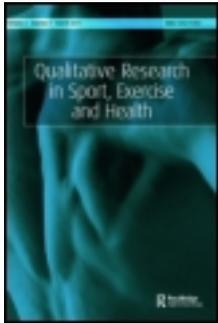


This article was downloaded by: [University of Birmingham]

On: 12 February 2013, At: 03:02

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Qualitative Research in Sport, Exercise and Health

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rqrs21>

### Doping in bodybuilders: a qualitative investigation of facilitative psychosocial processes

Ian D. Boardley<sup>a</sup> & Jonathan Grix<sup>a</sup>

<sup>a</sup> School of Sport and Exercise Sciences, University of Birmingham, Birmingham, UK

Version of record first published: 12 Feb 2013.

To cite this article: Ian D. Boardley & Jonathan Grix (2013): Doping in bodybuilders: a qualitative investigation of facilitative psychosocial processes, *Qualitative Research in Sport, Exercise and Health*, DOI:10.1080/2159676X.2013.766809

To link to this article: <http://dx.doi.org/10.1080/2159676X.2013.766809>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

## **Doping in bodybuilders: a qualitative investigation of facilitative psychosocial processes**

Ian D. Boardley\* and Jonathan Grix

*School of Sport and Exercise Sciences, University of Birmingham, Birmingham, UK*

*(Received 19 July 2011; final version received 26 May 2012)*

The current study was designed to investigate the psychosocial processes that support PED use in bodybuilders utilising Bandura's (1991) social cognitive theory of moral thought and action. Participants were nine bodybuilders who had previously used or were currently using illicit performance-enhancing substances. In-depth semi-structured interviews were conducted to investigate the psychological and social processes that facilitated their introduction to, and continuation of, doping. Study data were content-analysed deductively using definitions for the eight mechanisms of moral disengagement (Bandura 1991). However, evidence for only six mechanisms was present and a further three emergent themes were inductively coded. The six mechanisms evidenced were moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility and distortion of consequences. The three emergent themes related to the routinisation of doping, discussing doping with family and friends, and progression from supplement use to doping. All nine themes were discussed with reference to Bandura's (1991) theory as well as the extant qualitative literature on doping in sport.

**Keywords:** moral disengagement; performance-enhancing drugs; positivism; socialisation; deductive reasoning; inductive reasoning

### **1. Introduction**

Although much of the media's focus on Performance-Enhancing Drugs (PED) in sport is on their use by elite athletes, it is not just elite performers who ingest and inject such substances (Monaghan 2002). One group of non-elite athletes who are known to be particularly susceptible to the adoption of doping practices and therefore to the associated risks (e.g. cardiac, cardiovascular, immunological, hepatic and endocrine dysfunction; see Harmer 2010) is amateur bodybuilders (e.g. Backhouse *et al.* 2007; Litt and Dodge 2008). In order to further understanding on why bodybuilders are particularly susceptible to the adoption of PED use, it is important that researchers seek to determine the psychosocial processes that facilitate bodybuilders' implementation and maintenance of PED use.

One reason why it is important to understand the psychosocial processes that lead to PED use is the possibility that PED use in athletic populations can lead to detrimental health consequences. Although Kerr and Congeni (2007) indicate that PED such as androgenic-anabolic steroids can be used in clinical practice with few

---

\*Corresponding author. Email: I.d.boardley@bham.ac.uk

or no reported side effects, negative health effects may be more serious for illicit steroid users who often employ supraphysiological doses far in excess of those utilised in clinical practice (Casavant *et al.* 2007). Accordingly, PED using bodybuilders have described harmful side effects of PED use (see Andrews *et al.* 2005; Monaghan 2002; Olrich and Ewing 1999). Presented with such evidence, it is reasonable to expect that knowledge of such harmful side effects may be a key consideration in bodybuilders' adoption of PED use. Thus, research is needed that identifies how doping bodybuilders are able to resolve dilemmas relating to the potential side effects of PED use in order to initiate and continue doping.

As well as the potential health consequences of PED use, adoption of doping may contravene athletes' moral standards. First, purchase, distribution and use of many doping products are controlled in numerous jurisdictions around the world (e.g. the UK, the USA, Canada, and Australia) and therefore PED use is often associated with illegal activity. Although breaking the law is not necessarily immoral, personal morality has been shown to influence law-breaking behaviour (Wingrove *et al.* 2011). Second, by definition illicit substances are listed on the World Anti-Doping Agency's list of prohibited substances and methods. Doping is therefore a contravention not only of law in many countries, but also of the rules of the international agency charged with promoting, coordinating and monitoring the fight against doping in sport. Third, use of PED in competitive sport is considered cheating by some (Bilard *et al.* 2011; Probert *et al.* 2007), which may influence the moral cognitions of competitive bodybuilders.

Based on the above arguments, bodybuilders may be faced with moral dilemmas relating to PED use. Support for this is seen in research with bodybuilders in which athletes have discussed moral dilemmas relating to PED use. For example, in the work of Olrich and Ewing (1999) two out of five bodybuilders who had discontinued steroid use did so because they questioned the morality of steroid use, describing negative emotional consequences (e.g. guilt) as a result of PED use. These athletes questioned the morality of their PED use because it conflicted with their moral principles and values. Further, in work with New Zealand-based bodybuilders, Probert *et al.* (2007) quoted an athlete who considered PED use to be cheating 'Personally, I view taking drugs as cheating. I would rather get as far as I can naturally.' (p. 285). Thus, it is possible that some doping bodybuilders consider doping to be morally wrong, but find ways to justify doping and therefore circumvent their normal moral values.

The potential role of morality in decisions surrounding adoption of PED use is explicated in a number of models of PED use that specify the importance of moral issues in decisions to dope. For example, Donovan *et al.* (2002) presented a model for sport drug control that incorporated six antecedents of attitudes and intentions regarding PED. Importantly, one of the antecedents included was personal morality, referring to athletes' perceptions of social values and the internalisation of desirable values of sport such as fair play. Similarly, Donahue *et al.* (2006) specify and provide empirical support for the role of sportspersonship orientations (i.e. respect and concern for rules, officials and social conventions) in determining PED use in their motivational model of PED use. Further, in their life-cycle model of performance enhancement, Petróczi and Aidman (2008) identify moral values as an inhibiting factor that may avert athletes from PED use. The inclusion of moral variables in these models of PED use suggests that morality may be an important factor in determining use of PED.

