Reviewer’s report

**Title:** Attitudes and Behavior related to Performance-Enhancing Substance Use among Elite Saudi Football Players

**Version:** 0  **Date:** 14 Oct 2018

**Reviewer:** Andrzej Pokrywka

**Reviewer's report:**

General remarks
Manuscript entitled "Assessing Attitudes and Behavior toward Performance-Enhancing Substance Use among Elite Saudi Football Players" was aimed to investigate the attitudes, beliefs and behavior toward performance enhancing substances (PES) use by elite Saudi football players. The design and methodology of the study are adequate to the aim of the study. It is a new and original contribution for this group of athletes, and it gives support other findings in this area. The main practical issue found in this paper is a need to shift direction in the fight against doping from education and awareness programs to more in-depth analyses of factors and predictors of doping substances use, in particular the value of threats and morality as key factors in doping susceptibility. In my opinion, manuscript under review could be published in a scientific journal such as BMC Sports Science, Medicine and Rehabilitation after minor corrections.

Specific comments
- Author describes that the overall prevalence rate of PES use among elite Saudi football players is 3.9%. However, it is not clear which substances the author has in mind. The phrase "performance enhancing substances" can be used to refer to several distinct classes of doping substances. Some of them are prohibited by WADA in competition only, other at all times. Was the use e.g. stimulants during "out of competition" considered as doping rules violation? On the other hand, not all doping substances are PES.
- Introduction, Page 2 - I suggest rearranging text fragments, e.g. as follows: "The World Anti-Doping Agency (WADA) reviewed publications relating to attitudes and behavior related to PES use and found that the vast majority of attitudinal research is descriptive and uses cross-sectional designs; which cannot be used for planning educational and preventive programs against doping in sport. Therefore, WADA proposed the Social Science Research Package which is a research package aimed to help national anti-doping committees and agencies in investigating their athletes' beliefs, attitudes and behaviors toward doping using a standard questionnaire. It is derived from the Sport Drug Control Model (SDCM) where the overall objective is to apply what is known about the influences on athletes' attitudes and behaviors with respect to doping to policy and practice in the real world. It is an Australian model prepared Donovan et al. that is the most valuable tool to assess factors influencing PES use. PES use in this model is influenced by six major inputs: (1) threat appraisal (deterrence factor) (2) benefit appraisal, (3) reference group opinions, (4) personal morality, (5) perceived legitimacy 6 of doping laws, and (6) personality factors."
- References should be unified and amended in accordance with the requirements of the Editors.
- Table 2 - Please enter the test results for the item "doping susceptibility" (column 3) - similarly as it was included in the remaining rows of the table.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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