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## RELATION BETWEEN MOTIVATION AND TEMPTATION FOR USING THE DOPING SUBSTANCES IN HIGH PERFORMANCE SPORTS

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### Abstract

**Purpose.** The paper, realized within the project “Risk Factors of Doping Behavior related to Personality Structure and Social Environment of the Athletes”, financed by World Anti-doping Agency (WADA) (2007 – 2008) and managed by Romanian Anti-Doping Agency (ANAD) (Project Responsible Prof.Ph.D. Graziela Vajiala), has as purpose to analyze the relation between sportsmen motivation for high performance sports and temptation to use prohibited substances.

**Methods.** Among the research methods used in the project, we note for this paper momentary psychological state questionnaire (POMS) and opinion questionnaire for athletes. From the 57 items of the questionnaire for athletes, we have examined those which refer to the motivation of athletes for sports performance. This attitude was associated with those related to consumption of prohibited substances and momentary mental states. To analyze the differences between groups of athletes (1404 juniors and seniors) it was used the chi square test.

**Results.** There were found significant correlation between some type of motivation, sportsmen mood states and temptations to use doping substances.

**Conclusions.** The athletes externally motivated to practice sport, who present anger-hostility states with over average values, as well as those internally motivated to practice different sport disciplines, who have over average tension-depression values are tempted to use prohibited substances more than other athletes. No matter how content they are, the athletes experiencing certain spontaneous states of mind – such as tension, depression, fatigue might use doping substances. The risk is higher in senior athletes with weak results.

**Key words:** motivation, risk factors, doping substances, education.

### Introduction and research objectives.

The phenomenon of prohibited substances use among athletes, intending to increase artificially their performance has its origins in the ancient times and it is now so present, as it is supported and fed by the professional sport, so much commercialized and mediated.

The risk factors are variables associated to the risk, in terms of probability, where one or more

variable in some circumstances may be boosts for a deviant behavior such as the use of prohibited substances among athletes. According to WADA “prevention of doping in sport supposes to increase the conscience about the real problems inside this phenomenon, to disseminate relevant and correct information, and also to influence in a positive manner the beliefs, the attitudes and the behaviors.”

Specialty literature presents more explanation models concerning the doping behavior in sports. In A. Petroczi, E. Aldman model (2008), the authors consider that the risk factors could be organized in three structures: 1. Personality factors (increased performance, commitment, low self-esteem, anxiety), 2. Systematic factors (motivational climate, structure of authority) and 3. Situational factors (interaction of group members, role models, ambient factors). Some personality factors may act as inhibitors of doping practices (eg., A strong self-esteem, awareness and reduced tendency for risk taking.) K. Wiefferink et al., (2006) initiates a behavioral model using the theory of Ajene (Theory of Planned Behavior) and Bandura's self efficacy (Self-efficacy Theory). The integration of these two theories have led the authors to the three major constructs that explain the doping behavior: attitudes, social influences and self-efficacy.

A.N.A.D. - Romania Model (2007) grouped the risk factors into three groups: 1. Individual 2. Social, 3. Situational. (M. Epuran, 2007 G. Vajjala, 2007, C.

**Results and interpretations.** *Motivational orientation towards sport practice:* 62,8% (882) of the subjects practice sport for health, 47,2% (662) for action, 41,1% (577) for material earnings, 39,7% (558) for being noticed, 39,7% (557) for becoming stronger and 22,8% (320) for traveling. (Diagram no.1)

Berbecaru et al., 2008, I. Potzaichin et.al, 2008). In the category of individual factors, it was included athletes' motivation for sport performance.