One theoretical framework relevant to morality previously applied to PED use is Bandura's (1991) social cognitive theory of moral thought and action. According to Bandura (1991), moral behaviour is regulated by personal and social sanctions associated with such conduct; people avoid engaging in transgressive acts when they expect resultant personal or social rebuke. In monitoring their conduct, people make judgements regarding the moral nature of their conduct, and then experience affective reactions based on the judgements made; anticipation of affective reactions such as guilt and shame when considering transgressive conduct deters such behaviour. However, Bandura (1991) describes eight psychosocial mechanisms that allow people to act in ways normally considered immoral without experiencing the negative effects usually associated with such conduct; use of these mechanisms is termed moral disengagement. In Bandura's view, it is not that transgressors consider their actions moral, but that they perceive detrimental conduct to be acceptable in certain circumstances. The collective term moral disengagement refers to use of any of these eight psychosocial mechanisms; operational definitions and appropriate examples follow.

*Moral justification* operates when culpable behaviour is cognitively reinterpreted to make it personally and socially acceptable by portraying it as achieving a valued social or moral purpose. An example of this is when an athlete claims his own PED use allows him to offer advice on safe use of steroids to others. *Euphemistic labelling* involves the selective use of language to cognitively disguise culpable activities as less harmful. This mechanism is evidenced by an athlete referring to use of "juice" rather than anabolic steroids. *Advantageous comparison* involves comparing transgressive behaviours with more reprehensible activities to make the original behaviour appear less harmful. An example of this is when PED use is compared to consumption of illegal street drugs such as heroine. *Displacement of responsibility* occurs when people view their actions as the result of social pressure and not something for which they are personally responsible. This is exemplified by an athlete claiming he initiated PED use as a result of pressure from a respected athlete within his training environment.

*Diffusion of responsibility* can be achieved through group decision-making or group action (Bandura 1991). Group decision-making transpires when a group collectively takes the decision to engage in injurious conduct. Collective action operates through group engagement in deleterious behaviour. Thus, diffusion of responsibility would be demonstrated by athletes collectively deciding to (i.e. group decision-making) or actually engaging in (i.e. group action) PED use. *Distortion of consequences* occurs when one avoids or cognitively minimises the harm caused by reprehensible action. This mechanism is seen when PED users avoid or discredit information relating to detrimental side effects of PED use. *Dehumanisation* involves cognitively depriving victims of human qualities or attributing animalistic qualities to them. This mechanism operates in sport when those targeted by transgressive conduct are described as animals. Finally, *attribution of blame* occurs when people consider themselves driven to detrimental conduct by forcible provocation by their victim. Attribution of blame is exemplified in sport by retaliatory behaviours.

Research linking moral disengagement with PED use in adolescent athletes has been conducted by Lucidi and colleagues (Lucidi *et al.* 2004; Lucidi *et al.* 2008; Zelli *et al.* 2010). The first of these studies found that moral disengagement was a weak-to-moderate predictor of intention to dope in a sample of 952 Italian students (Lucidi *et al.* 2004). Lucidi and colleagues (2008) progressed their line of

investigation by completing a further study, this time assessing reported doping as an outcome variable. Utilising 1232 Italian adolescents, this longitudinal study assessed participants on two occasions, three months apart and demonstrated that moral disengagement at Time 1 moderately and positively predicted intention to dope at Time 1, and intention to dope and moral disengagement at Time 1 moderately and positively predicted reported doping at Time 2. Zelli *et al.* (2010) then investigated moral disengagement, intentions to dope and reported doping in Italian high-school students ( $n=1022$ ). A novel contribution of this study was that reported doping (as opposed to intention to dope in Lucidi *et al.* 2008) was assessed at two time points (four to five months apart). Moral disengagement was found to be a weak positive predictor of Time 1 doping intentions which in turn was a moderate positive predictor of Time 2 reported doping. In addition to doping, moral disengagement has been associated with other transgressive behaviours in sport through qualitative (e.g. Long *et al.* 2006) and quantitative (e.g. Boardley and Kavussanu 2007, 2009, 2010) investigations.

The work of Lucidi and colleagues has identified a consistent link between moral disengagement and intention to use and reported use of PED. However, to date no study has gathered qualitative accounts of PED users' rationalisations for PED use to determine whether such accounts resonate with the eight mechanisms of moral disengagement. Such research would have the potential to unearth detailed information on how (i.e. which mechanisms are used and how they are used) moral disengagement may facilitate doping not identifiable through quantitative research with samples largely comprising of non-doping athletes (i.e. Lucidi *et al.* 2004, 2008; Zelli *et al.* 2010). Seeking the qualitative accounts of actual PED users has proved successful in studies aiming to further understanding on the processes that facilitate adoption of doping in sport (e.g. Bilard *et al.* 2011; Lentillon-Kaestner and Carstairs 2010; Lentillon-Kaestner *et al.* in press). However, such research has not specifically investigated the utility of Bandura's (1991) theory in identifying the specific psychosocial mechanisms that facilitate this process. The present study seeks to contribute to the literature on doping in sport by drawing on Bandura's (1991) theory to investigate the psychologically and environmentally based processes involved in decisions to dope with athletes who have actual experience of PED use. In sum, the current research aims to answer the following research questions: (a) does moral disengagement exist in doping bodybuilders; (b) if so, which mechanisms are used; (c) is there a socialisation process within strength-training environments that facilitates moral disengagement and doping; and (d) can any emergent themes be explained within the boundaries of Bandura's (1991) theory.

## 2. Methodology

### 2.1. Participants, interviewer and ethical considerations

The study entailed in-depth semi-structured interviews with nine bodybuilders (eight males and one female) who trained in one gym in the West Midlands region of England. Participants' ages ranged from 20 to 30 years, and they had been bodybuilding regularly for between 4 and 14 years ( $M=7.5$  years). Seven of the nine athletes were using PED at the time of interview and had been for between one and three years; the remaining two had previously used PED but had discontinued use at that time. Interviews ranged in length from 15 to 39 minutes ( $M=28$  minutes). The types of PED being used included stimulants, anabolic

steroids and other hormones which were administered orally as well as through injection. The athletes were purposefully sampled to gain the perceptions of athletes who had actual experience of PED use. Participants were contacted in person at the gym to determine whether they would like to participate and to arrange a time for the interview. Ethical clearance for the study was obtained from the host institution and informed consent was obtained from all athletes.

