası madalya değişkeni puanları için Mann Whitney U testi kullanılmıştır. Tek yönlü varyans analizinde ise anlamlı farklılığın hangi gruplar arasında olduğunu belirlemek için de Scheffe Post Hoch çoklu karşılaştırma testi kullanılmıştır. Yapılan istatistikler neticesinde sonuç olarak araştırmaya katılan kadın sporculardan erkek sporcuların doping bilgi seviyeleri yüksek olduğu ve doping testine tabi tutulmayan sporcuların bilgi düzeylerinin, doping testine tabi tutulan sporculardan daha düşük olduğu sonucuna ulaşılmıştır.

Anahtar Kelimeler: Bilgi Düzeyi, Sporcu, Kızak, Doping.

INTRODUCTION

Sport is a healthy and peaceful safety valve for the inherent aggression in humans, serving to control aggressive behaviors in individuals, creating a more suitable competitive environment, and fostering friendship. It is also a place where peace is prioritized over war (3). Therefore, sport should not be solely focused on winning. The prevailing understanding of sports, which is centered around the desire to win at any cost, brings along its own set of problems. Unfortunately, in today's world, the concept of sports built on the goal of winning is perceived as sacrificing everything and trying any means for success.

Yıldıran (15) emphasized that the expectation from athletes regarding their behavior has been centered around winning and success from the beginning of the relationship between humans and sports to the present day. The fact that all individuals within the realm of sports have their expectations from sports and athletes based on winning and success has led to various divergent paths in pursuit of these goals. Öngel (9) pointed out that throughout history, manipulation of success in the field of sports through unfair external interventions has always existed. It was also noted that these unethical doping practices not only have adverse effects on the physical and psychological well-being of athletes but also endanger their health and lives, ultimately eroding their moral values, and undermining the integrity of champion athletes, record-holding athletes, and the fairness of sporting competitions.

Athletes turn to doping in order to enhance their performance, achieve athletic success, and gain financial rewards. The term "doping" in English is derived from the root "dope," and in Flemish, it comes from the "dop" root. It is known that this word carried the meaning of physical stimulants for the English, while for the Flemish, it originated from a beverage made from grape skins that was used by Zulu natives in Africa to boost courage in battles (10). In another definition, doping is described as the intake of foreign substances into the body for the purpose of increasing physical strength (17). The official definition was first established in 1963 as "the use of substances or other methods by athletes or competitors during and before competitions to enhance their performance in a manner contrary to sports ethics, which may negatively affect the athlete's psychological and physical health" (10).

The doping substances used to enhance performance in sports vary depending on the diversity of sports disciplines. This diversity includes substances aimed at improving endurance, developing strength, reducing fatigue, and providing psychological comfort (1).

The adoption of sports as a profession by individuals, their dedication to living for sports, and the consequent emergence of aggressive behavior in individuals, the desire for superiority, self-esteem, and the pursuit of fame, exorbitant transfer fees, the desire to win medals and awards, and the prestige associated with sporting achievements in international competitions among nations have always provided a fertile ground for doping use (9). Despite the knowledge that doping use leads to unfair competition and is unhealthy and risky, it is still observed to be used by athletes in the present day (7). Therefore, it is emphasized that new preventive legal measures are necessary to combat doping use (8).

The use of doping has brought into question the legality of sports and has also influenced the attitudes of athletes towards it. This situation not only affects the legitimacy of sports but also has a negative impact on the physical and mental health as well as the social life of athletes. Numerous studies have been conducted on the effects of doping use on athletes. Öztürk, Suveren, and Çolakoğlu (11) examined the level of knowledge

about doping among athletes in their study. Yıldırım and Şahin (16) investigated the knowledge and usage levels of doping and ergogenic aids among elite wrestlers. Şenel, Güler, Kaya, Ersoy, and Kürkçü (13) also examined the knowledge and utilization levels of ergogenic aids among top-level Turkish athletes from various individual sports disciplines in their research.

To prevent doping use, it is essential to better understand athletes' knowledge about doping and their attitudes towards doping. In our research, we examined the doping knowledge levels of natural sled athletes based on their age groups, genders, international experience, participation in doping tests, international medal achievements, and sports ages.

METHOD

This section of the study focuses on the research model, the research group, data collection tools, data collection, and data analysis.

The aim of this study is to measure the doping knowledge levels of elite sled athletes and examine them in terms of various variables.

