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## Perception of doping-related risks by junior and senior athletes

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### Summary

*Study aim:* To assess the degree of acceptance of risk by experienced and inexperienced athletes.

*Material and methods:* Two male teams participated in the study: juniors (football; n = 9) aged 16 – 18 years and seniors (volleyball; n = 13) aged 20 – 32 years. The subjects were requested to assess the doping-related risk of losing every of 6 values: health, medals, ranking position, physical attractiveness, psycho-emotional balance, bonuses and respect of personages, in three modes: importance of losing given value (scale 1 – 6), general likelihood of a doping-related loss of given value (scale 0 – 100) and the doping-related risk of losing given value the subject would be ready to take (scale 0 – 100).

*Results:* Seniors and juniors rated the importance of individual values and the doping-related general likelihood of losing them alike. As compared with senior athletes, the junior ones significantly underrated the risk of losing health and respect and overrated that of possible bonus.

*Conclusions:* The emotional, cognitive and social maturation of young athletes throughout a decade have an impact on perceiving doping-related risks and the associated decisions.

**Key words:** Doping – Perceived risks – Experience

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### Introduction

As follows from the literature, three sources of an erroneous assessment of doping-related risks in sports are the most widely spread ones [2,9]: an illusory universality of doping abuse ('all athletes use doping'; 'if I don't take doping, my chances are nil'), i.e. a distorted reality; wrong assessment of own susceptibility to doping which results in wishful thinking ('I am in full control of that risk'; 'others know less about the risk and of avoiding it'; 'others are more prone to suffer from doping'); distorted likelihood of the negative effects of doping, especially of the distant ones. The locus of a wrong assessment of circumstances and of tricky psychological approaches to taking risky decisions pertaining to doping may thus be both internal and environmental [1,7].

In previous studies on individual and team athletes [5,6], the significant differences in perceiving the doping-related risk evidenced their distorted assessment. Those results confirmed the existence of "risky shift" in a team expressed by taking risky decisions by individual members of that team. As compared with individual sport athletes, the risky attitudes of team members and the inconsistency of their knowledge and opinions on negative doping effects with the decisions they declared was in-

dicative of an unfounded optimism of team athletes and their higher susceptibility to illusions about their control of doping-related risks. This raises question as to the effect of life and sport experience on those erroneous perceptions.

The aim of this study was thus to assess the degree of acceptance of risk by experienced and inexperienced athletes. In view of a lack of such data, it seemed interesting to find out whether the tendency to accept a higher doping-related risk by team athletes than by the individual ones, would be influenced by the degree of experience acquired by the former.

### Material and Methods

Two male teams participated in the study: juniors (football; n = 9) aged 16 – 18 ( $17.3 \pm 0.5$ ) years with training experience of 4 – 8 ( $7.2 \pm 1.3$ ) years and seniors (League I volleyball; n = 13) aged 20 – 32 ( $26.0 \pm 2.8$ ) years with training experience of 8 – 18 ( $13.5 \pm 3.9$ ) years. An experimental questionnaire ("Perception of doping-related risk") [4,6], enabling the rating of previously identified values that may be lost due to illegal doping, was applied to all subjects to be anonymously filled. Those losses included health, medals, ranking position, physical

attractiveness, psycho-emotional balance, bonuses and respect of personages. The questionnaire covered three areas:

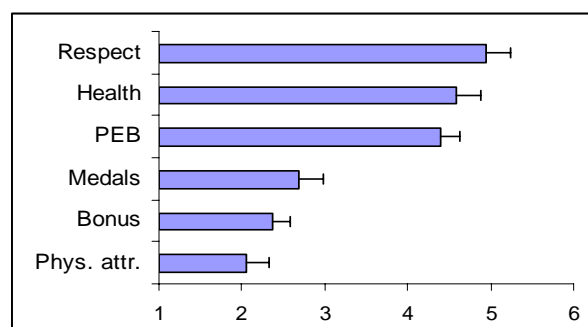
- Individual ranking of values (scale 1 – 6) reflecting the magnitude of possible doping-related losses; the higher a value, the higher its rank;
- General likelihood of a doping-related loss; every value is assessed separately (scale 0 – 100);
- Subjective likelihood of a doping-related loss; the respondent declares how high is the acceptable risk (scale 0 – 100) of losing every value.

The Siegel-Castellan's median test [8] was used in data analysis, the level of  $p \leq 0.05$  being considered significant.

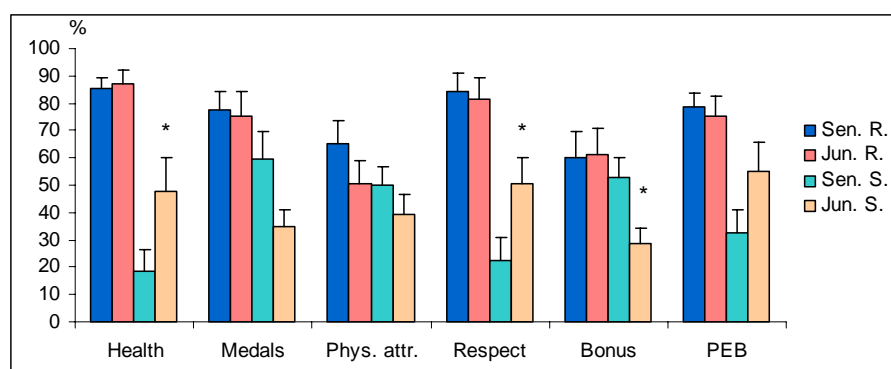
## Results and Discussion

Senior and junior athletes did not differ significantly in ranking values according to possible doping-related

losses despite a marked difference in experience; therefore, data from both groups were combined and presented in Fig. 1. Respect, health and psycho-emotional balance were valued significantly ( $p < 0.001$ ) higher than medals, bonuses and physical attractiveness.



**Fig. 1.** Mean values ( $\pm$ SE) of ranks (scale 1 – 6) assigned to doping-associated risks of losing various values by junior and senior athletes combined ( $n = 22$ )



**Fig. 2.** Mean values ( $\pm$ SE) of real (R) and subjectively acceptable (S) risk associated with doping as viewed by senior (Sen;  $n = 13$ ) and junior (Jun;  $n = 9$ ) athletes

Legend: Phys. attr. – Physical attractiveness; PEB – Psycho-emotional balance

The perception of real (general) likelihood of losing the above values due to risky, doping-related decisions, together with the individually accepted degree of risk, are presented in Fig. 2. The real risk reflects the knowledge of the modes of action and of negative effects of doping; junior and senior athletes did not differ significantly in that respect which confirmed earlier reports [4,6] that the knowledge alone had no direct effect on losses in values. Interestingly, the assessment of real risk was not only independent of age; the declared moral attitudes explained only 10% of the total variance of that assessment [3].

The individually acceptable risk of losing those values due to doping was, generally, lower than the real one. This is especially notable in case of a possible loss of health, respect, or – to a lesser degree – psycho-emotional balance; here the experience of senior athletes made them very cautious; the doping-related risk they would be ready

to accept did not exceed 30% on average and was significantly ( $p < 0.05$ ) lower compared with junior athletes. The latter ones, in turn, were decidedly more cautious than the seniors in assessing the risk of losing financial bonus or medals.

The presented data may be regarded as preliminary only due to small numbers of subjects studied. Nevertheless, the effects of emotional, cognitive and social maturation of young athletes throughout a decade were shown to have an impact on perceiving doping-related risks and the associated decisions [1,3] and ought to be considered in broader studies on attitudes towards doping.

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