At the time of data collection, the interviewer trained regularly at the gym in which data collection took place, and had done for a number of years. Although not a PED user himself, the interviewer was still heavily muscled and was therefore accepted as part of the 'serious' bodybuilding community in the gym. Factors such as class, gender, sexuality and prior sport participation potentially influence status in athletic subcultures and may affect acceptance, as well as the responses of those who occupy the social environment in question (see Woodward 2008). The interviewer's appearance and familiarity with the gym and its members allowed him to be easily accepted and trusted by interviewees and to gain access to a research site and participants which may not otherwise have been available. Also, it increased the likelihood of participants responding openly and honestly and allowed him to use language common to the specific subculture. There are, however, drawbacks to a researcher being viewed as an insider as it can be more difficult to probe and question assumptions that are taken for granted by members of the subculture. When addressing such issues, participants may be more articulate in their responses when questioned by an outsider. In an attempt to offset such a possibility, the interviewer explained the academic nature of enquiry at the outset of each interview and how this may result in questions to which the answer appeared obvious to the participant, as well as the importance of answering such questions fully.

## **2.2. Interview structure and data analysis**

In-depth semi-structured interviews were conducted during the winter of 2009/10. These interviews were based on a protocol aimed at identifying psychosocial justificatory mechanisms used to rationalise PED use that fitted with the eight mechanisms of moral disengagement. This interview protocol comprised open-ended questions (e.g. "What are your thoughts regarding the appropriateness of the use of performance-enhancing drugs?") that were followed up with targeted questions centred on the eight predetermined categories (e.g. Moral Justification: "Do you think there are any ways in which you using performance-enhancing drugs can benefit others?"). Such an approach is appropriate when investigating an existing theory through qualitative research (see Hsieh and Shannon 2005). Each interview was audio-recorded and transcribed verbatim. Once transcribed, interviews were sent to the participants in order to check the accuracy of the transcription; no athletes requested changes and a total of 84 single-spaced pages of transcript were coded and analysed.

The study data were analysed largely through deductive reasoning using directed content analysis, appropriate when examining a specific theory with qualitative data (Hsieh and Shannon 2005). This involved the application of operational definitions (see introduction for the definitions used) of the eight mechanisms of moral disengagement in content-analysing the data. Due to expertise in the relevant area, the first author created the operational definitions and the second author content-analysed the data using these definitions. Content analysis involved reading each

transcript and highlighting all text that appeared to represent one or more psychosocial justificatory mechanism; highlighted passages were then coded according to the predetermined codes (see Hsieh and Shannon 2005). The unit of coding used throughout data analysis was the complete response to a question (open-ended or targeted). This unit of coding was chosen to ensure that each response was coded whilst taking into account each entire response, therefore preventing loss of context which may have occurred if we had coded in individual sentences. A consistent unit of coding was used to facilitate intra- and inter-rater reliabilities in coding and to make comparisons with findings from similar studies more meaningful (De Wever *et al.* 2006).

Any data relevant to psychosocial processes facilitating PED use that could not be coded into one of the eight predetermined categories were coded inductively by the second author into a category that captured the essence of the underlying process described based on his reading – and subsequent re-reading – of all data representing that category. Through this approach, three categories beyond the eight pre-determined categories were identified. The first author then interpreted each of these categories using Bandura's (1991) theory.

Reliability of coding is a critical concern when conducting content analysis (De Wever *et al.* 2006). To ensure reliability in the current study, indicators of both intra- and inter-rater reliabilities were calculated. To assess intra-rater reliability, the second author coded Interview 8 on two occasions, several months apart. This resulted in 23 of 25 coding decisions corresponding across the two time points, giving an intra-rater reliability of .92. Inter-rater reliability was assessed by calculating percentage agreement and Cohen's Kappa following the separate content analysis of Interview 8 by both the first and second authors. Reliability assessment using one interview was considered satisfactory, given this represented eleven percent of the interviews. The specific indicators were chosen because percentage agreement is a commonly used indicator, and Cohen's Kappa takes into account chance agreement among coders and is appropriate when two coders are used (De Wever *et al.* 2006). Overall, percentage agreement was .85 and Cohen's Kappa .83. These levels of agreement are considered to be acceptable levels of inter-rater reliability (Banerjee *et al.* 1999; Riffe *et al.* 1998).

The methodological approach adopted in the current work reflects a variant of a post-positivist position. Whilst maintaining a worldview closely aligned with positivism, the researchers are more reserved regarding the ability to fully discern reality and are open to a wider range of methodologies in comparison to 'strict' positivists (Brustad 2008). This openness to a wider range of methodologies is reflected in the qualitative approach taken in the current study, and a close alignment with a positivist worldview manifests in the primarily deductive approach taken when analysing the study data, using categories derived from theory. This alignment with the positivist paradigm is again evident when theory is used to discuss the three inductively coded categories.

### 3. Results and discussion

In this section, we first present the results for each of the pre-determined categories, followed by emergent categories not captured by any of the eight mechanisms proposed by Bandura (1991). The numbers that follow exemplar quotes refer to the interviewee number followed by the page numbers referred to in the interview

transcripts. Where appropriate, square brackets [ ] have been used to add additional words or phrases to clarify quotes. As detailed below, evidence was found for six of the eight mechanisms described by Bandura (1991); no evidence emerged for use of dehumanisation or attribution of blame. In addition to these six categories, a further three categories emerged based on themes apparent in the data. These emergent themes were labelled routinisation, family and friends, and sliding scale.

### **3.1. Displacement of responsibility**

The first theme centred on displacement of responsibility, when people view their actions as the result of social pressure and not something for which they are personally responsible (Bandura 1991). With respect to our data, use of this mechanism was seen through the presence of more muscular athletes known to be users of PED acting as a form of social pressure that encourages PED use. Bandura (1991) suggests that environmental pressures to transgress can be either implicit or explicit. Clearly, the process exemplified here is more implicit in nature as there was little evidence that users went out of their way to entice other gym members to dope, but by virtue of their bodies and their performance, they appeared to attract other bodybuilders to emulate them. On this point, Interviewee 2 said that the group of users in the gym do not necessarily encourage PED explicitly, but do so ‘... by appearance, so maybe by someone looking at them and going “yeah”’ (2; 185–186).

Interestingly, among our sample one’s peers – in particular their appearance – helped shape and form attitudes towards PED. As interviewees worked through the reasons for crossing the line and moving to PED use, peers and their bodies were a recurrent topic. For example, one interviewee suggested that he ‘... saw people getting bigger, so I wanted to get bigger’ (4; 55); later in a similar vein, he continued: ‘I wanted to get bigger, I wanted to get stronger, I wanted to train harder...that’s why I’m keeping on taking them you know’ (4; 205–207). Rubbing shoulders with more advanced bodybuilders whose bodies tended to represent the end goal of what many people in the gym set out to achieve appeared to create the perception that taking PED was a necessary action if bodybuilders aspired to achieve the bodies they desired.

