

Inside the Locker Room:
A Qualitative Study of Coaches' Anti-Doping Knowledge, Beliefs and Attitudes

Terry Engelberg ^{1,2}

&

Stephen Moston²

¹ Department of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, Australia.

² Department of Psychology, College of Healthcare Sciences, James Cook University, Australia.

Acknowledgements

This paper is based on the research project 'Athletes' and Coaches' Attitudes about Drugs in Sport' which was supported by the Australian Government through the Anti-Doping Research Program of the Department of Health and Ageing.

Corresponding author:

Dr Terry Engelberg, Department of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, Gold Coast QLD 4222, Australia.

Tel: +61 (0)7 5552 7675

Fax: +61 (0)7 5552 8507

Email: t.engelberg@griffith.edu.au (changing after July 1 2015)

Email addresses of other author: Stephen.Moston@jcu.edu.au

Abstract

It is widely assumed that coaches have an effect on athletes' doping behaviours, however, the means by which this influence can be manifested are only superficially understood. The present study seeks to understand how coaches see their role in directly and indirectly influence the doping attitudes and behaviours of athletes. Fourteen elite level coaches participated in focus group discussions. Coaches displayed a low level of knowledge of banned methods and practices. While it was acknowledged that doping was prevalent in sport, coaches believed that doping was not a problem in their own sport, since doping does not aid in the development or implementation of sporting 'skills'. While the findings suggest that coaches support the revised WADA Code, with increased sanctions for coaches, the findings also highlight how coaches may indirectly and inadvertently condone doping. This may be through inaction or the apparent endorsement of pro-doping expectancies.

Inside the Locker Room:

A Qualitative Study of Coaches' Anti-Doping Knowledge, Beliefs and Attitudes

Introduction

Until recently, anti-doping legislation had firmly placed the responsibility for doping on the individual athlete (WADA, 2009). The decision to dope was seen as being largely influenced by individual characteristics of the athlete (Morente-Sanchez & Zabala, 2013; Ntoumanis, Johan, Ng, Barkoukis, & Backhouse, 2014), particularly their level of morality (e.g., Anderson, 2013; Barkoukis, Lazuras, Tsorbatzoudis, & Rodafinos, 2013; Kirkwood, 2012; Overbye, Knudsen, & Pfister, 2013; Shields & Bredemeier, 2007). However, there has been a growing recognition that the decision to use performance enhancing drugs might be affected by those people surrounding the athlete (Australian Crime Commission, 2013). Legislation has changed accordingly to include increasingly severe punishments for athlete support personnel (WADA, 2015). For example, under Rule 21.2.6 the explanatory comments states: 'Coaches and other Athlete Support Personnel are often role models for Athletes. They should not be engaging in personal conduct which conflicts with their responsibility to encourage their Athletes not to dope' (WADA, 2015; p. 114). The new Code Rule 23.2.3 also suggests that 'a National or International Federation could refuse to renew the license of a coach when multiple Athletes have committed anti-doping rule violations while under that coach's supervision' (WADA, 2015; p. 122).

The term *athlete support personnel* is typically used to describe all those 'working with, treating or assisting an Athlete participating in or preparing for sports Competition' (WADA, 2015; p. 132). While support personnel can include professionals such as doctors, physiotherapists, masseurs, sports scientists and dieticians, the coach is widely assumed to have a

INSIDE THE LOCKER ROOM

particularly salient role in affecting the decision to dope (e.g., Erdman, Fung, Doyle-Baker, Verhoef, & Reimer, 2007; Fung & Yuan, 2006; Golshanraz, Same-Siahkalroodi, & Poor-Kazem, 2013; Judge, Bellar, Petersen, Gilreath, & Wanless, 2010; Pitsch, Emrich, & Klein, 2007). In large part this is because coaches have the greatest degree of direct contact with athletes. This affords coaches the opportunity to influence the decision making of athletes either directly (e.g., instructing an athlete to use a banned performance enhancing substance) (Pitsch et al., 2007), or indirectly (e.g., by setting unrealistic goals). Research shows that nearly all coaches explicitly recognise that they have an important role to play in deterring doping (Laure, Thouvenin, & Lecerf, 2001).

