

1 EXECUTIVE SUMMARY

1.1 Introduction

1.1.1 The World Anti-Doping Agency (WADA) promotes, coordinates and monitors the global fight against doping in sport. This review is the result of WADA's identification of education and social science research as strategic priorities for developing evidence-based anti-doping education programs and interventions.

1.1.2 Based upon the need identified by WADA, the review provides an extensive annotated bibliography of peer reviewed publications in the social sciences regarding (a) predictors and precipitating factors in doping; (b) attitudes and behaviours towards doping and (c) anti-doping education or prevention programs. The database created during this review should be maintained so that future research in this area can be centrally documented and recorded.

1.2 The Literature Review Methodology

1.2.1 The review was conducted in line with guidelines devised by the UK National Health Service Centre for Reviews and Dissemination. An extensive search of the literature was conducted using electronic resources, including, but not limited to, PubMed, Ingenta, Academic Search Elite and ZETOC. The search strategy employed keywords for drug use in sport: 'doping', 'performance-enhancing drugs' and 'drugs AND sport' combined with selected terms relating to specific areas of interest:

- i) 'attitudes', 'beliefs', 'knowledge', 'perspectives', 'opinions'.
- ii) 'correlates', 'determinants', 'risk factors', 'precipitating factors'.
- iii) 'education', 'intervention', 'model', 'prevention'.

1.2.2 The review was limited to peer-reviewed articles written in the English language and published from 1st January 1990 to 1st December 2006.

1.3 The Findings

1.3.1 One hundred and three articles met the inclusion criteria and were considered in this review. Of these, 69 articles considered the attitudes of various target groups, 18 studies sought to examine the precipitating factors and correlates of performance enhancing drug use and 16 articles presented the findings of education intervention studies or model development in relation to doping in sport.

1.3.2 The United States dominated the literature surveyed across attitudes, precipitating factors and education, providing 61% of the empirical research output examined.

1.3.3 Attitudinal research is largely descriptive and typically fails to establish causal relationships between attitudes and behaviour. With few exceptions most research is under-theorised.

Cross-sectional designs, which are categorised as level III in the hierarchy of research evidence, dominate and self-report questionnaires feature in over 97% of the reported studies. The majority of surveys administered were not subject to psychometric testing, which undermines the validity and reliability of the findings.

- 1.3.4 Understanding of the precipitating factors for drug use is dominated by studies focused on anabolic steroids among young people. A wide range of factors have been identified although few are seriously helpful in addressing the complex way in which drug use begins, is sustained or stops. More recent studies have begun to explore the complex social matrix within which drug use becomes established. In this process researchers are increasingly acknowledging that like other behaviours, drug use follows a process and is more than an all-or-nothing behaviour. It is likely that the direction taken by Public Health research – in terms of addressing the interplay of motivation, context and skills – will represent the next generation of research design with drug prevention.
- 1.3.5 Education and intervention research are limited by both their span and scale. The limits of the chosen research designs restrict the capacity to transfer findings across settings, populations or communities. Randomised controlled trials represent the highest standard of research evidence and there is a need for more studies based on this design to confirm 'which works best'. Importantly, within these designs, 'best bet' intervention approaches should be compared. In this way, trials will be able to establish the everyday value of intervention approaches.

1.4 Conclusion

The evidence presented in this review leads to a simple conclusion: the weak evidence base undermines strategic planning and limits the capacity to target appropriate and efficacious education programmes to abate doping in sport.

1.5 Recommendations

This review has highlighted a number of key priorities in the social science research field. For example, adopting a Behavioural Epidemiological Framework would direct research efforts. Employing a variety of research designs from the upper echelons of the evidence hierarchy would facilitate the examination of causality and developing psychometrically sound measurement tools would enhance the validity and reliability of findings. Finally, the collaborative networks between practitioner and researcher need to be established so that evidence based findings inform the strategic planning of interventions and enable effective monitoring and evaluation.