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Identification and analyses the role of Athlete support Personnel's (ASP) attitudes towards doping



**world
anti-doping
agency**

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Table of Content

Executive Summary	4
Introduction	7
Research goals and methodology	8
Fieldwork timeline	8
Qualitative component	9
The target group of the study and respondent selection	9
Table 1 - Sample	9
Research instrument	11
Sample design	11
Data processing	12
Weighting procedure	12
Table 2 - Post-stratification groups and subgroup sizes	13
Table 3 - Population size values used for calibration	14
Discussion of Focus Group Results	16
The vision of the problem on a large scale and in Georgia	16
Anti-doping climate change	18
Perception of the causes and the level of doping consumption in Georgian sports	18
Perception of doping in the context of sports ethics	19
Factors affecting the disposition towards doping at an early age and the existing picture	21
Awareness	24
Existing Ways of Awareness of Doping	26
Information Need and Availability	26
Training	30
The existing picture of information delivery to ethnic minorities and athletes with special needs	33
GADA training	34
Testing	36
Ineffective detection and response to suspected doping	37
State anti-doping strategy	39
Quantitative Survey Results	41
Demographic overview	41

Gender	41
Figure 1 – Gender distribution.....	41
Age	41
Figure 2 – Age group distribution	41
Table 1 – Age.....	42
Ethnicity	42
Figure 3 – Ethnic groups.....	42
Place of residence	43
Figure 4 – Settlement type.....	43
Sports types	44
Figure 5 – Sports types.....	44
Figure 6 – The athlete support personnel by sports types	45
The athlete support personnel	45
Figure 7 – Athlete support personnel by profession	45
Figure 8 – Competition level.....	46
Overview of findings	47
The vision of the doping problem and attitude towards doping	47
Figure 9 – Doping usage statistics	48
Figure 10 - Factors influencing doping.....	49
Table 4 – Assessment of the others’ influence.....	50
Table 5 - Advice on taking a banned substance	51
Attitudes towards food supplements and vision of the problem	51
Table 6 – Food supplements	51
Table 7 – Food supplements- Comparison between groups	52
Table 8 – Consuming supplements during competitions.....	53
Table 9 - Consuming supplements during non-competitive periods.....	54
Perception of responsibility for doping and its prevention	54
Table 10 - Emotions.....	54
Table 11 – Working on doping issues.....	55
Table 12 - Working on doping issues. Comparison between groups.....	55
Sources of information about doping	55
Table 13 – Information sources.....	56

Table 14 – Information sources – by work type.....	56
Table 15 – Information sources – by competition level.....	57
Table 16 – Training courses.....	58
Table 17 – Training assessment.....	59
Figure 11 – Assessments of training – Comparison between groups	59
Practical knowledge of anti-doping rules.....	60
Figure 12 – Actions of the athlete support personnel.....	60
Table 18 - Athlete support personnel’s actions – Comparison between groups.....	61
Figure 13 – Doping during the non-competitive period.....	61
Table 19 – Doping cases.....	62
The impact of doping on athletes.....	63
Table 20 – Influence of banned substances	63
Table 21 – Influence of banned substances – Comparison between groups.....	64
Table 22 - Consumption of banned substances for a short time	65
Table 23 - Consumption of banned substances for a long time.....	66
Perception of doping control and detection	66
Table 24 – Attitudes towards the Anti-doping agency	67
Table 25 – Testing accuracy	67
Table 26 – Attitudes towards doping test	68
Table 27 – Responsible agency.....	69
Table 28 – Attitudes of the athlete support personnel.....	70
Summary	71
Conclusions and Recommendations	73
Appendix	75
Questionnaire for the Athlete Support Personnel (ASP)	75
Questionnaire for the representatives of the Sports Federations.....	78
Questionnaire	81

Executive Summary

One of the major problems facing modern sports is the doping, which on the one hand violates the conditions of fair competition and on the other hand harms athletes' health. The competition rules are based on the 'strict competition' principles and the need to fight for the championship force athletes and coaches to fight for victory by any means.

Cases of athlete disqualification and rescission of medals won in national and international competitions have increased in world sports and nowadays it is even more crucial to shift the focus from punitive measures to prevention in anti-doping policy. This it can be achieved by identifying and preventing the factors contributing to the consumption of banned substances in sports.

Due to the urgency of the issue the Georgian Social and Market Research Center (GESOMAR) with the support of the World Anti-Doping Agency (WADA) conducted a study, which aims to examine the doping climate in Georgia using qualitative (10 FGDs) and quantitative (N=218) research methods.

The study aims to explore perception of the doping problem, the level of knowledge of substances and methods as well as knowledge of the mechanism of doping effect on the body, attitudes of the athlete support personnel to the control and revelation of doping, perception of the state anti-doping campaign, behavior of ASP to prevent doping and encourage negative attitude and identify gaps and challenges in existing politics of anti-doping consumption.

Data collected in January of this year and December of last year revealed that the sports federations and athlete support personnel involved in the study recognize doping as a global problem but the study also found that participants do not have a global vision of the doping problem. One of the major problems is the lack of awareness of ASP about doping and banned substances - today prohibited substances more frequently enter the body unknowingly when using medical drugs for therapeutic purposes or when taking food supplements. The ASP need to know the practical information that will help them inform athletes about doping. Most of

the interviewed athlete support personnel did not know the principle of selecting sportsmen for doping testing during the non-competitive period and also during internal competitions. The interviewed athlete support personnel can hardly find information about doping independently. The study showed that, with rare exceptions, federations do not provide the athlete support personnel and athletes with credible and official sources of information regarding doping. Also, athlete support personnel mainly do not have information about doping consumption by athletes.

In addition, it should be said that compared to previous years, a large part of respondents talks about specific shifts in improving the anti-doping climate. The positive changes are related to the increase in doping awareness and the conduct of more doping tests in certain categories of athletes

However, the athlete support personnel have the largest interest and best awareness regarding the list of banned substances and methods, as they have to take into account these regulations on a daily basis to avoid sanctions and they have professional knowledge and skills of proper exercise workload and nutrition. But ASP do not have enough information regarding the threats that consuming different substances can pose to athletes. Also, it should be noted that coaches working with older age groups are less informed about nutritional supplements, and if their accessibility to a competent physician is restricted, they also have a problem with selecting and dosing nutritional supplements correctly for athletes. Some of the personnel working in this age group do not even see the reasons for raising awareness on doping. At the same time, they believe that young athletes are more at risk of taking improper food supplements.

Most often ASP receives information from the representatives and website of the Georgian Anti-Doping Agency, followed by the website of the World Anti-Doping Agency, and most rarely from the federation and colleagues. Athlete support personnel realize that their duty is the provision of anti-doping information. However, they feel less personal responsibility.

It was revealed that most of the sports federations do not have the code of ethics, which could define the value-based attitude of the federation member sportsmen and their athlete support personnel. It is important to establish the right attitude from an early age that they should rely solely on sportsmen's own physical strength to advance in their sports career. The absolute majority does not agree with the opinion that the doping realization will promote sports. Society has extremely low awareness in terms of doping, which often leads to heterogeneous attitudes. At the same time, quite a large part of the public does not have a negative attitude towards doping. Participants recognize the role of others in the development of athletes' attitudes towards doping. ASP agrees that Athletes' addiction to doping is influenced by various factors as well as their "significant others" and media. As for the issue of media coverage of doping problems and legalization of doping, two-thirds of respondents think that the media does not cover the doping issues in proportion to the problem level.

It is important to underline that the respondents note the trend of developing an adequate perception of the issue of doping in Georgia in recent years, among the athlete support personnel and partially among athletes. Respondents mostly agree with the statement that the modern system of doping testing effectively detects violations during competitions.

In conclusion we can say that ASP needs to raise awareness in the regard of doping and banned substances and the study showed that the athlete support personnel can obtain more comprehensive and complete information about doping through trainings.

Introduction

The competition rules are based on the 'strict competition' principles in sport. The need to fight for the championship force athletes and coaches to fight for victory by any means. However, 'any means' is not always ethical.

One of the major problems facing modern sports is the doping, which violates the conditions of fair competition and harms athletes' health.

The problem covers many aspects, including the functionality of state anti-doping policy, effectiveness of actions of Georgian anti-doping agencies, lack of popularization of appropriate approaches of sports ethics, lack of information on the consequences of physical exposure to the usage of banned substances, etc. As a result, doping is becoming a growing problem in elite sports.

It is crucial to shift the focus from punitive measures to prevention in anti-doping policy. And it can be achieved by identifying and preventing the factors contributing to the consumption of banned substances in sports.

Research goals and methodology

The Georgian Social and Market Research Center (GESOMAR) with the support of the World Anti-Doping Agency (WADA) conducted a study, which aims to examine the doping climate in Georgia. In particular, the research objectives are to explore the following topics:

- Perception of the doping problem in Georgian sports, and the factors that encourage athletes to dope;
- The level of knowledge of substances and methods, defined by the WADA prohibited list and anti-doping sanctions, and rules, outlined in the WADA Code;
- The level of knowledge of the mechanism of doping effect on the body, as a result of long- and short-term consumption;
- Attitudes of the athlete support personnel to the control and revelation of doping (intensity, accuracy, strength/weakness);
- Perception of the state anti-doping campaign
- Behavior of ASP to prevent doping and encourage negative attitude of sportsmen towards the dope consumption;
- Gaps and challenges in existing politics of anti-doping consumption.

To answer the research questions both, qualitative (focus groups) and quantitative research methods were used.

Fieldwork timeline

The research instrument was developed in October, 2021. Data collection and processing was carried out in January of this year and December of last year. The final report was prepared in February, 2022.

Qualitative component

The target group of the study and respondent selection

The target groups of the research were the following:

- Administration of Georgian sports federations;
- The athletes support personnel registered in Georgian sports federations - doctors, coaches.

Respondents for focus groups were selected from the list provided by the Georgian sports federations. The focus group participants were selected randomly from the list, according to the pre-designed parameters and criteria.

Within the qualitative component of the study, 10 focus groups were conducted, and each group consisted of 4-6 participants. The issues with the recruitment of focus group participants should be pointed out. In particular, in order to interview the target number of respondents, due to technical assignments, ten focus groups were conducted instead of eight. Also, in some cases, respondents leaving the discussion ahead of time due to technical problems and personal reasons can be considered as a research shortcoming. An average duration of focus group discussion was 100 minutes. In total, the research included 48 respondents.

Table 1 - Sample

<i>Type of respondents</i>	Number of respondents		
	Male	Female	Ethnic minorities/people working with ethnic minorities
<i>Coaches (Tbilisi)</i>	9	3	4
<i>Coaches (Regions)</i>	11	4	
<i>Doctors</i>	9	1	
<i>Administration of Georgian sports federations</i>	8	3	
<i>Total</i>	37	11	
	Total - 48 respondents		

The study used the focus group method, through the online platform Zoom, and covered both the capital and settlements in the regions.

To interview representatives of sports federations and the athlete support personnel – doctors and coaches, the GESOMAR qualitative research team prepared the research instrument based on the desk research.

Focus groups included representatives of ethnic minority regions and representatives of the Paralympic Committee. Also, a gender quota was taken into account.

Information letters were sent to focus group participants to let them know that participation in the study is anonymous and confidential. In particular, they would be able to participate with cameras turned off and use unidentifiable names. It should be pointed out that many participants used the suggestion to turn off cameras, but none of them avoided to identify themselves. The moderators gave verbal guarantees to respondents that their names would not be related to their opinions in any research document.

Respondents' trust and openness during the focus group discussion can be rated with high scores. All the data are saved secure (in password access folders and they will be deleted after relevant time).

Quantitative component

Research instrument

In the process of developing the research instrument, the World Anti-doping Agency (WADA) questionnaire was used. Except demographic data the questionnaire consists of 32 questions that includes seven sections:

- I. The vision of the doping problem and attitude towards doping;
- II. Attitudes towards food supplements and vision of the problem;
- III. Perception of responsibility for doping and its prevention;
- IV. Sources of information about doping;
- V. Practical knowledge of anti-doping rules;
- VI. The impact of doping on athletes;
- VII. Perception of doping control and detection.

Sample design

The survey was conducted using a structured questionnaire according to the principles of confidentiality and research ethics, and was placed on Google Docs. The link of the questionnaire programmed in the mentioned software was sent to the respondents via SMS. Also, with the support of the World Anti-Doping Agency (WADA), Georgian Social and Market Research center (GESOMAR) sent information letters to the respondents about the study that aims to analyze attitudes of athlete support personnel (ASP) towards doping. The letter informed them about anonymity of participation and ensured full confidentiality.

The target group of the study were 13 types of sports (Wrestling, Judo, Sambo, Weightlifting, Boxing, Canoeing / Kayaking, Fencing, Gymnastics, Athletics, Cycling, Powerlifting, Para fencing, Para Judo, and 3 team sports: Football, Basketball, and Rugby) that were selected considering efficiency coefficient of social performance, tradition, popularity, development opportunities, recognition as Olympic and Paralympic sports types, maximum efficiency of investment and also, the priority sports based on the achievements.

The respondents' database provided by the sports federations was defined as the population size. The database included 867 athlete support personnel (ASP) working with international, national, and local professional athletes. It should be noted that due to data update issues, a large number of selected federations failed to provide a comprehensive database.

Taking into consideration the population size (867) and estimated non-response rate (30-35%), census approach was decided as a sampling method. According to the census method, all listed athlete support personnel were contacted. Accordingly, there were 867 contact attempts and 218 interviews were conducted. For individual sports types $n=118$, and for team sports types $n=100$.

Data processing

The data was analyzed using the statistical software SPSS²⁵. Descriptive (frequencies, percentages, measurements of central tendency and variability) and inferential (to see differences between groups one-way ANOVA, independent samples T test, and Chi square tests were used) statistics were used for data processing.

Weighting procedure

Post stratification approach was utilized for calculating survey weights. For this purpose, the sample was post stratified into 32 subgroups, based on four variables:

- Sports type (Individual or Team)
- Region (Tbilisi or Other)
- Gender (Female or Male)
- Age (18-34, 35-44, 45-54 and 55+ cohorts)

The same post-stratification subgroups were also defined in the sampling frame of total population. Both within the sample and the sampling frame, subgroup sizes (number of individuals per each subgroup) were calculated (table 1).

Table 2 - Post-stratification groups and subgroup sizes

Sports type	Region	Gender	Age	Subgroup sample size	Subgroup population size
Individual	Tbilisi	Female	18-34	7	23
Individual	Tbilisi	Female	35-44	3	22
Individual	Tbilisi	Female	45-54	9	26
Individual	Tbilisi	Female	55+	1	22
Individual	Tbilisi	Male	18-34	12	45
Individual	Tbilisi	Male	35-44	12	41
Individual	Tbilisi	Male	45-54	9	55
Individual	Tbilisi	Male	55+	16	53
Individual	Other city	Female	18-34	2	4
Individual	Other city	Female	35-44	0	1
Individual	Other city	Female	45-54	0	7
Individual	Other city	Female	55+	1	2
Individual	Other city	Male	18-34	10	70
Individual	Other city	Male	35-44	10	74
Individual	Other city	Male	45-54	15	63
Individual	Other city	Male	55+	11	61
Team	Tbilisi	Female	18-34	6	7
Team	Tbilisi	Female	35-44	1	3
Team	Tbilisi	Female	45-54	3	8
Team	Tbilisi	Female	55+	1	1
Team	Tbilisi	Male	18-34	13	46
Team	Tbilisi	Male	35-44	17	31
Team	Tbilisi	Male	45-54	15	33
Team	Tbilisi	Male	55+	5	14
Team	Other city	Female	18-34	2	7
Team	Other city	Female	35-44	0	0
Team	Other city	Female	45-54	0	4
Team	Other city	Female	55+	0	2
Team	Other city	Male	18-34	7	27
Team	Other city	Male	35-44	14	45
Team	Other city	Male	45-54	8	28
Team	Other city	Male	55+	8	42
Total				218	867

Survey weights were calculated by the following formula:

$$W_i = \frac{N_i}{n_i}$$

W_i denotes a weight coefficient of specific respondent within each subgroup.

N_i denotes a population size within each subgroup.

n_i denotes a sample size within each subgroup.

In order to reduce potential bias, produced by extreme weights, weights were trimmed at the 1st and 99th percentiles. The sum of residuals was distributed across all cases, proportional to their weight coefficients.

Weights were further calibrated using iterative proportional fitting (raking) toward the counts of population subgroups for sports type, region, gender and age (table 2). The raking procedure ensures that the weighted ratios of the sample subgroups match that of the population, although not all of the 32 post-stratification subgroups were presented in the sample.

Table 3 - Population size values used for calibration

Category	Subgroup	Subgroup population
Sports type	Individual	569
	Team	298
Region	Tbilisi	430
	Other city	437
Gender	Female	139
	Male	728
Age	18-34	229
	35-44	217
	45-54	224
	55+	197

At the final stage, weights coefficients were normalized so that their sum matched that of the sample (218), rather than of the population (867), retaining the population subgroup proportions at the same time. The weights were normalized by the following formula:

$$W_N = W * \frac{n}{\sum_{n=1}^n W}$$

W_N denotes a normalized weight coefficient.

W denotes a non-normalized weight coefficient.

n denotes a sample size ($n = 218$).

$\sum_{n=1}^n W$ denotes a sum of non-normalized weight coefficients of all respondents ($\sum_{n=1}^n W = 867$).

The normalized weight coefficients are stored as a variable `wt` in the data set.

Discussion of Focus Group Results

The vision of the problem on a large scale and in Georgia

In the perception of the sports federations and athlete support personnel involved in the study, doping is a global problem and, therefore, is relevant for the Georgian sports as well.

Although the rate of positive doping tests among Georgian athletes in the last five years has been relatively low, detection of prohibited substances in the B samples of several Georgian Olympic athletes via routine rechecking procedures, created the feeling that doping has become much more prevalent in Georgia in recent years.

Considering the existing precedents in the world of sports, the following were named as efficient ways to combat doping:

- Precedents for rechecking B samples taken at international competitions;
- Involvement in the registered testing pool of top-level athletes.