Coaches as a Population of Study

It is surprising to discover how little anti-doping research has been conducted to directly examine the impact of coaches on the decision to dope. For example, a recent review of the literature on coaches and doping (Backhouse & McKenna, 2012) identified only four studies to have featured samples of coaches. Three of the studies (Fjeldheim, 1992; Laure et al., 2001; Scarpino et al., 1990) were conducted prior to the first international anti-doping code (WADA, 2003). The other study (Fung & Yuan, 2006) featured only community level coaches. While there have been several studies published after the review, and several that were not included in the review, the combined body of work is largely eclectic, with varying samples and methodologies that make integrating the findings problematic. These concerns apply to most of the literature on doping, which remains an inconsistent and disparate field of social science inquiry (for reviews see Engelberg & Moston, 2015; Morente-Sanchez & Zabala, 2013)

A literature review suggested that while coaches are regularly confronted with doping issues, the majority display a lack of doping knowledge, and have limited confidence in anti-

INSIDE THE LOCKER ROOM

doping control systems (Backhouse & McKenna, 2012). This conclusion has been borne out in subsequent work featuring elite coaches. For example, in a study of coaches in the USA (Judge et al., 2010), those coaches who were ‘certified’ stated that they felt more knowledgeable about performance enhancing drug use relative to uncertified coaches. Certified coaches also reported a stronger perception that they played a key role in deterring doping. In a related study of high school coaches (Sullivan, Feltz, LaForge-MacKenzie, & Hwang, 2014), a key premise was that while coaches recognise their importance in the prevention of doping, they generally lacked confidence (self-efficacy) in dealing with situations in which an athlete might be suspected of doping.

A recent quantitative study, featuring a sample of both coaches (n=92) and elite athletes (n=488) from a diverse range of sports in Australia (Moston, Engelberg, & Skinner, 2014a), found that coaches were far more skeptical than athletes about the likelihood of a doping athlete being detected by anti-doping agencies. Coaches also saw the current legal and financial deterrents to doping as less of a deterrent than did the athletes. Overall, relative to athletes, the coaches were more in favour of punishments to athletes and other support staff who had facilitated doping.

Coaches as the Object of Study

While coaches are rarely included as a population in anti-doping research, their potential impact on athletes’ attitudes to doping and doping behaviours has been examined in studies of elite athletes. In such studies athletes might be asked about how they perceive the doping attitudes of their coaches. For example, a mixed-methods study (Dimeo, Allen, Taylor, Robinson, & Dixon, 2012) suggested that in some individual-based sports ‘Coaches have an awful lot of influence on their athletes...to influence one way or another’ (p.19). The same study

INSIDE THE LOCKER ROOM

also suggested that coaches were dismissive of anti-doping education: ‘It seemed as though the coaches thought it was a waste of time...they weren’t really bothered if it went in or not, you know, they just wanted it ticked off that you’d done it’ (p.25). Similar findings were reported from a series of qualitative interviews with athletes who had used banned performance enhancing drugs. Engelberg, Moston, and Skinner (2015) found that in professional sports such as rugby league, support staff (including coaches) were perceived as crucial to the initial decision to dope and in maintaining such behaviours. In other sports the impact of support staff was more subtle, with one athlete describing how the team doctor refused to provide any banned substances, but an assistant doctor was able to help instead. This arrangement was conducted with the knowledge of the coach who ‘did not say a word’ (Engelberg et al., 2015; p. 7).

Another mixed-methods research study (Moran, Guerin, Kirby, & MacIntyre, 2008) which also featured athletes, found that coaches were perceived to have ‘mixed levels of influence’ (p.23). Athletes who said their coaches frequently criticised them, punished them for mistakes, encouraged rivalries and gave unequal recognition to team-mates, had the most favourable attitudes towards doping. However, the same study also found that both personal characteristics and the attitudes of team-mates might also be significant predictors of pro-doping attitudes.

Methodological Concerns about Research on Doping

The possibility that responses may have been affected by a social desirability bias (Gucciardi, Jalleh, & Donovan, 2010) was specifically acknowledged by both Judge et al. (2010) and Moston et al. (2014a). Such a distortion occurs when stated opinions conform to a socially accepted norm: coaches might state that they are opposed to doping, “because such an attitude is expected of them, rather than because they are really opposed to doping” (Moston et al., 2014a;

p.11). This concern is an ongoing problem in anti-doping research, where the truthfulness of stated attitudes and behaviours is often challenged. This has prompted researchers to develop increasingly sophisticated forms of indirect quantitative assessment methods (e.g., Pitsch & Emrich, 2011), or to use alternative forms of data collection such as qualitative interviews or focus groups (e.g., Probert & Leberman, 2009; Smith et al., 2010), or ethnographic methods (e.g., Hauw & McNamee, 2014; Pedersen, 2010).