The population of the research consists of active sled athletes in Turkey. The research sample is comprised of 55 volunteer sled athletes who participated in the Natural Sled Turkey Championship.

To measure the doping knowledge levels of natural sled athletes, a knowledge form developed by the researcher and the "Attitude Scale towards Doping Use" developed by Şapçı (12) were utilized. In this study, a survey model, which is one of the quantitative research methods, has been employed. The survey model is used to depict the existing situation as it is (6).

Statistical analyses in the research were conducted using SPSS 26 (Statistical Package for Social Science for Personal Computers). Descriptive statistics were calculated for data analysis initially. Subsequently, relationships between the variables in the research hypotheses were investigated. Independent samples t-test, one-way analysis of variance (ANOVA), and Mann-Whitney U test were used to examine the relationships between knowledge levels and independent variables. In the one-way analysis of variance, the Scheffe Post Hoc multiple comparison test was employed to determine which groups exhibited significant differences.

Ethical approval and institutional permission

The research has obtained ethical approval with a letter numbered 165583 and dated 18.09.2023 from the Ethics Committee of Yozgat Bozok University, Faculty of Social Sciences and Humanities.

FINDINGS

Table 1. One-way analysis of variance for the differences in sled athletes' doping knowledge scores according to the age variable.

Source of Variance	**Kt**	**sd**	**KO**	**F**	**p**
Between Groups	315,252	2	157,626	1,968	,150
Within Groups	4164,289	52	80,082		
Total	4479,541	54			

When examining Table 1, it can be observed that the doping knowledge levels of sled athletes did not exhibit a significant difference based on different age groups [$F(2,52) = 1.968$; $p > 0.05$]. This finding indicates that sled athletes from different age groups have similar knowledge levels.

Table 2. Descriptive statistics for the age variable

	Age	N	$\bar{X}$	S
Age Groups	10-15	13	23,8376	8,46
	16-20	29	23,9464	9,38
	21-25	13	29,5470	8,37
	Total	55	25,2444	9,11

When Table 2 is examined, it can be seen that there are 13 athletes in the age range of 10-15, 29 athletes in the age range of 16-20, and 13 athletes in the age range of 21-25.

Table 3. T-test results for the differences in sled athletes' scores on doping knowledge levels according to gender.

	Gender	N	$\bar{X}$	S	sd	T	p
Knowledge Level	Male	31	27,87	7,52			
	Woman	24	21,85	9,99	53	2,56	0,14

When Table 3 is examined, it can be observed that sled athletes' doping knowledge levels did not exhibit a significant difference based on the gender variable [$t(53) = 2.56$; $p > 0.05$]. However, the slightly higher mean scores of male athletes in knowledge level compared to female athletes indicate that the gender factor has a minor influence on doping knowledge levels.

Table 4. T-test results for sled athletes' doping knowledge scores according to international experience

	International Competition	N	$\bar{X}$	S	sd	t	p
Knowledge	Yes	19	26,34	9,61			
Level	No	36	24,67	8,91	53	,648	,520

According to Table 4, the doping knowledge levels of sled athletes did not exhibit a significant difference based on the international experience variable [$t(53) = 0.648$; $p > 0.05$]. However, the slightly higher mean scores of athletes who participated in international competitions in comparison to athletes without international experience indicate that having international experience has a minor influence on doping knowledge levels.

Table 5. T-test results for sled athletes' doping knowledge scores according to their participation in doping tests

	Doping Test	N	$\bar{X}$	S	sd	T	p
Knowledge	Yes	7	36,81	3,56			
Level	No	48	23,56	8,418	53	4,085	,000

When examining Table 5, it can be observed that sled athletes' doping knowledge levels exhibited a significant difference based on the participation in doping tests variable [$t(53) = 4.085$; $p > 0.05$]. In this finding, it can be stated that the mean doping knowledge levels of sled athletes who underwent doping tests are higher compared to athletes who did not participate in the tests.

Table 6. T-test results for sled athletes' doping knowledge scores according to their achievement of national medals

	National Medal	N	X̄	S	sd	t	p
Knowledge Level	Yes	23	26,40	10,26			
	No	32	24,41	8,25	53	,796	,430

According to Table 6, sled athletes' doping knowledge levels did not exhibit a significant difference based on the national medal achievement variable [t(53) = 0.796; p > 0.05]. However, the slightly higher mean scores of athletes who won medals in national competitions compared to those who did not win medals indicate that achieving medals has a minor influence on doping knowledge levels.

