



## A Qualitative Perspective on Anti-Doping: Mixed Methods Research

Mine ÖMERCİOĞLU<sup>1\*</sup> Kemal Alparslan ERMAN<sup>2</sup>

<sup>1</sup>Department of Physical Education and Sport, Burdur Mehmet Akif Ersoy University, Burdur, Türkiye

<sup>2</sup>Department of Sport Management, Faculty of Sport Science, Akdeniz University, Antalya, Türkiye

### Keywords

Policy,  
Prevention,  
Sports management

### Article History

Received 2 October 2023  
Revised 01 December 2023  
Accepted 06 December 2023  
Available Online 29 December 2023

### \* Corresponding Author:

Mine ÖMERCİOĞLU  
E-mail Address:  
[myalcinkaya@mehmetakif.edu.tr](mailto:myalcinkaya@mehmetakif.edu.tr)

### ABSTRACT

National and international anti-doping programs are carried out to protect athletes' health, establish an equal and fair competition environment, and defend the basic principles of sports. This study aims to determine the situation regarding the prevention of doping in sports in Türkiye and the recommendations that can be presented to the national sports administration on anti-doping in line with the findings to be obtained. The study was designed with the explanatory sequential design participant selection sub-design, a mixed method research. Three hundred-two people, determined by the purposeful sampling technique, participated in the research. After evaluating the quantitative findings obtained using the questionnaire technique, in-depth interviews were conducted for the qualitative part of the research with 12 people who met the criteria determined among all the participants. Descriptive statistics were used to analyze quantitative data, and theme analysis, descriptive analysis, content analysis, analytical generalization, and discourse analysis were performed in qualitative data analysis. As a result of this research, it is understood that training activities prepared to increase the knowledge and awareness level of sports professionals are considered a more effective method for doping prevention than criminal sanctions. In line with the findings obtained, it is understood that there is a need to establish an independent, multi-faceted anti-doping organization in which all relevant stakeholders are involved and a national action plan in which more importance is attached to guidance and training activities.

## INTRODUCTION

The idea of anti-doping first emerged after the death of an athlete at the 1960 Rome Olympic Games. In line with this idea, the International Olympic Committee published a list of substances and methods used to increase sportive performance and applied various penalties to athletes for whom these substances and methods were detected (Ergen, 2011). Furthermore, to emphasize the need for more coordinated global action against doping, which took place during the 1998 Tour de France, the International Olympic Committee (IOC) brought together all parties involved in the fight against doping to organize the World Doping Conference and issued the Lausanne Declaration. According to the declaration, the World Anti-Doping Agency (WADA) was established in Lausanne on 10 November 1999 to promote and coordinate the fight against doping in international sports (WADA, n.d.). In Türkiye, this movement is spearheaded by the Turkish Anti-Doping Commission (TADC).

One of the most extensive pharmacological experiments in history is the administration of drugs to athletes to enhance performance in many different sports. Perhaps the most remarkable aspect of this massive and ongoing global experiment, which has come to be known as doping, is its widely acknowledged covert nature. Doping involves thousands of athletes, doctors, scientists, sports, and government officials (Franke & Berendonk, 1997).

It is necessary to protect athletes' rights regardless of their level (Schneider & Butcher, 2000). Unless doping is prevented, equality and honesty in sports cannot be ensured, and doping, which costs human lives, is a critical moral problem in sports (Şahin, 2018). The anti-doping program and anti-doping code seek to win this fight through education, deterrence, detection, enforcement, and the rule of law (World Anti-Doping Code, 2021). Anti-doping programs aim to protect the 'spirit of sport,' and the fact that doping is against the essence of the spirit of sports is seen as the primary justification for anti-doping in the world as well as in our country (Turkish Anti-Doping Commission, 2019). To create an equal and fair competition environment and protect the health of athletes, athletes are subjected to in-competition and out-of-competition doping controls by national and international organizations, are continuously monitored with the athlete biological passport and they are obliged to participate in trainings against the harms of doping. At the beginning of each new year, the World Anti-Doping Agency publishes a list of substances and ways that are banned at all times, banned in competition, and banned in some particular sports and informs athletes, coaches, and managers. In order to make the fight against doping more effective, new methods

and techniques are constantly being researched. Scientific research also makes contributions to this process.

The fact that technological advances may greatly overshadow the human body's capacitance is of great concern to the various governing agencies in sports. Because of this concern, many organizations seek to protect sports from the invasion of biotechnology (Shafer, 2016). Much time, energy, and money is spent on enforcing doping bans in sports. Nevertheless, there is growing evidence that enforcement of bans is doomed to failure and somehow misses the point (Schneider & Butcher, 2000). According to Schneider and Butcher (2000), the real problem lies in why doping does not fit into sports and the need for educational programs to prevent doping from occurring rather than punishing perpetrators.

Despite the development of anti-doping awareness and anti-doping programs, it is thought that doping is an essential problem for sports worldwide and in our country. Additionally, doping scandals give rise to distrust in sports governance and public unease (Solberg et al. 2010 ). In this context, it is anticipated that longer-term qualified solutions should be found to increase the success of the fight against doping.

In line with the opinions of professionals in the sports environment, besides amateur and professional sports, in which areas should a long-term and effective struggle be carried out to purge doping from those who participate in sports at the exercise level, to accumulate anti-doping recommendations following Turkish traditions, customs, and cultural perceptions in order to install a clean sports environment? It is of utmost necessity to find an answer to this question. Research emphasizes the importance of cultural adaptation of intervention and preventive measures for a wide range of public health problems, such as health promotion, and drug abuse prevention (Burlew et al., 2013; Steinka-Fry et al., 2017 ). According to Barkoukis et al. (2022), doping intervention programs should target beliefs concerning legitimacy and social cognitive variables, consider cultural characteristics, and aim at specific beliefs about policy support in different countries.

This research aims to determine the current anti-doping situation in Türkiye based on the views of relevant stakeholders on anti-doping in sports. Moreover, the other purpose of this research is to determine the suggestions that can be presented to the field of Turkish sports management related to anti-doping in line with the findings obtained from the research. Therefore, understanding the opinions of stakeholders in the field, such as academicians, physical education and sports teachers, national team trainers, national team athletes about anti-doping, and several public institution employees constitute the sub-objectives of this research.

