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Research article

ATTITUDE OF FOOTBALL PLAYERS OF DIFFERENT SPORTING EXPERIENCE TOWARDS UNALLOWED STIMULATIVE RECOVERY DRUGS

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Abstract

Usage of unallowed stimulative drugs for recovery implies consuming or giving to others substances which artificially improve physical and psychical condition of an athlete and thus improve his/her success in sport. The goal of the study is to examine attitudes of football players of various length of sports experience, towards unallowed stimulative substances for recovery. The sample of examinees consists of 120 football players divided into two groups, on basis of the sports experience length (first group: 4-8 years of sport experience, second group: 9-14 years). The sample of variables consists of a system of 10 items (claims) assessed on a 5-grade scale. The importance of the differences between the groups was determined by a multivariate and univariate analysis of variance, discriminative analysis, Roy’s test, Pearson's coefficient of contingency and the coefficient of multiple correlation. It is evident that football players of different length of sport experience differ among themselves in their attitudes towards unallowed drugs for recovery, however, those differences are not big.

Keywords: unallowed stimulative drugs for recovery, football players, attitudes, length of sport experience

Introduction

Usage of unallowed stimulative drugs for recovery implies consuming or giving to an athlete those substances which artificially improve his physical and psychological condition and thereby improve his success in sport. Consuming substances which can be synthetizied by a healthy organism itself such as hormones (testosterone, cortisone, growth hormone and others)

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also falls into the definition of doping. Doping substances differ by their chemical structure and by their impact on athlete's body.

Some studies have lead to a conclusion that it is important to take measures in order to help young athletes and people close to them (parents, coaches, friends, etc.) to prevent the risks related with doping (Llorens, 2008).

Usage and misusage of various performance enhancing drugs has been recorded without exception in all professions where success depends on physical abilities and performance (Sekulić, Kostić & Miletić, 2008).

Numerous studies have tried to find out motives for usage of doping. High-ranking sportsmen are motivated to use performance enhancing drugs mainly in order to maintain or improve physical functioning, cope better with social or psychological pressures or to realize social and psychological goals. Majority of sportsmen have a negative attitude towards doping in sport, insisting that it is necessary to undertake certain concrete steps to prevent the usage of performance enhancing drugs in sport. Besides, they are concerned with the ways tests are performed, in other words, about reliability and integrity of the testing procedure. Although the evidence gained through numerous research projects in that area is scarce, it is evident that athletes ask for more intensive doping tests, and express their wish that more information is obtained by the National Administration bodies and anti-doping agencies (Backhouse, McKenna, Robinson, & Atkin, 2006).

The beginnings of doping can be traced back in the distant past, since people have always searched for a way to make a better performance in what they were doing or minimize fatigue. In the modern sport which praises only the first places in competitions, athletes do not choose means to realize their goals. Doing so, they pay little or no attention to many negative consequences that occur frequently as a result of consumption of various non-approved performance-enhancing drugs. A sportsman should be aware of the reasons for not consuming those drugs before taking them is quite long and includes condemnation by family, friends and general public, then financial punishment, taking back medals, and a series of health consequences (hormonal disorders, tumours, heart attacks, and stroke) (Pipe & Ayote, 2002).

Some authors point out that the most dangerous problem of usage of doping is the threat that the consequences may occur in the following generations (Naglić & Milošević, 2006). Majority of sportsmen have not developed addiction to the improving performances or addiction to the performance of enhancing drugs. However, in practice there are individuals who go in for sport and use the performance-enhancing drugs intensively and thereby have been exposed to a greater risk of development of diseases and syndrome of addiction (Franques, Auriacombe, & Tignol, 2001).

Sportsmen spend much more time recovering than training. However, much attention has been paid to training and little to recovery. The recovery can be divided into three groups: (1) recovery immediately after the strain; (2) short–term recovery between repeated actions (for example between sets of resistance or fight intervals, and (3) training recovery between trainings (Bishop, Jones, & Woods, 2008).

