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# Prioritising health in anti-doping: What Australians think

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**Abstract**

*Objectives:* There is debate concerning whether the guiding paradigm for anti-doping policy should be the current legalistic approach or a "harm minimisation" approach prioritising athlete health. This study sought to determine whether a representative sample of Australians prioritises health above other concerns using the World Anti-Doping Code's Spirit of Sport statement which lists the 11 attributes that define the moral basis for anti-doping.

*Design:* A Best–Worst Scaling (BWS) Balanced Incomplete Block Design experiment using 11 choice sets of five Spirit attributes from the set of 11, with the attributes within each choice set in a random order.

*Methods:* A representative sample of $n = 168$ Australians responded to an on-line survey. The BWS scores defined the relative ranking of each attribute to define an aggregate model and demographically defined models (gender, education, sports participation and sports following).

*Results:* Health was ranked as 7/11 in the aggregate model. Only those who did not follow sport prioritised health (2/11), with other demographic models failing to show a meaningful departure from the aggregate model.

*Conclusions:* Australians ranked health below other attributes in the Spirit of Sport, appearing to prioritise "rule following" consistent with the legalistic approach. This challenges the harm minimisation approach to managing the role of drugs in sport and suggests that rule-following and legalistic approaches to drug use should take precedence over health messages.



*Keywords:* Doping in sports; Harm minimisation; Spirit of Sport; Best–Worst Scaling

## 1. Introduction

The anti-doping policy enforced by the World Anti-Doping Agency (WADA) seeks to deter athletes from using drugs by adopting a legalistic approach; threatening sanctions when a failure to comply with a set of rules is detected.[1] The medical community has been debating whether an approach that prioritises athlete health would be more effective than this legalistic approach.[2–6] For example, McKenzie and Fitch[7] state "the health of the athlete must be the top priority and should not be forfeited for the sake or ease of bureaucracy." This approach is more commonly known as harm minimisation, which reflects efforts in illicit drug research and policy to focus on secondary prevention through, for example, medically supervised heroin use,[8] needle exchange[9] and injecting rooms.[10] Applied to doping, harm minimisation is about limiting adverse outcomes for athletes through medical supervision[4,11] or ongoing haematological testing to determine whether substance use has rendered athletes medically unfit to compete.[12] This debate has been dominated by medical and sporting experts with little input from the general public; there is no evidence whether the public has a preference for either or neither of the "law and order" or harm minimisation approaches to anti-doping. This paper reports a survey that determines the importance of health relative to other values in sport according to a sample of Australians who reflect the demographics evident in Australian census data.

The World Anti-Doping Code[13] (the Code) lists 11 attributes that make up the Spirit of Sport, which is defined as the essence of Olympism and that which is intrinsically

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Table 1
BWS ratio scores, in order of WADA's Spirit of Sport statement (rank in parentheses).

| | Aggregate | Male | Female | Do not follow |
|---|---|---|---|---|
| *N* | 168 | 85 | 83 | 19 |
| Ethics, fair play and honesty | 4.072 (1) | 4.975 (1) | 3.536 (2) | 3.000 (1) |
| Health | 1.161 (7) | 1.240 (5) | 1.083 (7) | 2.380 (2) |
| Excellence in performance | 0.439 (8) | 0.482 (9) | 0.396 (9) | 0.354 (10) |
| Character and education | 0.426 (9) | 0.515 (8) | 0.330 (10) | 0.500 (8) |
| Fun and joy | 1.177 (6) | 1.020 (7) | 1.387 (5) | 1.026 (6) |
| Teamwork | 1.551 (4) | 1.438 (4) | 1.689 (3) | 0.894 (7) |
| Dedication and commitment | 1.178 (5) | 1.166 (6) | 1.191 (6) | 1.348 (5) |
| Respect for rules and laws | 1.807 (3) | 2.032 (3) | 1.612 (4) | 1.563 (4) |
| Respect for self and other participants | 4.024 (2) | 3.296 (2) | 5.431 (1) | 1.944 (3) |
| Courage | 0.336 (11) | 0.342 (10) | 0.330 (10) | 0.302 (11) |
| Community and solidarity | 0.378 (10) | 0.314 (11) | 0.445 (8) | 0.488 (9) |