Being cognizant of the opinions and suggestions of the stakeholders in the sports field, such as sports scientists, teachers, trainers and athletes, and some public institution officials on the subject of prevention of doping in sports, is considered an important determining factor in the national anti-doping plan. Therefore, as the result of this study, it is envisaged to determine the situation related to the fight against doping in our country and make recommendations on the subject to reach the participants' opinions using mixed research methods.

*The Main Problems of the Research*

- To present anti-doping suggestions in compliance with Turkish tradition, customs, and cultural perception in line with the stakeholders' opinions in the sports environment.
- In which areas and in what kind of structure can a long-term and effective fight against doping be implemented?

*Sub-Problems of the Research (Quantitative Stage)*

- Which agencies can be involved in a national anti-doping program?
- According to Sports Stakeholders, what would be the most effective method of deterrence related to anti-doping?

*Sub-Problems of the Research (Qualitative Stage) for the Sports Stakeholders;*

- What are their thoughts on the prohibition or release of doping-containing substances?
- What are their thoughts on the effectiveness of the penalty method in the fight against doping?
- What are their views on anti-doping policies around the world?
- What are their opinions and suggestions about the anti-doping activities carried out in our country?
- What are their recommendations for establishing a national anti-doping plan?
- Which institutions or organizations does it recommend for a national anti-doping program?
- What does anti-doping look like, according to sports stakeholders?

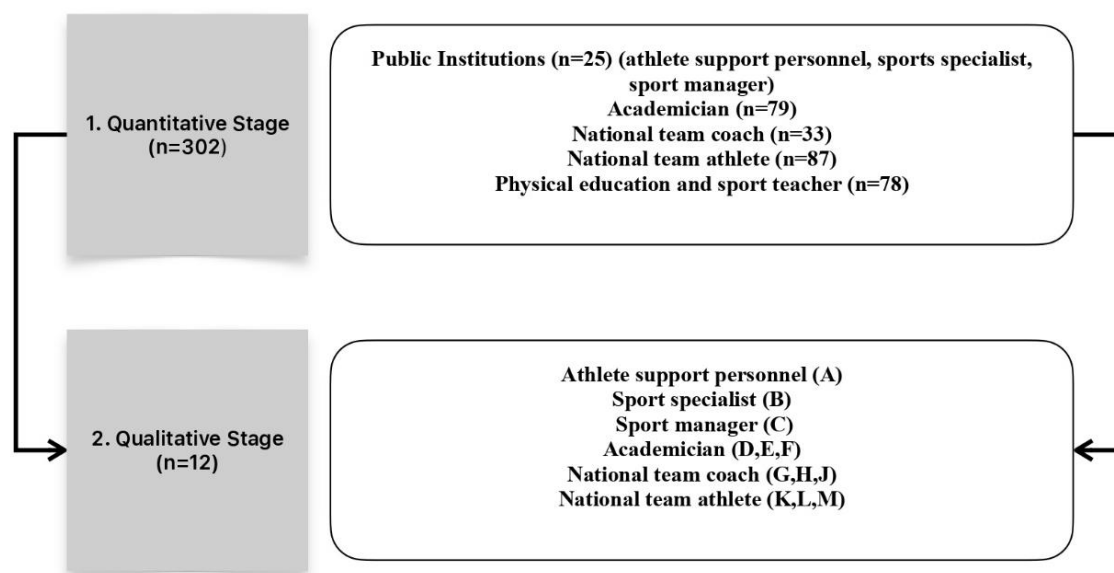
## METHODS

### *Study Group*

The study area of this research consists of public institutions, universities, national sports federations, and the Ministry of National Education (MNE) in our country. Three hundred-two people voluntarily participated in the questionnaires prepared for the quantitative research phase. In addition, semi-structured interviews were conducted with 12 participants, who were determined to understand and interpret the findings in depth. The purposive sampling method was used in the first stage to determine the participants, and as a result of the evaluation of the quantitative findings in terms of being suitable for the participant selection research design, the people who would participate in the qualitative dimension were determined with the criterion sampling sub-technique. The scoring system was used in the criterion questions in the quantitative questionnaires. Participants who scored highest from the determined criteria were invited to the qualitative stage. Permission was received from Akdeniz University Social and Human Sciences Scientific Research and Publication Ethics Board (The Project Code: 2021P162/16.04.2021).

**Figure 1**

Participant selection flowchart



Alphabetical nicknames were given to the participants simultaneously during the interview. In-depth interviews were conducted with 12 people: Athlete support personnel (A), sports specialist (B), sports manager (C), academician (D, E, F), coach (G, H, J), and athlete (K, L, M). The roles of the participants were taken into account since it is thought that the person's role may affect the personal opinion of the answers to the research questions.

### *Research Design*

This research, designed with the mixed method, was constructed with the explanatory sequential design and participant selection sub-design. In order to be suitable for the design of the explanatory sequential model, a priority order approach was used in the data collection and analysis processes. In the first stage, a descriptive survey model (quantitative) was used, whereas in the second stage, descriptive case study-holistic multiple case study sub-pattern and discourse analysis designs (qualitative) were used. The mixing process was carried out in the discussion and conclusion section to connect quantitative and qualitative data. Looking at the whole of the research, following the purpose of the participant selection model, emphasis was placed on the qualitative aspect of the research (second stage). SCID-MMR was used while designing this research (Günbayı, 2020). Explanatory sequential design is a method in which the researcher conducts quantitative research, analyzes the results, and then develops the results to explain in more detail with qualitative research. This method is considered descriptive because quantitative data results are explained in more detail with qualitative data. It is considered sequential because the quantitative phase is followed by the qualitative phase (Creswell, 2014). The participant selection sub-design is used when the researcher focuses on qualitatively examining a phenomenon and needs quantitative results to identify the best participants (Creswell & Plano Clark, 2018). The holistic multiple case study design was used in the qualitative aspect of the study. The research collected data from different sample groups to reveal the views on the fight against doping, which is a holistic issue (Yin, 1984). In the qualitative phase of the study, linguistic analysis (discourse analysis) was included to reach deeper information and answer the qualitative questions to determine the participants' views on the fight against doping. Discourse analysis is a type of qualitative research in which the researcher uses language as an essential analysis method in understanding social events and forms of social relations (Özdemir, 2010).