During the study, the sanctions imposed by the International Olympic Committee on the Russian team at the World Olympics were often brought as examples of the fight against doping. The sanctions were connected with the state-sponsored doping program of 2011-2015 years. At the same time, some of the study respondents believe that the sanctions imposed on Russia are more a political decision. In their opinion, the doping control bodies are turning a blind eye to violations for other countries.

There is also a widespread myth among athlete support personnel that in highly developed countries, athletes are taking such forms of doping that are impossible to detect at this stage. Accordingly, in their opinion, unequal conditions of competition are created for Georgian athletes at international competitions, as they do not have access to the banned substances created through high technologies. Interestingly, the athlete support personnel are also skeptical about the effectiveness of the doping control of the athletes competing in domestic

championships of Georgia, as they believe that the conducted tests do not cover the sufficient number of athletes.

"They are not sufficiently aware. Even for athletes who go to international competitions, the risk of being discovered as a doping user is, in their opinion, very small, about 10%. As for the local competitors at the Georgian level, they have a greater hope that they will not have to go through the control." (Athletics; Coach; Tbilisi)

"I hear people say that others have the opportunity to get doping. We do not have the opportunity to get it, and it should not be so; why should it be decided by the amount of money. There are drugs that are expensive and hide doping." (Athletics; Coach; Region)

"Athletes think that doping increases strength and energy; they say that others take it, and we will be left behind if we do not take it." (Rugby; Coach; Tbilisi)

Respondents talk about the trend of developing an adequate perception of the issue of doping in Georgia in recent years, among the athlete support personnel and partially among athletes.

"The situation in wrestling is better than in previous years because athletes received more information; we provide them more information so that they do not consume banned substances. Discoveries of doping in wrestling had been quite common in earlier years. Now athletes find it a disgraceful behavior, realizing that it is not just the shame of one athlete but rather affects the entire team. In this respect, the progress is excellent compared to previous years." (Wrestling; Doctor)

"In terms of information, the situation is better now; athletes can search for information on the Internet. Also, more players go to international competitions and bring information from there." (Athletics; Coach; Tbilisi)

Anti-doping climate change

According to the athlete support personnel, from 2014-2015, there were frequent cases of athletes taking banned substances upon the recommendation of their coach. Coaches considered doping to be an acceptable weapon in the fight for better sports results. The practice of taking doping was induced by the fact that there was virtually no doping control at national championships, and the athlete support personnel were less informed about the possibilities of detecting a banned substance at international championships.

Compared to previous years, a large part of respondents talks about specific shifts in improving the anti-doping climate. The positive changes are related to the increase in doping awareness and the conduct of more doping tests in certain categories of athletes.

It should be noted that in terms of these positive changes, a heterogeneous picture emerged in different sports. The Judo and Weightlifting Federations managed to improve the doping climate through implementation and adoption of requirements and support of international federations, as well as through active communication with the federation member athlete support personnel. The World Athletics and Rugby Federations made Georgian versions of online anti-doping training and courses available, and the Gymnastics Federation's athlete support personnel use the WADA's Anti-Doping Education and Learning Platform (ADEL). It should be noted that the Georgian Anti-Doping Agency (GADA) has been named as an essential and active ally by all federations in terms of improving doping control.

Respondents noted that the risks of doping were significantly lower than in previous years among individual or team athletes in the international arena, as more work was done with them in terms of current doping awareness and, at the same time, increased control.

Perception of the causes and the level of doping consumption in Georgian sports

According to the athlete support personnel, today prohibited substances more frequently enter the body unknowingly when using medical drugs for therapeutic purposes or when taking

food supplements. However, there are cases when athletes intentionally use banned substances upon their own decision.

The following were named as the main motivation for sportsmen to get fast sports results at the expense of artificially increasing the capacity of their bodies:

- An attempt to level unequal competition conditions at international championships;
- Using doping to gain essential sports achievement in order to be enrolled or to keep the place in the national team and, consequently, to get financial benefits.

According to athlete support personnel, despite the well-known fact that doping is harmful to the body, most doping-user athletes do not have information from a reliable and competent source on the kind of severe and, in some cases, irreversible impact the doping can have on their health. Therefore, when choosing an artificial stimulant, they trust the advice of their acquaintances and friends.

According to the athlete support personnel, maintaining confidential and trust-based relationships with athletes, on their part, is a kind of a preventive measure to avoid athletes taking banned drugs upon their own decision. However, at the same time, according to the majority of the athlete support personnel, they do not devote time to the talks with athletes about the unethical side of doping, as well as the impact mechanisms and harms of doping.

As the study showed, the value approach to doping is not properly formed even among the athlete support personnel. Lack of competence is one of the main reasons why there is insufficient communication with athletes about doping on the side of the athlete support personnel.

Perception of doping in the context of sports ethics

During the study interviews with representatives of the sports federations, it was revealed that most of the sports federations do not have the code of ethics, which could define the value-based attitude of the federation member sportsmen and their athlete support personnel. In the

perception of the study respondents, unlike other types of laws and rules of the sports world, the code of ethics is not among the list of the important documents, translation or development of which they would prioritize.

Respondents of the study themselves viewed the usage of doping as unethical behavior. A small part of the athlete support personnel mentioned that while talking with athletes, they even emphasize this topic; they think that among other issues, it is necessary to focus on this aspect as well. Nevertheless, many, among them representatives of the federation administrations, believe that making emphasis on the ethical aspect of doping is not a significant deterrent to the usage of doping.

"I do not know to what extent the ethical side can make this influence. Increasing awareness is key. More than ethics, its impact on health must be promoted." (Football; Federation)

Most of the sports community involved in the study acknowledge that, in general, there is an improper attitude towards doping, both among athletes and their support personnel. In their opinion, Georgian sportsmen indeed consider doping as an unacceptable act. And still, quite a large segment do not fully grasp and see the value aspect of the problem.

"There are no correct attitudes among athletes and their support personnel, and also, there are cases of covering up and hiding the facts. I had information about one of the athletes using doping, I asked for a test, but I got the answer that it was better to let it go because I would earn many enemies." (Rugby; Athlete support personnel)

"There were games when the ones who lost blamed the other party for taking stimulating substances. But does it mean that they really consider doping unethical? But when it comes to a real case, no one will directly say: aren't you ashamed of taking doping?" (Rugby; Coach; Region)

As for the society, according to the respondents, their awareness in terms of doping is extremely low, which often leads to heterogeneous attitudes. For example, part of the public

also perceives dietary supplements as doping as well and has a sharply negative reaction, which may violate the dignity of the athlete.

"People, parents do not have accurate information about doping. Some parents think supplements are also doping. Many think that if a sportsman has an outstanding result, it is due to doping." (Athletics; Coach; Tbilisi)

At the same time, quite a large part of the public does not have a negative attitude towards doping. They would not reproach athletes who have achieved results through unhealthy competition, and may even sympathize with them in some cases.

"We don't have the right perception of doping; to take my case, I have a sharply negative reaction to the traded matches, but I do not have a similar reaction to the doping, I do not have the feeling of protest. When the Liverpool player Mamadou Sakho was doped and disqualified for 6 months, none of the fans protested against him; this is not only Georgia's problem." (Football; Federation)

"Athletes are already informed about doping to some extent, and if the society gets more information on the topic and understands that when an athlete tries to gain an easy win when representing the country, this should be perceived as cheating." (Sambo; Federation)

Factors affecting the disposition towards doping at an early age and the existing picture

According to the support personnel working with junior or child athletes, in order for adult sportsmen to appreciate the values of equal opportunity and clean sports, it is important to establish the right attitude from an early age that they should rely solely on their own physical strength to advance in their sports career. In order for young sportsmen not to have the temptation to take artificial stimulating substances, and to strengthen potential abilities of their body naturally, various factions need to coincide, part of which are: appropriate infrastructure, and competence of a coach, and another part implies subjective factors, such as the food and sleep regime, and hard and diligent work.

The study has shown that in some sports, young and junior sportsmen do not have access to proper sports infrastructure as there is a lack of a sufficient number of suitably equipped gyms. Competitions are rare, especially due to the pandemic restrictions.

Physical development of junior sportsmen through exercise and proper diet implies that the athlete support personnel has professional knowledge and skills of proper exercise workload and nutrition. Coaches with such competencies, as it turned out, are a deficit in Georgian sports, which according to the national team's doctors, leads to the fact that an early age injuries among young sportsmen enrolled in the national team are not uncommon.

"We tell them what to eat, how to behave, but if they are not at the gathering and are at home, it cannot be controlled. There is a lack of knowledge in terms of nutrition; they think that the main thing is not to be hungry. Neither the trainer knows anything about proper nutrition." (Cycling; Coach; Tbilisi)

"Because of this, I had problems with the coaches in the region. First of all, it is important to train them, not only in the doping issues but also in correct diet, respective workload, and resting regime. So that sportsmen's bodies grow in the right way. This way we will get successful sportsmen. I have had a case when a sportsman came to the national team of under 17, already injured because of incorrect exercise and rest balance. At that age children listen to you and understand things, so, it is necessary to guide them to the right direction." (Weightlifting; Doctor).

It should be noted that part of the athlete support personnel working with athletes who are under the professional sports age, try to provide them with as little information about doping as possible, as they believe that at this age doping is not a real problem and providing information will only stimulate their interest.

Some of the personnel working in this age group do not even see the reasons for raising awareness on doping. At the same time, they believe that young athletes are more at risk of taking improper food supplements.

The age category when athletes' interest in nutritional supplements increases varies across different sports. For example, in gymnasts where athletes become professionals at 13-14 years old, improper use of dietary supplements raises the risks of health damage at an even earlier age.

The study showed that both in the regions and in the capital, young athletes do not have doctors who would attend their exercises; some federations have nurses for this age category. Consequently, when compiling a diet for young athletes, the coach takes advice from doctors he/she knows or is guided by his/her own experience. At the same time, coaches, especially in the regions, complain about the lack of complete nutrition due to the low social background of athletes, which is why some of the respondents advised adolescent athletes to take supplements such as protein, creatine, and amino acids and vitamins C and D. Some of the coaches surveyed are categorically against any supplements.

Coaches also see a problem in juvenile athletes' interest in fitness clubs, where instructors offer synthetic nutritional supplements to young people as young as 15-16 years of age, and their consumption by the athletes is seen as a threat by the athlete support personnel. At the same time, the athlete support personnel do not have the knowledge to talk to young people about the benefits and harms of using these supplements, as well as the risks of dosing violations. Part of the respondents did not know at what age they could take food supplements. Consequently, a large proportion of respondents acknowledge that they need to increase their knowledge of food supplements.

"There are essential food supplements that are allowed, which is protein, for example. I have also taken courses, and I am aware that without omega 3, carbohydrates, proteins, vitamins, an athlete cannot play. The nutritional value of food is low." (Rugby; Coach; Tbilisi)

It should be noted that coaches working with older age groups are also less informed about nutritional supplements, and if their accessibility to a competent physician is restricted, they

also have a problem with selecting and dosing nutritional supplements correctly for athletes. In this regard, the problem is relatively resolved with the national teams and teams participating in the major leagues, which are served by qualified doctors who make recommendations on certified nutritional supplements. Part of the federations provides reliable purchase and supply of food supplements for this category of athletes.

Awareness

The study found that participants do not have a global vision of the doping problem.

For example, they have fragmentary and, in some cases, inaccurate information on doping-related developments, such as changes in the anti-doping legislation, as well as details of the annual activities of major anti-doping organizations, including the World Anti-Doping Agency and the International Testing Agency, on cases of violations of anti-doping rules in different countries and the sanctions imposed. At the same time, on the background of lack of information, the spread of misconceptions and myths is quite common, especially among athletes.

A large proportion of respondents believe that the most effective tool in the fight against doping is to raise the awareness of athlete support personnel and athletes themselves. As the study has shown, the provision of information on doping in the following way will have a deterring effect:

- Get aware of the list of banned substances and methods, as well as the list of frequently used treatment-medical products containing banned substances updated annually, and place it in an accessible place for athletes and the athlete support personnel;
- Explain the mechanisms of doping impact on the body and the possible effects of short-term and long-term consumption on the health of athletes;

- Explain the principle of the doping testing scheme, both in the non-competitive period and at international and local competitions;
- Clearly divide responsibilities of athletes and the athlete support personnel, defined by the anti-doping rules, and explain them based on examples;
- Familiarize with the sanctions imposed for violation of anti-doping rules and additional aggravating and mitigating circumstances, and give relevant examples.

Athletes often have injuries due to the specifics of their activities and have to use medications for therapeutic purposes. Consequently, they constantly have to take into account the restrictions imposed by the World Anti-Doping Agency. For example, during the study, they had concerns that it was impossible for them to use even a painkiller in the pre-competition period. In order not to be left with a sense of injustice due to strict prohibitions, it is important for athletes to be well aware of the principle, based on which the list of prohibited substances is compiled.

Athletes who decide to use doping often rely on the advice of incompetent individuals. While using doping to achieve the desired goal, they can neither estimate the duration of the course nor the doses. Consequently, they cannot improve athletic performance and pose a risk to their health. However, such unsuccessful examples may not induce them to drop using doping, and the athletes may try to increase the dose or use a stronger substance. It is important for athletes to be aware of the fact that the effects of doping are limited in time, and by using doping athletes become dependent on prohibited external means to maintain their achievements. Therefore, the risk of failing an athlete's test is critically increased. Coaches and athletes form more correct perceptions of doping harm when hearing examples of negative experiences in the sports world.

Existing Ways of Awareness of Doping

Information Need and Availability

The interviewed athlete support personnel can hardly find information about doping independently. The study showed that, with rare exceptions, federations do not provide the athlete support personnel and athletes with credible and official sources of information regarding doping. Moreover, some of the athlete support personnel do not know the website of their own federation and are not aware of the content of the page and the material posted on it.

The availability of competent doctors at the national team level in the federations is high. However, there federations differ in that regard, both in the lower leagues and in the regions, in terms of the availability of relevant personnel. As for the category of athletes under the professional athlete age, which is mainly the age of 14-15, both in the capital and large cities, as well as in the regions, there is virtually no medical personnel for them.

The most frequently requested information that the athlete support personnel need in their daily activities is the list of prohibited methods and substances that is updated annually by the World Anti-Doping Agency.

The document is available online in English on the websites of the

International Sports Federations and various anti-doping organizations, and the Georgian version of the document is available on the website of the Georgian Anti-Doping Organization. Georgian sports federations cooperate with the mentioned organization in order to receive the

Frequently Asked Questions of Athletes about Doping:

- ✓ How long does doping stay in the body?
- ✓ How to ensure that no traces of doping are detected in tests?
- ✓ What types of painkillers can be taken?
- ✓ Are Creatine and an amino acid allowed?
- ✓ If I take a legal drug today, in case of a ban after years, can my test be considered a failure retrospectively?
- ✓ What are the consequences of short-

service. Accordingly, the Georgian version of the list of prohibited substances is provided to sports federations by the Georgian Anti-Doping Agency.

To ensure access to the document for the athlete support personnel, all federations have chosen different ways of communication. Some of them post it on their own website, while others send it out electronically or in print form to the head coaches and/or doctors.

"All federations cooperate with GADA. They provide us with a list that we put on our website, and also, we send it to the team doctors. During the workshops, we tell the athletes where they can see the list of allowed or banned substances. For example, once we were late in posting on a website and we were reprimanded by athletes, they complained to us." (Rugby; Federation)

"The doctor provides information about this; athletes often contact them. I also liked the idea of posting it on the website. We do not have an active website now, but we have a page in the social network where we are active." (Boxing; Federation)

"When anti-doping expert sends us the list, we resend it to the medical personnel, as well as to the athletes if they ask for it. Mostly doctors ask questions. Doctors are well aware. We have not uploaded it on the website, and I liked this idea. If anyone contacts us, we will print it or send it by e-mail." (Athletics; Federation)

It should be noted that most of the federation doctors are more able to perceive and use the information provided in the banned list, while coaches are less able to do that. However, the last step for verifying and confirming the information for both categories is to consult with a representative of the Georgian Anti-Doping Organization in person or by phone. It should be noted that the agency has included an explanatory text with the prohibited list on its website - "Summary of major changes and explanatory notes". However, the study could not identify a case of the athlete support personnel using this document.

The study found that federation member coaches in the regions have the least access to the annually updated list, as well as access to competent doctors.

The most sports federations pay little attention to the supply and promotion of doping support literature and educational resources. Only a few of the federations involved in the study had relevant literature, including information leaflets provided by the Georgian Anti-Doping Agency.

"We depend on anti-doping expert, we have the materials that GADA provides us. It is desirable to have specific information in a short, understandable language." (Boxing; Federation)

"We have a library in the main room; any athlete and athlete support personnel can find it, but only books. There are rules related to doping as well as medical terms. Mainly in Russian and English, less in Georgian. Anti-doping expert gave us the booklets. There have been cases when athletes showed interest in them. If the language is too difficult to understand, we provide help." (Athletics; Federation)

"We have nothing like that, we barely translated the legislation, GADA provided us with anti-doping rules in Georgian." (Paralympic; Federation)

At this point, federation officials say, coaches and athletes take little interest related topics and literature, which may be due to the topic being less popular or the material having a non-user-friendly format. In their view, it is important to diversify information taking into consideration the target category. In particular, unlike physicians, coaches and athletes need to be provided with information in a format adapted to them, for example, reduced text, more visualization, and in digital form, which includes animation and computer graphics. Since athletes mostly access information via mobile phones and tablets, respondents believe that it is important to create a Newsfeed-type application that will include addresses for Georgian versions of doping news and required documents from various websites.

"It would be good if materials were prepared with shorter and simpler texts and illustrations. Everyone is bored of reading large texts. It would be good to have some educational program in the form of a video/clip. There is a YouTube channel where you can find videos on related topics, but not in Georgian." (Athletics; Federation)

"These training should be fun. When an athlete is already experienced, for example, is 23+, who already has some information, it can be held with them normally, but if we do it in lower age groups, it should be simple, fun, easy to listen to. To make sure that someone does not start having fun on the phone. There should be different types of presentations for different age groups. We have a team under 15; they are 13-14-15 years old; we have to start from there." (Weightlifting; Doctor)

"We have had booklets for 2-3 years, those who have a desire can read them, but they are already outdated. The booklets were not in much demand. It is better to make a video; they can also watch the video posted on the site on their phones." (Gymnastics Federation)

In a few cases, Federation representatives had experience with the successful use of educational resources on the official websites of anti-doping organizations. According to them, if the easy-to-understand and fun format of information provision to athletes was maintained and translated into Georgian, the material would be an attractive and effective resource for athletes to obtain doping-related information. According to the respondents, one of the places for posting such materials could be the website of the Georgian Anti-Doping Agency.