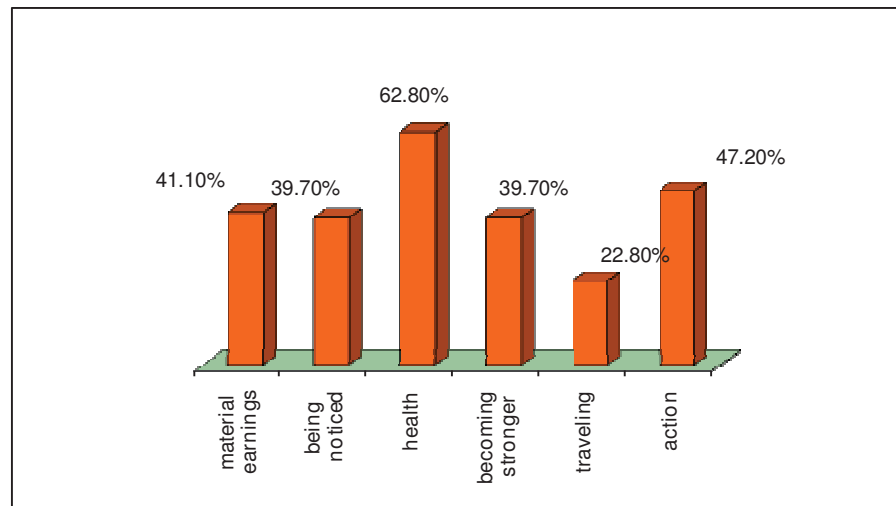
#### **Purpose.**

Aim of the paper is to analyze the structure and types of motivation for sports performance in relation to the attitude concerning the consumption of doping substances.

#### **Methods.**

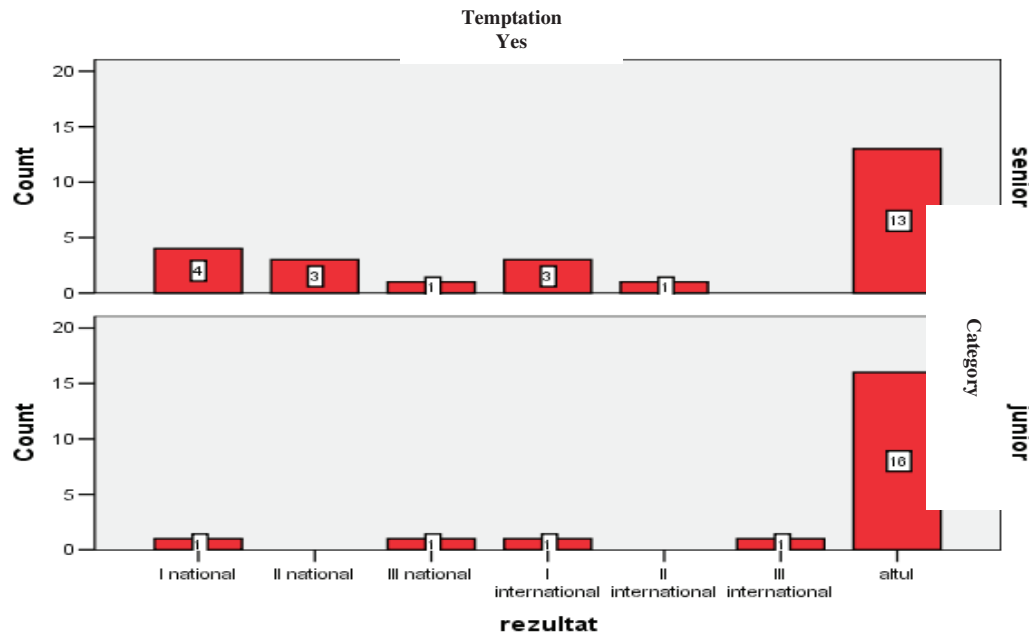
Among the research methods used in the project, we note for this paper momentary psychological state questionnaire (POMS) (D.M. McNair, 1992) and opinion questionnaire for athletes. Of the 57 items in the questionnaire for athletes, we have examined those which refer to the motivation of athletes for sports performance. These attitudes were associated with subsequent attitudes to consumption of prohibited substances and momentary mental states. To analyze the significance of differences between groups of athletes (1404 juniors and seniors) it was used the chi square test.

**Diagram no. 1 – Motivational orientation towards sport practice**



The number of athletes with *material earnings orientation* and *tempted to use prohibited substances* are about 45 (20 juniors and 25 seniors). The insignificant difference between them doesn't allow us to analyze the attitudes by reporting to category. (Diagram no. 2)

**Diagram no. 2. External motivated athletes, who are tempted to use doping substances, depending on the result and category**



#### Result

Out of the 25 athletes stating that they are, they were or they might become prohibited substances' users, we can notice that most of them are seniors (15 subjects, 11 of them having other results than the first three places).

Out of the 45 athletes orientated towards material earnings and tempted to use substances, 36 athletes (80%) had *over average scores for Anger-Hostility factor*, but the differences between seniors and juniors are not significant at  $p=0.05$  ( $x=4.50$ ), and the same are the differences between the results achieved by the athletes included in this group.