The Present Study

Coaches are widely assumed to have a significant role in shaping the anti-doping attitudes and behaviours of elite athletes (Kim et al., 2011; Peters, Schulz, Oberhoffer, & Michna, 2009). Understanding the views of coaches towards doping and anti-doping policy is thus a necessary step in ensuring that those most affected by anti-doping legislation both understand and comply with that legislation (Mendoza, 2002). To date, only a handful of studies have included coaches. Furthermore, the samples were often small and the unique contributions of coaches was not always clear (e.g., Ohl, Fincoeur, Lentillon-Kaestner, Defrance, & Brissonneau, 2013).

Given this dearth of literature and research into the role of coaches in understanding doping by athletes, the present study seeks to explore coaches' knowledge, beliefs and attitudes [about their role in anti-doping](#). This study employs a qualitative methodology consisting of focus group discussions with elite coaches from a variety of sports. Each focus group was described to the participants as an informal 'locker room' style discussion, where previous experiences could be openly shared.

Method

Sample and Recruitment

A theoretical sampling method was used for the purposes of this study. This method was chosen because the aim of this research was to develop theory and concepts grounded in or emergent from real life events and circumstances (Cohen & Crabtree, 2006). Specifically, the views of coaches who were actively involved in coaching elite athletes were sought. Coaches were recruited from state-level sporting clubs, organisations and academies of sporting excellence in the state of Queensland (Australia).

Efforts were made to recruit both male and female coaches from a wide spectrum of sports, including team and individual sports, skill and strength sports, as well as Olympic and commercial sports. The final sample consisted of 14 coaches (nine males and five females) representing the following sports: American football (1 coach), Australian Rules Football (AFL: 1), basketball (2), cycling (1), football (soccer: 2), gymnastics (1), kayaking (1), netball (1), rugby union (1), surf-lifesaving (1), taekwondo (1), and triathlon (1). The mean age was 37.29 years (SD=10.29). All of the coaches were currently working with elite athletes: twelve of the coaches were working at a state level, and two were working with national/international level athletes. Ethical approval for the conduct of the research was granted by the educational institution of the first author.

Data Collection

The method of data collection was through focus group discussions, characterised here as locker room style discussions. Focus groups were selected as the method for data collection because they are an effective way of gathering information which includes a mix of complex attitudes, behaviours, and past experiences (Morgan & Krueger, 1993). Furthermore, Bringer,

INSIDE THE LOCKER ROOM

Brackenridge, and Johnston (2002) suggest that it is a myth that focus groups are not suitable for sensitive topics. These authors used focus groups to investigate coaches' perceptions of the appropriateness of sexual encounters between athletes and coaches.

As the purpose of this study was largely exploratory, a topic-guide was created to aid these discussions. The guide did not have set questions; instead, it used loose topics/themes to ensure consistency in the data collection process (Arthur & Nazroo, 2003). Items or probes were used to actively elicit additional information. Group discussions facilitated this process as participants often responded to other participants' comments or elaborated on specific points. This active process also aids the researchers' responsiveness to the actual wording or language used by the coaches. The main topics of discussion were:

1. Knowledge of banned performance enhancing drugs (including having personal knowledge of users; knowledge of testing procedures and testing protocols; awareness of what substances are banned and knowledge of where or from whom to obtain information about drugs and other substances).
2. Beliefs (the perceived extent of banned performance enhancing drug use, the perceived role of coaches in educating athletes, and shaping and influencing athletes' attitudes and behaviour).
3. Attitudes (whether drugs in sport should be banned, type and extent of suggested sanctions). Attitudes towards the Australian Anti-doping Authority (ASADA) and the World Anti-Doping Agency (WADA).

In a similar fashion to a study of athletes' views on doping conducted by Stewart and Smith (2010), digressions from the main probes were permitted in so far as these served to

INSIDE THE LOCKER ROOM

identify or illustrate further a previous point of interest or a possible further avenue of research not initially covered by the guide.