There was a sense that the transition to training in a ‘real’ gym facilitated athletes’ initiation of PED use. Interviewee 7 captures this by saying, ‘I think the step from one kind of gym to the other sort of pushed me to do it [take PED] I suppose ... where there are people walking around with the physique you want to eventually get to ... knowing what they’ve taken ... might sway your decision somewhat’ (7; 48–50). Importantly, according to Bandura (1991, p. 82), perceptions of personal responsibility for transgressive conduct are reduced if actions are seen to arise ‘from the dictates of the situation’. Thus, it is possible that bodybuilders offset responsibility for their decision to dope to environmental stimuli that create an implicit pressure to adopt PED use.

### **3.2. Diffusion of responsibility**

The second theme investigated diffusion of responsibility through collective action, whereby responsibility for transgressive action is socially diffused in a relatively large group of offenders (Bandura 1991). Use of this mechanism was evident, and closely linked to Theme 1 in that the environment was central to its operation.

Interviewees made a clear juxtaposition between a ‘real gym’ and a ‘leisure centre’, with the former likely to be the site of PED use and the latter seen as inferior and not serious. The biggest difference that marks the ‘serious’ or ‘hardcore’ gym from the others is the specific atmosphere; the sense of collective endeavour among the core group. Just as being around certain peers appears to influence decisions to move to PED use, the environment in which such groups meet and train appears to facilitate PED use. A ‘type of gym’ in which ‘more people use drugs for their sport’ can lead to people thinking it is ‘... acceptable to use anything’ (2; 96–97); the effect of such an environment is clear for one interviewee: ‘... the longer I’m here the more keen I am to do stuff I shouldn’t really or would never ever of considered ...’ (3; 313–314).

A perception of communal endeavour regarding use of PED may influence newcomers to the group and ease the passage from supplement use to PED use. Interviewee 4 explains crossing the boundary from legal supplements to illegal PED as follows: ‘...it wasn’t such a big deal for me ... because other people in the gym had taken them; you know, the atmosphere of the gym ...’ (4; 210–1). Another continues this theme stating that ‘I think they [people taking PED in this gym] make it more acceptable, people here are taking it because they know other people are taking it, definitely.’ (3; 381–2). This effectively ‘normalises’ the act of PED use in this particular environment. Interviewee 3 captures this point when she states: ‘I think the more you are around it [use of PED], the more acceptable and normal it becomes ...’ (3; 292–3). Similarly, a broader answer summing up the notion of the influence of peers is as follows:

In this gym particularly I would say it’s because so many other people do...it’s difficult to train in this gym without bumping into or training with or talking to someone that at least at one point has used or trained with somebody that has used (8; 430–434).

Thus, it appears that both diffusion and displacement of responsibility may be key mechanisms in the promotion of PED use in certain gyms. Bandura (2002) describes how the use of these two mechanisms can be built into the organisational configurations of societal systems. This would appear to be the case with ‘serious’ gyms, where the presence of a high percentage of PED users and social cues that proliferate the belief that successful bodybuilders use PED facilitate diffusion and displacement of responsibility. One question that remains to be answered is whether athletes actively seek out these environments due to a pre-existing intention to adopt PED use or whether they enter such environments naively, before being inadvertently socialised into PED use.

### **3.3. *Advantageous comparison***

The third theme investigated rationalisations that reflected advantageous comparison. This mechanism involves drawing comparisons between the transgressive behaviour in question and alternative activities perceived to be more reprehensible (Bandura 1991). Such comparisons have the effect of minimising the perceived harm caused by the less-serious offence (Bandura 1991). Although the athletes were clearly aware of the potential health implications and side effects associated with PED use, by focusing on positive aspects of their lifestyle associated with bodybuilding (e.g. being physically active, healthy diet, not smoking) and comparing

their overall lifestyles to those of the general population, athletes appeared to be able to downplay any negative effects of PED use on their health. To facilitate this, the general public were characterised as physically inactive frequent consumers of alcohol, who show high rates of smoking.

Interviewee 6 got straight to the crux of the matter asking ‘... is doing this any worse than someone who goes out and has 3 or 4 pints [of beer] every night of the week ...’ (6; 335–356; also 357–362). Many of the interviewees appeared indignant when discussing smoking and alcohol consumption, considering themselves much healthier than those who consume such substances. Interviewee 7 uses this argument to justify his PED use:

I suppose in my head I justified it through erm, comparing it to people who already abused their body with alcohol and everything else and thinking well it can’t be that bad or worse than that so why should I not be able to take it?’ (7; 244–247).

Building on this theme, Interviewee 4 ruminates that ‘regular people....like to smoke, they drink, you know they go out get absolutely trashed on alcohol....I’m a relatively healthy person ... I don’t think steroids are as harmful as alcohol’ (4; 297–302; also Interviewees 2, 5 and 8).

Similar comparisons by steroid-using bodybuilders have been reported in past research. For example, in the work of Monaghan (2002), one athlete stated: ‘If they were stood there with a fag in their hand and a pint of beer, I’d say “it’s no different to what you’re doing is it?”’ (p. 701). Similarly, Probert and Leberman (2009) quoted an athlete who stated: ‘The drugs certainly don’t make it healthy. But then again, what is healthy these days? If I wasn’t a bodybuilder, I wonder would I be a piss head and obese from eating takeaways?’ (p. 357)

Monaghan’s (2002) study also illustrated how steroid-using bodybuilders frequently compared steroid use with use of illegal street drugs such as heroin and cocaine, again assumedly to minimise the apparent harm caused through PED use when compared with drugs perceived to be more harmful. For example, one athlete stated: ‘Compared to cocaine, to crack, to heroin, this is Mickey Mouse stuff’ (p. 702). Although this particular referent behaviour was not evidenced in the current study, comparisons with legal and illegal recreational drugs both resonate with the mechanism of advantageous comparison as defined by Bandura (2002). Thus, it would appear that advantageous comparison may be relatively common among PED using bodybuilders.