"We have delegated doping activities to ITA, it uses the WADA platform ADEL (Anti-Doping eLearning), and training and seminars are often used from this platform. ADEL's platform is best in every way with its format and pedagogical approach. This is the answer to the challenge of how to provide information to a 10-15-year-old person so that they understand. Previously I did not consider the quiz effective, but in recent years I have changed my mind. The methodology and form of compiling quizzes have changed.

These quizzes on this platform are not in Georgian but are in Russian. It would be best to use this material, translate it into Georgian and provide it to the athletes."
(Weightlifting; Federation)

Training

The study showed that the athlete support personnel can obtain more comprehensive and complete information about doping through training.

In most cases, doping information is provided to the athlete support personnel in accordance with commitments made by international federations or on the recommendation of the training provider organization. The study did not reveal any cases where the federation, upon its own initiative or at the request of the athlete support personnel, spent funds to obtain the services of a relevant specialist or organization.

"GADA asks us to take part in their events, and we take it into account. In addition, when an athlete participates in international tournaments, it is a critical recommendation for them to have participated in an anti-doping workshop. They will be allowed to compete without it, but in the future, it may be mandatory to attend." (Weightlifting; Federation)

"We do not have such an obligation to the Paralympic Committee, and we have not received any training organized by international partners; we use GADA services in terms of training." (Paralympic Committee)

"The International Federation obliges us to conduct training, to make booklets, and we do that. The athletes are prepared when the team attends a seminar." (Rugby; Federation)

"It is not requested; however, in the annual report, we indicate whether seminars were held and how many participated. There are courses to be taken before leaving for the European Championship, which are translated into Georgian, we were offered to

translate into the national language, and we requested it. It is also available on the website of the International Federation in Georgian." (Athletics; Federation)

"As for the obligations, we have an obligation to the Gymnastics Federation to send licensed personnel to international competitions. To get a license, they have to take a course on the WADA website, which is not in Georgian, and this is a hindering circumstance." (Gymnastics; Federation)

Various actors, including the Ministry of Sports, the Georgian Physical Education and Sports Training University, the Georgian Olympic Committee, local federations, international federations, and the Georgian Anti-Doping Agency, have been named as organizers and service providers of seminars and training sessions by various sports federations and the athlete support personnel.

Most of the training sessions cover various topics, where doping is one of the components. The exception is the

training conducted by the Georgian Anti-Doping Agency, where the doping problems are presented to the listener in a more substantial way and with the focus on various aspects.

As the study suggest, the Weightlifting and Judo Federations showed more activeness to raise the awareness of athletes and their support personnel by inviting the support personnel from the regions to the meetings. It should be noted that during the pandemic, when the number of competitions dropped significantly, the awareness-raising meetings also became rare.

Good examples of support personnel awareness

Example N1 Following the recommendation of the International Weightlifting Federation, before each competition the federation conducted trainings led by a specialist invited by the local federation.

Example N2 With the assistance of the International Judo Federation, the Georgian Judo Federation frequently conducted training for athletes and their support personnel. The meetings were mostly led by the federation's chief physician, who paid more attention to the proper planning of athletes' workouts and determining the appropriate workload with coaches, and gave recommendations on nutrition. As for the doping related information, he discussed it in depth with doctors.

The interviewed athlete support personnel talk about the need to increase the frequency of training. In this regard, special demand emerged from the regions. The athlete support personnel hope to receive updated information on banned substances and methods as well as anti-doping rules and sanctions during training. The athlete support personnel believe that training on the effects of short-term and frequent use of doping on health should be attended by athletes too so that they obtain information on issues that they are interested in directly from a competent person. The material for athletes should be adapted to their age and interests. It was noted that it would be good to hear examples from world sports of those who have been sanctioned for violating anti-doping rules. The study found a lack of knowledge about nutrition and nutritional supplements among the support personnel for both children and adolescents, as well as for adult athletes. A large proportion of respondents, especially coaches in the regions and of under-professional-age groups with less access to physicians, hope that along with doping the training will also cover these topics.

"It was clear to me. I would like to focus more on such training, how doping affects the body, what the risks are for girls, what the risks are for boys." (Weightlifting; Coach; Region)

"It would be good to talk at such meetings about examples, who failed, what sanctions were imposed, for what reason, the same information about the trainers, who was fired from the coaching position." (Football; Doctor)

"As a rule, the topic of doping should be managed by a representative of the medical field, but not all teams have the opportunity to have qualified medical personnel, so you should also know about it. Things change every year, which is why it is difficult for a coach. There are drugs that are allowed for treatment; it is interesting to have information about them. We need to know not to be fined, not to get disqualified. The most important information for me is what punishment comes with using any drug, in what case, how long the disqualification lasts, what punishment can be imposed on the team. In general, the most important issue with doping is, of course, health." (Rugby; Coach; Region)

"It is desirable to have training on nutrition, one of the training talked about it, but there was not enough time, and I need more information. I also have to have information about doping to correctly explain to a child when they ask me." (Fencing; Coach; Region)

The existing picture of information delivery to ethnic minorities and athletes with special needs.

Any materials related to doping are delivered to the federations in Georgian. Trainings are delivered in Georgian as well. The information materials used at the training and the printed handouts distributed during trainings are also in Georgian. Most non-Georgian-speaking sports federation member athlete support personnel and athletes can generally understand the information provided in Georgian. However, there are cases when there is a need for translation, and according to the survey respondents, this service is provided by their colleagues.

"We send materials to ethnic minorities in Georgian, and they translate them if necessary." (Gymnastics; Federation)

"We have a lot of ethnic groups; of course, there is more or less a language barrier among athletes, they mostly speak Russian, but the athlete support personnel speak Russian well and mostly communicate in Russian, and it is not a problem." (Boxing; Federation)

"There are ethnic minorities, but they understand the Georgian language; if there is any problem in this regard, the trainers and doctors provide explanations. They are mainly representatives of the Armenian ethnos. Seminars and training are conducted in the Georgian language, and there is no problem in this regard." (Athletics; Federation)

"It is a little difficult for them who come from Akhaltsikhe or Marneuli." (Boxing; Coach; Ethnic Minority)

"There is a category of coaches who know Georgian well, and they absorb information freely about the training, there are coaches who know Russian, and there is a category who only knows Azerbaijani, they will definitely need a translation. I also have children from ethnic minorities; there are those to whom I deliver information; they understand, although I do not know Azerbaijani, and for some of them, it is difficult to understand; they can understand 70% of the information. It will be good if it is printed in their language." (Basketball; Coach; Region; Working with National Minorities)

It should be noted that the Paralympic Committee includes blind or partially sighted athletes, and the federation provides them with basic documentation and an updated list of prohibited items in Braille. According to the representative of the Georgian Anti-Doping Agency, in previous years, they were not able to organize training for athletes with special needs. Still, recently they started engaging in trainings. The agency seeks funding to provide training and handouts for athletes with special needs with visual and hearing impairment.

GADA training

As mentioned above, the main provider of anti-doping training services for federations is the Georgian Anti-Doping Agency, which systematically conducts training. In the pre-pandemic period, meetings were held face-to-face, both in the capital and at venues for sports teams and clubs. Currently, the training is conducted online. A representative of the agency informed us that more than 30 online training sessions were conducted in the last two years. Information on the possibility of participating in the training was provided to the sports federations directly or through the Ministry of Sports. As the study showed, mobilization by the federations to involve athlete support personnel and athletes in training was not effective because a large proportion of the athlete support personnel surveyed, especially those from the regions, did

not even have information about this opportunity. At the same time, the athlete support personnel who had the experience of attending the GADA training, positively evaluated its duration and content, the volume and language of the information presented. The material provided after the training was also considered a necessary resource.

"I give the highest assessment to the GADA training, it explains in detail, in a simplified language to all doctors, and they are also attended by the athletes. Unfortunately, it stopped during the pandemic period. Hopefully, it will recover. It is important for both the athletes and us. In order not to be stressed that someone will inadvertently take some drug, it is good to have more awareness among athletes. Coaches also attend these training. Ethical issues are also often devoted time at these meetings. Duration is enough." (Judo; Doctor)

"He was a very qualified trainer from the Anti-Doping Agency; they handed us both booklets and electronic material. Provided us with a list of banned drugs. The training was also conducted with athletes and coaches. It was very productive. Many questions were asked, and all of them were answered in a qualified manner. It was spoken in an understandable language. The young athletes also had some weird questions, and they explained everything to everyone. These workshops were halted during the pandemic but can be conducted online. There may have been some training online last year, but I have not heard. I might have missed them. The brochures that were given to us were informative, what the consequences of doping are, what the punishments are, they are written in an understandable language." (Rugby; Coach; Region)

"We hold seminars twice a year, GADA conducts them for us. We are in direct contact with them." (Paralympic)

Testing

As the study revealed, there are several sources of funding for doping testing in Georgia: contribution of international sports federations; the Georgian Anti-Doping Agency, which receives basic funding for its activities from the Ministry of Sports of Georgia, and the Georgian Olympic Committee; Also, one of the small resources of internal testing is the budget of local sports federations, although it must be said that testing costs are a rather painful topic for some federations. Part of the representatives of the federations stated that in specific cases, testing is required by the International Federation. At the same time, it became clear that the state does not require federations to include the money for testing as a necessary item in the budget.

The Georgian Anti-Doping Agency uses the methodology developed by the World Anti-Doping Agency when selecting athletes for testing within its budget, which involves assessing doping risk scores.

It should be noted that most of the interviewed athlete support personnel did not know the principle of selecting athletes during the non-competitive period and also during internal competitions, which in some cases left them with a sense of injustice.

Among the respondents, testing most frequently occurred in those sports that the Georgian teams and athletes have high sporting achievements at the international level. Such federations are: Judo, Weightlifting, Wrestling, and Rugby Federations. These federations use the testing services offered by all the actors listed above, and they also have a rather large budget. In contrast, some federations are left with only their own limited budgets and GADA for testing.

Participants unanimously acknowledge the fact that frequent testing proportionally reduces the risks of doping. Although there have been some positive shifts in Georgian sports in this regard, as well as the fact that there are already positive precedents for GADA and federations conducting random, unplanned testing, which all respondents considered to be an effective deterrent, all participants complained about the lack of testing frequency. Especially during the domestic championships of Georgia and in the non-competitive period - in the lower leagues and the age category.

"There is a problem with testing in the lower leagues, we cannot test there, we do not have the budget for it, even if one test is conducted in each league, it will be good, they know that they can be tested, and they will be careful." (Rugby Federation)

"Frequent testing will be good, once in 2-3 months. If the funding increases for GADA, it will bring results." (Paralympic Committee)

"Increasing the number of internal tests would be a good tool to fight, which means more costs. We have good funding. The strategic numbers of tests are funded by the state." (Weightlifting Federation)

Ineffective detection and response to suspected doping

If the effects of a banned substance are more than obvious and there is a suspicion of consumption, a unified approach has not been established among the large part of the sports community in terms of response.

Lack of awareness of the details of anti-doping rule violations and relevant sanctions has been identified as a common impediment to the subsequent transmission of information on doping-related violations. For example, respondents know that the disqualification of athletes is defined as 2-4 years, although in what cases the shortest period of disqualification is applied to an athlete, and what may become an aggravating circumstance is not known to the respondents. Accordingly, there were cases of respondents who deemed the measures taken in response to the violation of anti-doping rules as unfair.

It should be noted that the majority of respondents are unaware of the anti-doping rules and sanctions imposed on the athlete support personnel.

Also, it may be a problem for athletes to protest against the anti-doping rules in the international court because, according to the respondents, there is a critical shortage of lawyers with relevant qualifications and knowledge of the law in Georgia.

"As for legal proceedings, the only organization is the Swiss CAS (Court of Arbitration for Sports). In 2015, we had a case in the federation held by this organization, the qualification of the Georgian lawyer was very low." (Weightlifting; Federation)

"The athlete who failed did not plead guilty. They requested test B, but it also showed a positive outcome. It was in 2013. They applied to the court; these procedures were unknown to us then. It turned out that we did not even have suitable lawyers; we saw the arbitration for the first time." (Paralympic Committee)

The survey found that the majority of respondents respond to suspicious cases of doping through personal relationships and informal conversations, although they admit that their efforts did not end well - in most cases, these forms of response were recognized as inappropriate.

In several cases, informing the Georgian Anti-Doping Agency (GADA) about the official way of transmitting the information about the violation was mentioned. However, in case of suspicion of doping, the responsibility for allocating the money for the test to prove the violation falls on the person who suspects, which increases the possibility of demotivation.

"There was a precedent, the team lost, and one of the players of the opposing team was suspected as he had been on the field for long and did not look tired. We applied to GADA, but this opinion was considered insufficient, and the applicant was to pay the amount, and they did not want to do that. The complaint was left unanswered. If there is enough reason to doubt, we will think about conducting a doping test within that tight budget. We would have funded if there was enough reason to doubt." (Basketball; Federation)

"Theoretically speaking, international experience and best practice are like this, if the coach feels that there is a violation, they go to communicate with the athlete, who can say it honestly, or there is a case they have unknowingly taken it. If it is not found out, a test is prescribed for the whole team to not tarnish the image of the athlete. If it happens

to us, we will do the same, but the problem is funding. However, the damage done by doping is so high - morally, physically, and financially, it is better not to spend money on other things and fund testing. If there is reasonable doubt and there is a financial barrier, this should be solved. There is an opportunity for the state to add money to you if necessary." (Weightlifting; Federation)

Only one federation member had information about the possibility of anonymous disclosure of information in case of suspected doping, particularly the ITA whistleblowing platform 'Reveal.' At the same time, it should be noted that the subsequent transmission of information about the violation anonymously is perceived as unacceptable by a large proportion of respondents and unsuitable for the cultural context. However, there was a share of the respondents who think that using this method to improve the current situation is justified.

Under the influence of the above factors, it can be said that suspicious cases often end up without reacting.

State anti-doping strategy

According to the respondents, the role of the state is limited to allocating funds to the federations and GADA and it rarely participates in the organization of trainings and seminars. According to the participants, an active and effective anti-doping policy cannot be developed within the framework of this funding and these approaches. According to the study, there is no appropriate approach established to doping in athletes and the community.

Respondents see the need to strengthen the state anti-doping policy in the following areas:

- Promote the problem of doping, raise awareness, and launch the anti-doping information campaign to build appropriate attitudes. Permanent anti-doping propaganda through mass media - organize TV programs, encourage electronic and print media to become more active;
- Increase funding for federations and the Georgian Anti-Doping Agency;
- Increase targeted doping testing;

- Strengthen the anti-doping activities at the regional level, both in the field of education and testing.

The study has shown that the majority of athletes are not certain about the current doping policies and innovations in the world.

According to the representatives of the federations, our state policy needs to be in line with the world's approaches for establishing the values of clean sports and a healthy society regarding doping.

The situation would be improved by introducing world-proven doping policy experiences to athletes and the public. Such information should be provided to them in a centralized manner.

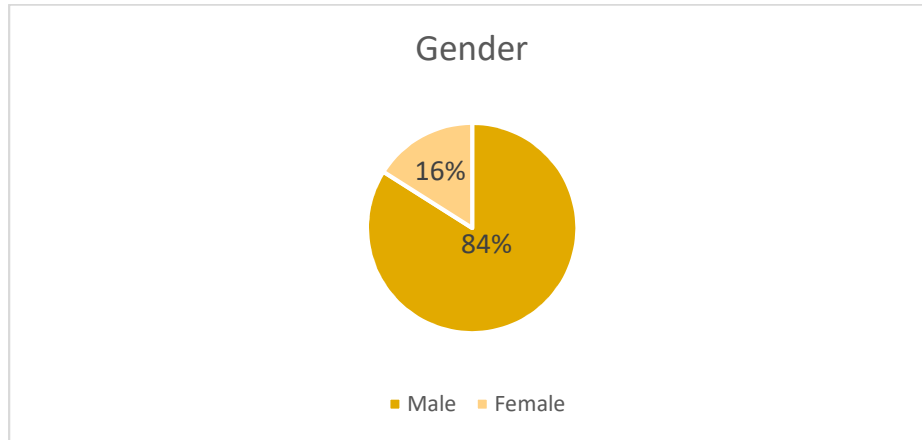
Quantitative Survey Results

Demographic overview

Gender

Different gender representatives participated in the survey. The majority of respondents were male (84%), while the minority were female (16%) participants.

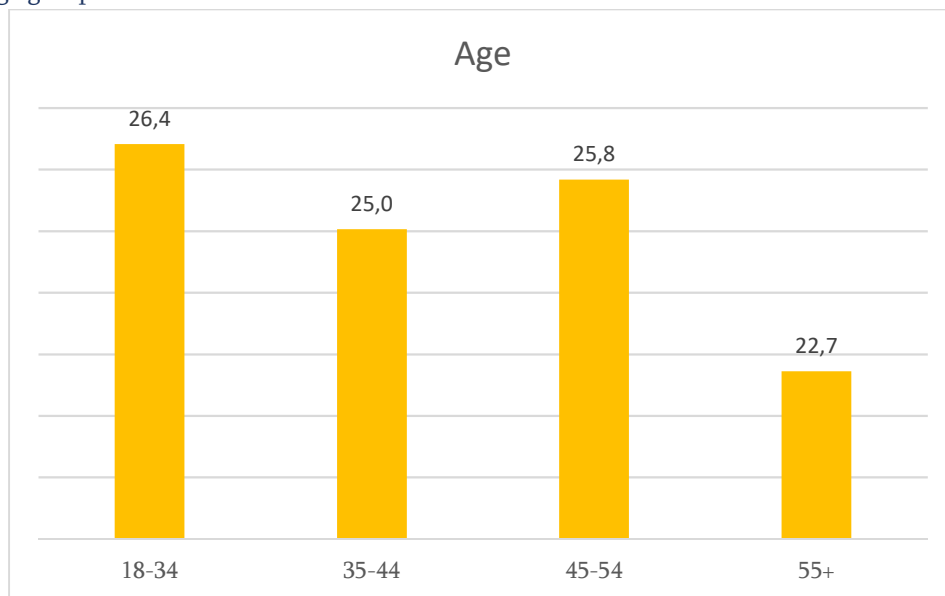
Figure 1 – Gender distribution



Age

Also, different age group representatives participated in the survey. The largest share was respondents between 18-34, followed by respondents between 45-54 and 35-44 years old. The smallest share of respondents was people over 55.