Out of 41,1% athletes oriented towards material earnings, 66% had *high score on Anger*, from psychic states point of view. Out of this percentage, 56% are seniors and 43% are juniors (among which 68% had higher scores on Anger-Hostility). For those without significant results (69,4%) and for those placed on the 1<sup>st</sup> position in national championships (67,4%), the moment states associated to anger are more frequent.

In the case of those *oriented towards material earnings and higher tension states*, 56% are seniors and 44% are juniors. These athletes are those who didn't achieve significant results, but also those placed on the first three positions in international championships; they are also athletes using or who had use recently such substances.

Out of the 39,7% athletes (557) *motivated to practice sport by the need to be noticed*, only 33 athletes are also tempted to use prohibited substances and among these ones, 22 athletes present *high values*

*on Tension factor*. The differences between the junior athletes (11) and the senior ones (22) are not significant on  $p=0.05$ , but it can be still noticed the increased number of athletes with "other results".

Out of this category of athletes, 15 of them declare that *they used or are using prohibited substances*, among them being 6 juniors and 9 seniors. Most of them, 12 athletes have different results than the first three positions in national or international championships.

Among the investigated athletes, 39,7% (557) answered that they practice sport *to become stronger* and 40 of them are *tempted to use prohibited substances*. The analysis of the moment psychic states underlines the fact that these athletes are included in the group average, except for the tension (23 athletes) and depression (21 athletes) states, where over average values are met. The differences between the number of the junior and senior athletes, for  $p=0.05$  are not significant. According to the results achieved, 26 athletes of this category have "other results" in competitions. 21 athletes (7 juniors and 14 seniors) declare that they were or might become prohibited substances users. It can also be noticed here that most of the athletes (12) don't have results in the first three positions in competitions.

*Result achieving orientation*. Out of the 1404 athletes, 45,7% (642) want to become national champions, 21,3% (299) want to be ranked on the first 6 positions on national level, 27,1% (380) want to be European champions, 38,2% (536) World champions

The journal is indexed in: 1. INDEX COPERNICUS JOURNAL MASTER LIST, 2. DOAJ DIRECTORY OF OPEN ACCES JOURNALS, 2009, 3. SOCOLAR and 25,6% (360) Olympic champions, while 17,8% level. (Diagram no. 3)  
(250) want to be in the first 6 athletes on international

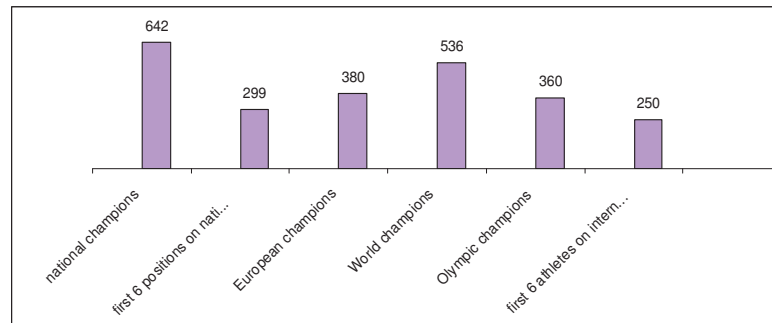


Diagram no. 3 – Result achieving orientation

88 athletes (30 juniors and 58 seniors) would be tempted to use prohibited substances. Among them, only 39 declare that they will do this in the future, have done this in the past or are doing now. Among them, 19 athletes want to become national champions, 10 International champions, 16 European champions, 18 World champions and 10 Olympic champions. Most of the athletes don't have significant results in national and international competitions. The analysis of the values of the momentary psychic states' highlights over-average values for tension (25 athletes), depression (22 athletes), and fatigue (20 athletes). Even

if the differences between the athletes' number, as well as between the seniors and juniors are not significant, we still underline the tendency of the athletes who declare to be tempted to use prohibited substances and to score over-average values for the previously mentioned psychic factors.