### 3.4. *Distortion of consequences*

The fourth theme considered justifications that resonated with distortion of consequences, when one avoids or cognitively minimises the harm caused by reprehensible action (Bandura 1991). Consistent with this mechanism, interviewees were keen to draw attention to the fact that they were not professional athletes involved in competitive sport, therefore implying that the harm caused to others through competitive advantage was not relevant in their case. There were various examples of this from each interviewee, and the following offer representative examples of these. Interviewee 6 described how taking PED is fine because he was ‘not competing in any kind of professional sport’ (6; 293–294). Similarly, Interviewee 9 suggested that as long as PED users do not ‘do a competition like the Olympics it’s

just fine' (1; 147–149). There was a clear sense among 'users' that so long as PED are not taken in order to win a competition it does no harm to others – that is, the act is restricted to 'just' themselves – then it is morally acceptable (2; 147–148; 4; 256–257). Clearly, such a focus ignores the potential harm caused to the individual's health as a result of side effects, as well as possible psychological harm to others (i.e. friends, family, etc) who have a vested interest in the athlete's overall health and well-being.

As well as downplaying the harm caused to others, distortion of consequences was also evident in attempts to minimise the perceived harm to the self. This was particularly apparent in distorted perceptions of the potential harmful side effects of PED use resulting from information gathering by neophyte users. The importance of this information in supporting PED use through creation of distorted beliefs is evidenced by Interviewee 2 who stated 'with the research I've done ... as long as you are doing it properly and professional then it looks like it's ok, and as safe as it can be' (2; 193–4). Such information gathering was also evident in young elite cyclists considering doping in the research of Lentillon-Kaestner and Carstairs (2010). For example, one cyclist said "Because I am very interested in doping, I have read a lot of books on this subject", whereas another stated "Just by reading newspapers, you can sometimes get the right dosage" (p. 340). Thus, it appears that gathering information is an important step in the transition to doping across different sports, and that this may serve the purpose of creating and reinforcing distorted beliefs regarding the ability to control the potential negative health consequences of PED use.

One important source of easy-to-access information about PED and their use was the Internet. Interviewee 2 suggests, reflecting on why he used PED, 'I thought it was ok, fine, I mean I'd been reading reviews and things on the Internet which is also helpful and I thought it was fine' (2; 124–125). As well as in the present study, the importance of the Internet as a source of information on PED use is evidenced by the elite cyclists in Lentillon-Kaestner and Carstairs' (2010) study. The accuracy of Internet-based information is clearly disputable but the existence of such information may be important in supporting distorted beliefs regarding the detrimental side effects associated with PED use. Thus, although the specific means through which it is achieved may differ across individuals, it appears that the ability to create favourable perceptions of the health implications of PED use through information gathering may be a common supporting mechanism for doping.

### **3.5. *Moral justification***

The fifth theme represents the mechanism of moral justification, which involves the portrayal of transgressive acts as serving a worthy social or moral purpose (Bandura 1991). Utilisation of this mechanism capitalised on extensive experience and knowledge of PED use and was therefore restricted to the more experienced PED users. These athletes believed that the knowledge and experience generated through their PED use allowed them to offer qualified advice on safe doping practices. Offering such advice provided a justification for the advisors' PED use as engagement in doping is clearly a prerequisite to establishing the knowledge required to offer this service. As such, experienced bodybuilders were able to cognitively reconstrue a transgressive act (i.e. PED use) in a way that portrayed it as serving a valued social purpose (i.e. advising neophyte users on safe PED use), therefore evidencing moral justification.

Such ‘knowledge’ of PED use in experienced users was a frequent and recurring theme. It was clear that disseminating knowledge was a mechanism to justify and reason the taking of PED. The information propagated centred on issues such as which drugs to take and at what level, being promulgated by athletes who ‘know what they are doing’ and thus can ‘give people feedback’ [on taking PED] (6; 131). Interviewee 6 also articulated this process, suggesting that given that he was always asked questions by newcomers about PED use, he surmised that ‘if I tried this myself I could give people feedback on it ... ’ (6; 129–131). Interestingly, elite cyclists in Lentillon-Kaestner and Carstairs’ (2010) study described similar processes. More specifically, the young elite cyclists described how experienced professional cyclists who had used PED transmitted the culture of doping to young elite cyclists by educating them on doping methods and which substances to use. For example, one athlete described how when he needed advice on PED use, he could contact a professional cyclist experienced in PED use: “If I need advice, I can phone him” (p. 341). Thus, the reliance on experienced users for information on ‘safe’ use of PED appears not to be restricted to bodybuilding. This process is likely to facilitate not only the advisor’s PED use but also that of the recipient, as such advice is likely to propagate the belief that PED can be used safely. Proliferation of this belief should then facilitate the favourable beliefs regarding the health implications of PED use described in the previous theme.

### 3.6. *Euphemistic labelling*

The sixth theme centred on euphemistic labelling which acts to make detrimental behaviour appear less harmful and/or more acceptable through the selective use of language (Bandura 1991). Detrimental conduct can appear quite different depending on the terms used to describe it, and the esoteric use of specific names for PEDs among interviewees was widespread. No one ever speaks of ‘drugs’, ‘PED’ or ‘steroids’ within the confines of the gym, alternative terms are used instead as described by Interviewee 8:

...there is a lot of slang for erm, performance-enhancing drugs, all the typical ones such as juice, gear, people might just refer to them as jabs, tabs, orals ... it’s no different from you know, relating it to erm, a class A drug just by its street terminology, it’s just they’ve got comfortable using it (8; 465–472).

Such an argument – about becoming ‘comfortable’ with specific terminology – belies the fact that calling PED by their real name, as our interviewee hesitatingly did in the quote above, makes it real, brings its illegality into focus. This is highlighted by Interviewee 4’s more thoughtful remark that ‘I suppose it is more acceptable [using specific language to describe PED] if you don’t name it steroids because if you name it steroids it sounds illegal and derogatory already doesn’t it? So, you just say “juice”’ (4; 311–312). Interviewee 6 captures well the purpose that may underlie the use of euphemistic language by PED users:

To try and perhaps make it more acceptable, they [PED users] don’t want to be branded as like “having used steroids”. You know, if you go up to someone and say “I’m using these steroids now”, they would go “oooo no”, but you can say “I’m trying a bit of gear” (6; 439–442).

The consistent use of sanitising language to soften the appearance of PED use is seen throughout the interviews, and suggests that there is a common language shared by PED users in this gym. What is most interesting regarding the use of euphemistic labelling here is that at least some athletes appear acutely aware of why they use such language when discussing PED. This finding suggests that awareness of how this mechanism operates does nothing to diminish the effectiveness of its use and is particularly important given this is the first study to demonstrate athletes' awareness of why euphemistic language is used when discussing transgressive behaviour. Evidence supporting the prevalent use of euphemisms when users discuss PED is provided by previous research with PED using bodybuilders in which athletes use identical terms (e.g. juice, gear) to those in the present sample when discussing PED (Andrews *et al.* 2005). This suggests that there may be a common language amongst 'serious' bodybuilders that serves to prevent distasteful emotional reactions when discussing PED.