Figure 2 – Age group distribution



The mean age of respondents equals 43,68 (SD=11,474). The minimum and maximum ages are 24 and 65, respectively.

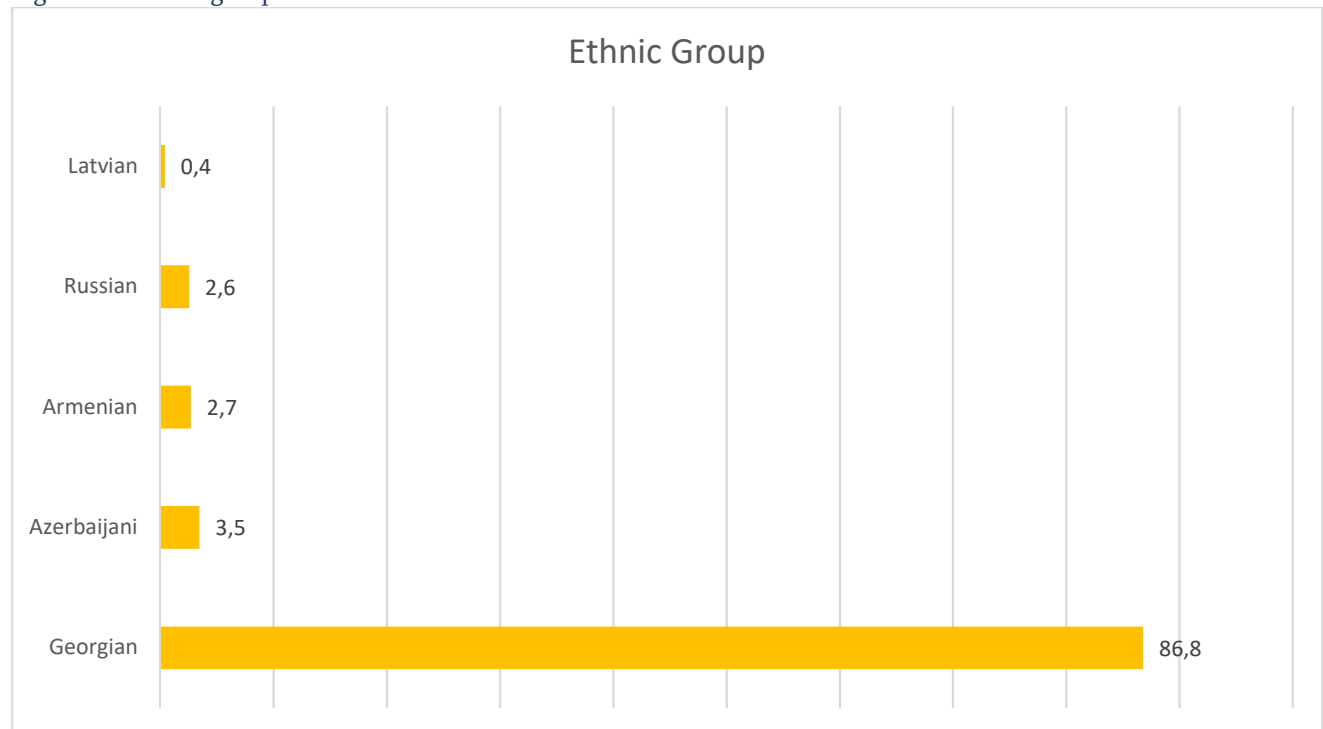
Table 1 – Age

	Age
Mean	43,68
Median	42,26
Mode	56
Std. Deviation	11,474
Minimum	24
Maximum	65

Ethnicity

Representatives of different ethnicity took part in the survey. The majority of the surveyed respondents (86.8%) are ethnic Georgians, while the rest represent ethnic Azerbaijanis, Armenians, Russians, and Latvians. Four percent do not identify themselves with any ethnic group.

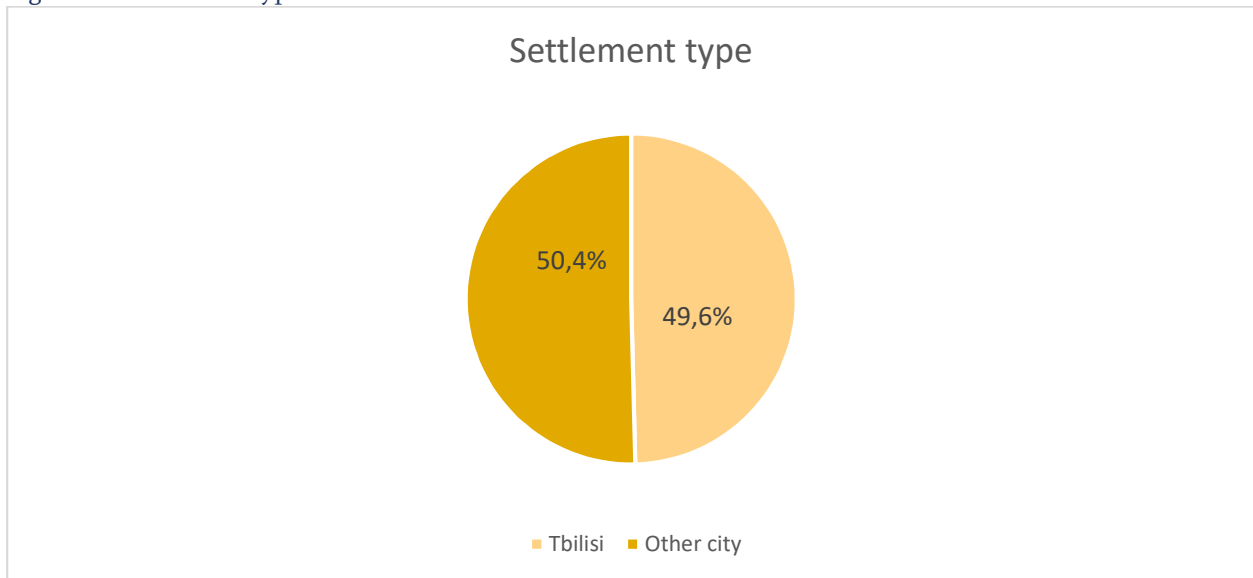
Figure 3 – Ethnic groups



Place of residence

The respondents were surveyed in Tbilisi, as well as in other cities. Distribution of the respondents from Tbilisi and other cities is almost equal; 50,45% of respondents live in other cities, while 49% live in Tbilisi.

Figure 4 – Settlement type

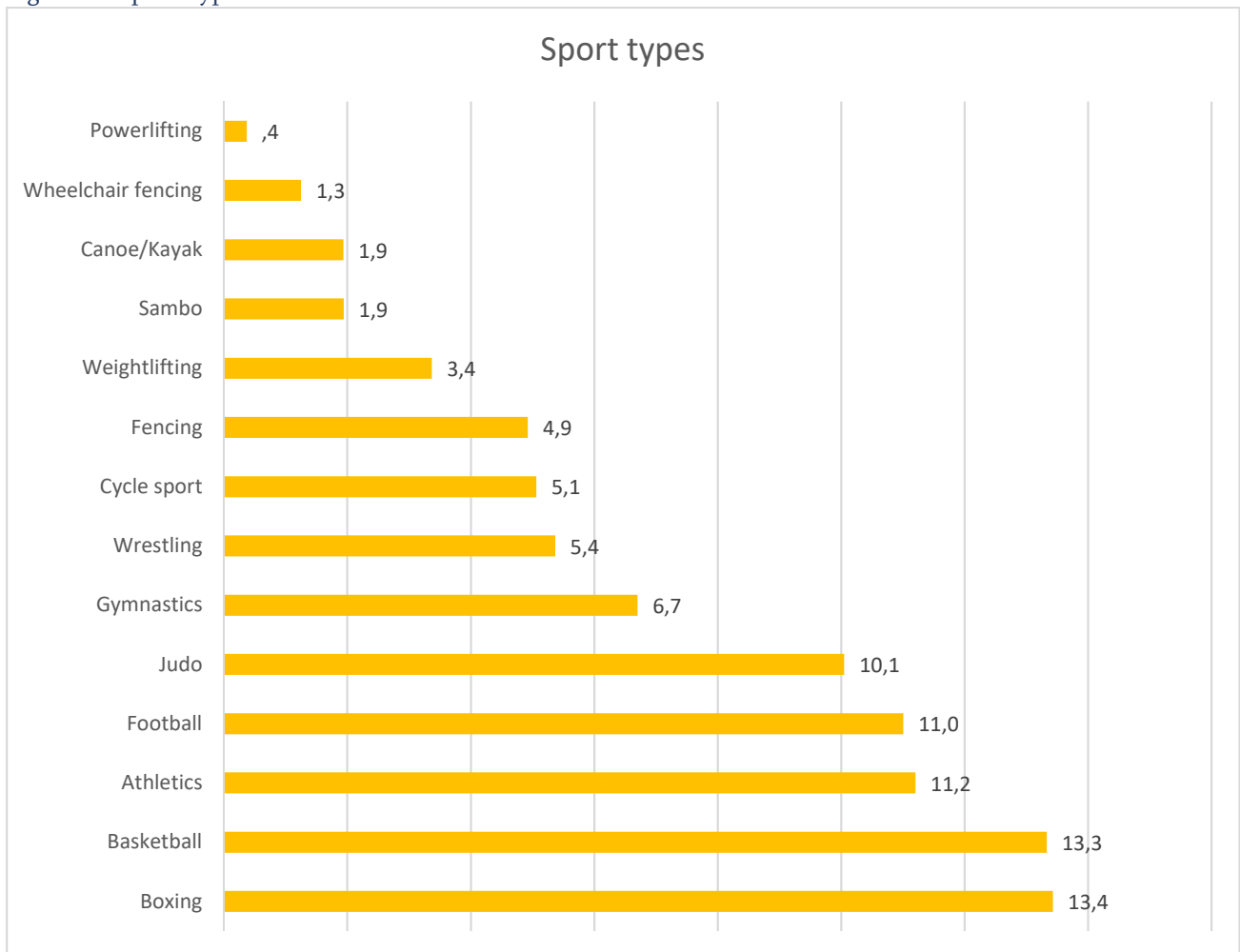


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Sports types

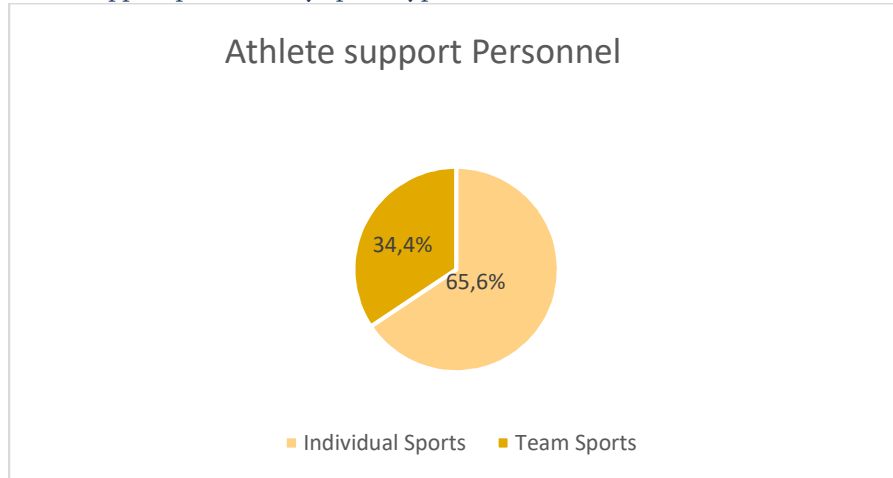
Identifying sports types where respondents work with athletes was important. The analysis shows that the majority of respondents work in the following spheres: Boxing, Basketball, Gymnastics, Football, Judo, and Rugby. While the smallest share works in Sambo, Canoe, Para fencing, and Powerlifting.

Figure 5 – Sports types



Except sports types, respondents differ by individual and team sports types. According to the survey results, a third of the respondents (34,4%) work in team sports, while two thirds of the respondents (65,6%) work in individual sports.

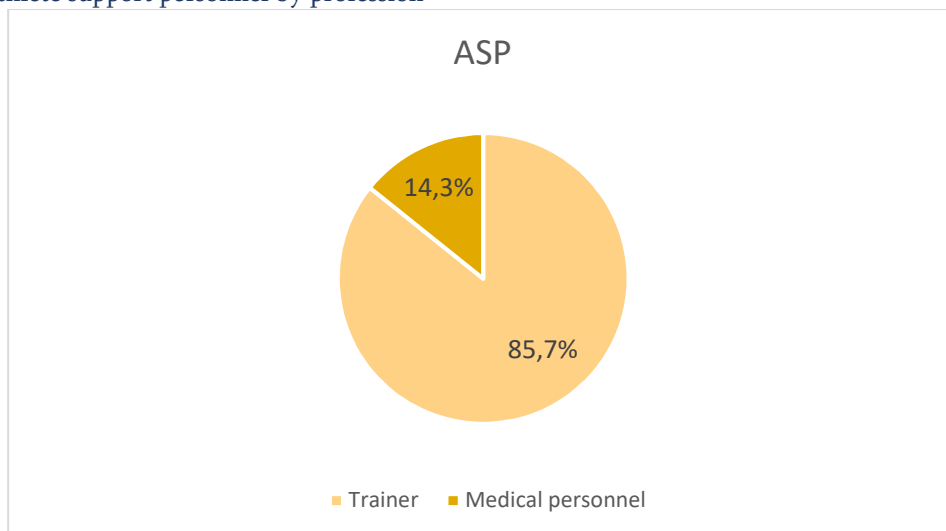
Figure 6 – The athlete support personnel by sports types



The athlete support personnel

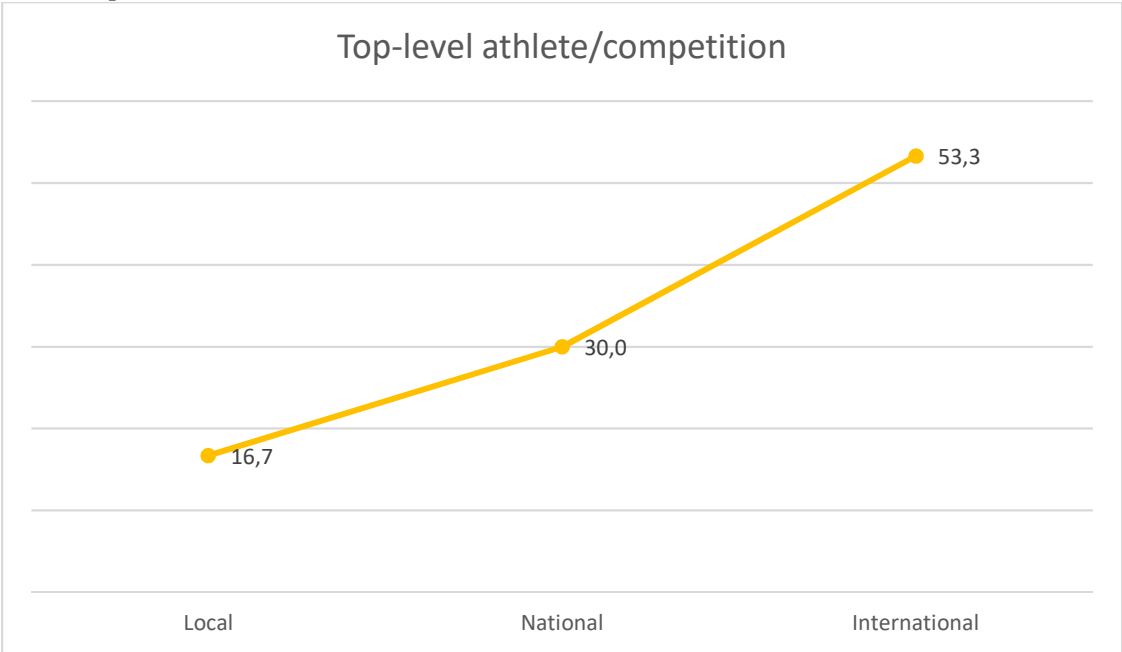
Two types of athlete support personnel participated in the survey. The majority (85,7%) of respondents are coaches/trainers. The rest of respondents (14,3%) represent medical personnel.

Figure 7 – Athlete support personnel by profession



Mostly, the support personnel work with athletes participating in international competitions, followed by athletes participating in national and local competitions.

Figure 8 – Competition level



Overview of findings

The vision of the doping problem and attitude towards doping

To identify the general attitudes of the athlete support personnel towards doping, it was important to explore their attitudes and knowledge about doping.