Procedure

Four focus group discussions were organised at two locations in the state of Queensland, Australia. All participants were contacted a few days prior to their scheduled focus group interviews and given an introductory briefing. Upon arrival at the venue participants were given an informed consent form describing the aims of the research, the nature of the data collection procedures, data handling and storage. The researchers also verbally explained the purpose of the study and provided participants with the opportunity to ask questions prior to commencement of the sessions. Participants did not know each other prior to the study.

Permission to take digital audio recordings of interviews was requested. Once consent was obtained from all participants, the sessions began. Discussions lasted between 43 minutes and 50 minutes. After each focus group concluded, participants were thanked for their cooperation.

Data Treatment and Analysis

Digital recordings for the focus group discussions were downloaded into digital audio files. The recordings were transcribed within two or three days of each focus group discussion. The analyses were conducted manually following the Analysis Method Framework (Ritchie, Spencer, & O'Connor, 2003), a process which has been used in qualitative research in community sport (Engelberg, Skinner, & Zakus, 2014). The process of analysis requires managing the data and making sense of the evidence through participants' accounts. The analysis has three stages: data management, descriptive accounts, and explanatory accounts. In this research, the data management stage served to identify the initial themes. Following from this

INSIDE THE LOCKER ROOM

step, an index with subthemes under the three overarching headings (knowledge, beliefs and attitudes) was created. The index was applied to the data by each member of the research team independently and then refined until agreement was reached and a final index was created. Data were then sorted through thematic charting; this process reduced the volume of data and simplified analysis, whilst it also retained the original wording and language of the participants.

Findings

Knowledge

Very few coaches admitted to having any actual knowledge about banned substances and associated potential side-effects. Additionally, very few had ever actively looked for current and accurate information in detail. As one coach explained:

I guess most of what us coaches know about is what steroids do, don't we all? To be honest I do not look for that information myself. I refer my athletes to the team doctor... and the WADA prohibited list.

Another coach said: 'All I know is about the ones that speed up recovery, and then again, not much. I'm not sure which are currently banned.'

Most coaches stated that they frequently received queries from athletes about drugs and other substances. One coach said: 'For the most part, when an athlete wants to know whether they can take something, they come to us, some go to the team doctor, or they just look it up somewhere.'

None of the coaches admitted to coaching an athlete who used performance enhancing drugs. However, a handful of coaches admitted to having some direct personal knowledge of other athletes who were using banned substances. Generally the 'offending' athlete was in the same sport as the coach, but the coach did not know the athlete personally. As one coach said: 'I

INSIDE THE LOCKER ROOM

don't personally know or ever knew of anyone that I've coached ever using performance enhancing drugs but at the elite level there obviously would be a few'. Most coaches admitted to knowing athletes who used illicit drugs. One coach said: 'No, I don't know of anyone using performance enhancing drugs. But I do know of athletes using other drugs, party drugs, it's more of a social or a team thing'. Two coaches said they knew other coaches who would endorse the use of banned substances if it increased the chances of winning. As one of these coaches pointed out, 'There's no doubt a few of these coaches do make recommendations to the boys that they need to improve by whatever means possible. I know one or two of those'.

Generally coaches were well-informed about testing protocols and anti-doping policy. All of them were familiar with random testing and out-of competition testing procedures. Few coaches, however, had had first-hand experience with testing, that is, many of these coaches' athletes had never been tested. One coach of an under 17 team (youth squad) said: 'My players have never been tested I don't know if it means our sport is not taken seriously, so who would dope, or that our players are not seen to be elite enough to be tested.' Coaches were less familiar with schemes such as the 'whereabouts scheme' or 'the biological passport'. Two coaches declared that they were not familiar at all with either policy.

Most coaches stated that they obtained information about drugs from written documents (such as publications from sport governing bodies) and from online sources, such as <http://www.wada-ama.org> and <http://www.asada.gov.au>. As one coach explained:

From ASADA [Australian Sports Anti-Doping Authority]... there's a hotline.

But the big thing in our sport and I think it's the same in all the sports is to make the athletes fully responsible so you do not make the coach give them the information and you tell them where they look it up. From the time they start to

INSIDE THE LOCKER ROOM

become an elite athlete they have to know that it's not the coach's responsibility or anybody else's. It is totally theirs.

Another coach agreed that the athletes had to take responsibility for their choices:

Same here. Going through all the courses we always get directed towards the ASADA website. We can always access information and they'll send anything out. We can distribute that to the athletes and we always talk about those things whenever we are doing any training, especially if someone is talking about how their performance is low.