### 3.7. *Routinisation*

Theme 7 is the first of three themes that emerged inductively during the coding and analysis of interview transcripts. Theme 7 was defined as description of supplement and PED use becoming part of an athlete's daily routine. All interviewees made reference to how taking supplements had simply become part of their lifestyle. Interviewee 4, for example, stated in relation to supplements use: 'I don't even think about err, why I'm taking them anymore it's just part of my diet ...' (4; 142–143); for another '.... it's a way of life' (7; 176). Importantly, routinisation also applied to PED use in interviewedees who were experienced in taking PED. For example, Interviewee 4 suggested that doping had become like taking supplements as it was '...now [it's] just again part of my routine' (4; 217).

The wider point here is that supplement and PED use appear to become part of a broader routine, a structured procedure that is carried out, over time, without conscious thought. Thus, it is possible that routinisation of supplement use later facilitates the routinisation of PED use as well as the psychological assimilation of supplement use with PED use. Although a causal link has not been established, numerous data connecting supplement use and subsequent doping have been reported (e.g. Dodge and Jackard 2006, Dunn *et al.* 2009; Hoffman *et al.* 2007).

The issue of routinisation of detrimental conduct is one that is addressed in Bandura's (1991, 2002) theorising, with moral disengagement thought to facilitate this process. Accordingly, Bandura (2002, p. 110) describes how detrimental conduct can become 'thoughtlessly routinised' through moral disengagement. More specifically, moral disengagement is thought to have a transformative influence that gradually changes one's perception of the moral self through a progressive process whereby people first engage in mildly harmful acts that they can tolerate with minor uneasiness. The seriousness of conduct then increases in line with an increasing adeptness at moral disengagement. Evidence of the thoughtlessness and routinisation that Bandura (2002) talks about is seen in Interviewee 4 who says he no longer thinks about his use of PED, but describes it as just being part of his routine. Importantly, the ability to reduce conscious thought regarding PED use through this process is likely to reduce experience of controlling self-sanctions that should normally deter such conduct.

### 3.8. Family and friends

The second emergent theme was defined as discussants compartmentalising their PED use, making clear distinctions between ‘gym friends’, ‘non-gym friends’ and family. The first group is fully aware of athletes’ PED use, whereas the latter two groups are not privy to such goings on. Most of our interviewees agreed that PED use is not something to be discussed with direct and close family; one thought his mum ‘wouldn’t be too impressed with it, although I’m old enough and everything’ (2; 63–64); another put it far more strongly asserting that ‘there’s no need for them to know whatsoever’ (4; 101).

A sub-theme related to this is feelings of shame and disappointment that a discovery of PED use by ‘non-gym friends’ or ‘family’ would elicit (e.g. 5; 111–113) or that non-users would not ‘understand perhaps the motivation for taking it [PED] ... and they’ll probably just label you as a drug user, regardless of what the drugs are or how they compare to Class A [drugs]’ (7; 108–110). Thus, only those in the gym are entrusted with this information, ‘because the gym environment people would understand’ (6; 172–173). A good example is the somewhat contradictory response to the question of why interviewees did not inform their families about their PED use to which Interviewee 4 replied:

I don’t know, I suppose it’s illegal, the drugs are illegal and I didn’t want them to know that I’m taking illegal drugs, erm, I don’t know, it’s not that I’m ashamed but I can’t really explain, maybe slightly ashamed but I don’t know ...’ (4; 97-99).

An awareness of the likely reaction of significant others not from the gym environment is also demonstrated when Interviewees 6 and 7 suggest a lack of ‘understanding’ by those outside the gym. Although the athletes do not elaborate on what they mean by the term ‘understanding’, it is possible that what they are referring to here is a lack of understanding of the means through which they justify PED use rather than the behaviour itself. As described earlier, use of moral disengagement progressively develops through adoption of harmful practices (Bandura 2002). Those outside the gym environment have not been through this process and may not be perceived as ‘understanding’ the psychosocial processes that underpin PED use.

The selective way in which the interviewees described how they shared their PED use with some confidants but not others may relate to the reciprocal interplay that Bandura (2002) describes between personal and social influences. Bandura describes how moral action is influenced by the interaction of personal (i.e. moral cognition and emotion) and social (i.e. social acceptance or condemnation of transgressive acts) influences. Conflict occurs when there is disparity between personal and social beliefs regarding what is acceptable conduct. Bandura (2002) suggests such conflict is likely to have negative emotional consequences. Evidence of conflict and resultant emotion is seen in the response of Interviewee 4 who struggles to articulate his thoughts and is aware that sharing his PED use with family may result in feelings of shame. Experiencing negative emotion when discussing this issue may also have resulted in the initial defensive response of Interviewee 4 when questioned on this subject. Thus, it is possible that PED users proactively avoid conflict between personal and social influences by only sharing their PED use with those who they feel will reinforce their use of, and justifications for, using PED.

### 3.9. *Sliding scale*

The final theme referred to the notion of a ‘sliding scale’ in relation to PED use in sport. This category was defined as descriptions reflecting supplement use being one end of a continuum, with PED use in the form of tablets in the middle, and ‘injectables’ at the far end. The implication being that supplement use can (eventually) lead to serious PED use and en route there are a number of ‘boundaries’ to cross such as stepping over the line to take PED for the first time and then moving from PED in tablet form to ‘injectables’. Although others have described a progressive sliding from the use of legal products or methods to illegal ones (Martinez and Bilard 2003), our data suggest an extension of this in which athletes progress from minor use of illegal products to more serious use, with this process facilitated by gradualistic moral disengagement (see Bandura 2002). We put the question of a possible link between supplement use and PED use to our interviewees and the overwhelming response was that it was a natural trajectory. The following sums up many of the comments:

Yeah it’s like a natural cycle really, anyone who’s been using normal supplements ... for a certain amount of time, err, steroids are easily, err, one of the most, err, easy to get hold of ... as soon as you start training with people or around people who use then it’s only a matter of time before things progress (8; 115–119).

References to ‘natural cycles’ and suggestions that things are ‘progressing’ lend a sense of inevitability to taking PED after a specific time period, usually spent taking supplements and coming to a point in training at which the person ceases to improve. Interviewee 5 offers a clear example of such ‘progression’ when he states that he ‘...started on Dianabol in small doses and then *worked my way up* and *went onto* the injection, but I only did one injection a week; I didn’t do them heavy or anything like that’ (5; 55–56; our emphasis). There are two things to note here: first, the sense of incremental shift from supplements to PED in injectable form. Second, the final two sentences added to justify the use of the most extreme type of PED, injections. This person ‘only’ used ‘one’ injection a week; thus, his use was not ‘heavy’.