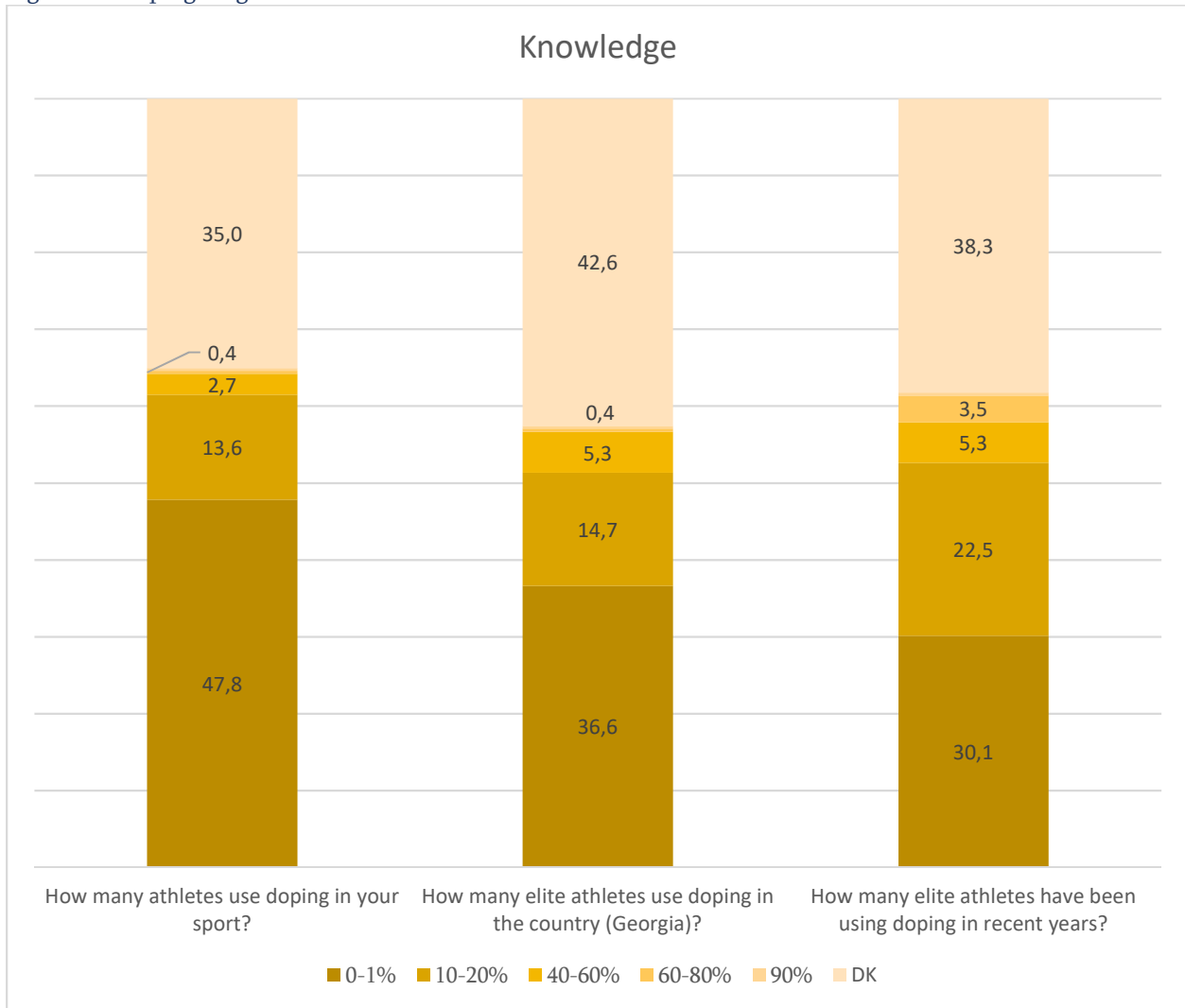
The respondents were asked what percentage of athletes dope in sports where they work. Almost half of respondents report that 0-1% of athletes dope, one-third (35%) say 'do not know'. Approximately every tenth person (13,6%) reports that 10-20% of athletes use doping. The answer option of 60-90% was named by a small share of respondents.

Regarding the question about the share of athletes in Georgia who use doping, almost every second respondent (42,6%) says that they do not know the percentage distribution, every third respondents thinks that 0-1% of athletes use doping, and 14,7% say 10-20% of them use doping.

As for elite athletes, more than a third of respondents (38.3%) note that they do not know if the athletes have doped in recent years. Less than a third state that only 0-1% of athletes use it. However, it should be noted that the response share for the answer option '10-20%' is increased and 22.5% report that 10-20% of elite athletes consume doping. Regarding differences between groups for the discussed statements, Chi square test did not show any statistical significance ($p>0.05$).

In conclusion, we assume that the athlete support personnel mainly do not have information about doping consumption by athletes. However, when respondents have to name a specific share of athletes using doping, in their opinion, quite a small share uses it, which indicates that, in their view, the doping cases are quite rare.

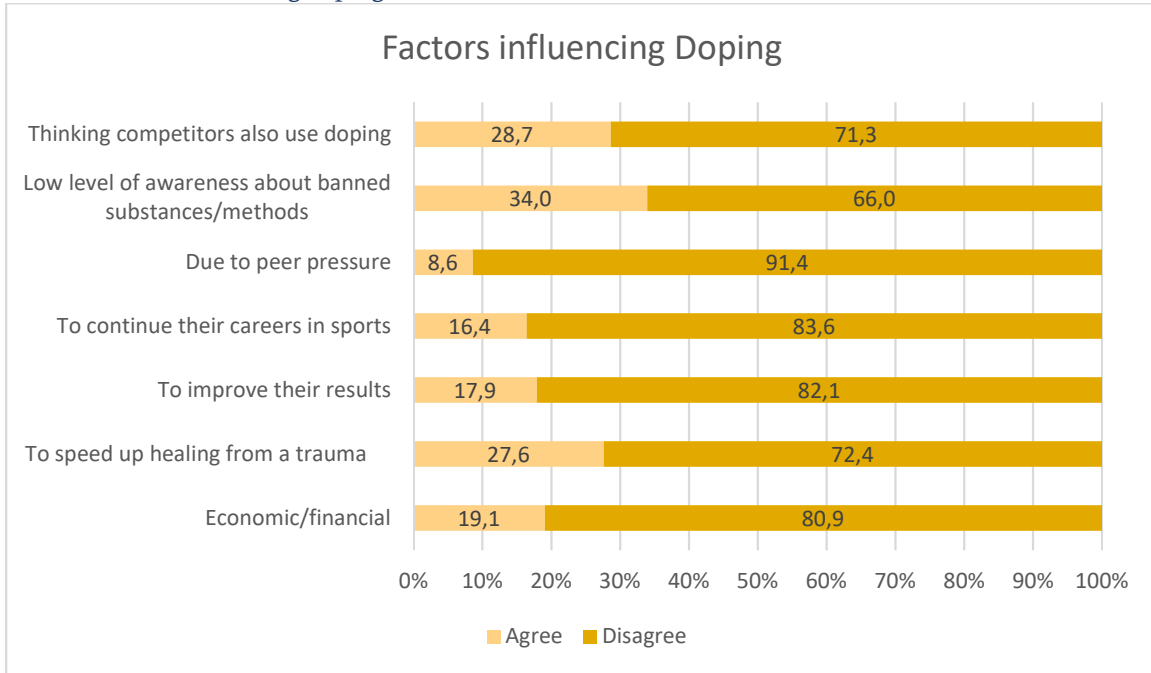
Figure 9 – Doping usage statistics



It's interesting what the athlete support personnel think about the reasons that might force athletes to dope. We suggested different factors to the respondents that might push athletes to use doping. In respondents' opinion, the suggested factors are less likely to affect athletes' decision to dope. The most frequently named reason is the low level of awareness of banned substances. Almost every third respondent shares the opinion. Approximately every fourth respondent believes that thoughts about competitors also using doping (28,7%) or in order to speed up healing from traumas (27,6%) might impact athletes' decision on doping. Every fifth respondent says that economic and financial factors (19,1%) might impact on doping consuming, while 17,9% think that athletes dope to improve their performance; 16,4% share

the opinion that doping might be motivated by athletes' desire to improve their sports career. The vast majority of respondents (91,4%) do not agree with the opinion that peer pressure may affect usage of doping.

Figure 10 - Factors influencing doping



In conclusion, we are able to say that mostly the athlete support personnel consider that above-mentioned factors do not impact athletes' decision on doping.

Chi square test shows only two statistically significant differences while estimating different factors. In particular, a larger share of support personnel working in individual sports (80%) agree with the opinion that athletes use doping to improve their career, compared to the respondents working in team sports (74,7%) ($X^2(1) = 4.312$; $p=0.038$). A larger share of respondents who work only on a local level (80%) agree that low level of awareness of banned substances can be a cause of doping, compared to the support personnel working with athletes competing at international (68,1) or national levels (53,8%) level ($X^2(2) = 7,894$; $p=0.019$).

Athletes' addiction to doping is influenced by various factors as well as their "significant others". We were interested to find out what the support personnel think about the influence of personal trainers, parents, teammates / acquaintances and team doctor / medical staff on the

development of athletes' attitudes. Respondents assess each 'significant other' with a score above average (2.5). The highest score is observed for personal trainers (M = 3.62; SD = 1.473), and the lowest for parents (M = 3; SD = 1.306). Also, it should be noted that 4,5% of respondents are not aware of the impact of personal trainers. Nine-point four percent of respondents do not know the effect of parents, 6,1% are not aware of teammates' impact, and 5,9% do not know about the influence that medical staff might have.

Regarding differences between groups, one-way ANOVA analysis did not confirm a statistically significant difference while assessing the role of any significant other ($p > 0.05$).

Based on the data, it can be said that participants recognize the role of others in the development of athletes' attitudes towards doping. But most of them underline their own (coaches and medical staff) roles, which is indicated by both mean scores and the mode of distribution (MODA = 5).

Table 4 – Assessment of the others' influence

	Personal trainers	Parents	Teammates/sports acquaintances	Team doctors/Medical personnel
Mean	3,62	3,00	3,42	3,46
Median	4,00	3,00	3,00	4,00
Mode	5	3	3	5
Std. Deviation	1,473	1,306	1,246	1,449
Minimum	1	1	1	1
Maximum	5	5	5	5

It was crucial to identify to what extent other people may advise athletes to take banned substances. According to the support personnel, it is most likely that teammates advise athletes to take banned substances, and it is least likely that parents give such advice. However, it should be pointed out that for each case (teammates and parents), results are lower than the mean scale score (2,5). This allows us to say that according to the support personnel, none of the significant others advise athletes to take banned substances, even when the substance cannot be detected.

A very small share of respondents reports that they do not know if other people can advise athletes to use banned substances (personal trainers - 3.4%; parents - 3.4%; teammates - 2.9% and medical staff - 3.6%).

Table 5 - Advice on taking a banned substance

	Personal trainer	Parents	Teammates/sports acquaintances	Team doctor/Medical personnel
Mean	1,52	1,44	1,65	1,51
Median	1,00	1,00	1,00	1,00
Mode	1	1	1	1
Std. Deviation	0,976	0,889	0,956	1,026
Minimum	1	1	1	1
Maximum	5	5	5	5

Attitudes towards food supplements and vision of the problem

The study also looked at the support personnel's attitudes towards food supplements and how much they consider it as a problem. The survey asked the support personnel to what extent they advise athletes to take food supplements. According to the results, most often they advise taking herbal products or vitamins and mineral supplements. Most rarely, they advise taking proteins and energy bars. Based on the data, we can say that the support personnel do not advise athletes to take any supplement often or regularly, but sometimes.

Table 6 – Food supplements

	Mean	Median	Mode	Std. Deviation	Min	Max
Herbal products	3,39	4,00	4	1,307	1	5
Vitamins or mineral supplements	2,77	3,00	4	1,194	1	5
Sports drinks	1,90	2,00	1	1,055	1	5
Creatine	1,84	1,00	1	1,077	1	5
Other	1,83	1,00	1	1,144	1	5
Caffeine	1,70	1,00	1	0,934	1	5
Protein-carbohydrate mixture	1,69	1,00	1	1,004	1	5
Energy bars	1,59	1,00	1	0,902	1	5

Regarding differences between groups, Independent Samples T test shows statistically significant differences for two groups: the sports and work types of the support personnel. In particular, the support personnel working with athletes from individual sports was less likely

(M=1.5; SD=0.835) to advise taking energy bars, compared to the support personnel working with athletes from team sports (M=1.77; SD=1) (F=1.735; p=0.189) (t (216) =-2.137; p=0.034).

There is a difference for almost all statements between coaches and medical staff representatives, except advising taking herbal products. Medical staff members advise taking all supplements (except herbal products) more than coaches do. In particular: vitamins and mineral supplements (F=0.001; p=0.976) (t(216)=-2.301; p=0.022); Creatine (F=6.873; p=0.009) (t(36,287)= -3,723; p=0.001); Sports drinks (F=2.083; p=0.150) (t(216)= -2.855; p=0.005); energy bars (F=2.927; p=0.0089) (t(216)= -3.543; p=0.000); Caffeine (F=1.549; p=0.215) (t(216)= -3089; p=0.002); proteins (F=4.327; p=0.039) (t(216)= -3.547; p=0.000), and other supplements (F=3.005; p=0.084) (t(216)= -4.336; p=0.000).

Table 7 – Food supplements- Comparison between groups

		Mean	St. Deviation
Vitamins or mineral supplements	Trainer	2,69	1,176
	Medical personnel	3,22	1,223
Herbal products	Trainer	3,42	1,312
	Medical personnel	3,21	1,284
Creatine	Trainer	1,72	0,988
	Medical personnel	2,61	1,277
Sports drinks	Trainer	1,82	1,022
	Medical personnel	2,40	1,131
Energy bars	Trainer	1,51	0,855
	Medical personnel	2,11	1,016
Caffeine	Trainer	1,62	0,889
	Medical personnel	2,17	1,067
Protein-carbohydrate mixture	Trainer	1,60	0,949
	Medical personnel	2,27	1,141
Other	Trainer	1,70	1,069
	Medical personnel	2,62	1,273

It was crucial to know the athlete support personnel's thoughts about whether any above-listed factors can cause troubles for athletes while testing during competitions. According to the surveyees, it is less likely that the supplements can cause any problems while testing. The highest-rated supplements are energy bars and proteins. However, a large share of respondents notes that they do not know how much problematic each of the supplements is. Every fifth respondent does not know whether vitamins can cause a problem (19,1%); 17,3% of them do

not know if herbal products can bring trouble; every third respondent answers do not know when it comes to creatine (31,6%) and proteins (34,1%). Every fourth of them says that they are not aware of the effect of using sports drinks (25,4%) and caffeine (25,3%). Accordingly, based on the findings, we can assume that the athlete support personnel do not have enough information regarding the threats that consuming different substances can pose to athletes. Thus, they need to raise awareness in this regard. The same trend is shown in all groups since comparing groups did not show statistically significant differences ($p>0.05$).

Table 8 – Consuming supplements during competitions

	Mean	Median	Mode	Std. Deviation	Min	Max
Vitamins or mineral supplements	1,37	1,00	1	0,592	1	3
Herbal products	1,34	1,00	1	0,614	1	3
Creatine	1,64	2,00	1	0,660	1	3
Sports drinks	1,66	2,00	2	0,640	1	3
Energy bars	1,77	2,00	2	0,681	1	3
Caffeine	1,69	2,00	2	0,680	1	3
Protein-carbohydrate mixture	1,74	2,00	1	0,724	1	3
Other	1,72	2,00	2	0,702	1	3

Regarding the non-competitive period, the indicator of awareness is lower. Every fourth does not know if taking vitamins (21,2%) or herbal products (20,5%) can cause problems for athletes. Every third respondent does not know if taking creatine (33,7%), sports drinks (30,7%), energy bars (35,8%), caffeine (31,4%), and proteins (37,4%) can be a trouble for athletes.

As for the respondents, who expressed their opinions, they think that mostly taking caffeine, energy bars, or proteins can cause trouble, while the least problematic can be using herbal products and vitamins. Similar to the previous case, there is no statistically significant difference between groups ($p>0.05$).

Table 9 - Consuming supplements during non-competitive periods

	Mean	Median	Mode	Std. Deviation	Min	Max
Vitamins or mineral supplements	1,32	1,00	1	0,544	1	3
Herbal products	1,25	1,00	1	0,534	1	3
Caffeine	1,66	2,00	1	0,702	1	3
Sports drinks	1,57	1,00	1	0,663	1	3
Energy bars	1,63	2,00	1	0,673	1	3
Caffeine	1,59	2,00	1	0,639	1	3
Protein-carbohydrate mixture	1,62	1,00	1	0,720	1	3
Other	1,67	2,00	1	0,710	1	3

Perception of responsibility for doping and its prevention

It's interesting to learn who the athlete support personnel hold responsible for doping cases. We asked how much they would feel different emotions in case they exposed the athletes they work with to doping. The analysis shows that the support personnel would feel all four emotions we asked about: shame, inconvenience, guilt feelings, and frustration because their average rating for each emotion exceeded the mean scale score (2,5). Awkwardness and frustration are among the highest-rated emotions.

There is no statistically significant difference between groups while assessing the emotions, which allows us to say that the support personnel feel some of these emotions.

Table 10 - Emotions

	Shame	Inconvenience	Guilt	Frustration
Mean	3,88	3,97	3,75	3,98
Median	4,00	4,00	4,00	4,00
Mode	5	5	5	5
Std. Deviation	1,231	1,160	1,291	1,174
Minimum	1	1	1	1
Maximum	5	5	5	5

According to the surveyees, their duty is to take care of athletes so that they do not use doping. They plan to provide athletes and their parents with information about doping. The respondents do not agree with the opinion that they are responsible for forming anti-doping attitudes among athletes. Accordingly, we can say that the athlete support personnel realize

that their duty is the provision of anti-doping information. However, they feel less personal responsibility.

Table 11 – Working on doping issues

	Mean	Median	Mode	Std. Deviation	Min	Max
It is my duty to work with an athlete to refrain him/her from doping	4,28	5,00	5	1,020	1	5
I plan to provide anti-doping information to the athlete working with me	4,21	4,00	5	0,887	1	5
I plan to provide anti-doping information to the parent of an athlete working with me	4,06	4,00	4	0,988	1	5
Athlete attitudes about doping are not within my sphere of influence	2,36	2,00	2	1,355	1	5

While testing the differences between the groups, a statistically significant difference was observed regarding the evaluation of the three above-listed statements by sports types. The support personnel working in individual sports feel more responsible to work with athletes to avoid doping and providing athletes and their parents with information about doping. Accordingly, the personnel working in individual sports feel more personal responsibility compared to the personnel working in team sports.

Table 12 - Working on doping issues. Comparison between groups

		Mean	Std. Deviation
It is my duty to work with an athlete to refrain him/her from doping	Individual Sports	4,38	0,912
	Team Sports	4,08	1,182
I plan to provide anti-doping information to the athlete working with me	Individual Sports	4,32	0,780
	Team Sports	4,01	1,038
I plan to provide anti-doping information to the parent of an athlete working with me	Individual Sports	4,18	0,884
	Team Sports	3,84	1,135

Sources of information about doping

It was interesting to find out from where the athlete support personnel get information about the banned substances. Based on the results of the research, we can say that most often they receive information from the representatives and website of the Georgian Anti-Doping

Agency, followed by the website of the World Anti-Doping Agency, and most rarely from the federation and colleagues.