About half of the coaches stated that they would refer their athletes to the team doctor or a pharmacist if they asked them if a drug or substance was permitted.

Beliefs

Use of banned performance enhancing drugs was perceived very negatively by all coaches. Twelve of the fourteen coaches considered such use as 'cheating' and eleven considered drug use 'harmful' and dangerous to physical and/or mental and psychological health. Overall, coaches agreed that performance enhancing drug use was a threat to the integrity of sport.

This noted, most coaches estimated the incidence of drug use by elite athletes in all sports as quite low with most estimates being around 1%-5% of all athletes. The only exceptions were the sports of athletics, cycling, swimming and power-based sports (weightlifting, powerlifting) and bodybuilding where the perceived incidence of drug use was, depending on the sport, between 20% and 80% of all athletes competing in those sports. One participant noted: 'I think the higher the profile of the player the more chance there is of them using the drugs because again the higher the profile the more chance there is of it being needed.... To win'. Another one

INSIDE THE LOCKER ROOM

said: ‘Cycling, obviously, athletics, weightlifting, powersports, bodybuilding, and, despite its squeaky clean image, swimming. At least 20% of all athletes in those sports, closer to 80% in cycling I’d say’. Other coaches noted that they believed that performance enhancing drugs were more prevalent in individual sports, particularly endurance sports. Conversely, in sports perceived as skill-based, the perception of incidence of use in such sports was lower. As a basketball coach remarked:

Well, you know that cycling and endurance sports such as marathons are physically demanding and anaerobic and aerobic systems have to be really strong and I think some athletes will certainly use drugs to get the better performance.

This is very different from, say, basketball, you can take as many steroids as you like but it’s not going to make you shoot any better.

With the exception of the cycling coach, all coaches believed that the incidence of performance enhancing drug use in their own sport was lower than in all sports in general. In the words of one coach:

In my sport I would have to say it would be low. Probably 0%, maybe just 1%.

Based on my cynicism, however, I would have to say that in other sports, like athletics, cycling, etc., it is probably like 40-60% of all athletes.

Many participants noted that their perceptions were shaped by the media (such as TV, internet, magazines and newspapers) rather than personal experience. The majority of coaches admitted that the media coverage of specific sports and specific scandals in particular, shaped their views and perceptions. As one coach put it:

INSIDE THE LOCKER ROOM

You get the information from TV and media. They are the sports we see on TV.

You see the Chinese swimmers... everyone knows that, then we are getting bombarded with Armstrong, and all the other cyclists. These stories take a life of their own.

The perceived sporting culture was cited as a powerful force in shaping coaches' beliefs. Knowledge of sporting culture was either derived from personal experience or from personal contact with other coaches. All participants believed that coaches had a key role to play in the prevention of doping, with many believing they had significant influence over their athletes: 'We will stress how important it is not to take drugs and the by-products of taking drugs and stuff but some athletes still at school just laugh it off so they don't take it that seriously.'

Other coaches stressed that their influence depended on issues such as the athlete's respect for their coach:

It would depend on how much you respected your coach ...I guess it depends on the relationship you have with them. If the coach goes 'don't take it. It's illegal and you shouldn't be taking it,' and you don't really respect the coach enough then you kind of think you're going to do it anyway. Whereas if you really respect where the coach is coming from and the history that they've had in the sport and how much knowledge and they've helped you and stuff then you might be a little bit more inclined to do as they say.

Opinions on coaches' accountability for use of banned substances were divided. Some coaches believed that using banned substances was the athlete's decision, a decision that oftentimes the coaches were unaware of.

INSIDE THE LOCKER ROOM

I know there's questions where should the coach be held accountable. I don't believe the coach can be because no matter how many times the coach says no ...the players are still going to do it. But the coach and the management, they are sort of responsible for the atmosphere in the club and the education in the club and I think that's the area they can take responsibility for. But to penalise the coach because the player is taking something? Really the coach doesn't have that control.

However, other coaches were of the view that coaches had a duty of care and that they were accountable for their actions, whether implicitly or explicitly encouraging drug use. About one third of the coaches considered themselves ill-equipped to deal with doping issues. Few admitted to having an extensive knowledge of what substances were banned and how to satisfactorily advise athletes.