Table 7. Mann Whitney U test results for the differences in sled athletes' doping knowledge scores according to their achievement of international medals

	International Medal	N	Ranking Average	Ranking Total	U	p
Knowledge Level	Yes	3	40,00	120,00		
	No	52	27,31	1420,00	42,000	,182
	Total	55				

When looking at Table 7, athletes' doping knowledge levels did not exhibit a significant difference based on the variable of international medal achievement (U = 42.000; p > 0.05).

Table 8. One-way analysis of variance for the differences in sled athletes' doping knowledge scores according to their years of sports experience

Knowledge Level	KT	sd	KO	F	p
Between Groups	360,230	2	180,115		
Within Groups	4119,311	52	79,218	2,274	,113
Total	4479,541	54			

When examining Table 8, it can be observed that the doping knowledge levels of sled athletes did not exhibit a significant difference based on the years of sports experience groups [F(2,52) = 2.274; p > 0.05]. However, the increase in the mean sports experience scores as the years of sports experience increase suggests that sports experience has a minor influence on doping knowledge levels.

Table 9. Descriptive statistics for the years of sports experience variable

Sports Age	N	X	S
1-4	28	23,1548	9,40
5-9	20	26,2111	8,12
10+	7	30,8413	8,97
Total	55	25,2444	9,11

When looking at Table 9, it can be observed that there are 28 athletes with a sports experience of 1-4 years, 20 athletes with a sports experience of 5-9 years, and 7 athletes with a sports experience of over 10 years.

DISCUSSION AND CONCLUSION

The Turkish Anti-Doping Commission emphasizes that the spirit of sports is a reflection of the human soul, body, and intelligence, and that this spirit is based on values such as personality, education, health, adherence to rules and laws, respect for oneself and other athletes (14). However, these values have not always been upheld over time, and throughout history, humanity has turned to various chemical substances to enhance its strength and potential while engaging in sports activities. What initially began as the consumption of certain herbs in the form of herbal infusions eventually lost its innocence. Due to advancements in medicine and the transformation of sports competitions into an international platform, doping has become one of the most significant issues in the world of sports (2).

In a structure as highly valued as sports, the doping knowledge levels of athletes are of significant concern. In this study, we examined the doping knowledge levels of natural sled athletes based on their gender, international experience, international medal achievements, national medal achievements, and years of sports experience. A total of 55 athletes participated in our research, including 13 athletes aged 10-15, 29 athletes aged 16-20, and 13 athletes aged 21-25.

In the analysis conducted on natural sled athletes in the study, there was no significant difference in doping knowledge levels based on the gender variable. However, it was observed that male athletes had higher average scores in knowledge level compared to female athletes, indicating that the gender factor has a minor influence on doping knowledge levels. However, Karacabey, at al (5) found significant differences in doping knowledge levels among participants based on the gender variable in their studies. It can be argued that the different results in these studies may be attributed to the fact that the studied groups were involved in different sports disciplines.

In the research, doping knowledge levels did not show a significant difference based on the variable of international experience. However, it was found that athletes who participated in international competitions had higher knowledge levels compared to athletes without international experience. Therefore, our research shows a similarity, and it is understood that athletes competing at the international level have greater awareness of doping knowledge.

In our study, no significant difference was found in doping knowledge levels of athletes based on their international medal achievements. Similarly, when examining the national medal achievement variable, no significant difference was found. Therefore, it is believed that athletes' achievements do not lead to any changes in their doping knowledge levels.

In the research, when the scores of athletes with higher years of sports experience were examined, it was found that athletes with greater sports experience had higher knowledge levels. Yıldırım and Şahin (16) in their study found a statistically significant negative relationship in the comparison of years of sports experience regarding the statement "I try every means to succeed in sports" and the most commonly used stimulants in sports, such as caffeine and cocaine. Similarly, in a study by Gençtürk, at al. (4), it was observed that there was a significant difference in years of sports experience among wrestlers. These studies, along with our research, indicate that as years of sports experience increase, doping knowledge levels also tend to increase.

In the research, doping knowledge levels of natural sled athletes showed a significant difference based on the variable of participation in doping tests. This finding indicates that athletes who participated in doping tests had higher average doping knowledge levels compared to athletes who did not participate in the tests. In a study by Gençtürk, at al. (4), it was found that 72% of the participants had no previous experience with doping control, and 27.6% had no experience with doping control at all. According to this result, it is believed that properly conducted doping control practices can positively contribute to athletes' knowledge levels.