### *Data Collection Tools*

In this study, the data were obtained by questionnaire, in-depth interview, and metaphors. In the quantitative stage, consisting of open-ended, closed-ended, and multiple-choice questions, including personal information questionnaire forms developed by the researcher based on the opinions of experts, was used as a data collection tool. The level of doping knowledge and opinions on the fight against doping, five different 'Participant Information Questionnaire Forms' were applied to academicians, physical education and sports teachers, and national team trainers, the national team athletes and some public

institution officials. The forms contain different demographic information for each participant group, and there are two common questions about the fight against doping in all forms. These questions are as follows;

Question 1: If a national anti-doping program was to be established in our country, which institution or institutions should oversee this program? (Please indicate by numbering from 1 to 5 in order of importance; Participant Information Questionnaire Forms)

Question 2: In your opinion, what is the most effective method of deterrence regarding anti-doping in our country? (Options: Punishment, Reward, Education, Release of Prohibited Substances and Other; Participant Information Questionnaire Forms)

In the qualitative stage, a semi-structured interview form consisting of open-ended, indirect, and hypothetical questions and one metaphor question based on discourse analysis, developed by the researcher in consultation with experts, was used. These experts consisted of researchers experienced in mixed research methods and experts in doping. It aims to clarify the answers to the two common questions in the quantitative questionnaires related to the fight against doping, with the questions in the semi-structured interview form and the probe questions developed during the interview. The data were recorded with a voice recorder (Philips, DVT 1000).

*Semi-structured Interview Questions;*

- Question 1: What do you think about the prohibition or liberalization of doping substances? How? Why?
- Question 2: What do you think about whether the punishment method is effective in the fight against doping? How? Why?
- Question 3: What do you think about the adequacy of anti-doping policies worldwide? Why?
- Question 4: How do you evaluate the anti-doping activities in our country? Why?
- Question 5: If a national anti-doping program were to be established in our country, what kind of an action plan would need to be prepared? How? Why?
- Which institution or institutions do you think this anti-doping program could be under the management of?
- Question 6: If I asked you to compare the fight against doping to something, what would you compare it to? Why?

*Data Analysis*

Using the questionnaire form, the quantitative data obtained from the descriptive survey method were analyzed using descriptive statistics. Next, themes, descriptive, content, analytical generalization, and discourse analysis methods were used to analyze the qualitative data obtained using the semi-structured interview form. In the theme analysis, sub-themes were determined in line with the opinions received from the participants under the upper themes determined by the researcher within the scope of the problem sentences of the qualitative stage, and these themes were presented with a scoreboard. With the use of the descriptive analysis method, the aim is to understand and present the interview transcripts' major and sub themes related to the research problem with direct quotations. In this direction, the participants' views were associated with the themes presented and described with direct quotations. The content analysis determined the relationship between the participants' demographic characteristics and the themes, and the researcher's comments were included and interpreted. Finally, in the analytical generalization phase, the findings were discussed concerning the existing theory in the literature (Günbayı, 2019).

This study aimed to increase the validity and reliability of the research by using the data diversity method (data collection with survey, interview, and metaphors). Therefore, it was deemed appropriate to use credibility, transferability, consistency, and confirmability criteria to meet the study's eligibility criteria. Credibility is the researcher's clear presentation of how the researcher arrived at the said conclusions and presented the evidence in a way accessible to others. At this stage, the main themes and sub-themes were determined to ensure the study's credibility, and the existing pattern was tried to be given with the interviews. In addition, interview transcripts were shared with the participants, and participant confirmation was provided. Transferability is related to the generalization of the results of the research. Since there is no statistical generalization in qualitative research, analytical generalization has been made to the existing theory in the literature (Yıldırım & Şimşek, 2016). Finally, all the findings are given without comment to increase the research's consistency.

Moreover, the two researchers coded separately on the data obtained during the interviews, and the consistency rate (Kappa Value) was calculated by comparing the coding made with the coding of another person who did not know about the research. As a result, it can be asserted that the 0.86 Kappa Value found is in perfect agreement with the consistency of the research (Landis & Koch, 1977). Thus, the researchers determined that the coding was reliable and that internal reliability was ensured. Furthermore, to increase the research's external reliability (confirmability), all data collection tools, the coding made during the



analysis phase, and the inferences that form the basis of the report were consulted with an expert on qualitative research.

## RESULTS

In this part of the study, which was designed using the explanatory sequential mixed research method, the quantitative and qualitative findings related to the research problems were included. In the quantitative phase, it is discerned that the initial five responses elicited from participants originate from the Ministry of Youth and Sports, Ministry of Health, Federations, Council of Higher Education (CoHE)-Universities, and the Ministry of National Education, in that particular order. In the quantitative part, the participants emphasized that the most importance should be given to the method of education (n=175, 46.9%) and punishment (n=168, 45%) in the fight against doping. They stated that reward (n = 15, 4%) and other (n = 15, 4%) methods are less effective in anti-doping and deterrence in our country.

At the qualitative stage, the findings were obtained by using two different methods, namely, the data obtained as a result of individual interviews with the participants who were determined with the aim of understanding and interpreting the quantitative findings in-depth, and the data obtained as a result of the metaphor analysis. The participants' opinions on the prohibition or release of doping-containing substances take the first place on the theme of “unethical” (58.3%; Table 1). In this respect, one participant (C1, 1) remarked that: ...the use of doping brings unfair competition in sports, and the prohibition of its use will make this competition more legal.

**Table 1**  
Findings Concerning the Prohibition or Release of Doping Substances

Ban-Release	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Not being ethical	√		√	√					√	√	√	√	7	58.3
Does not differentiate between individuals				√			√				√	√	4	33.3
Protection of health				√		√	√		√				4	33.3
Banning is not the solution					√								1	8.3
Blocking accessibility		√											1	8.3
Raising awareness		√											1	8.3

Regarding the issue of whether the punishment method is effective in the fight against doping, the participants mostly expressed their opinions on the themes of “effective but insufficient” and “lack of prevention power” (Table 2). In this respect, participants remarked that:

...the punishment method is of course a deterrent. This is because it has a serious sanction for athletes or those who manage sports. In particular, there are deterrent methods such as bans from international competitions, very long-term bans or withdrawal of awards, but of course, only bans are not enough. Preventive measures should also be taken. (C2, 1)

...the penalties are not enough. Not enough in the sense that there should be more punishment, not enough. I don't believe that punishment has the power to prevent. (E2, 2)

**Table 2**  
Findings Regarding the Efficiency of Punishment Method in the Fight Against Doping

Effect of Punishment Method	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Effective but insufficient		√	√	√		√	√		√	√			7	58.3
Lack of prevention power	√				√	√	√						4	33.3
Presence of serious sanctions			√								√		2	16.6
Performance reduction	√										√		2	16.6
Stigmatizing the athlete and the branch								√			√		2	16.6
Enforcement of sanctions							√		√				2	16.6
Not being deterrent												√	1	8.3

Regarding the adequacy of the policies implemented in the world on anti-doping, it is understood that the participants expressed their opinions on the themes, stating that “inadequate because it cannot be prevented” and “the difference between countries” (Table 3). In this respect, participants remarked that: “E3, 1” ...for something to be enough, it has to be finished. You can't say it's enough if it's not finished. “C3, 2” ...some countries follow a method on doping, maybe as a country policy. I mean, recent examples of this were seen in Russia.