Attitudes

All coaches were aware of the main forms of sanctions and other forms of punishment for doping. Participants concurred that bans were the most suitable sanction for performance enhancing drug use and that a fine was more appropriate for illicit (recreational) drug use. The majority of coaches were satisfied with existing sanctions, however, a handful endorsed harsher penalties for athletes at highest levels of competition.

The issue of coaches supplying banned substances to athletes was also addressed. The majority of coaches believed that coaches who supply performance enhancing drugs should be banned for life. As one coach noted:

INSIDE THE LOCKER ROOM

I was going to say the other difference in the penalty is, if you are taking performance enhancing drugs it's one thing. If you are supplying performance enhancing drugs that to me is a much more severe penalty. Much more severe.

Another coach said: 'They should be banned forever. Coaches have power over athletes, so their punishment should be much harsher'. One coach added:

I think the other thing is that a coach, like an athlete, does it to cheat but as a coach you're ruining the person and all the other side effects so I think it's a much greater crime to be encouraging someone to take drugs. If someone [an athlete] puts their hand up and says 'I want to take drugs to get an advantage' they should be banned for a couple of years. If someone [a coach] is saying 'I would like you to take drugs' it should be for life.

With regards to general responsibilities, one coach noted: 'Under the duty of care as a coach we all sign a Code of Conduct and in there is the athlete wellness and athlete wellbeing and all those types of things'.

The overall feeling concerning sport governing bodies and other sport organisations was one of disillusionment. More than half of the coaches believed that many of these organisations did not care, particularly in professional sports or clubs. One coach said: 'I've heard rumours from [name of sport] that people take drugs but if their governing body finds out about it, they don't care because they're getting money and big contracts and that's all that matters'. This feeling was shared by another coach:

Same with [name of sport]. I've heard that under the carpet, yeah, they don't care because they are getting money from it. It's their athletes, so yeah, they don't let it

out unless it goes public. I think it needs to get public, so that it can't be swept under the carpet.

Discussion

The purpose of this research was to gather information from coaches about their knowledge, beliefs and attitudes towards doping (and anti-doping) in sport. Fourteen elite level coaches participated in focus group discussions, with the findings both supporting and extending those from earlier studies.

Knowledge

Previous research had suggested that coaches lack knowledge and confidence (Sullivan et al., 2014) on a range of anti-doping issues. Similar knowledge gaps have also been reported in other members of support staff, including medical practitioners (Peters, Selg, Schulz, Pabst, & Michna, 2007). In large part, any such gaps in knowledge are unsurprising. The legislation is highly complex and has been a fruitful area of academic study, with analysts often highlighting sources of confusion or contradiction in the rules (e.g., Robinson, 2007; Rushall & Jones, 2007).

In the present study the coaches were generally well informed about anti-doping control testing procedures, but they knew very little about specific doping products (e.g., the names of drugs on banned lists) and more advanced anti-doping procedures such as the athletes' whereabouts scheme. Coaches said that they typically referred doping related queries to medical practitioners, and that their anti-doping role as coaches was largely reactive (responding to athlete initiated requests) rather than proactive. Generally, coaches did not see anti-doping education as part of their role. This abrogation of responsibility, while understandable, may represent an important potential direction for anti-doping initiatives.

INSIDE THE LOCKER ROOM

If coaches are an important source of influence on the doping behaviour of athletes, for good or ill, then it appears that coaches may be evading the topic, passing responsibility onto other professional groups. To coaches, anti-doping testing is a practical requirement of their work, and educating athletes about such matters is restricted to the mechanics of testing, rather than addressing the underlying rationale for such testing. In short, the opportunity for coaches to deliver any anti-doping message is currently missing.

The coaches endorsed WADA policy (WADA, 2009) that the athlete is the person responsible for the use of legal or illegal drugs, and that coaches only had a limited part to play in monitoring such conduct. As with the study by Sullivan et al. (2014), there was some evidence for a lack of confidence in dealing with doping, although the majority expressed confidence in their ability to deal with doping issues. This may be because the coaches in the present study were all elite, and would thus most probably have completed specific anti-doping training sessions, factors which have been shown to enhance confidence in dealing with anti-doping (Judge et al., 2010).

Beliefs

A recent study of the perceived incidence of drug use in sport showed that both athletes and coaches see the use of both performance enhancing and other illicit (recreational) drugs as relatively common (Moston, Engelberg, & Skinner, 2015a). On average, coaches estimated the use of performance enhancing drugs at almost 19% of all athletes, but that perceived performance enhancing drug use in their own sport was estimated at about 10%. A similar pattern of results was observed in the current study where the coaches saw doping in sport in general as common, but that their own sport was an exception to this trend. Surprisingly this

INSIDE THE LOCKER ROOM

apparent discrepancy in views was not raised in any of the focus groups and this may be an issue that requires a more structured interviewing format.

