

Executive summary

Introduction

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. To complete this commission we set out to identify evidence regarding the efficacy of prevention interventions across four social domains; bullying, alcohol, tobacco and social drug use. The main purpose of this review is to highlight the factors which have been determined, to date, as the most successful preventive approaches in these respective domains. Broad conclusions are drawn from the literature with a view to recommending 'recipes of success' which could be further refined and applied in the design of future anti-doping prevention programmes.

The Literature Review Methodology

The review process comprised two main stages. Stage one involved an examination and summation of tertiary and secondary level reviews (e.g., reviews of reviews meta-analyses, systematic reviews), published in the scientific literature or by government agencies between 2002 and November 2008. Stage two comprised the execution of a comprehensive search and review of primary studies based on the fact that the studies were (i) experimental or quasi-experimental, (ii) published from 2002 onward and (iii) not included (or excluded) in the reviews of stage one.

The Findings

Universal, school-based interventions are the most frequently studied prevention approach. This single setting offers the most systematic and efficient way of reaching the greatest number of young people each year. Although these interventions demonstrate immediate impact, their long-term effects are questionable. When school based programmes are integrated into multi-level strategies involving school, family and community approaches, effectiveness is enhanced. However, community-based prevention alone appears to be ineffective in changing the behaviours considered.

Based on the findings of research across the four domains, prevention programmes should be:

- Targeted at young people and adolescents when attitudes and values are being formed.
- Tailored to fit the target population (e.g., risk factors, developmental).
- Interactive and emphasising of active participation (e.g. role-plays, discussions).

- Derived from social influence approaches and focused on developing core life skills (e.g., communication, decision-making, refusal skills) as knowledge dissemination alone is ineffective in changing behaviour.
- Monitored and delivered with high degrees of fidelity¹, ensuring that programme implementation is as directed.
- Delivered by well trained individuals who, demonstrably, deliver the programme with high fidelity.
- Based on booster sessions delivered over a number of years. This reinforces and builds on intervention messages.

A number of questions still remain, even in those fields with a long history of research and evaluation. For example, intervention intensity appears to be an important determinant of intervention efficacy. However, it is unclear whether an 'intense' programme comprises (i) more sessions, or (ii) more content with fewer sessions. Similarly, the importance of training deliverers to ensure fidelity has been emphasised across the literature, but there is no consensus regarding who fits the role of 'best' deliverer.

Conclusion

This review has highlighted that, currently, there are no 'magical ingredients' to include in prevention programmes to ensure their effectiveness. However, there do seem to be some 'recipes for success' that should underpin any programme with primary prevention at its heart. Anti-doping education is a relatively young research field with few examples of best-practice. Therefore, anti-doping researchers, policy makers and practitioners are far from being able to rely on the level of evidence-based research that is currently available across the four domains we have considered in this review. It is also notable that even in these well established fields, more systematic research is needed to fully assess ideas across a variety of settings. Furthermore, researchers across each of these domains agree that little high quality information exists in developing countries in terms of prevention, evaluation and research. They also caution against assuming that research findings will readily transfer, and with equal impact, to prevent other undesirable/unhealthy behaviours.

On balance, this review has highlighted some of the lessons learned from research examining the prevention of bullying, alcohol, tobacco and social drug use. We hope the findings will assist active anti-doping educators in developing programmes from walled foundations rather than providing just bricks and mortar. The strategic goal of anti-doping education should be to develop an evidence-base that allows the 'critical ingredients' necessary for effective doping prevention education to be (i) discovered, (ii) applied and (iii) evaluated. In doing so, we will facilitate a long-term perspective which emphasises prevention, rather than detection, in the fight against doping in sport. Doping is a global issue and as such, requires 'connected' approaches, across countries and, most likely across the related organisations.

¹ Fidelity refers to the degree to which programme providers implement programmes as intended by the developers.