Great attention has been paid nowadays to unapproved, non-allowed stimulative drugs for recovery. However, in our country there is little research in the area of usage of these drugs, especially if we are speaking about studies that are methodologically correct. That is why only the papers mainly referring to the attitude of sportsmen towards training process (which is in function of preparation system) and training or some other recovery drugs can be used in a comparative study (Smajić, Molnar, & Popović, 2009; Smajić, Molnar, Popović, & Tomić, 2009, Smajić, Tomić, Kapidžić, & Joksimović, 2009; Smajić, Mihajlović, & Bekvalac, 2010).

Comparing attitudes towards sport (of sportsmen of various competition ranks and non-athletes), the studies have shown that sportsmen of lower rank competitions had the highest

value of the general attitude towards sport, high-rank competition sportsmen had somewhat lower values, while non-sportsmen had mainly positive general attitude towards sport (Havelka & Lazarević, 1981).

Reasons why usage of unallowed stimulative recovery drugs is banned are of health nature (various groups of these drugs cause many different, mostly harmful consequences on health) and ethical (consuming various performance enhancing drugs is in opposition to basic sport principles; sport competitions should be competitions of participants, not pharmacologists and physicians; from medical point of view, it is wrong to give drugs to a healthy person, and different synthetical substances can cause unwanted side effects). Besides, practical experiences lead to a conclusion that the doping problem is becoming more and more a legal problem, placing medical and other aspects (sociological and ethical) in the second place (Malacko & Radjo, 2004.). The goal of this research is to examine attitudes of football players of different length of sporting experience towards unallowed stimulative drugs for recovery.

Method

The examinees sample consists of 120 football players from 9 clubs of various competition ranks within the area of the Football Association of Vojvodina (Super league of Serbia = 43, First League of Serbia = 40 and Serbian League = 37), who have been divided in two groups according to their sport experience length (first group (62) with 4-8 years of sport experience, second group (58) 9-14 years).

The variable sample was made up of 10 items (claims) which have been assessed on a five- grade scale (completely disagree, partially disagree, indecisive, partially agree, completely agree). The items applied in the study were: 1. In spite of the possible bad consequences on health, in order to achieve the best possible results, sportsmen should take unallowed, non-approved stimulative drugs (stimulants, narcotics, anabolics); 2. A sportsman should take unapproved stimulative drugs only in case he/she wants to recover as soon as possible for further training; 3. Unapproved stimulative drugs are not harmful for the athletes' health. 4. Athletes should take narcotic analgesics (morphine, methadone, etc.) in case of an injury to be able to withstand the strain "under the influence of the shot"; 5. Athletes may use blood doping; 6. The use of alcohol and marijuana is completely forbidden in sports; 7. Taking various medicinal substances is contrary to basic sport principles; 8. It is athletes who should compete in sport, and not pharmacologists or doctors; 9. From a medical standpoint it is wrong to give medication to a healthy person; 10. Various synthetic medicines can cause all sorts of unwanted side effects and can have very serious consequences for the athletes' health, and thus should not be used (data on the author of the questionnaire are missing).

In order not to lose information and bearing in mind the non-parametric nature of the data, the data have been scaled on the tables of contingency. On basis of frequency, each class has got a real number. The fact that it is possible to apply steps related with the ratio scale on the scaled values, shows that in this way it is possible to reach new knowledge in research work which could not have been obtained applying steps and methods related with non-parametric scales. Scaling of the data does not exclude application of non-parametric tests, so that on the scaled data it is possible to apply the Multivariate analysis of variance (MANOVA), discriminative analysis, and other parametric steps and methods. Several univariant steps were applied: Roy's test, Pearson's coefficient of contingency (χ), coefficient of multiple correlation (R).

Results

Tables 1-10 show the frequencies of the examinees' answers (both at individual and at the whole sample level) about the unallowed stimulative recovery substances.