valuable about sport (see Table 1), with 'health' as the second attribute listed. There is no explanation of how the Spirit of Sport was developed, nor any guidance on how to interpret the attributes within the Code or through WADA. For example, the definition of health could refer to the standard disease-free longevity discourse[14] or to instrumentality, where athletes define health based on the capacity of their body to perform in desired ways.[15,16] Despite the ambiguity, the statement provides a list of attributes amenable to ranking using Best–Worst Scaling (BWS).

In contrast to traditional Likert-type or ranking procedures, BWS determines how people trade off the items within a defined and finite set of items (in this case the attributes listed in the Spirit of Sport). Respondents choose the "best" item and the "worst" item within an experimental design. As BWS obtains responses about the relative importance of the items, it has enhanced discriminatory capability compared with more traditional elicitation procedures, such as the use of rating scales which are prone to response-style bias.[17] The formal theoretical aspects of BWS, also known as maximum difference scaling,[18] are offered by Marley and Louviere.[19] BWS assumes there is an underlying dimension of interest (for instance, attributes that make up the Spirit of Sport), and that one can assign numerical values to a set of objects on that dimension (e.g. 'ethics, fair play and honesty' and 'health') such that valid comparisons can be made. These numerical BWS values are ratio scores that provide estimates of the relative importance among objects. BWS has been successfully applied to social research in relation to study topics as diverse as food safety concerns,[20] quality of life,[21] cross-country consumer ethics[22] and student evaluation of teaching.[23]

The present study addressed the importance of health relative to the other 10 attributes using the BWS method. Support for prioritising health as argued by advocates of harm minimisation would be demonstrated if 'health' is ranked as the most important attribute in the Spirit of Sport statement.

## 2. Methods

After ethical approval, the sample ($n = 168$) was recruited using an on-line survey company that had an established panel of over 200,000 members. The sample was 50.3% male, aged 18–83 years [$46.5 \pm 16.7$ years], with proportional representation from every State and Territory in Australia. Some 17% of the sample had completed high school (Year 12), 26% had a diploma or technical qualification, 39% university qualifications, and the remaining 18% Year 10 or below. Data were collected in March 2010.

The survey included five sections. The first section was on demographics, asking for respondent gender, age, State/Territory and highest level of education. The second asked about sports engagement. Respondents were asked if they followed sport (regularly, occasionally, or not at all) and, if relevant, the main sport they followed. They were also asked about personal participation in sport (regular/occasional by social/competitive, or do not participate) and, if relevant, the main sport in which they participated.

The third section presented the 11 attributes of the Spirit of Sport statement with the following introduction:

*The Spirit of Sport is what the Olympic Movement says makes sport intrinsically valuable. We are interested in your views about how important the different parts of the Spirit of Sport are to each other.*

Respondents were given an open field engagement question to indicate whether they felt the Spirit attributes reflected their perception of what made sport valuable. Most comments agreed that the attributes captured what made sport valuable (79%), with a minority commenting on the negative impact of "big business" (7%). Importantly, there were no comments about the value or role of health.

The fourth section presented the BWS choice sets to ascertain relative differences among the attributes. The BWS experiment followed a Balanced Incomplete Block Design[24] with 11 choice sets of five Spirit of Sport attributes taken from the overall set of 11 attributes. All 55 possible pairs of attributes appeared twice in the design, and each attribute appeared in five subsets. The attributes within each choice set as well as the choice sets within the overall design were presented in a random order. In each choice set of five Spirit of Sport attributes, respondents were asked to "choose the ONE value out of those five which, you think, is most