A final example of the proposed ‘sliding scale’ process of PED use records an analogy with ‘recreational drugs’. Interviewee 4 explains:

I mean I wouldn’t just take performance-enhancing drugs without the supplements I mean there’s got to be something that starts you off I suppose; it sounds like recreational drugs, like smoking weed then moving on to harder drugs, I suppose you can almost think that with performance enhancers and supplements’ (4; 74–78).

As described previously, Bandura (2002) considers the use of moral disengagement in supporting transgressive practices to be a gradual process. People initially engage in mildly distasteful acts before progressing to more harmful conduct. This progression is facilitated by an increased adeptness at using moral disengagement, resultant decreases in controlling negative emotions and environments which reinforce justifications for transgression. As Bandura (2002, p. 110) describes, this “continuing interplay between moral thought, affect, action and its social reception is personally transformative”. Progression from supplements to PED to injectables as described by the athletes is consistent with such a process. It is possible that whilst

using supplements, athletes socially learn moral disengagement techniques required to justify the decision to move to PED use, and that once using PED, they gradually develop the required psychosocial skills to cross the boundary to injectables. Social reinforcement of justifications for PED use and seeing others follow similar trajectories are likely to facilitate progression through this process.

This process is insidious in that people are not even aware of the changes that occur to the moral self (Bandura 2002). This is seen in Interviewee 5 who describes how he only used one injection per week as if this was not a significant level of PED use. It is possible and maybe even likely that at one time, this athlete wouldn't have even considered using PED, whereas at the point of interview regular use of injectable PED was considered acceptable as long as it is restricted to once per week. Although the bodybuilders appear acutely aware of the trajectory, their supplement and PED use has taken, and it is unlikely they were aware of the transformations in moral thought and emotion that had occurred to facilitate such changes (see Bandura 1991).

### **3.10. Limitations and future directions**

The current study has generated knowledge that could inform those attempting to reduce doping in sport and exercise contexts by providing evidence of thought processes and environmental conditions that may facilitate doping in an athletic population. However, the study has some limitations which should be addressed in future work. First, the current study only included athletes from a single gym. Thus, replication of the current findings in other regions of the UK and countries around the world is warranted and encouraged. As well as furthering understanding on the generalisability of moral disengagement across larger and more diverse samples, such work could focus especially on the stability and importance of the three themes that emerged inductively (i.e. routinisation, family and friends, and sliding scale). Also, it is not known what proportion of the study participants were competitive bodybuilders, which could have had an impact on the types of justifications offered. Thus, future research should investigate whether justificatory processes differ between competitive and non-competitive athletes. Further, distinctions were not made between current PED users and those who had terminated use. As such, it would be interesting to investigate whether the moral cognitions of current PED users differed from those no longer using such substances. Comparisons between these groups and non-users are also encouraged. In addition, it is not known whether participants were users, misusers or abusers of PED. Future work categorising athletes in this way would help determine whether the types of PED used, and the frequency and volume with which they are used influence the moral cognitions relating to PED use. A further potential direction for future work is to investigate the utility of Bandura's (1991) theory alongside existing research suggesting the timing of doping interventions may be a critical consideration, as periods of career instability appear to be a point at which athletes may be particularly vulnerable to adoption of doping practices (Mazanov *et al.* 2011).

## **4. Conclusion**

Through interpretation of the data within the nine themes, the four research questions have been answered. First, there is considerable evidence that moral

disengagement does exist in bodybuilders who use PED. Second, only six of the eight mechanisms were evident in the data as there was no support for use of dehumanisation or attribution of blame. As these mechanisms target the victim of transgressive acts (see Bandura 1991), it may be the case that these mechanisms are not utilised when one of the victims of harmful acts is also the perpetrator, as is the case here. Third, although there was not evidence of an explicit doping socialisation process, it is clear that many of the PED users had followed a consistent trajectory from supplement use to injectables and that the environment in ‘serious’ gyms supports this trajectory. The presence of an implicit rather than an explicit socialisation process makes sense given the illegal activities involved in PED use, and promotion and reinforcement of moral disengagement may have an important role in this insidious process. Finally, Bandura’s (1991) theory demonstrated clear utility in explaining three emergent themes relevant to psychological and environment processes associated with PED use.

Although it is too soon to propose detailed interventions aimed at reducing PED use based upon the current findings, athletes and those advising them should be aware of the potential consequences of frequenting environments similar to the one in which the current study data were collected as such environments clearly have the potential to increase athletes’ adoption and continuation of PED use. Further, the current study represents an initial starting point to understanding the mechanisms and processes involved in the justification of PED use as guided by Bandura’s (1991) theory. We encourage future researchers to further investigate this topic, either through further application of Bandura’s (1991) theory or by using appropriate alternative theories such as neutralisation theory (Sykes and Matza 1957).

### Notes on contributors

Dr Boardley is a sport psychology researcher in the UK whose work predominantly focuses on moral issues in sport. He has recently published on the effects of competitive pressure on expert performance (*Psychophysiology*, 2011), fear of failure and anti-social behaviour in education and sport (*British Journal of Educational Psychology*, 2011) and the effects of goal orientation and perceived value of toughness on anti-social behaviour (*Journal of Sport & Exercise Psychology*, 2010).

Dr Grix is a political scientist in the UK whose work focuses on sport and politics, and sport policy. He has recently published on the governance of sport (*Public Administration*, 2011), using ‘Q’ methodology in sports research (*Leisure Studies*, 2010) and the decline of distance running in the UK (*Sport in Society*, 2011), and his most recent book is on the East German Sports ‘Miracle’ (Palgrave, 2012).

### References

- Andrews, G.J., Sudwell, M.I., and Sparkes, A.C., 2005. Towards a geography of fitness: an ethnographic case study of the gym in British bodybuilding culture. *Social science & medicine*, 60 (4), 877–891.
- Backhouse, S.H., et al., 2007. *International literature review: attitude, behaviours, knowledge and education – drugs in sport: past, present and future* Social Science Research Fund, WADA, Carnegie Research Institute, Leeds Metropolitan University.
- Bandura, A., 1991. Social cognitive theory of moral thought and action. In: W.M. Kurtines and J.L. Gewirtz, eds. *Handbook of moral behavior and development: theory research and applications*. Hillsdale, NJ: Lawrence Erlbaum Associates, 71–129.
- Bandura, A., 2002. Selective moral disengagement in the exercise of moral agency. *Journal of moral education*, 31 (2), 101–119.