Table 1

Frequency of answers to item 1 – Regardless of the negative consequences for the health, for the sake of attaining good results, athletes should take unallowed stimulative substances (stimulants, narcotics, anabolics)

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	56	3	3	-	-	62
II	56	2	0	-	-	58
Σ	112	5	3	-	-	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 2

Frequency of answers to item 2 – An athlete should take unallowed stimulative substances only when s/he wants a faster recovery

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	48	11	2	1	-	62
II	52	6	0	0	-	58
Σ	100	17	2	1	-	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 3

Frequency of answers to item 3 – Unallowed stimulative substances are not harmful for athletes' health

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	54	5	1	-	2	62
II	56	2	-	-	-	58
Σ	110	7	1	-	2	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 4

Frequency of answers to item – Athletes should take narcotic analgesics (morphine, methadone, etc.) in the event of an injury to be able to withstand the strain "while on the shot"

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	50	7	4	1	-	62
II	54	3	1	-	-	58
Σ	104	10	5	1	-	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 5

Frequency of answers to item 5 – Athletes may use blood doping

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	15	14	14	17	2	62
II	2	6	14	31	5	58
Σ	17	20	28	48	7	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 6

Frequency of answers to item 6 – The use of alcohol and marijuana is completely forbidden in sport

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	3	1	-	8	50	62
II	1	1	-	6	50	58
Σ	4	2	-	14	100	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 7

Frequency of answers to item 7 – Taking various medical substances is contrary to basic sport principies

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	7	28	5	12	10	62
II	2	9	-	19	28	58
Σ	9	37	5	31	38	120

Table 8

Frequency of answers to item 8 – It is athletes who should compete in sport, and not pharmacologists or doctors

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	1	-	1	1	59	62
II	1	-	-	4	53	58
Σ	2	-	1	5	112	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 9

Frequency of answers to item 9 – From a medical standpoint it is wrong to give medication to a healthy person

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	2	-	1	3	56	62
II	-	1	-	3	54	58
Σ	2	1	1	6	110	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Table 10

Frequency of answers to item 10 – Various synthetic medicines can cause all sorts of undesired side effects and can have very serious consequences on athletes' health, and thus should not be used

	completely disagree	partially disagree	indecisive	partially agree	completely agree	Σ
I	-	1	2	2	57	62
II	-	1	-	3	54	58
Σ	-	2	2	5	111	120

I – 4-8 yrs. of sport experience, II – 9-14 yrs. of sport experience

Results of the multivariate analysis (MANOVA) are shown in Table 2. Based on obtained results, it can be determined that the two groups of examinees formed on basis of their length of sport experience, statistically speaking, significantly differ at the level of p=0.02.

Table 11

Multivariate significance of differences between football players with different sporting experience with respect to their attitude to non-allowed stimulative substances for recovery

F	**p**
2.324	.01603

The univariate analysis (Table 12) shows that statistically significant differences exist in four statements (items under ordinal numbers 5, 7, 9, 10). Out of the four statements, the largest F test is in statement 7 with the largest significance of p=0.01. The statement in the question is "Taking various medical substances is contrary to the basic sport principles". Differences in the attitude towards blood doping (item 5) are significant at a level of p=0.03, while the differences in items 9 and 10 ("From a medical standpoint it is wrong to give medication to a healthy person" and " Various synthetic medicines can cause all sorts of unwanted side effects and can have very serious consequences for the athletes' health, and thus should not be used") are at a border level of significance.

Based on value of Pearson correlation coefficient (R) and contingency coefficient (Table 12) it can be concluded that correlation of opinions to length of service of an athlete is very low, i.e. it can be said that their opinions do not depend on their length of service in the sport.