Table 13 – Information sources

	Mean	Median	Mode	Std. Deviation	Min	Max
Georgian Anti-Doping Agency (GADA) representative	2,59	3,00	3	1,021	1	4
Georgian Anti-Doping Agency (GADA) website	2,51	3,00	3	1,018	1	4
WADA website	2,50	3,00	3	0,995	1	4
Google search engine	2,16	2,00	2	0,927	1	4
Olympic Committee	2,11	2,00	3	0,852	1	4
Ministry of Sports	2,08	2,00	2	0,853	1	4
Federation Administration	1,90	2,00	1	0,911	1	4
Colleagues	1,87	2,00	1	0,876	1	4
Other	2,23	2,00	1	1,045	1	4

Regarding sources of information, there are statistically significant differences between groups. More often respondents working in team sports receive information from the Olympic Committee ($M=2.29$; $SD=0.858$) than respondents working in individual sports ($M=2.02$; $SD=0.837$) ($F=1.06$; $p= 0.304$) ($t(216) =2.239$; $p=0.026$). Also, trainers more often receive information from the anti-doping agency ($F=1,913$; $p= 0.0,168$) ($t(216) =2,218$; $p=0.02/$), colleagues ($F=1.182$; $p= 0.278$) ($t(216) =2.895$; $p=0.004$), and other sources ($F=4,38$; $p= 0.029$) ($t(216) =2.197$; $p=0.029$) compared to medical personnel.

Table 14 – Information sources – by work type

		Mean	Std. Deviation
Georgian Anti-Doping Agency (GADA) website	Trainer	2,57	1,025
	Medical personnel	2,14	0,904
Colleagues	Trainer	1,94	0,877
	Medical personnel	1,45	0,764
Other	Trainer	2,29	1,052
	Medical personnel	1,85	0,933

And finally, regarding the support personnel working with athletes, who took part in competitions of different level, there is a statistically significant difference in the frequency of

receiving information from the website of the Anti-doping Agency of Georgia ($F(2)=4.416$; $\eta^2=0.039$; $p= 0.013$) or its representatives ($F(2)=6.11$; $\eta^2=0.054$; $p= 0.003$), federation ($F(2)=5.003$; $\eta^2=0.044$; $p= 0.008$), the Olympic Committee ($F(2)=4.503$; $\eta^2=0.04$; $p= 0.012$), the Ministry of Sport and Youth Affairs of Georgia ($F(2)=3.106$; $\eta^2=0.028$; $p= 0.047$), and other sources ($F(2)=3.267$; $\eta^2=0.029$; $p= 0.04$). After the one-way ANOVA analysis of the differences between groups, the data were compared according to the Tukey criteria, which confirmed a statistically significant difference between the following groups: the personnel working on national competitions receive information more often from the website of the Georgian Anti-Doping Agency and its representatives than the respondents working on the international level ($p = 0.013$) ($p = 0.004$); Also, the respondents working on national competitions receive information from federations more often than the respondents working on international or local competitions ($p = 0.019$); Finally, respondents working in national competitions more often receive information from the Olympic Committee than respondents working on the local level ($p = 0.013$).

Accordingly, we can say that the support personnel working with athletes, who participate in national competitions, receive information from the sports organizations in Georgia more often than the personnel working with athletes who take part in international or local competitions.

Table 15 – Information sources – by competition level

		(GADA) website	(GADA) representative	Federation Administration	Olympic Committee	Ministry of Sports	Other
Local	Mean	2,63	2,80	1,69	1,85	1,94	2,50
	N	36	36	36	36	36	36
	Std. Deviation	1,037	0,929	0,926	0,938	0,944	1,220
National	Mean	2,77	2,86	2,19	2,34	2,29	2,37
	N	65	65	65	65	65	65
	Std. Deviation	1,059	0,961	1,014	0,837	0,783	1,009
International	Mean	2,32	2,37	1,81	2,06	2,00	2,07
	N	116	116	116	116	116	116
	Std. Deviation	0,958	1,038	0,810	0,806	0,845	0,985

Regarding the training on doping, the answers are divided equally. Half of the respondents say that they have taken a training course on doping, while the second half of the respondents report they have not taken such training courses.

The Chi-square test showed statistically significant differences between the groups. A larger share of the personnel working with athletes, who perform in individual sports, says that they have taken training courses compared to the personnel working in team sports ($X^2(1) = 11,009$; $p = 0,001$). Also, a larger share of the personnel working in international level competitions has taken training courses than the personnel working in local level competitions, following the personnel working in national level competitions ($X^2(2) = 12,85$; $p = 0,002$). Regarding the work type of the support personnel, more medical personnel have taken anti-doping training courses than trainers ($X^2(1) = 4,349$; $p = 0,037$)

Table 16 – Training courses

Have you had any anti-doping training?		
	Yes	No
Individual Sports	62,2%	37,8%
Team Sports	38,7%	61,3%
	Yes	No
Local	47,2%	52,8%
National	37,9%	62,1%
International	64,7%	35,3%
	Yes	No
Trainer	50,8%	49,2%
Medical personnel	71,0%	29,0%
	Yes	No
Total	53,7%	46,3%

According to the participants, anti-doping training is often conducted for athletes and the support personnel. The training responds to the challenges in sports today in terms of doping. However, it should be pointed out that 15,3% do not know how often the training is conducted for athletes, while every fourth is not aware of the frequency of training for the support personnel (18,5%) and how much the training courses meet the challenges (21,5%).

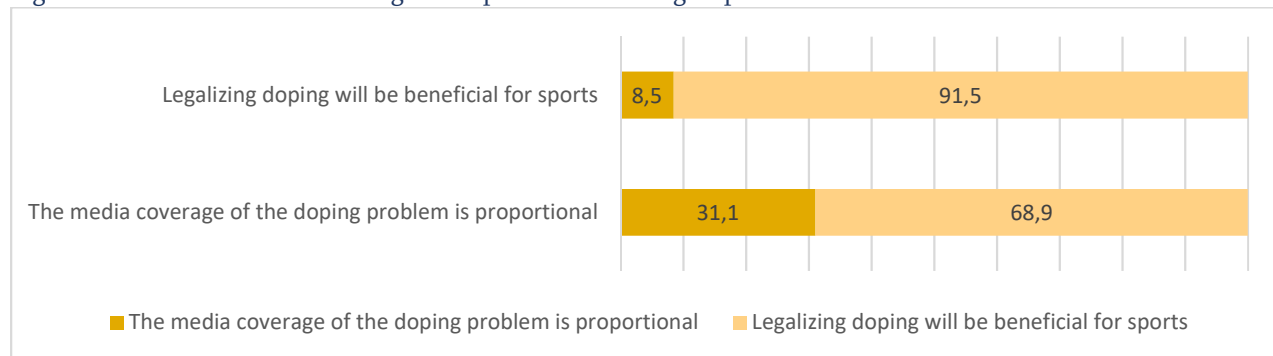
Table 17 – Training assessment

	Mean	Median	Mode	Std. Deviation	Min	Max
Anti-doping training is held often enough to raise awareness among athletes	1,98	2,00	2	0,809	1	3
Anti-doping training is often held for the Athlete Support Personnel to increase their awareness	2,04	2,00	3	0,826	1	3
The theme of the training responds to the challenges that exist in terms of doping	2,31	3,00	3	0,791	1	3

The independent T test confirmed statistically significant differences between sports types. Representatives of individual sports (M=2.12; SD=0.778) (M=2.18; SD=0.81) more often consider that the training courses are conducted often for both athletes $F=1.325$; $p=0.251$) ($t(183) = 3.299$; $p=0.001$) and the support personnel ($F=0.012$; $p=0.913$) ($t(176) = 3.108$; $p=0.002$), than representatives of team sports (M=1.72; SD=0.806) (M=1.78, SD=0.08). Also, representatives of individual sports (M=2.4; SD=0.753) evaluate the relevance of the topic more positively, than representatives of team sports (M=2.12; SD=0.837) ($F=0.73$; $p=0.753$) ($t(169) = 2.242$; $p=0.026$).

As for the issue of media coverage of doping problems and legalization of doping, two-thirds of respondents think that the media does not cover the doping issues in proportion to the problem level. The absolute majority does not agree with the opinion that the doping realization will promote sports.

Figure 11 – Assessments of training – Comparison between groups

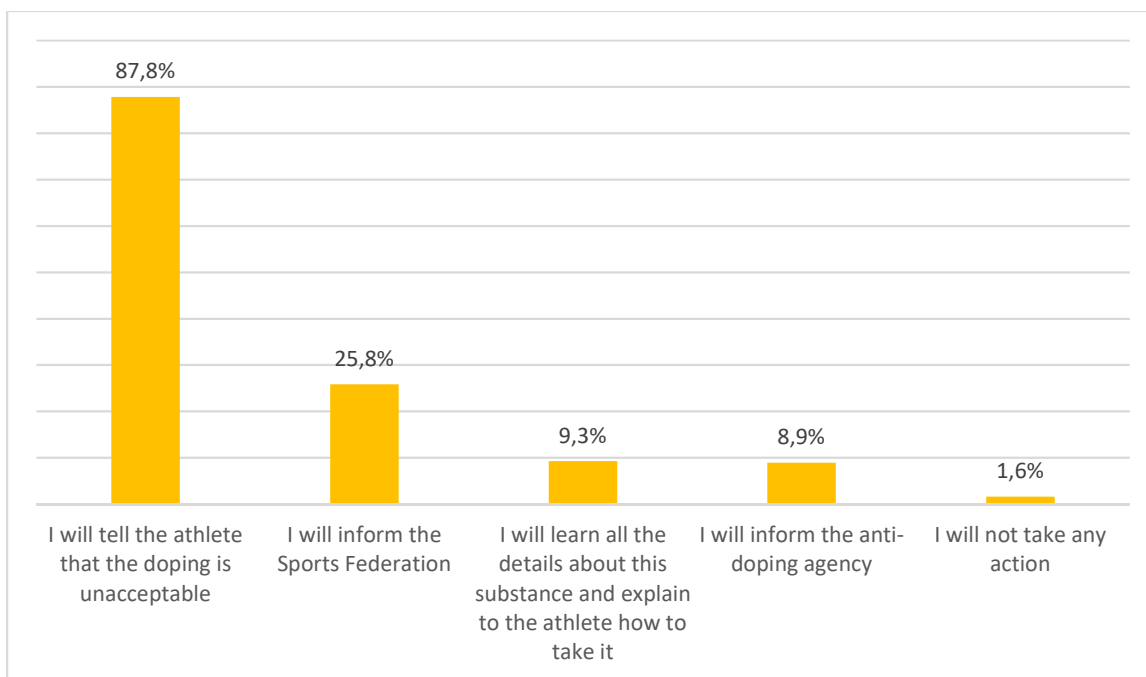


Practical knowledge of anti-doping rules

The athlete support personnel needs to know the practical information that will help them inform athletes about doping.

We asked the support personnel what they would do if they learned that an athlete had taken or purchased a prohibited substance. Based on the results, we can say that the vast majority of support personnel would tell the athlete that doping is not acceptable. Every fourth will inform the federation, every tenth will learn all the details about this substance and explain to the athlete how to take it or notify the anti-doping agency. Only 1.6% say they will not take any action.

Figure 12 – Actions of the athlete support personnel



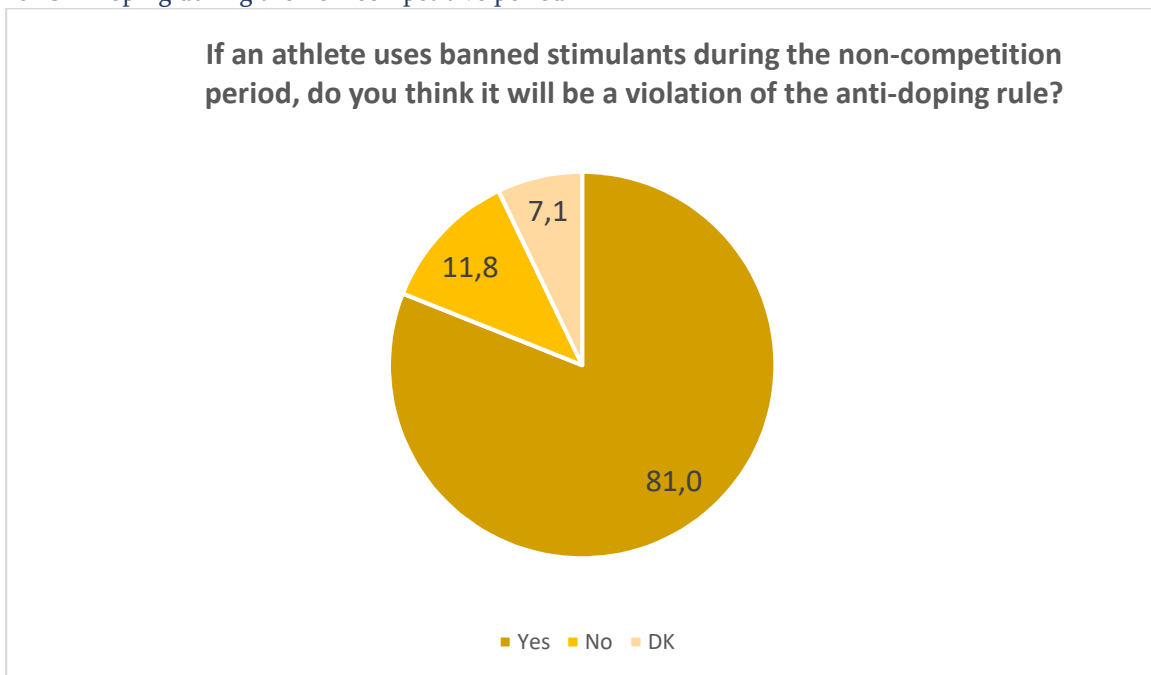
The chi-square test confirmed only one statistically significant difference between the work types of support personnel ($X^2(3) = 9.42; p = 0.024$). Trainers would tell the athlete that doping is unacceptable, while medical staff would note that they will examine all the details regarding this substance and explain to the athlete how to take it.

Table 18 - Athlete support personnel's actions – Comparison between groups

	Trainer	Medical personnel
I will inform the Sports Federation	26,7%	37,5%
I will tell the athlete that the doping is unacceptable	57,8%	12,5%
I will learn all the details about this substance and explain to the athlete how to take it	11,1%	50,0%
I will not take any action	4,4%	

According to the surveyees, if an athlete uses prohibited stimulants during the non-competitive period, it will still be a violation of anti-doping rules. Every tenth thinks that it will not be a violation.

Figure 13 – Doping during the non-competitive period



Respondents were asked if any athlete needs to receive a Therapeutic Use Exception (TUE), whether it is necessary to make a preliminary diagnosis of the disease, and doctors'

recommendations for taking the banned substance. Fourteen-point one percent do not know if they need it, three-quarters say it will be needed in all cases (72.6%), while 2.8% think it will not be needed.

Even if the support personnel are sure that the athlete will not be tested before the competition, they still would definitely not recommend the athlete to use a banned substance. Only one in ten notes that they probably would not recommend taking the substance, and 6.8% said they might recommend it. Five-point eight percent of respondents say they would definitely recommend doing so.

If an athlete received information about how long it takes for a particular banned substance to leave the body, the vast majority of support personnel (82.8%) would tell the athlete not to take this information into account and never take the banned substance.

If a banned substance is found in an athlete's blood or urine, first of all the athlete (65.3%) will be responsible for this behavior, followed by medical staff, and coaches. One in ten (11.1%) do not know who can be hold responsible in this situation.

Table 19 – Doping cases

If any athlete needs to receive a Therapeutic Use Exemption (TUE), is it necessary to make a preliminary diagnosis of the disease and doctors' recommendations for taking the banned substance?	
	%
Yes - in all cases	72,6
Only in some cases	10,4
No	2,8
DK	14,1
If you are confident that your athlete can only be tested during competitions, would you advise him or her to use banned substances during the non-competition period if you know for sure that the substance will not be detected in the urine sample during the competition?	
	%
I would really recommend	5,8
I would probably recommend	0,4
Maybe yes or maybe no	6,8
I would probably not recommend	10,9
I would really not recommend	76,2
If your athlete received information about how long it would take for a particular banned substance to leave their body, what would you do?	
	%
I would tell them to ignore this information and to never use a banned substance	82,8

I would make the appropriate calculations and recommend using this substance with this in mind	3,3
I would check the information online or with sports doctors, and based on the information received	14,0
If a banned substance is found in an athlete's urine or blood, who will be primarily responsible for the anti-doping rule violation?	
	%
Athlete	65,3
Team doctor/medical personnel	13,5
Trainer	10,0
DK	11,1

The impact of doping on athletes

It is interesting to know what effect doping has on athletes in the opinion of the support personnel. To learn this, we asked them about specific substances to see if each of them could improve athletes' achievements in sports. Based on the results, since the observed average score of each substance is higher than the possible mean score (1.5), we can say that the support personnel thinks that each banned substance will improve athletes' performance.

Respondents believe that among the listed substances anabolic steroids can improve athletes' performance, followed by erythropoietin (EPO) and other similar substances, and designer steroids such as Tetrahydrogestrinone (THG), and least one is diuretics.

