

# Review of Social Science Anti-Doping Literature and Recommendations for Action

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CANBERRA



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# Review of Social Science Anti-Doping Literature and Recommendations for Action

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Department of Health

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# Executive Summary

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## Context

To date there has been only one (unpublished) review of the social science literature on doping, which was prepared for WADA. Backhouse, McKenna, Robinson, and Atkin (2007) conducted a series of systematic searches of the social science literature from 1990 to 2006, identifying 103 academic studies, of which “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.” (Backhouse et al., 2007; p.1).

In the last few years there has been a significant increase in the number and scope of social science research into anti-doping. Despite this apparent progress, the field remains a disparate body of work. For example, from a research methodological perspective, samples are frequently chosen on a convenience basis, and measurement systems are, at best, inconsistent. Another recurring methodological limitation is that most research focuses not on athletes who are actually engaged in doping behaviours, but instead focuses on the attitudes and opinions of those who might hypothetically later engage in doping.

In a further development, there appear to have been major changes in the content of the social science literature. One trend is that many articles now openly challenge the legitimacy of anti-doping policies. Instead of focusing on anti-doping themes, such as detection and prevention, many authors now advocate positions that promote the values of doping, or the need for a ‘harm reduction’ policy whereby doping is legalised and overseen by medical practitioners.

The social science literature has thus become an ideological battlefield, where a number of academics have started to directly challenge the logic and legitimacy of anti-doping authorities. In large part this attack on anti-doping authorities has occurred because the rationale for anti-doping in sport is often poorly articulated. The common justifications for anti-doping legislation (i.e., the 'health' & 'fair play' arguments) typically wilt under detailed scrutiny and in some anti-doping regulations no argument against doping is actually stated.

Consequently, there exists a need for a new, comprehensive review of the social science literature on doping. This new review would highlight gaps in the current knowledge base, and the potential for social science research to inform anti-doping interventions such as education and deterrence.

### **The present study**

A systematic review of the social science literature on doping published between 2000 and the present was conducted. A total of 529 relevant publications were identified. This included 481 academic peer-reviewed journal articles (90.9% of the total), 43 chapters in scholarly books (8.1%) and five scholarly books (0.9%). Each publication was coded for year of publication, research methodology, country of origin (i.e., where data collection occurred), populations studied, sample sizes and focus of the study.

The number of publications on doping over the period 2000 to 2014 has shown a number of peaks and troughs. From only a handful of studies (2000), there was a brief surge (2001), a decline (2002-03) then a steady increase (2004-09). Publication numbers have plateaued in recent years (2010-13), averaging about one new article per week. Publications were classified according to their research methodology. By far the largest number of

publications was in the document analysis category (n=236; 44.6% of the total). Most of the publications in this category were based on document analysis (particularly the WADA Code and other policy documents), although there were some publications that examined other research papers (i.e., literature reviews; n=9) and some theoretical models (n=8).

The second largest number of publications employed survey based methodologies (n=171; 32.3%), noting that within this category there were wide variations in how the surveys were conducted. The third most common methodology was secondary data analysis (n=71; 13.4%), where once again, there were wide variations in research methodologies. There were also 31 qualitative papers (5.9%) and 20 experiments (3.8%).

The countries with the largest number of primary (data-driven) studies included the USA, Australia and the UK. Combined, studies in these three countries constitute almost 45% of the available empirical data. There were also multiple studies conducted with populations from France, Germany, Italy and Norway. The most common focus was the assessment of attitudes towards doping. There were 49 studies that focussed on establishing behaviour, with 68 addressing both attitudes and behaviours.

A high percentage of social science doping articles appeared in medical and social issues journals, with low percentages of articles appearing in management, sociology and psychology journals. The journal publications were distributed across 166 different journals.

### **Qualitative findings**

The research findings were organised to offer answers, according to the social science literature, to a series of key anti-doping issues. Many of the answers were surprising.

### *Why is doping (really) banned?*

Doping is primarily banned because of political reasons. Attempts to justify anti-doping through health or ethical based rationales have been thoroughly deconstructed and found to be poorly articulated and generally without strong justification. The decision to adopt, maintain and extend anti-doping legislation reflects broad societal concerns about drugs.

### *Does anti-doping policy work?*

No. Current detection and deterrence systems have failed to stem the spread of doping and in many sports doping is now practiced by a majority of athletes. This failure has been recognised by WADA and changes to legislation, such as increasing the severity of sanctions, are attempts to rectify the failures of the current system.

### *Why do athletes dope?*

A variety of psychological and demographic factors have been linked to the decision to dope; most significantly, morality has been linked to doping whereby individuals with lower levels of moral reasoning (or higher levels of moral disengagement) have been linked to pro-doping attitudes and behaviours. However, there are major limitations in research designs and methodologies that hinder research in this area. Furthermore, it is not clear how morality or other psychological characteristics can be meaningfully altered.

