"Is Everyone Else Doing It?": Investigating the Estimated Prevalence of Doping Use

Andrea Petroczi, Kingston University, United Kingdom, a.petroczi@kingston.ac.uk Declan Naughton, Kingston University, United Kingdom

Susan Backhouse, Leeds Metropolitan University, United Kingdom

Tamás Nepusz, Budapest University of Technology and Economics, Hungary

Keywords: doping, prevalence estimation, False Consensus Effect, survey, UK athletes

Abstract

Aims

To gather information on prevalence estimation of prohibited performance enhancing substance (PES) use and potential use. It was hypothesised that i) athletes overestimate the prevalence of drug use and ii) owing to the False Consensus Effect (FCE), the magnitude of overestimation is higher among those who use PESs in comparison to those who do not dope.

Background

From time to time, estimation of doping prevalence appears in doping research. Pearson & Hansen's (1992) study of athletes at the 1992 Winter Olympics provides an insight into how the FCE might work in an anti doping context. Athletes were asked to estimate the prevalence of doping or specific PES use among their peers and 43% of those surveyed thought that more than 10% of athletes in their sports used steroids. A further 34% gave an estimate between 1% and 9%.

A survey of Finnish Olympic athletes (Alaranta, Alaranta, Holmila, Palmu, Pietila & Helenius, 2006) revealed similar results. Whilst none admitted using PESs, 42.5% from the power sports and 37% of the endurance athletes reported that they knew personally another athlete who uses PESs. In the context of a review for WADA, Backhouse, McKenna, Robinson & Atkin (2007) report that unvalidated self reported PES use among elite athletes typically ranges between 1.2% and 8%. Conversely, estimates increased to between 6% and 34% when athletes are asked to estimate how many team mates or competitors use PES. This divergence appears large for random sampling difference and may be better explained by the FCE by which people perceive their own action as a relatively common behaviour (Ross, Greene & House, 1977). Specifically, the effect describes the considerable overestimation of behaviour in which a person engages, and a slight underestimation of behaviour absent from a person's repertoire. Additionally, recent marketing research investigating consumer behaviour showed that overestimation is greater when an individual holds positive feelings toward the subject (Gershoff, Mukherjee & Mukhopadhyay, 2007).

Methods

To investigate whether a relationship exists between doping use and potential doping use and estimation of others' use and potential use, a questionnaire was developed containing the following questions: i) self-reported doping use (Y/N), ii) estimated doping use of others (as %) and eight hypothetical scenarios of doping use forming the Hypothetical Doping Scenarios (HDS) scale in which respondents were asked to iii) estimate the proportion (as %) of others who would use doping and iv) report whether or not they would use doping in a prescribed situation (Y/N). Participants also completed the Performance Enhancement Attitude Scale (PEAS, Petroczi, 2002) and indicated their pressure perceptions to doping. Data were collected among competitive UK student-athletes (n = 124) using an anonymous web-based questionnaire. User vs. non-user groups were established using self-reported doping use and intention to use PESs in hypothetical situations. Based on the self-reported doping use and potential use, repondents were categorised into four groups: a) users with current and potential use (n = 9), b) potential users with no current use (n = 31), c) 'ambiguous' users with current use but denied potential use (n = 8) and d) non-users (n = 76).

Results and Discussion

Scale reliability coefficients were as follows: HDS-Others (alpha = .886) and PEAS (alpha = .871). The sample consisted of 46 female and 78 male athletes, with mean age of 21.47 ± 5.53 years. Statistically significant differences between users and non-users in both general chi-square = 123.00, p < .001) and hypothetical doping prevalence (chi-square = 10.834, p = .013) were evidenced. In both cases, the mean estimation made by the user group exceeded that made by the non-users (15% vs. 35% for general doping and 26% vs. 34% in hypothetical situations, respectively). Users also perceived higher pressure to dope (chi-square = 11.665, p = .009) and expressed a more lenient explicit attitude toward using PESs (mean scores: 31.83 vs. 48.33, chi-square = 27.458, p < .001). The other two groups (potential users and the ambigous group) showed considerable inconsistency, suggesting that these responses (as well as the self-reported information on which group membership was established) influenced by the perceived need for socially desirable responding.

Even the lowest doping estimation was considerably higher than the average rate of positive doping tests (ca 2% of all tests). This may signal a widespread belief that competitors are doping or it might signal a closer and more realistic estimate of doping prevalence. Lastly, the notable overestimation by doping users suggests that this indirect assessment method, if further refined and validated, may be successfully employed in large scale prevelance studies.

References

Alaranta, A., Alaranta, H., Holmila, J. Palmu, P., Pietila, K., & Helenius, I. (2006). Self-reported attitudes of elite athletes towards doping: differences between type of sport. International Journal of Sports Medicine, 27, 842-846.

- Backhouse, S.H, McKenna, J., Robinson, S. & Atkin, A (2007). Attitudes, Behaviours, Knowledge and Education – Drugs in Sport: Past, Present and Future. Available at www.wada-ama.org.
- Gershoff, A.D., Mukherjee, A., Mukhopadhyay, A. (2007). What's Not to Like? Preference Asymmetry in the False Consensus Effect. Journal of Consumer Research, DOI: 10.1086/524416
- Pearson, B. & Hansen, B. (1992). Survey of U.S. Olympians. USA Today, February 5, 10C.
- Petróczi A: Exploring the doping dilemma in elite sport: Can athletes' attitudes be responsible for doping?. Published Doctor of Philosophy dissertation, University of Northern Colorado, USA, 2002.
- Ross, L., Greene, D., & House, P. (1977). The false consensus effect: An egocentric bias in social perception and attribution processes. Journal of Experimental Social Psychology, 13, 279-301.