**Table 3**  
Findings Regarding the Adequacy of the Policies Implemented in the World on Anti-Doping

Anti-doping in the world	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Inadequate because it cannot be prevented				√	√		√			√			4	33.3
Difference between countries			√				√		√	√			4	33.3
The difficulty of fighting with powerful countries	√	√	√										3	25
Execution of comprehensive activities		√			√			√					3	25
Not being fair and transparent			√								√	√	3	25
The difference between theory and practice				√		√	√						3	25
Inadequacy of development		√			√								2	16.6
Sufficient and insufficient aspects											√	√	2	16.6
Sample collection problems	√												1	8.3
Presence of an institutional structure		√											1	8.3
Ineffective activities						√							1	8.3
Differences between laboratory results			√										1	8.3
Inadequate because it cannot be prevented				√	√		√			√			4	33.3
Difference between countries			√				√		√	√			4	33.3
The difficulty of fighting with powerful countries	√	√	√										3	25

The participants were asked to evaluate the anti-doping activities carried out in our country, and it was observed that they mainly mentioned the themes of “meticulousness in control” and “lack of knowledge and awareness” (Table 4). In this respect, participants remarked that:

...I know that there is much discipline in the work, the laboratories, the individuals who take samples related to doping, the organization that makes this organization, ... the work they do is independent of each other and very careful. Well, I know that they work very meticulously and have been doing this for years. ... That is why I think it is above world standards in Turkiye. (F4, 1)

...what is doping? What is not, or how does doping work? How it works, etc.... They don't have enough information. There is doping, yes. We can take

a doping test after we leave the competition. I didn't use drugs, etc. I'm not supposed to use drugs or I have to be careful at work. That's all there is to it. I mean, yes, you shouldn't take medication, but which medication should you not take and why? Why don't we know this, for example? If we don't know this, it is actually due to a lack of knowledge in general. There are very good trainings and seminars on anti-doping, but not all athletes this does not reach them. (P4, 2)

**Table 4**  
Findings Regarding the Evaluation of Anti-Doping Studies in Türkiye

Anti-doping in Türkiye	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Meticulousness in controls	√					√	√	√			√	√	6	50
Lack of knowledge and awareness					√	√			√	√			4	33.3
Good, but it can be improved.		√		√									2	16.7
Lack of control in recreational sports						√	√						2	16.7
More effective			√										1	8.3
Therapeutic drugs			√										1	8.3
Awareness raising			√										1	8.3

According to Table 5, the responses of the participants to the questions formulated as “In your opinion, what kind of action plan should be prepared if a national anti-doping program was to be established in our country? How? Why?” are primarily expressed on the themes of “guidance and education,” “empathy,” “budget” and “moral values.” In this respect, participants remarked that:

...with education, they can be told that they have responsibilities both in terms of health and for the country if they are representing the country. But of course, this can be done through family, friends, coaches, athletes... ...from childhood, before they become famous, before they go to international competitions, from the very first moment they start... I think that apart from universities, from primary education, from the youngest ages, from the time they get a license in the federation, they should be trained... Maybe there could be a 4-week course on doping in much more detail. ...I think that especially the coaches of those young age groups, including parents, should

receive very serious training. ...Teachers also need to be trained. If they take this child to a competition, they should also be informed about this issue.

(D5, 1)

...it's very important to show the consequences of doing. Okay, you did it. You didn't get caught, but what happens after you get caught? There are many examples of this in the world. ... You are not the first to dope. You won't be the first one not to be caught and caught. ... One doped here in I don't know how many years ago, and this is how s/he is now. You have Ben Johnson, who went from being a role model for people in Canada in the courts to being on trial in the courts. He became a sensation in the world because he beat Carl Lewis, but what happened? Nobody is looking at him now. Everybody is judging him for doping. So we are trying to say, 'Overall, this is not going to bring you any profit, know that.' I mean, we show them examples, we show them lived stories. (E5, 2)

**Table 5**  
Findings Related to Creating a National Anti-Doping Plan

National Action Plan	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Guidance and education	√	√	√	√	√	√	√		√	√		√	10	83.3
Empathy	√				√		√	√	√	√			6	50
Budget		√	√		√		√		√				5	41.7
Moral values		√			√	√						√	4	33.3
Scientists and research		√	√			√							3	25
Reward and penalty regulation			√						√		√		3	25
Stakeholders			√		√		√						3	25
Psychology				√		√						√	3	25
Control mechanism							√		√			√	3	25
Supervised sales	√		√										2	16.7
Penalties and sanctions				√	√								2	16.7
Doping-free belief in success	√					√							2	16.7
Competitions			√		√								2	16.7
Science and technology		√											1	8.3
Policy and strategy document			√										1	8.3
International joint action			√										1	8.3
Moral punishments						√							1	8.3

According to Table 6, when the participants were asked about the institutions or organizations likely to be involved in the management of a national anti-doping program, it is understood that the participants mostly expressed their opinions on the themes of Ministry of Youth and Sports, “Ministry of Health,” “National Sports Federations” and “TADC”. In this respect, participants remarked that: “H6, 1”, it could be the Ministry of Youth and Sports. It is a process that can move forward with the Presidency. I think it can be done with the Ministry of Youth and Sports. “J6, 2”, ...the Ministry of Health, medicine, which examines the direct metabolic properties of our body, down to the smallest vessel. ... Together with doctors, doctors who are experts in this field...