The aspiration level. 7,4% (104) of the subjects are very satisfied with the performance level that they have reached in comparison with the intended level, 36,5% (512) are satisfied, 38,2% (536) are not sure, 14,7% (206) are not satisfied and 3,3% (46) are extremely unsatisfied. (Diagram no.4)

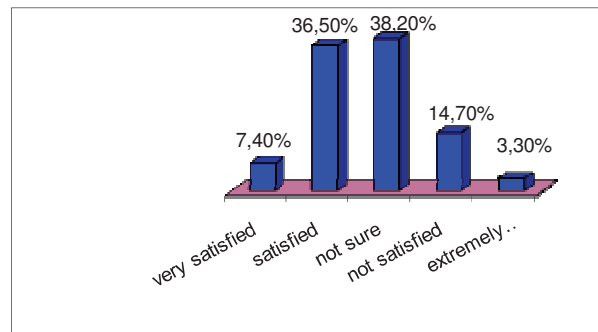


Diagram no.4 – Sportsmen aspiration level

Most of the athletes, 38.2% (536 subjects) are not sure about the satisfaction provided by the results achieved until that moment. For 33 of them, the answer to the question regarding the temptation to use prohibited substance was affirmative.

High over-average values are registered on tension (21 athletes), depression (21 athletes) and fatigue (19 athletes). There are no significant values between the junior and the senior athletes for  $p=0.05$ . Most of the athletes have other results than the first three positions in national or international competitions.

The number of athletes who are discontent and very discontent by their performance up to the present moment is 252 (18%), out of them 82 juniors and 170 seniors. 21 athletes within this category are the ones saying they are tempted to use prohibited substances,

while 10 athletes state they already use or will use the prohibited substances.

The diagram no.5 shows that most of the athletes have less noticeable results and they are seniors. The small number of athletes in such a situation is not significant in relation with the investigated pattern. Nevertheless, we underline that most of them show a high tension level (21 athletes), 14 athletes show values of the depression factor above the average of the group and 13 of them show values of the fatigue level above the average. Within the investigated pattern, 54.9% (771) of the athletes say they would have more strength if they use doping substances, 36.3% (510) that the training would be easier, 11.4% (160) that they would reach and maintain the ideal weight, 12.7% (179) that the performances would not be diminished, 47% (660) that would obtain better performances faster, 12.7%

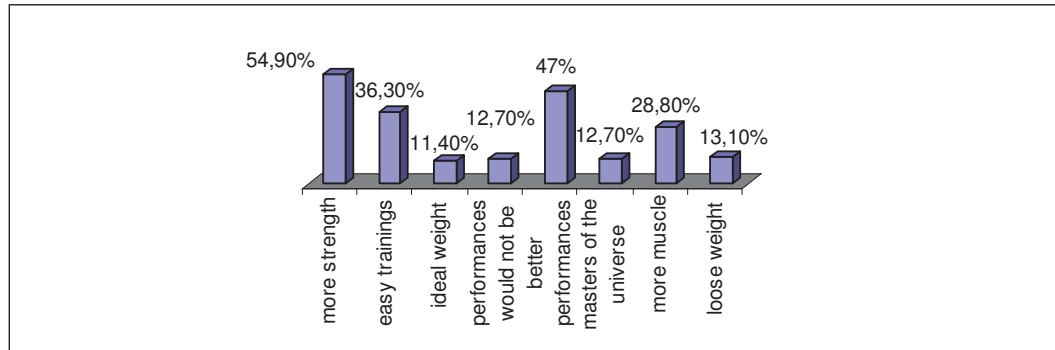


Diagram no. 5 – Athletes’ motifs to use prohibited substances

Despite the fact they think *doping substances would provide them with more strength*, 80% are not tempted to use prohibited substances and 87% would not use them ever. The athletes who think that doping substances provide them with more strength and are tempted to use, present high tension level, are furious, depressive and tired.

No matter the purpose they associate with the doping substances, these athletes are characterized by dogmatism and high values of the factors related to spontaneous states of tension, depression, discontent.

Within the investigated pattern, 60.6% (851) of the athletes say that one of the causes of athletes’ using doping is the possibility to obtain some material goods, 60.5% (850) think it is the need to be famous, for 34.4% (483) the cause is the doubt, for 20.8% (292) is the tension they feel, while for 23% (323) is the lack of information and 45.7% (641) think the high level of records is the cause of doping use. (Diagram no. 6)