Table 20 – Influence of banned substances

	Mean	Median	Mode	Std. Deviation	Min	Max
Anabolic steroids	2,03	2,00	2	0,781	1	3
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	1,97	2,00	2	0,781	1	3
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	2,01	2,00	2	0,806	1	3
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	2,02	2,00	2	0,781	1	3
Human Growth Hormone (HGH)	1,96	2,00	2	0,770	1	3
Diuretics	1,68	2,00	1	0,733	1	3

As for intergroup differences, the Independent Sample T Test confirmed a statistically significant difference between sports types. Representatives of team sports more often indicate that anabolic steroids ($F = 1.55$; $p = 0.215$) ($t(216) = -2.478$; $p = 0.014$), metabolic modulators (e.g., meldonium, mildronate, or trimetazidine preductal) ($F = 2.955$; $p = 0.087$) ($t(216) = -2.701$; $p = 0.007$), designer steroids such as tetrahydrogestinone (THG) (an artificially created anabolic steroid used only for doping) ($F = 4.594$; $p = 0.033$) ($t(216) = -3.033$; $p = 0.003$), erythropoietin (EPO) and other similar substances ($F = 3.208$; $p = 0.075$) ($t(216) = -2.531$; $p = 0.012$) and also, diuretics (diuretics) ($F = 0.759$; $p = 0.385$) ($t(216) = -2.145$; $p = 0.033$) will improve the performance of athletes than the personnel working with the athletes engaged in individual sports.

Table 21 – Influence of banned substances – Comparison between groups

		Mean	Std. Deviation
Anabolic steroids	Individual Sports	1,94	0,805
	Team Sports	2,21	0,705
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	Individual Sports	1,87	0,798
	Team Sports	2,16	0,712
Designer steroids, such as Tetrahydrogestinone (THG) (an artificially created anabolic steroid used only for doping)	Individual Sports	1,89	0,832
	Team Sports	2,24	0,705
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	Individual Sports	1,92	0,810
	Team Sports	2,20	0,691
Diuretics	Individual Sports	1,61	0,724
	Team Sports	1,83	0,732

When respondents were asked how much athletes can be harmed by taking substances for a short time, they noted that in most cases they are not aware of how much each of these substances can be harmful. Two-fifths of respondents say they do not know what harm the substances can bring in case of each banned substance.

Those who have a response about harm, think that each substance is highly harmful. Designer steroids are considered the most harmful substance, while other substances, in their opinion, are equally harmful to the athlete.

Table 22 - Consumption of banned substances for a short time

	Mean	Median	Mode	Std. Deviation	Min	Max	DK %
Anabolic steroids	3,02	3,00	4	1,015	1	4	39.2
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	2,94	3,00	3	1,030	1	4	40.1
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	3,13	3,00	4	0,984	1	4	40.9
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	3,02	3,00	4	1,038	1	4	41.3
Human Growth Hormone (HGH)	3,03	3,00	4	1,047	1	4	41.1
Diuretics	3,05	3,00	4	1,051	1	4	39.5

As for taking the banned substance for a long time, the share of respondents answering "I do not know" for each substance decreases slightly, however only by 2-4 percent. About two-fifths say they are unaware of how harmful each banned substance is for athletes' health.

Regarding those who express their opinion about the harm of substances, while evaluating the effects of substances for prolonged usage, the observed rate of perception of harm increases for each banned substance.

Table 23 - Consumption of banned substances for a long time

	Mean	Median	Mode	Std. Deviation	Min	Max	DK %
Anabolic steroids	3,45	4,00	4	0,824	1	4	37
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	3,46	4,00	4	0,854	1	4	36
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	3,51	4,00	4	0,823	1	4	39
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	3,48	4,00	4	0,823	1	4	38
Human Growth Hormone (HGH)	3,44	4,00	4	0,869	1	4	39
Diuretics	3,44	4,00	4	0,887	1	4	38

While assessing the impact, statistically significant differences are not observed. This allows us to say that despite diverse sports and activities, the support personnel do not have enough information about the impact that long and short-term consumption of substances might have on athletes.

Perception of doping control and detection

As for the general attitudes of the support personnel towards doping control and detection, the respondents state that the Georgian Anti-Doping Agency is fair to all athletes. However, every third respondent says they are not aware of how fair the agency's performance is or how the correctly the testing process goes in Georgia. Respondents say that the testing procedure is followed.

Table 24 – Attitudes towards the Anti-doping agency

	Mean	Median	Mode	Std. Deviation	Min	Max	DK %
How equally fair is the Georgian Anti-Doping Agency towards all athletes?	3,09	3,00	3	0,632	1	4	35,4
How are the testing procedures of the Georgian Anti-Doping Agency followed in Georgia	1,83	2,00	2	0,701	1	4	36,7

When it comes to the detection of specific substances during testing, more than half of the surveyees report that they are not aware of how it is possible. And those who answered this question state that the discovery of each substance is possible. Diuretics are the least accurately detected, while detection accuracy for all the other substances is almost identical.

Table 25 – Testing accuracy

	Mean	Median	Mode	Std. Deviation	Min	Max	DK %
Anabolic steroids	2,57	3,00	3	0,550	1	3	56,2
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	2,56	3,00	3	0,574	1	3	56,9
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	2,55	3,00	3	0,574	1	3	56,5
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	2,51	3,00	3	0,555	1	3	56,7
Human Growth Hormone (HGH)	2,54	3,00	3	0,571	1	3	56,5
Diuretics	2,49	3,00	3	0,600	1	3	57,5

To determine attitudes towards doping testing, we suggested different statements to respondents that they had to rate on a 4-point Likert scale, where 1 means strongly disagree with this statement and 4 means strongly agree. These statements are: A modern system of doping testing effectively detects violations during the competition; A modern system of doping testing effectively detects violations during the non-competitive period; Anti-Doping Education Programs/Training courses are effective in keeping athletes from doping; The current 4-year ban on using doping for the first time is effective in preventing an athlete from using doping.

According to the respondents, the high risk of doping in a particular sport (56.3%) defines doping test number for athletes, followed by athletes' citizenship (14,2%). Every fourth (29,5%) does not have information on what determines the number of tests.

The analysis shows that the support personnel agree with the statements since their average score is higher than the mean score (2). However, they do not agree with these statements as their mean scores range from 2.76 to 2.97 points. Respondents mostly agree with the statement that the modern system of doping testing effectively detects violations during competitions.

Table 26 – Attitudes towards doping test

	Mean	Median	Mode	Std. Deviation	Min	Max
A modern system of doping testing effectively detects violations during the competition period	2,97	3,00	3	0,737	1	4
A modern system of doping testing effectively detects violations during the non-competitive period	2,78	3,00	3	0,793	1	4
Anti-Doping Education Programs/Training are effective in keeping athletes from doping	2,87	3,00	3	0,745	1	4
The current 4-year ban on using a doping for the first time is effective in preventing an athlete from using doping.	2,76	3,00	3	0,773	1	4

Speaking about knowledge, it was also interesting for us to find out the support personnel's awareness of organizations responsible for each anti-doping activity.

The analysis shows that in the support personnel's opinion, primarily the Anti-Doping National Agency is responsible for planning and conducting the doping testing for national-level athletes, followed by the federation, the World Anti-Doping Organization, the Ministry of Sports, and finally, the Olympic Committee.

The National Anti-Doping Agency, followed by the federation, the World Anti-Doping Organization, the Ministry of Sports, and finally, the Olympic Committee are responsible for

monitoring the effectiveness of the anti-doping testing and disqualification of national-level athletes.

The World Anti-Doping Organization, followed by the National Anti-Doping Agency, the Ministry of Sports, the federation, and the Olympic Committee are primarily responsible for planning the anti-doping testing process and the testing of international-level athletes.

As for the disqualification of international-level athletes, the World Anti-Doping Organization is responsible for it, followed by the National Anti-Doping Agency, the Ministry of Sports, the federation, and in the last place the Olympic Committee.

Consequently, we can conclude that according to the respondents, the World Anti-Doping Agency and the Georgian Anti-Doping Agency have the highest responsibility, while the Olympic Committee has the lowest.

Table 27 – Responsible agency

Planning and conducting the national-level athlete testing	
	%
National Anti-Doping Organization	52,9
National Federation	17,7
World Anti-Doping Agency (WADA)	12,1
Ministry of Sports	10,2
National Olympic Committee	7,0
Controlling the effectiveness of testing and disqualification of national-level athletes	
	%
National Anti-Doping Organization	44,6
National Federation	23,1
World Anti-Doping Agency (WADA)	12,7
Ministry of Sports	10,6
National Olympic Committee	9,1
Planning and conducting the international-level athlete testing	
	%
World Anti-Doping Agency (WADA)	39,4
National Anti-Doping Organization	26,0
Ministry of Sports	14,0
National Federation	10,7
National Olympic Committee	10,0
Disqualification of international-level athletes	
	%
World Anti-Doping Agency (WADA)	48,6

National Anti-Doping Organization	20,3
Ministry of Sports	13,6
National Federation	9,0
National Olympic Committee	8,5

The main challenges for the athlete support personnel are low wages and the lack of young people engaging in sports. The most important thing for support staff is love of sports, training a healthy generation and working with children and young people.

Table 28 – Attitudes of the athlete support personnel

In general, what is the main challenge for the Athlete Support Personnel (ASP) in Georgia?	
	%
Low salary	60,7
Less youth involvement in sports	28,3
Pressure from sports administrators	4,9
Infrastructure	3,1
Unprofessionalism	3,0
Which of the following is the most important to you as an Athlete Support Personnel?	
	%
Love of sports	37,8
Preparing a healthy generation	34,3
Working with young people and children	23,1
Feeling that I stayed in the sports	4,9

Summary

With the aim of creating clean sports and a healthy society, the International Sports Federations and the World Anti-Doping Agency introduced regulations that reflected on Georgian sports and athletes, and put the issue of doping high on the agenda in Georgia in recent years. The entire sports community became well aware of the doping issue. Moreover, higher echelons, such as the federation administration, elite athletes, and the athlete support personnel fully comprehended the ethical side of doping, and health risks, as well as the principle of preventive regulations.

Compared to previous years, certain changes towards improving the anti-doping climate are related to the raised awareness about the doping issue and more doping tests conducted among elite athletes. Nevertheless, effective control at the lower level is not possible due to the limited number of tests.

In various sports, federations managed to improve the doping climate with the help of the requirements and support of international federations, as well as active communication with the federation member athlete support personnel. The Georgian Anti-Doping Agency (GADA) was named as an important and active ally of all federations to improve doping control.

Most sports federations do not have a code of ethics that reflects the value attitude of federation athletes and their support personnel. In practice, lack of ethical perception of doping leads to the passive response of the large part of the sports community towards the detected and suspected doping cases.

In sports federations, the division of doping-related competencies between athlete support personnel - medical personnel and coaches - is vague, as a result of which there is a blurred vision of the value aspect of doping and, in practical terms, a lack of feeling self-responsibility

over doping. Coaches often considered the provision of competent information on doping to be the sole concern of medical personnel.

The athlete support personnel have the largest interest and best awareness regarding the list of banned substances and methods, as they have to take into account these regulations on a daily basis to avoid sanctions. The athlete support personnel, especially in the regions, have fragmented and often inaccurate information on the mechanism of impact of doping on the body, as well as short-term and long-term effects of doping consumption, and in some cases their knowledge is based on prominent myths in the sports community. Nonetheless, obtaining profound information through training was not available to many.

A positive trend is observed in the provision of educational training for athletes with special needs, carried out by GADA. However, the preparation of educational course materials in the appropriate format for athletes with special needs, as well as for representatives of ethnic minorities remains a challenge.

Having confidential and trust-based relationship with athletes is a way to prevent them from taking banned drugs upon their own decision. At the same time, most of the athlete support personnel do not devote time to the talks with athletes about the use of doping being an unethical behavior, as well as the mechanisms and harms of doping. One of the main reasons for the lack of communication with athletes in this regard is lack of competence.

Most federations in the regions have a scarce supply of educational resources and a shortage of competent medical personnel. The latter was particularly problematic with younger sportsmen.

Conclusions and Recommendations

The state anti-doping policy of Georgia needs to be in line with the world approaches of establishing the values of clean sports and a healthy society. It is important that the policy is implemented with the support of both the state and donor organizations and with the involvement of key actors, such as the Ministry of Culture, Sports and Youth Affairs of Georgia, the Georgian Anti-Doping Agency, the Georgian National Olympic Committee, and the Georgian Paralympic Committee.

The analysis of research materials leads to the following recommendations:

- Inform the sports community and stakeholders about current anti-doping trends and news around the world, such as details of the annual activities of major anti-doping organizations, including the World Anti-Doping Agency and the International Testing Agency, cases of violation of anti-doping rules, and consequent sanctions in different countries. It is important to provide this information to them in a centralized form, for example in the following ways:
 - To organize seminars and conferences;
 - To publish relevant materials in sports newspapers periodically, and to air social advertisements and programs on television;
 - To create a dedicated page in social networks;
 - To create a newsfeed-type phone application for news and updates.
- Ensure the formation of ethical approaches in the sports community and the society, including through the development of the code of ethics in sports federations;
- Maximize support of natural strengthening of physical abilities of adolescent athletes, including correct planning of exercise, balanced diet and, particularly, development of correct and competence-based approaches to nutritional supplements;

- With the involvement of the Georgian Anti-Doping Agency, establish a systematic approach to the doping problem within the federations, on issues such as a clear definition of responsibilities of athlete support personnel for doping prevention and writing out appropriate methods of action;
- Periodically conduct targeted research of athlete support personnel in federations with the involvement of the Georgian Anti-Doping Agency to identify weaknesses related to the knowledge on doping and the proper development of physical abilities of athletes, and provide training courses to enhance respective competencies.
- Train more trainers on doping to provide educational services to the federations, and translate training materials approved by international organizations;
- Allocate more funding for testing from relevant actors, and agree on the testing strategy between the federations and the Georgian Anti-Doping Agency to cover all risk groups as effectively as possible;
- Strengthen anti-doping activities at the regional level, both in terms of education and testing.

Appendix

Questionnaire for the Athlete Support Personnel (ASP)

Hello, my name is and I am a representative of the sociological research organization GESOMAR, today we will talk about doping issues in Georgian sports.

Our online meeting will last about 90 minutes. We will ask you questions about your experiences and views during our discussion:

- (1) there are no right or wrong answers to the questions;
- (2) your participation in the discussion is voluntary, and you have the right to refuse to participate;
- (3) Also, you will not be asked to answer a question that you do not want to answer.
- (4) Discussion participants can participate in discussion with changed names without turning on the cameras

We will record today's interview, which will help us to recover the details of the conversation. The recording is confidential, it will be read only by qualitative researchers, and after listening to the recording, it will be deleted. The comments you make will not be connected to your first and last name in any of the documents.

I The problem of doping in Georgian sports

1.1 Do you consider doping a problem in Georgian sports?

1.1.1 Could you assess whether the doping situation has changed compared to previous years? **To the moderator - Ask:** Consumption, Awareness, Frequency of testing?

1.2 What factors would you single out that make athletes use doping?

1.2.1 Is one of the factors a lack of knowledge about proper nutrition, safe nutritional supplements?

1.2.2 In this sense, is there a difference between federations or between large cities and regions? What about the athletes belonging to national minorities or the athletes with special needs?

1.2.3 To what extent is the development of an athlete properly planned based on the physical characteristics of the athlete? **To the moderator - Ask:** For example, is it common for an athlete to have an inappropriate load on his or her physical characteristics? If yes, in your opinion, is this an additional contributing factor to doping?

1.3 Is doping consumption perceived as a violation of sports ethics by the athletes and Support Personnel?

1.3.1 What is the attitude of parents and society in general towards doping? If possible, give examples.

II Awareness of prohibited substances and methods in sports

2.1 Does the federation have a pre-written plan to provide anti-doping training for the Support Personnel?

2.2 Do you think the current frequency of training is enough? Why?

- 2.2.1 Has there been a case where the Support Personnel themselves requested training on a specific topic as needed? If yes, was the request met? What issues did the training cover?
- 2.2.2 Is the training for doctors and trainers organized jointly or separately?
- 2.2.3 Who provides these services to the federations?

Let's talk about the training you have been attending

2.3 How would you rate how interesting and informative the training was for you?

- 2.3.1 Are you interested in doping issues that have not been covered by your training and workshops? **If not named** - Is training needed to raise awareness about anti-doping rules and the responsibilities and sanctions of the Support Personnel covered by these rules?

2.4 Were the issues raised in the training understandable and easy to perceive? What do you think can be improved in this regard? In what way would it be optimal to provide information?

- 2.4.1 Is there a need to simplify/adapt the information for any segment, for example, athletes? For the Support personnel who belong to the ethnic minority? If yes, were the needs of ethnic minorities taken into account in the presence of a translator or translated material at the training?

2.5 What source do you turn to for information on anti-doping topics?

2.6 Does your federation or club have educational anti-doping literature, articles, booklets? Are there any online electronic resources that are recommended to use, for example, by a federation or team leadership? If yes, how effective is this printed or electronic literature for you or your athletes?

- 2.6.1 What additional information would be interesting to you in a printed form?
- 2.6.2 If there is educational literature like that, are the needs of ethnic minorities taken into account in the availability of translated materials?

2.7 Do you have information about the WADA Anti-Doping E-Learning Platform? If you have used this platform, how informative or convenient is it to raise awareness?

III Prevention of doping

3.1 Do you spend time talking to athletes about doping? If yes, is there a plan in advance on what issues and how often will the athletes be informed, or are the conversations informal and spontaneous? Do you talk about sports ethics with all age categories? And if not, why?

3.2 What are the main issues related to doping that the athletes are informed about? **If not named, ask.**

- 3.2.1 Do you provide information on the risk of prohibited substances in medicines, foods, or supplements?
- 3.2.2 Do you provide information on how it works in the body, what effect it causes, and at what cost it gives this result? (For example, it reduces pain, slows heart rate, enriches the body with oxygen, speeds up metabolism, accelerates rehabilitation, causes an increase in strength, an increase in endurance.)

- 3.2.3 Do you provide information on the short-term and long-term use of banned substances and methods in terms of athletes' health?
- 3.2.4 Do you provide information on anti-doping rules and sanctions for their violation?
- 3.3 What questions do athletes ask themselves about doping?
- 3.4 Do you spend time talking to athletes about the incompatibility of doping with the principles of sports ethics? How often do such conversations take place? Are there talks about sports ethics with all age categories, and if not, why?
 - 3.4.1 To what extent are athletes themselves interested in talking about clean sports and equal opportunities?
 - 3.4.2 In your opinion, how often and using what means should information on doping as an unethical behavior should be delivered in order to become an effective deterrent?
- 3.5 In terms of access to physicians, is there a difference between federations or between major cities and regions? What about the athletes belonging to national minorities or the athletes with special needs do they have insufficient access to doctors or communication problems?
- 3.6 What additional steps need to be taken to prevent doping and raise awareness among athletes and Support Personnel working with them?