Table 12

Univariate significance of difference between football players of different sporting experience regarding their attitude to non-allowed stimulative substances for recovery

Roy's test and ANOVA					
	Cr = .0337				
	R	**CHI**	**F**	**p**	**Disc. Coef.**
1	.0170	.1292	2.0386	.1560	-
2	.0287	.1669	3.4824	.0645	-
3	.0183	.1339	2.1947	.1411	-
4	.0222	.1475	2.6849	.1040	-
5	.0406	.1976	4.9954	**.0273**	-
6	.0171	.1297	2.0527	.1546	-
7	.0613	.2403	7.7026	**.0064**	.06
8	.0256	.1579	3.0982	.0810	-
9	.0326	.1776	3.9716	**.0486**	.03
10	.0346	.1829	4.2295	**.0419**	-

By analyzing the results obtained (Tables 13 and 14) it can be seen that the opinions that most discriminated the two groups were 5 and 7, the ones that do make the discriminative function structure at p=0.00.

Table 13

Discriminative significance of differences between football players of different sport experience regarding their attitude to ‘‘non-allowed stimulative substances for recovery"

n	**F**	**p**
2	10.716	.0014

The differences obtained are in favour of the second group (with sporting experience of over 8 years), which is obvious from the centroid values (Table 14).

Table 14

Centroids and the borderline between football players of different sporting experience with respect to their attitude to "non-allowed stimulative substances for recovery"

GROUPS	**1**	**2**
CENTROIDS	-.514	.549
BORDER LINE	0.18	

Table 15

Homogeneousness between football players of different sporting experience with respect to their attitude to "non-allowed stimulative substances for recovery"

	N	**%**
1	30/62	48.38
2	43/58	74.13

In statement 5 (Athletes may use blood doping) the football players from the second group have given a larger number of negative answers, which shows their being better informed in connection with this forbidden method. In statement 7 (Taking various medicinal substances is contrary to the basic sport principles) the second group with longer sporting experience (9 to 14 years) has given the opinions that are in accordance with the statement, which can again be ascribed to the better understanding of the negative effect of using synthetic medication in sport. It should be pointed out that even though there is a statistically significant discrimination function, the differences between these two groups with respect to the length of sport experience are not explicit, which is also evident from the relatively low homogeneousness of the first group (Table 15). Namely, a large number of football players of shorter length of sport experience (nearly 50%) have the same opinion profile like the ones from the second group (longer sporting experience).

Discussion

Generally speaking, it can be noticed that football players of different sporting experience differ; however those differences are not explicit. The groups are very similar when it comes to opinions about unallowed stimulative substances for recovery, unlike in previous research projects where the difference was explicit (Smajić, Molnar, & Popović, 2009, Smajić, Molnar, Popović, & Tomić, 2009; Smajić, Tomić et al., 2009, Smajić et al., 2010). It should only be pointed out that while determining the opinions of the player groups, they differed most in the statement about taking various medical substances (item 7); this was also the case regarding the opinions of players from various leagues (Smajić, Molnar, Popović, & Tomić, 2009). Some authors have hold the view that players aged between 18 and 24 are best informed about doping (Sas-Nowosielski, & Świątkowska, 2007).

With respect to the issue of using unallowed stimulative substances for the recovery of athletes, the examinees were unanimous in their opinions that they do not want to use those as they are harmful for athletes' health; they were also unanimous with respect to taking stimulative substances stating that it is contrary to the basic sport principles. However, their opinions regarding blood doping were divided.

The respondents' opinions about alcohol and marijuana use (most of them agreed with the statement that those are completely forbidden in sports) indicate to their lack of knowledge regarding the legal regulations of the International Olympic Committee (Backhouse et al., 2006). It can be concluded that in connection with using prohibited stimulative substances for recovery, athletes are not sufficiently informed neither about the health, ethic and legal regulations, nor about the consequences of using such substances. It is necessary that athletes in the sports clubs be better informed and educated about prohibited stimulative substances for recovery through adequate professional brochures, lectures and talks with experts.

A key step in athletes' education probably involves collecting data and creating a greater database based on more information submitted by top athletes with respect to their opinions and experiences about doping, all for the benefit of further research into this very complex issue (Backhouse et al. 2006).

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