In conclusion, the results obtained in our study indicate that there is a parallel increase in athletes' knowledge levels with their age. While this may initially seem positive, it is understood that it is not necessarily beneficial for athletes. Instead of athletes gaining knowledge with age, it is suggested that educational programs related to doping and harmful substances should be provided as early as possible in an instructional format. Additionally, staying informed about the ongoing efforts in the world to combat doping

and taking inspiration from the work of expert organizations can provide opportunities for educating athletes about doping-related issues.

REFERENCES

1. Akgün N. Egzersiz Fizyolojisi. II. Cilt. No:115. İzmir: Ege Üniversitesi Basımevi. 1993.

2. Baysaling Ö. Sporda her yönüyle doping: Zararları- İlaç ve kürler- Dopingle mücadele. İstanbul: İl Press Basım ve Yayın. 2000.

3. Fişek K. 100 soruda Türkiye spor tarihi. İstanbul: Gerçek Yayınevi. 1985.

4. Gençtürk G, Çolakoglu T, Demirel M. Elit sporcularda doping bilgi düzeyinin ölçülmesine yönelik bir araştırma (Güreş örneği). Beden Eğitimi ve Spor Bilimleri Dergisi, 2009, 3(3), 213-221.

5. Karacabey K, Seyhan S, Öntürk Y, Ufuk A, Akyel Y. Genç sporcuların dopinge yönelimine etken olarak doping hakkındaki bilgi düzeyleri ve bazı değişkenler açısından incelenmesi. Batman Üniversitesi Yaşam Bilimleri Dergisi, 2017, 7(2/2), 168-179.

6. Karasar N. Bilimsel araştırma yöntemi: kavramlar, ilkeler, teknikler. Nobel yayın dağıtım. 2007.

7. Morente Sánchez J, Zabala M. Doping in sport: A review of elite athletes' attitudes, beliefs, and knowledge. Sports Med, 2013, 43, 395-411.

8. Muwonge H, Zavuga R, Kabenge P. A. Doping knowledge, attitudes, and practices of Ugandan athletes': A cross-sectional study. Subst Abuse Treat Prev Policy, 2015, 10, 37.

9. Öngel H. B. Sporda etik değerler açısından doping. Gazi Beden Eğitimi ve Spor Bilimleri Dergisi, 1997, 2(2), 68-79.

10. Özmen M. M. Doping. Tübitak Bilim ve Teknik E-Dergisi, 2008, 490, 18-21.

11. Öztürk E. G, Suveren S, Çolakoğlu T. Türkiye'de doping, sporcuların doping bilgi düzeylerinin ölçülmesi (Hentbol Örneği). Uluslararası İnsan Bilimleri Dergisi, 2012, 9(1), 249–260.

12. Şapcı H. A. Üniversiteler arası spor müsabakalarına katılan öğrencilerin doping kullanımına yönelik tutumlarının incelenmesi. Yayınlanmamış Yüksek Lisans Tezi, Sağlık Bilimleri Enstitüsü, Gazi Üniversitesi, Ankara. 2010.

13. Şenel Ö, Güler D, Kaya İ, Ersoy A, Kürkçü R. Farklı ferdi branşlardaki üst düzey Türk sporcuların ergojenik yardımcılara yönelik bilgi ve yararlanma düzeyleri. Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi, 2004, 2(2), 41-47.

14. Türkiye Dopingle Mücadele Komisyonu. Türkiye dopingle mücadele talimatı. Erişim adresi: https://www.tdmk.org.tr/turkiye-dopingle-mucadele-talimati/, 2021.

15. Yıldıran İ. Fair play eğitiminde beden eğitiminin rolü. Gazi Beden Eğitimi ve Spor Bilimleri Dergisi, 2005, 10(1), 3-16.

16. Yıldırım Y, Şahin S. Elit güreşçilerin doping ve ergojenik yardım hakkındaki bilgi ve kullanma düzeylerinin incelenmesi. Spor Bilimleri Araştırmaları Dergisi, 2019, 4(2), 187-204.

17. Yoncalık O, Gündoğdu C. Sporda ahlaki bir sorun olarak doping. Doğu Anadolu Bölgesi Araştırmaları, 2007, 128-134.