**Table 6**  
Findings Regarding Institutions and Organizations to Be Involved in the Administration of a National Anti-Doping Program

Institutions and organizations	A	B	C	D	E	F	G	H	J	K	L	M	Frequency (f)	Percentage (%)
Ministry of Youth and Sports	√	√	√	√	√	√	√	√	√	√		√	11	91.7
Ministry of Health	√	√	√			√	√		√	√	√		8	66.7
National Sports Federations	√				√			√		√	√	√	6	50
Turkish Anti-Doping Commission of		√			√	√				√	√	√	6	50
Council of Higher Education (CoHE)- Universities and Professional Associations	√		√			√	√						4	33.3
Ministry of Education		√		√			√		√				4	33.3
A Multi-Stakeholder, Independent, New Board		√	√	√	√								4	33.3
Ministry of Internal Affairs		√					√						2	16.7
Turkish National Olympic Committee					√	√							2	16.7
Presence of Athletes in Management		√			√								2	16.7
Ministry of Agriculture and Forestry	√												1	8.3
General Directorate of Security							√						1	8.3
Cinema Industry										√			1	8.3

*Metaphors*

Participants were asked to generate metaphors about “anti-doping,” and ten themes were found in line with the answers received. Participants mainly compared the fight against

doping to “doctor” (18.2%). In addition, they explained the concept of anti-doping within the context of the metaphors of “cat,” “detective,” “ship,” “war,” “to knock one's head against a brick wall,” “free diving,” “world,” “covid-19” and “gazelle.” As seen from Table 7, the metaphors generated by the participants regarding the concept of “Anti-doping” were handled under six different categories. These categories are “dilemma,” “weakness,” “elaboration,” “difficulty of the process,” “need for time,” and “protection of health.” Some participants noted that:

*Category 1: “Dilemma”*

...the most recent example I can liken it to Covid. There is a society that believes that Covid exists. There is a society that believes it doesn't exist. ... The fight against doping is also like this. ...So there is a struggle, a struggle in its entirety. But it has its supporters and it also has its non-supporters. And this struggle may actually end with Covid, but the fight against doping will be a struggle that will exist as long as sport exists. (P7, 9)

*Category 2: “Powerlessness”*

...the fight against doping is really a very difficult thing. I mean, it's fought with good intentions, but it's not something that can get one hundred percent results. ... For example, imagine a river with crocodiles. Imagine a gazelle in it. I think that gazelle is the one who fights against doping. Because there are so many factors, the crocodile is around, I think they will prevent it. It will be seen as a visual struggle, but in terms of success, there are hundreds of factors, such as pharmaceutical companies that produce it, etc. I think they will also be crocodiles. ... The gazelle will die. Yes, the gazelle will die. Unfortunately. ... It may not die. It may jump across the road (M7, 10)

*Category 3: “Elaboration”*

.....I would liken it to freediving, not scuba diving. In freediving, you hold your breath at the surface and you have to come back to the surface. But the deeper you go, the harder it is to get to the surface, and as the pressure increases, the oxygen in the lungs decreases. To put it differently, air decreases along with oxygen. That's why the depths are difficult. ... It is difficult, but it is also essential, that is, if success is to be achieved, it is necessary to go down to those depths and then come to the surface and get fresh air. (F7, 7)

*Category 4: "The difficulty of the process"*

...imagine you're on a stormy sea, you're struggling with something, there's a destination you want to reach but it's always dragging you backwards, I mean, you're on a boat, maybe you can create a metaphor like that. So there is a struggle, there is a destination you want to reach. But there are waves that constantly throw you off course, so you can look at it like that. ... You have set a goal. Zero tolerance, zero doping, clean sport, but there is also a process that keeps you constantly wobbling, unable to reach the goal, and we will wait for the sea to calm down or we will wait to get rid of the waves stronger and move towards the goal. But those waves sometimes overturn that boat, sometimes you get back on it and move on, but in the end there is a process that forces you to reach your goal... (C7, 4)

*Category 5: "The need for time"*

Well, one's escaping from prison. By digging a well with a needle, but s/he escapes. How else can we open it? Escaping from the prison in the metaphor is not a positive behavior, but when s/he works with determination, it works there too. (E7, 6)

*Category 6: "Health protection"*

..for example, a person with cancer. they are told not to smoke. we as parents or doctors tell them not to smoke because it will kill them. They smoke, though. They have such a habit in their head. So I can liken it like that. It is the same with doping. They say, "I'm going to harm my body, I'm going to ruin my body. We say don't do it, don't do it, but I can liken it to that. (J7, 1)

**Table 7**  
Categorical Distribution of Metaphors Generated Regarding the Concept of Anti-Doping

Category	Metaphor code (MC) and metaphors	Number of participants generating metaphors
<b>Dilemma</b>	Covid-19 (MC 09)	3
	World (MC 07)	
	War (MC 04)	
<b>Weakness</b>	Cat (MC 01)	2
	Gazelle (MC 10)	
<b>Elaboration</b>	Free-diving (MC 06)	2
	Detective (MC 02)	
<b>The difficulty of the process</b>	Ship (MC 03)	1
<b>Need for time</b>	To knock one's head against a brick wall (MC 05)	1
<b>Health protection</b>	Doctor (MC 08)	2



## DISCUSSION

### *Prohibition or release*

Doping is unjust because it is unfair for a doping athlete to gain or attempt to do so by not paying the full price for what he/she owes for his/her own choice by exploiting others (Angelo et al., 2013). According to the participants, doping should be banned because it does not comply with the concepts of sports ethics, such as equality and fair play; it harms the health of the athlete and the public, and easy accessibility should be prevented. Participants stated that this prohibition should be equal and fair worldwide, not vary according to individuals and countries, and that if the prohibition varies according to people or countries, doping-containing substances can be released worldwide to ensure equality and justice. They also stated that it is essential to raise awareness and that a conscious athlete would not prefer substances containing doping despite being released. Moreover, according to participants, banning doping is not the only solution per se. In line with the content analysis conducted in the research, it is understood that most participants had similar views on the prohibition or release of doping.

### *The impact of the punishment method*

According to the participants, the penalty method is a deterrent in the fight against doping due to its harsh sanctions and negative impact on the athlete and the branch before the public. However, since the method of punishment does not eliminate a behavior, it is not considered sufficient on its own, and it is understood that criminal sanctions are weak in preventing doping. Sports administrators, sports experts, and academics mostly think that deterrence can be increased with primary moral and value education instead of punishment since the punishment method alone does not have the power to prevent it.

### *Institutions and organizations*

Regarding the other problem statement of the quantitative stage, the participants predominantly stated that the Ministry of Youth and Sports, Ministry of Health, National Sports Federations, (CoHE)-Universities, and Ministry of National Education should be the executive of a national anti-doping program in our country. Considering the answers given under the "institutions and organizations" upper theme in the individual interview held at the qualitative stage, researchers had the chance to understand and interpret the participants' views clearly.