- Banerjee, M., *et al.*, 1999. Beyond kappa: A review of interrater agreement measures. *The Canadian Journal of Statistics*, 27, 3–23.
- Bilard, J., Ninot, G., and Hauw, D., 2011. Motives for illicit use of doping substances among athletes calling a national antidoping phone-help service. an exploratory study. *Substance use & misuse*, 46 (4), 359–367.
- Boardley, I.D. and Kavussanu, M., 2007. Development and validation of the moral disengagement in sport scale. *Journal of Sport & Exercise Psychology*, 29, 608–628.
- Boardley, I.D. and Kavussanu, M., 2009. The influence of social variables and moral disengagement on prosocial and antisocial behaviours in field hockey and netball. *Journal of Sports Sciences*, 27, 843–854.
- Boardley, I.D. and Kavussanu, M., 2010. Effects of goal orientation and perceived value of toughness on antisocial behavior in soccer: The mediating role of moral disengagement. *Journal of Sport & Exercise Psychology*, 32, 176–192.
- Brustad, R.J., 2008. Qualitative research approaches. In: T.S. Horn, ed. *Advances in Sport and Exercise Psychology*. Champaign, IL: Human Kinetics, 31–43.
- Casavant, M.J., *et al.*, 2007. Consequences of use of anabolic androgenic steroids. *Pediatric clinics of North America*, 54 (4), 677–690.
- De Wever, B., *et al.*, 2006. Content analysis schemes to analyze transcripts of online asynchronous discussion groups: A review. *Computer & Education*, 46, 6–28.
- Dodge, T.L. and Jaccard, J.J., 2006. The effect of high school sports participation on the use of performance enhancing substances in young adulthood. *Journal of adolescent health*, 39 (3), 363–373.
- Donahue, E.G., *et al.*, 2006. A motivational model of performance-enhancing substance use in elite athletes. *Journal of sport & exercise psychology*, 28 (4), 511–520.
- Donovan, R.J., *et al.*, 2002. A conceptual framework for achieving performance enhancing drug compliance in sport. *Sports medicine*, 32 (4), 269–284.
- Dunn, M., Mazanov, J., and Gomathi, S., 2009. Predicting future anabolic-androgenic steroid use with current substance use: findings from an internet-based survey. *Clinical journal of sports medicine*, 19 (3), 222–227.
- Harmer, P.A., 2010. Anabolic-androgenic steroid use among young male and female athletes: is the game to blame? *British journal of sports medicine*, 44 (1), 26–31.
- Hoffman, J.R., *et al.*, 2007. Nutritional supplementation and anabolic steroid use in adolescents. *Medicine and science in sports and exercise*, 40 (1), 15–24.
- Hsieh, H. and Shannon, S.E., 2005. Three approaches to qualitative content analysis. *Qualitative health research*, 15 (9), 1277–1288.
- Kerr, J. and Congeni, J., 2007. Anabolic-androgenic steroids: use and abuse in pediatric patients. *Pediatric clinics of North America*, 54 (4), 771–785.
- Lentillon-Kaestner, V. and Carstairs, C., 2010. Doping use among young elite cyclists: a qualitative psychosociological approach. *Scandinavian journal of medicine and science in sports*, 20 (2), 336–345.
- Lentillon-Kaestner, V., Hagger, M. S., and Hardcastle, S., in press. Health and doping in elite-level cycling. *Scandinavian journal of medicine and science in sports*.
- Litt, D. and Dodge, T., 2008. A longitudinal investigation of the Drive for Muscularity Scale: Predicting use of performance enhancing substances and weightlifting among males. *Body Image*, 5 (4), 346–351.
- Long, T., *et al.*, 2006. A qualitative study of moral reasoning of young elite athletes. *The Sport Psychologist*, 20, 330–347.
- Lucidi, F., *et al.*, 2004. Determinants of the intention to use doping substances: an empirical contribution in a sample of Italian adolescents. *International journal of sport psychology*, 35 (2), 133–148.
- Lucidi, F., *et al.*, 2008. The social-cognitive mechanisms regulating adolescents' use of doping substances. *Journal of sports sciences*, 26 (5), 447–456.
- Martinez, D. and Bilard, J., 2003. Ecoute dopage: la prévention au service des sportifs. *Empan*, 51, 32–35.
- Mazanov, J., Huybers, T., and Connor, J., 2011. Qualitative evidence of a primary intervention point for elite athlete doping. *Journal of Science and Medicine in Sport*, 14, 106–110.

- Monaghan, L.F., 2002. Vocabularies of motive for illicit steroid use among bodybuilders. *Social science & medicine*, 55 (5), 695–708.
- Olrich, T.W. and Ewing, M.E., 1999. Life on steroids: bodybuilders describe their perceptions of the anabolic-androgenic steroid use period. *Sport psychologist*, 13 (3), 299–312.
- Petróczy, A. and Aidman, E., 2008. Psychological drivers in doping: the life-cycle model of performance enhancement. *Substance abuse treatment, prevention, and policy*, 3, 7.
- Probert, A. and Leberman, S., 2009. The value of the dark side: an insight into the risks and benefits of engaging in health-compromising practices from the perspective of competitive bodybuilders. *European sport management quarterly*, 9 (4), 353–373.
- Probert, A., Palmer, F., and Leberman, S., 2007. The fine line: an insight into 'risky' practices of male and female competitive bodybuilders. *Annals of leisure research*, 10 (3), 272–290.
- Riffe, D., Lacy, S., and Fico, F., 1998. *Analyzing media messages: Quantitative content analysis*. New Jersey: Lawrence Erlbaum Associates, Inc..
- Sykes, G. and Matza, D., 1957. Techniques of neutralization: a theory of delinquency. *American sociological review*, 22 (6), 664–670.
- Wingrove, T., Korpasa, A.L., and Weisz, V., 2011. Why were millions of people not obeying the law? Motivational influences on non-compliance with the law in the case of music piracy. *Psychology, crime & law*, 17 (3), 261–276.
- Woodward, K., 2008. Hanging out and hanging about: Insider/outsider research in the sport of boxing. *Ethnography*, 9, 536–560.
- Zelli, A., Mallia, L., and Lucidi, F., 2010. The contribution of interpersonal appraisals to a social-cognitive analysis of adolescents' doping use. *Psychology of sport and exercise*, 11 (4), 304–311.