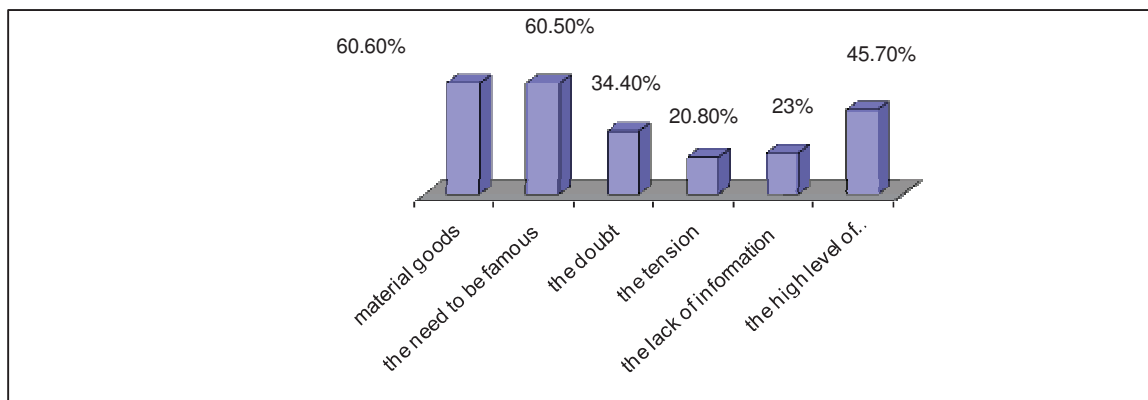


Diagram no. 6– Motifs the athletes think could be the base of using doping

When analyzing the relation between the athletes with *extrinsic motivation to practice sport* and the answers *related to the material benefits*, we noticed these athletes do not have results in the first three places in national and international competitions, and 46% of them state they might or they are tempted to use prohibited substances.

As for the athletes with *intrinsic motivation* who think doping is used for fame, 378 athletes show high values in tension parameter. Those who state they would be tempted to use are the seniors as well as the ones who do not have special results (46%) or the ones winning the first place (20%) and second place (25%) in international competitions.

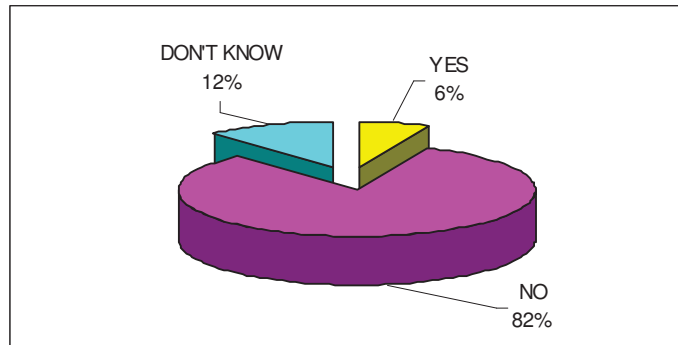
Most of the 34.4% (483) for who doubt is the reason of doping, are seniors and 78% of them are

tempted to use prohibited substances. The athletes who state they are tempted to use doping are the ones who do not have significant results in competitions (56%) or are national champions (18%) or national vice-champion (11%).

The athletes who think tension is what leads to doping are preponderantly juniors. They are also the ones tempted to use doping, especially those with no significant results in competitions (71%).

The motifs are a particular aspect of *the attitudes towards the doping phenomenon*. The athletes' attitudes towards the use of doping substances were revealed by the means *the temptations to use prohibited substances*. 6.3% (88) of the athletes

answered they would be tempted to use prohibited substances in order to accomplish the objectives, 81.9% (1150) that they are not tempted and 11.8% (166) that they do not know. (Diagram no.7)



**Diagram no. 7 – The temptations to use prohibited substances**

Out of 88 athletes, 39 athletes (13 juniors and 26 seniors) state they were or they could become prohibited substances' users.

Most of the athletes have no significant results. Nevertheless, among the athletes who do not exclude the possibility to use doping there are also athletes with results in the first three places in national and international competitions.

**Conclusions.** The athletes externally motivated to practice sport, who present anger-hostility states with over average values, as well as those internally motivated to practice different sport disciplines, who have over average tension-depression values are tempted to use prohibited substances more than other athletes.

The use of doping substances can be the consequence of an external motivational orientations associated with the tension-anxiety states or internal motivational orientations associated with the moment states of anger-hostility or depression-dejection.

Those aspiring to the highly ranked positions and presenting psychic states – tension, depression, fatigue over the population's average are more tempted to use prohibited substances than those already well-known.

No matter how content they are, the athletes experiencing certain spontaneous states of mind – such as tension, depression, fatigue might use prohibited substances. The risk is higher in senior athletes with weak results.

The doping substances use is a temptation equally perceived by juniors, and seniors, especially under higher tension and higher depression conditions. The

athletes who could use prohibited substances and methods are the ones with good results in the first three places as well the athletes with other results.

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