According to the participants, a multi-stakeholder, independent, new institution for a national anti-doping program under the directorship of the Ministry of Youth and Sports,

where athletes can also take part in decisions, can be established to make the fight more multi-faceted and more effective. As sub-stakeholders of the Ministry of Youth and Sports, the participants proposed the Ministry of Health for the health, laboratory, and equipment section, the Sports Federations and Turkish National Olympic Committee to ensure coordination, the TADC on issues such as doping controls, training of officials, information studies, CoHE-Universities and Professional Associations for education and scientific research, the Ministry of National Education for the training of groundwork athletes and physical education and sports teachers, the Ministry of Internal Affairs, Ministry of Agriculture and Forestry and General Directorate of Security for inspection activities, cinema sector for empathy studies. Following the "Ulusal Gençlik ve Spor Politikası Belgesi," which was approved by the Council of Ministers on 26 November 2012 and entered into force after being published in the Official Gazette on 27 January 2013 and is still in effect, the necessary planning regarding doping and the fight against doping has been specified in our country. Within the scope of the athlete health policy, the national stakeholders regarding the fight against doping are specified as the Ministry of Youth and Sports, the Ministry of Health, the Ministry of National Education, Media Outlets, Sports Federations, and Non-Governmental Organizations (Ulusal Gençlik ve Spor Politikası Belgesi, 2013). Policy Document objectives are mainly described with abstract explanations (Balcı et al., 2018). The necessary arrangements must be made and implemented.

#### *The global anti-doping activities*

Evaluating the anti-doping activities in the world and our country separately, the participant's statements, and comprehensive activities align with an organizational structure in the fight against doping globally. Compared to the past, the fact that activities are carried out under the tutelage of an institutional structure is considered a development. However, it has been stated that the struggle is incomplete and inadequate because of the different attitudes between the countries, the difficulty of struggling with solid countries, the problems in sampling, the ineffectiveness of the activities, the problems in taking samples, and doping continues to be an issue as of today.

#### *The anti-doping activities carried out in our country.*

According to the participants, our country's doping controls and sampling procedures are carried out with due diligence and attention by TADC. In recent years, with the provision of support personnel for athletes in amateur branches, awareness about doping has begun to be gained in our country. When we look at the past in our country, as in the world, the fight against doping has made headway, but it has aspects that can be improved. In addition, the

participants stated that the lack of knowledge and awareness among athletes, trainers, parents, and teachers continues and that there is no control mechanism in recreational sports.

The majority of sports managers have expressed opinions on the sub-themes of “more effective,” “therapeutic drugs,” and “awareness-raising” regarding the anti-doping activities carried out in our country. It is observed that academicians have opinions on the sub-themes of “good but can be improved,” “uncontrolled in recreational sports,” and “lack of knowledge and awareness.” In contrast, athletes have opinions on the sub-themes of “meticulousness in controls.” In terms of the content analysis, it was determined that the opinions of the other participants on this subject were similar.

#### *National Action Plan*

It was observed that the participants predominantly focused on guidance and training activities to prevent doping. They expressed their opinion that anti-doping activities should be carried out in schools through the Ministry of National Education so that training can be given to raise awareness of young age groups, families, and teachers starting from the groundwork. According to Faggiano et al. (2008), universal, school-based intervention studies are the most frequently studied prevention approach. Thus, they stated that it is preferred because it offers the most systematic way to reach the highest number of young people every year. Participants stated that athletes should be taught moral values from a young age. For this purpose, guidance and training activities should be planned within the framework of a specific curriculum according to age groups. Backhouse et al. (2012) suggested in their work on anti-doping in sports that the formation of attitudes and values should be targeted at early ages and adapted to suit the developmental stage of the target population. They also stated that the intervention effect could be strengthened by offering activities based on support sessions over several years. Effective anti-doping education can reduce doping cases and, therefore, reduce sanctions (Exner, 2023). In addition, implementing and disseminating effective education programs is an urgent issue that needs to be addressed locally and globally (Backhouse et al., 2012).

Participants stated that creating empathy can be a very effective method for athletes. Psychologists have argued that empathy lies at the bottom of prosocial behavior and that the absence of empathy typically results in aggressive and winning behavior that ignores the rights or suffering of others (Feshbach, 1987; Miller & Eisenberg, 1988; Marshall & Marshall, 2011). Empathy is significant in human life because it stimulates changes in people's behavior. It is observed that people with different levels of empathy display behaviors in various ways (Kaukiainen, 1999; Ersoy & Köşger, 2016). Participants will be given examples from the lives

of famous athletes who have been punished for doping, making documentaries and movies, encyclopedias, etc. They suggested that resources should be created and these exemplary lives should be shared with young athletes. According to the participants, presenting the lived events effectively affects society and is thought to raise awareness.

The fight against doping is a global problem and, therefore requires interlinked approaches between countries and possibly between relevant organizations (Backhouse et al., 2009). Participants stated that to make the actions they propose in the fight against doping meaningful and applicable, an international understanding of joint action should be adopted, and the fight against doping should progress in a coordinated manner in all countries.

Participants stated that the government should create a budget and resources for training, laboratory, and equipment expenses within the scope of the fight against doping. In their study, Songün et al. (2015) stated, "a new national doping control center should be established, and human and financial resources should be provided by relevant government bodies to carry out routine doping controls of athletes in a healthy way."

#### *Metaphors*

It is thought that to obtain opinions about the fight against doping; the participants generated metaphors on the subject, which helped to reveal their thoughts more clearly.