IV Awareness of anti-doping rules

- 4.2 If you had/have any doubts about the use of doping by an athlete, how did/will you act? If you had a similar case from your subordinate athlete or other athlete and what were your next steps?
- 4.3 Have you heard about the possibility of providing information anonymously? Is it important to maintain anonymity in the further dissemination of anti-doping rule information? Why? What will the guarantees of anonymity change? (WADA platform is SPEAK UP: <https://speakup.wada-ama.org/WebPages/Public/FrontPages/Default.aspx>!)

V Perception of doping testing regulations

Let's talk about the frequency of testing and the selection of athletes.

- 5.1 Is the testing funded only by the budget of the federation, or are the tests conducted at the initiative of the Georgian Anti-Doping Agency too? Did you have any need for additional testing in addition to the planned testing, and what was your experience at the time?
- 5.2 Do you think the frequency of testing is sufficient to detect abnormalities during the competition period among athletes of all levels?
 - 5.2.1 Among elite athletes?
 - 5.2.2 In the major leagues?
 - 5.2.3 In the minor leagues?
- 5.3 Is frequency of testing sufficient to detect irregularities in the non-competition period?
 - 5.3.1 Among elite athletes?
 - 5.3.2 In the major leagues?
 - 5.3.3 In the minor leagues?
- 5.4 What do you think would be the most optimal model for the doping testing?

Questionnaire for the representatives of the Sports Federations

Hello, my name is and I am a representative of the sociological research organization GESOMAR, today we will talk about doping issues in Georgian sports.

Our online meeting will last about 90 minutes. We will ask you questions about your experiences and views during our discussion:

- (5) there are no right or wrong answers to the questions;
- (6) your participation in the discussion is voluntary, and you have the right to refuse to participate;
- (7) Also, you will not be asked to answer a question that you do not want to answer.
- (8) Discussion participants can participate in discussion with changed names without turning on the cameras

We will record today's interview, which will help us to recover the details of the conversation. The recording is confidential, it will be read only by qualitative researchers, and after listening to the recording, it will be deleted. The comments you make will not be connected to your first and last name in any of the documents.

I The problem of doping in Georgian sports

1.4 Do you consider doping a problem in Georgian sports?

1.4.1 Could you assess whether the doping situation has changed compared to previous years? **To the moderator - Ask:** Consumption, Awareness, Frequency of testing?

1.5 What factors would you single out that make athletes use doping?

1.5.1 Is doping consumption perceived as a violation of sports ethics by the athletes or support personnel? What is the attitude of parents and society in general towards doping? If possible, give examples.

1.6 Do the federations have a code of ethics in Georgian? **If YES** - Is it focused on doping? **If NO** - Do you see the need for a custom code of ethics tailored to your federation, and why?

1.7 Does the federation devote time to talk to athletes and support personnel about the incompatibility of doping with the principles of sports ethics, and how often?

1.8 What are the challenges for federations in terms of their commitments to the international partners to promote clean sports?

II Awareness of prohibited substances, methods, and rules in sports

Concerning the list of methods and substances banned by the World Anti-Doping Agency (WADA), as well as the regulations of the anti-doping rules.

- 2.1 Do you provide an annually updated list of banned substances and methods to your federation members? In what form?
 - 2.1.1 Is access to information provided for all segments electronically or in print?
 - 2.1.2 Do you see the need to provide information in an adapted-simplified form for different segments? **Ask** - For example, for national minorities or athletes with special needs? Does the federation respond to this request in any way?
- 2.2 Does your federation have a competent enough doctor who will provide information about the possible presence of a prohibited substance in medication and nutritional supplements to the federation's athletes and support personnel?
 - 2.2.1 In terms of access to physicians, is there a difference between federations or between major cities and regions? What about athletes belonging to national minorities or athletes with special needs, do they have sufficient access to doctors?
 - 2.2.2 As for the massage therapists, do the federations have enough personnel? Do massage therapists have enough competence in doping, and can they, like a doctor, give the right advice to an athlete?
 - 2.2.3 As for you, as the administration of the federations, what questions do athletes or support personnel most often ask you, **for example**, about banned substances or methods and the capabilities and time for their detection in the blood? Are you being asked about the consequences of taking banned substances? How do you provide them with similar information?
- 2.3 If you or the support personnel have any doubts about the use of doping by an athlete, how will you react? Did you have a similar case, and what were your next steps?
 - 2.3.1 Have you heard about the possibility of anonymous delivery of information? Is it important to maintain anonymity in the further dissemination of anti-doping rule information? Why? What will the guarantees of anonymity change?

III Raising awareness

- 3.1 Is there a library/media library in the federations where doping articles in printed periodicals, online articles, videos, literature, booklets are available? How much are they in demand by the athletes or support personnel?
 - 3.1.1 Does the federation have an obligation to provide anti-doping training for athletes and support personnel, and if so, how often?
 - 3.1.2 Is there a difference in this respect between federations or large cities and regions? For the athletes belonging to national minorities or the athletes with special needs?
 - 3.1.3 Has there ever been a time when the federation itself has requested training on specific topics for athletes and support personnel? Give examples.
- 3.2 Do you have information about WADA's anti-doping e-learning platform? If you have used this platform, how informative or convenient is it to raise awareness.
- 3.3 What additional steps need to be taken to prevent doping and raise awareness among athletes and personnel working with them?

IV Perception of doping testing regulations

Let's talk about the selection of test subjects by the Georgian Anti-Doping Agency.

- 4.1 Do all federation athletes have an equal chance of being selected, or is there a difference between the federations?
 - 4.1.1 Is there a difference between big cities and regions in this regard? What would you say about the athletes belonging to national minorities or the athletes with special needs, do they have an equal chance of being among the tested?
- 4.2 Is frequency of testing sufficient to detect irregularities in the competition period?
 - 4.2.1 Among elite athletes?
 - 4.2.2 In the major leagues?
 - 4.2.3 In the minor leagues?
- 4.3 Is frequency of testing sufficient to detect irregularities in the non-competition period?
 - 4.3.1 Among elite athletes?
 - 4.3.2 In the major leagues?
 - 4.3.3 In the minor leagues?
- 4.4 Did you need additional testing in addition to the planned testing? If yes, what was your experience in this regard?

V Anti-doping policy - attitude and vision

- 5.1 In your opinion, to what extent does the state have an anti-doping policy and why?
- 5.2 What are the main problems you see in terms of the anti-doping policy by the state at this stage?
 - 5.2.1 At the legislative level, for example, in the case of sports disputes, do we have judicial authorities of the relevant profile? Lawyers?
 - 5.2.2 At the level of resources, for example, is there sufficient funding for anti-doping training, literature acquisition, or testing?
 - 5.2.3 At the level of preventing access of the athletes to doping - is there proper control of trafficking of illicit substances by the state?

Questionnaire

Hello, the Georgian Social and Market Research organization Gesomar, with the support of the World Anti-Doping Agency (WADA), is conducting a survey to examine and analyze the attitudes of Athlete Support Personnel (ASP) towards doping.

The questionnaire is anonymous. The complete confidentiality of the information you provide is guaranteed. The data will be deleted 1 month after the end of the survey. Your participation is voluntary, and you can stop filling out the form at any time.

Q1 What sport do you work in?

Wrestling	1	Powerlifting	11
Judo	2	Wheelchair fencing	12
Sambo	3	Para Judo	13
Weightlifting	4	Football	14
Boxing	5	Basketball	15
Canoe/Kayak	6	Rugby	16
Fencing	7		
Gymnastics	8		
Athletics	9		
Cycle sport	10		

Q2 Please, indicate your status as an Athlete Support Personnel

Trainer	1
Medical personnel (doctor, physiotherapist, massage therapist, etc.)	2

Q3 Which top-level athlete/competition did you work with?

Local	1
National	2
International	3

I Vision of the doping problem and attitude towards doping

Q4 Sometimes, even the most successful athletes use doping substances; the following statements are intended to clarify your beliefs about the use of doping by athletes

	0-1%	10-20%	40-60%	60-80%	90%	DK
How many athletes use doping in your sport?	1	2	3	4	5	9
How many elite athletes use doping in the country (Georgia)?	1	2	3	4	5	9
How many elite athletes have been using doping in recent years?	1	2	3	4	5	9

Q5 As an Athlete Support Personnel, do you agree with each factor as a potential influence on the decision of the athletes to use doping?

	Agree	Disagree
Economic/financial	1	2
To speed up healing from a trauma	1	2
To improve their results	1	2
To continue their careers in sports	1	2
Due to peer pressure	1	2
Low level of awareness about banned substances/methods	1	2
Thinking competitors also use doping	1	2

Q6 To what extent do the opinions of the people listed below about doping influence the development of an athlete's attitude toward doping?

	Do not Really influence	Do not influence	Somewhat influence	Influence	Really influence	DK
Personal trainer	1	2	3	4	5	9
Parents	1	2	3	4	5	9
Teammates/sports acquaintances	1	2	3	4	5	9
Team doctor/Medical personnel	1	2	3	4	5	9

Q7 To what extent can the people listed below advise an athlete to take a banned substance if it would have a significant impact on their results and is currently not being detected?

	Shouldn't really advise	Shouldn't advise	Somewhat should advise	Should advise	Should really advise	DK
Personal trainer	1	2	3	4	5	9
Parents	1	2	3	4	5	9
Teammates/sports acquaintances	1	2	3	4	5	9
Team doctor/Medical personnel	1	2	3	4	5	9

II Attitudes towards nutritional supplements and problem vision

Q8 How often do you recommend the following nutritional supplements to the athletes you work with?

	Never	Rarely	Sometimes	Often	Systematically
Vitamins or mineral supplements	1	2	3	4	5
Herbal products	1	2	3	4	5
Creatine	1	2	3	4	5
Sports drinks	1	2	3	4	5
Energy bars	1	2	3	4	5
Caffeine	1	2	3	4	5
Protein-carbohydrate mixture	1	2	3	4	5
Other	1	2	3	4	5

Q9_1 Can any of the following nutritional supplements create a problem for an athlete during a doping test in the time of a competition period?

	Never	Sometimes	Always	DK
Vitamins or mineral supplements	1	2	3	9
Herbal products	1	2	3	9
Creatine	1	2	3	9
Sports drinks	1	2	3	9
Energy bars	1	2	3	9
Caffeine	1	2	3	9
Protein-carbohydrate mixture	1	2	3	9
Other	1	2	3	9

Q9_2 Which of the following nutritional supplements can cause a doping test problem for an athlete during a non-competition period?

	Never	Sometimes	Always	DK
Vitamins or mineral supplements	1	2	3	9
Herbal products	1	2	3	9
Caffeine	1	2	3	9
Sports drinks	1	2	3	9
Energy bars	1	2	3	9
Caffeine	1	2	3	9
Protein-carbohydrate mixture	1	2	3	9
Other	1	2	3	9

II Perception of responsibility for doping and its prevention

Q10 Listed below are the emotions that people experience when exposed to the use of illicit substances and methods by the athlete they work with. How much did you experience the following emotion?

	Didn't experience at all	Didn't experience	Somewhat experienced	Experienced	Very much experienced
Shame	1	2	3	4	5
Inconvenience	1	2	3	4	5
Guilt	1	2	3	4	5
Frustration	1	2	3	4	5

Q11 To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	1	2	3	4	5
It is my duty to work with an athlete to refrain from doping	1	2	3	4	5
I plan to provide anti-doping information to the athlete working with me	1	2	3	4	5
I plan to provide anti-doping information to the parent of an athlete working with me	1	2	3	4	5
Athlete attitudes about doping are not within my sphere of influence	1	2	3	4	5

IV Sources of information on the subject of doping

Q12 From the following sources, updated annually for information on substances and methods banned by the World Anti-Doping Agency (WADA), which you use most often

	Often	Rarely	Never	Never heard of this Agency
WADA website	1	2	3	4
Georgian Anti-Doping Agency (GADA) website	1	2	3	4
Georgian Anti-Doping Agency (GADA) representative	1	2	3	4
Federation Administration	1	2	3	4
Olympic Committee	1	2	3	4
Ministry of Sports	1	2	3	4
Google search engine	1	2	3	4
Colleagues	1	2	3	4
Other	1	2	3	4

Q13 Have you had any anti-doping training?

Yes	1
No	2
DK	9

Q14 Which statement do you agree with?

	Disagree	Somewhat Agree	Agree	DK
Anti-doping training is held often enough to raise awareness among athletes	1	2	3	9
Anti-doping training is often held for Athlete Support Personnel to increase their level of knowledge	1	2	3	9
The theme of the training responds to the challenges that exist in terms of doping awareness	1	2	3	9

Q15 To what extent do you agree or disagree with the following statements?

	Agree	Disagree
The media coverage of the doping problem is proportional	1	2
Legalizing doping will be beneficial for sports	1	2

V Practical knowledge of the anti-doping rules

Q16 What would you do if you found out that an athlete received or bought a banned substance?

I will inform the anti-doping agency	1
I will inform the Sports Federation	2
I will tell the athlete that the doping is unacceptable	3
I will learn all the details about this substance and explain to the athlete how to take it	4
I will not take any action	5

Q17 If an athlete uses banned stimulants during the non-competition period, do you think it will be a violation of the anti-doping rule?

Yes	1
No	2
DK	9

Q18 If any athlete needs to receive a Therapeutic Use Exemption (TUE), is it necessary to make a preliminary diagnosis of the disease and doctors' recommendations for taking the banned substance?

Yes - in all cases	1
Only in some cases	2
No	3
DK	9

Q19 If you are confident that your athlete can only be tested during competitions, would you advise him or her to use banned substances during the non-competition period if you know for sure that the substance will not be detected in the urine sample during the competition?

I would really recommend	1
I would probably recommend	2
Maybe yes or maybe no	3
I would probably not recommend	4
I would really not recommend	5

Q20 If your athlete received information about how long it would take for a particular banned substance to leave their body, what would you do?

I would tell them to ignore this information and to never use a banned substance	1
I would make the appropriate calculations and recommend using this substance with this in mind	2
I would check the information online or with sports doctors, and based on the information received, I would recommend using it or not	3

Q21 If a banned substance is found in an athlete's urine or blood, who will be primarily responsible for the anti-doping rule violation?

Athlete	1
Team doctor/medical personnel	2
Trainer	3
DK	9

VI The impact of doping on the athlete

Q22 To what extent can the listed substances improve the achievements of athletes in sports?

	Will not improve	Somewhat will improve	Will improve
Anabolic steroids	1	2	3
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	1	2	3
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	1	2	3
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	1	2	3
Human Growth Hormone (HGH)	1	2	3
Diuretics	1	2	3

Q23 How much can an athlete's health be harmed by taking these substances for a brief time (for example, up to 2 months)?

	No	Little	Somewhat	Very much	DK
Anabolic steroids	1	2	3	4	9
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	1	2	3	4	9
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	1	2	3	4	9
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	1	2	3	4	9
Human Growth Hormone (HGH)	1	2	3	4	9
Diuretics	1	2	3	4	9

Q24 To what extent can regular use of these substances harm the athlete's health?

	No	Little	Somewhat	Very much	DK
Anabolic steroids	1	2	3	4	9
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	1	2	3	4	9
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	1	2	3	4	9
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	1	2	3	4	9
Human Growth Hormone (HGH)	1	2	3	4	9
Diuretics	1	2	3	4	9

VII Perceptions of Doping Control and Detection

Q25 How equally fair is the Georgian Anti-Doping Agency towards all athletes?

It is very unfair	1
It is unfair	2
It is fair	3
It is very fair	4
DK	9

Q26 How are the testing procedures of the Georgian Anti-Doping Agency followed in Georgia? Such as taking and protecting samples?

Are strictly followed	1
Are followed	2
Not really	3
In no way	4
DK	9

Q27 How accurately do you think it is possible to determine the substances listed below during testing?

	No	Somewhat	Accurately	DK
Anabolic steroids	1	2	3	4
Metabolic modulators (e.g., Meldonium, Mildronate or Trimetazidine Preductal)	1	2	3	4
Designer steroids, such as Tetrahydrogestrinone (THG) (an artificially created anabolic steroid used only for doping)	1	2	3	4
Erythropoietin (EPO) and other similar substances used to stimulate red blood cells (RBCs) secretion	1	2	3	4
Human Growth Hormone (HGH)	1	2	3	4
Diuretics	1	2	3	4

Q28 To what extent do you agree or disagree with the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree
A modern system of doping testing effectively detects violations during the competition period	1	2	3	4
A modern system of doping testing effectively detects violations during the non-competitive period	1	2	3	4
Anti-Doping Education Programs/Training are effective in keeping athletes from doping	1	2	3	4
The current 4-year ban on using a doping for the first time is effective in preventing an athlete from using doping.	1	2	3	4

Q29 What do you think determines the number of tests performed on an athlete, the elevated risk of doping in a particular sport, or the citizenship of the athlete?

Elevated risk of doping in a particular sport	1
Citizenship of the athlete	2
DK	9

Q30 Which anti-doping organization is responsible for the following anti-doping activities:

	National Anti-Doping Organization	National Federation	Ministry of Sports	National Olympic Committee	World Anti-Doping Agency (WADA)
Planning and conducting the national-level athlete testing	1	2	3	4	5
Controlling the effectiveness of testing and disqualification of national-level athletes	1	2	3	4	5
Planning and conducting the international-level athlete testing	1	2	3	4	5
Disqualification of international-level athletes	1	2	3	4	5

Q31 In general, what is the main challenge for Athlete Support Personnel (ASP) in Georgia?

Low salary	1
Pressure from sports administrators	2
Less youth involvement in sports	3
Other (specify)	

Q32 Which of the following is the most important to you as Athlete Support Personnel?

Working with young people and children	1
Preparing a healthy generation	2
Feeling that I stayed in the sports	3
Love of sports	4

D1 Gender

Male	1
Female	2

D2 Your age _____

D3 Please, name the major city where you work as an Athlete Support Personnel (trainer, doctor, physiotherapist, etc.)

D4 Please, indicate which ethnic group you belong to?

Thanks for sharing your opinion!