### *How many athletes are doping?*

A single incidence figure remains elusive. The incidence of doping varies by factors such as country, sport and gender. Incidence figures vary from almost none, through to a clear majority of athletes in some sports. Estimates of incidence from social sciences research are generally viewed with great skepticism, as the reliance on self-report measures may result in under-estimations, or over-estimations depending on the research

methodology. Estimates based on blood testing suggest that overall, about 14% of adult athletes are doping. Estimates from survey research suggest that about 4% of youth athletes are doping.

*How many athletes are perceived to be doping?*

About a quarter of athletes are perceived to be doping. Perceptions may be more important than actual incidence as this creates a powerful self-fulfilling prophecy.

*Do anti-doping deterrents work?*

No. While severe sanctions are a deterrent, doping athletes do not believe that they will be detected. This invalidates the deterrent effect of current legislation. Increasing the severity of sanctions will not have an impact on doping behaviours.

*Can doping be prevented?*

Possibly. Anti-doping education may deter some athletes from doping, but this is hard to empirically establish as it requires a long term assessment of a behaviour that is essentially undetectable.

*What do athletes and support personnel believe and know about doping?*

Athletes and coaches are overwhelmingly opposed to doping. Support personnel (including coaches) are generally poorly informed about doping issues and lack confidence in dealing with doping.

*What are the recommendations for research?*

Based on the current review, a number of recommendations for research emerge. First, it should be noted that there is a major disconnection between academic research and anti-doping policy. Simply put, policy is not based on research. This has led to a profound sense of antagonism between academia and anti-doping organisations, including WADA and ASADA. An additional problem is that empirical research on doping issues lacks coherence

and purpose. Methodologically the field suffers from a lack of standardised measurement tools, as well as an over-reliance on convenience samples. The research also lacks an applied purpose, whereby empirical studies generate knowledge that has no obvious practical application (e.g., linking personality characteristics to attitudes to doping).

Recommendations for research topics arising from this review include:

1. Establishing the prevalence and diffusion of doping into all levels of sport and in society.
2. Establishing profiles of athletes at risk of doping.
3. Identifying effective deterrents.
4. Identifying effective prevention strategies.
5. Improving the detection of doping through investigative interviewing.
6. Establishing intention to dope.
7. Assessing the effects of doping on sport and society.

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# Preface: Bad news bearer

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In 1993 the International Olympic Committee (IOC) announced that Australia was to host the 2000 Olympic Games in Sydney. As the years passed the Australian media became increasingly obsessed with the possibility that local athletes might lose out to foreign athletes who were doping (Magdalinski, 2001). The media clearly positioned 'clean' Australian athletes against 'drug-taking' others.

The release of Werner Reiterer's (2000) book *Positive: An Australian Olympian Reveals the Inside Story of Drugs and Sport*, offered an altogether different perspective. In *Positive* Reiterer admitted to five years' abuse of performance-enhancing drugs. Reiterer said that he had written the book as a 'last-ditch response to a sports world so awash with drugs that natural athletes - who are in the minority, just a few percent .... in some events - either succumb or compete without real hope of success' (Williams, 2001). Reiterer described sport as an ugly, hypocritical world where the notion of 'cheating' is largely meaningless and drug testing was ineffectual (Williams, 2001).

Australian reactions to the release of the book ranged from silence, through to condemnation. Swimmer Kieren Perkins called the book 'disgusting' and called on the Australian swimming team to bring a class action against Reiterer. Olympic swimming coach Brian Sutton said anyone who bought the book would be 'unAustralian'.

Despite the hostile reception, Reiterer's story was a watershed moment in Australian doping history. It signalled the beginning of the end of the belief that Australian athletes would not dope. Doping was no longer a 'foreign' problem and in the period since then Australia has emerged as one of the leading anti-doping nations, through the development of anti-doping legislation and through the funding of research.

The purpose of the current report is to summarise the social science research on doping from 2000 to the present, critically evaluating the merits of such work. The report attempts to offer relatively simple answers to a series of very complex questions. Inevitably, interpretations of the evidence will differ, but the broad conclusions are ones that will be familiar to most academics working in this field. In brief, doping is now highly prevalent in all levels of sport in Australia (and nearly all other countries). Unfortunately, the complexity of the problem means that it is unlikely that any of the current interventions, detection schemes or deterrents will have any significant impact on slowing the spread of doping, let alone stopping or reversing the situation. This is clearly an inconvenient truth, but it is an inescapable one. The current report will attempt to show how this impasse might be resolved.