## CONCLUSION

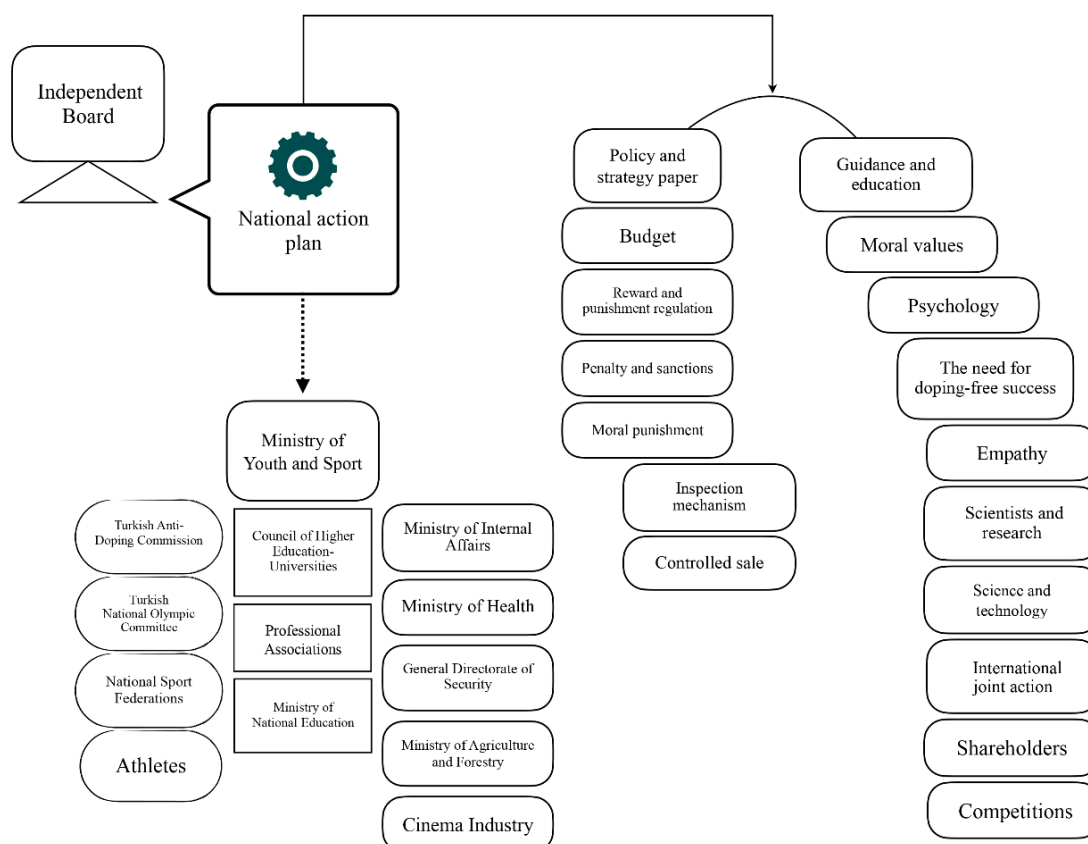
In conclusion, it is perceived that doping-containing substances should be banned relatively and equally all over the world, as they are against ethical principles and adversely affect health, and the penalty method is a method that should exist in the fight against doping. However, is perceive revisions can be made to the penal regulation to strengthen the sanctions. In addition, the punishment method alone is understood not sufficient; education and guidance studies for prevention are more important. In the world, comprehensive activities are carried out in an institutional structure in the fight against doping, but there are some problems due to science and technology, especially in powerful countries. In our country, the fight against doping is partially more successful when compared to the world, but some dimensions need to be developed. It is necessary to establish a multi-faceted, independent anti-doping organization that includes all relevant stakeholders. It is necessary to develop and implement a policy and strategy for the fight against doping. It is necessary to implement and disseminate practical guidance and training programs aimed at reinforcing moral values and raising awareness. It is necessary to establish a control mechanism in the fight against doping and to carry out inspections for both athletes and those who exercise and play sports for health.

It is necessary to ensure the controlled sale of drugs used for therapeutic purposes containing prohibited substances. It is understood from the participants' opinions that, as a country strong in science and technology, it should have laboratory and testing facilities. As a result of the discourse analysis, it is understood that the fight against doping aims to protect health, but it is a complex and bilateral process. Furthermore, it has been understood that there are weaknesses in the fight against doping and that time and elaboration are needed to achieve success in the fight.

Furthermore, the collective perspective among participant groups regarding enhancing the efficacy of anti-doping efforts underscored the imperative of prioritizing educational and guidance initiatives. As a result of this study, it is thought that the current anti-doping situation has been determined. In this context, in light of the information received from the participants, the Anti-Doping National Action Plan Model is given below (Figure 2).

**Figure 2**  
Anti-Doping National Action Plan Model

**National Anti-Doping Action Plan Model**



## PRACTICAL IMPLICATIONS

In line with the results obtained from this study, some suggestions for practitioners and researchers are presented. Within the protocol framework, a new committee of representatives of the concerned sport's stakeholders can be established. Existing anti-doping policies and strategies can be strengthened and implemented. Budget arrangements can be made. Documentaries and motion pictures can be made, and resources can be created on athletes punished for doping. A curriculum can be prepared for guidance and training activities to raise awareness and strengthen moral values. Studies on the planning and executing guidance and training activities can be carried out. This research is limited to academicians, coaches, athletes, sports administrators, sports experts, and athlete support staff. Researchers can expand or diversify the research group in future studies by including different stakeholder groups.

### Acknowledgements

This article produced from doctoral thesis title of “Investigations views on anti-doping in sports in Türkiye: Mixed methods research”, that carried out under the consulter of Prof. Dr. Kemal Alparslan ERMAN. Additionally, would like to acknowledge the contributions of Prof. Dr. İlhan GÜNBAI, to this article.

### Authors' contributions

Both authors contributed design of the study, interpretation of the data and reported. The first author collected and analyzed data. The first and second authors are contributed to critical revisions and reviewing the results.

### Conflict of interest declaration

No conflict of interest is declared by the authors.

## REFERENCES

- Angelo Corlett, J., Brown JR, V. & Kirkland, K. (2013). “Coping With Doping”. *Journal of the Philosophy of Sport*, 40(1), 41-64. <https://doi.org/10.1080/00948705.2012.725897>
- Backhouse, SH., McKenna, J. & Patterson, L. (2009). Prevention Through Education: A Review of Current International Social Science Literature: A Focus on the Prevention of Bullying, Tobacco, Alcohol and Social Drug Use in Children, Adolescents and Young Adults. *Project Report*. World Anti-Doping Agency.
- Backhouse, SH., Patterson, L. & McKenna, J. (2012). “Achieving the Olympic Ideal: Preventing Doping in Sport”. *Performance Enhancement and Health*, 1(2), 83-85. <https://doi.org/10.1016/j.peh.2012.08.001>

- Balcı, V., Gök, Y., & Akoğlu, HE. (2018). Türkiye'nin Ulusal Gençlik ve Spor Politikalarının, Sürdürülebilirliğin Sosyal Boyutuyla İncelenmesi. *Journal of Sport Science Research*, 3(1), 9-22. <https://doi.org/10.25307/jssr.399823>
- Barkoukis, V., Mallia, L., Lazuras, L., Ourda, D., Agnello, S., Andjelkovic, M., Bochaver, K., Folkers, D., Bondarev, D., Dikic, N., Dreiskämper, D., Petróczi, A., Strauss, B., & Zelli, A. (2022). The role of comprehensive education in anti-doping policy legitimacy and support among clean athletes. *Psychology of Sport and Exercise*, 60, 102173. <https://doi.org/10.1016/j.psychsport.2022.102173>
- Burlew, A. K., Copeland, V. C., Ahuama-Jonas, C., & Calsyn, D. A. (2013). Does cultural adaptation have a role in substance abuse treatment? *Social Work in Public Health*, 28(3-4), 440-460. DOI: <https://doi.org/10.1080/19371918.2013.774811>
- Creswell, JW. & Plano Clark, VL. (2018). *Designing and Conducting Mixed Methods Research* (3. bs.). Sage Publications, Inc.
- Creswell, JW. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4. bs.). Sage.
- Ergen, E. (2011). *Egzersiz Fizyolojisi* [Exercise Physiology] (3th ed.). Nobel Publications, Ankara.
- Ersoy, E. & Köşger, F. (2016). "Empati: Tanımı ve Önemi/Empathy: Definition and Its Importance". *Osmangazi Journal of Medicine*, 38(2), 9-17. <https://doi.org/10.20515/otd.33993>
- Exner, J. (2023). Fight against Doping, Good Governance, and Education: What are the Roles and Responsibilities of the Czech Olympic Committee? *Sports Law, Policy & Diplomacy Journal*. <https://doi.org/10.30925/slpdj.1.1.3>
- Faggiano, F., Vigna-Taglianti, FD., Versino, E., Zambon, A., Borraccino, A. & Lemma, P. (2008). "School-based prevention for illicit drugs use: A systematic review". *Preventive Medicine*, 46(5), 385-396. <https://doi.org/10.1016/j.ypmed.2007.11.012>
- Franke, W. W. & Berendonk, B. (1997). "Hormonal Doping and Androgenization of Athletes: A Secret Program of the German Democratic Republic Government". *Clinical chemistry*, 43(7), 1262-1279. <https://doi.org/10.1093/clinchem/43.7.1262>
- Günbayı, İ. (2019). "Nitel Araştırmada Veri Analizi: Tema Analizi, Betimsel Analiz, İçerik Analizi ve Analitik Genelleme." <http://www.nirvanasosyal.com/h-392-nitel-arastirmada-veri-analizi-tema-analizi-betimsel-analiz-icerik-analizi-ve-analitik-genelleme>. (date of access: 24.05.2022)
- Günbayı, İ. (2020). "Systematic Curriculum and Instructional Development for a Mixed Methods Research: SCID-MMR". *Journal of Mixed Methods Studies (JOMES)*, 1(1).
- Landis, JR. & Koch, GG. (1977). "The Measurement of Observer Agreement for Categorical Data". *Biometrics*, 33, 159-174. <https://doi.org/10.2307/2529310>
- Marshall, LE. & Marshall, WL. (2011). "Empathy and Antisocial Behavior". *Journal of Forensic Psychiatry and Psychology*, 22(5), 742-759. <https://doi.org/10.1080/14789949.2011.617544>
- Özdemir, M. (2010). "Nitel Veri Analizi: Sosyal Bilimlerde Yöntembilim Sorunsalı Üzerine Bir Çalışma". *Journal of Social Science Eskişehir Osmangazi University*, 11(1), 323-343.
- Şahin, M. (2018). *Spor Ahlakı ve Sorunları* (3th ed.). Spor Yayınevi ve Kitapevi, Ankara.

- Schneider, A. J. & Butcher R. B. (2000). "A Philosophical Overview of the Arguments on Banning Doping in Sport". C. Tamburrini ve T. Tannsjö. (ed.). *Values in Sport: Elitism, Nationalism, Gender Equality and the Scientific Manufacturing of Winners*. Taylor ve Francis, London and New York, 185-199.
- Shafer, M. (2016). *Well Played: A Christian Theology of Sport and the Ethics of Doping*. Pickwick Publications, USA. <https://doi.org/10.2307/j.ctt1cg4kv5>
- Solberg, H. A., Hanstad, D. V., & Thoring, T. A. (2010). Doping in elite sport-do the fans care? Public opinion on the consequences of doping scandals. *International Journal of Sports Marketing and Sponsorship*, 11(3), 2-16. <https://doi.org/10.1108/IJSMS-11-03-2010-B002>
- Songün, Y., Katkat, D. & Budak, D. (2015). "Türkiye'deki Ulusal Spor Federasyonlarının Doping Kontrol Uygulamalarının Değerlendirilmesi". *Spormetre The Journal of Physical Education and Sport Sciences*, 13(2), 93-102. [https://doi.org/10.1501/Sporm\\_0000000273](https://doi.org/10.1501/Sporm_0000000273)
- Steinka-Fry, K. T., Tanner-Smith, E. E., Dakof, G. A., & Henderson, C. (2017). Culturally sensitive substance use treatment for racial/ethnic minority youth: A meta-analytic review. *Journal of Substance Abuse Treatment*, 75, 22-37. <https://doi.org/10.1016/j.jsat.2017.01.006>
- Turkish Anti-Doping Commission (2019). "Türkiye Doping Mücadele Talimatı". <http://www.tdmk.org.tr/wp-content/uploads/2016/03/Turkiye-Doping-Mucadele-Talimati-2019.pdf> (date of access: 30 Ocak 2020).
- Ulusal Gençlik ve Spor Politikası Belgesi. (2013, 27 Ocak). Resmi Gazete (Sayı: 28541). Access address: <https://www.resmigazete.gov.tr/eskiler/2013/01/20130127-8-1.pdf>
- WADA, "Who We Are". <https://www.wada-ama.org/en/who-we-are> (date of access: 29.11.2021).
- World Anti-Doping Agency (2021). World Anti-Doping Code. WADA. Canada.
- Yıldırım, A. & Şimşek, H. (2016). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri* [Qualitative research methods in the social sciences] (11th ed.). Seçkin Publications, Ankara.
- Yin, RK. (1984). *Case Study Research: Design and Methods* (3. bs.). SAGE Publications.