This pattern of results has been interpreted as a potential cause for concern about the likely impact of anti-doping campaigns (Moston, Engelberg, & Skinner, 2014b). *If coaches (or athletes) perceive that banned drug use is common, it may encourage non-users to start using, in part, to level the playing field. A self-fulfilling prophecy is thus created, and drug use becomes highly prevalent (Moston, Engelberg, & Skinner, 2015b). However, given that some coaches in this study expressed the view that banned drug use was not common, the expectancy may be quite different. If the expectancy is that drug use will not enhance performance, at least not for some sports, then athletes in those sports may be deterred from using any such substances. While this is an intriguing possibility, and a possible new approach to anti-doping education (i.e., doping does not work!), this is probably an unrealistic scenario.*

The belief that doping does not assist in skill-based sport was a common theme in the focus group discussions. This belief appears to be a common (e.g., Blatter, 2006) and potentially damaging misconception (Malcolm & Waddington, 2008). While doping may not directly assist in the acquisition or performance of a skill (Waddington, Malcolm, Roderick, & Naik, 2005), nearly all athletes would benefit from the use of performance enhancing drugs to enable them to train longer (increased endurance), throw or kick further/faster (increased power), or simply to speed up recovery from injury. Statements by coaches denying the potential existence of doping in their sport may suggest to athletes that doping is of no benefit, thereby deterring doping. However, it is also possible that such statements might suggest that anti-doping testing is unlikely to occur, thereby possibly encouraging doping.

Attitudes

As with previous research (e.g., Judge et al., 2010) the coaches in this study were consistently opposed to doping in sport and they expressed strong, highly punitive attitudes towards other coaches who might be supplying such substances to their athletes. However, unlike the coaches in Moston et al. (2014a) the current coaches did not endorse the view that coaches of athletes who are doping should also be sanctioned, unless they had pressurised the athlete into doping, in which case the suggested sanctions were extremely severe. While it was recognised that coaches can play an important part in shaping the culture of a club or team, and thus have a role to play in anti-doping, there are inevitable restrictions on the scope of this influence and this impacted on judgments of sanctions.

Limitations

An ongoing limitation of anti-doping research is that the responses given by coaches, athletes, and other members of support teams, might reflect a social desirability bias whereby stated opinions conform to a socially accepted norm. In the current study it is possible that the coaches might have stated a strong opposition to doping because such an attitude is expected of them, rather than because they were really opposed to doping. Research with athletes (e.g., Gucciardi et al., 2010) has shown that social desirability biases can impact on attitudes towards doping. While it is impossible to accurately determine whether any social desirability bias had an influence in the current study, the participating coaches were from different sports and previously unknown to each other, thereby minimising social desirability. A focus group methodology can provoke and stimulate a greater range of responses than individual interviews, but the possibility that a social desirability bias was present cannot be entirely discounted.

Consequently, it would be advisable to compare the findings of this study to findings of research that employs individual interviews.

Implications and Conclusions

This study shows that coaches believe they have an important influence over the behaviour of their athletes and are capable of imparting anti-doping knowledge and attitudes. These findings have implications for both theory and policy in anti-doping.

Models of why some athletes use performance enhancing drugs, and why some athletes do not, have largely reflected the assumption that doping is affected by the personality and, to a lesser extent, the situational characteristics of an athlete (Donahue et al., 2006; Donovan, Egger, Kapernick, & Mendoza, 2002). The potential impact of external influences, such as coaches and other support personnel, has been neglected. In part, this is because of the policy emphasis on the responsibility of the individual athlete. If the athlete is solely responsible then the words and deeds of those surrounding the athlete are deemed of limited importance. This assumption perpetuates a popular narrative that doping is practiced by flawed individuals (a 'bad apple'), and diverts attention away from the possibility that there may be systemic issues within either a club/team, or within an entire sport (a 'rotten barrel'). For example, no matter how many cyclists are found to be doping, there has been only limited, and some might say half-hearted, consideration of the possibility that the entire sport is flawed (Brissonneau & Ohl, 2010). For example, if long races are only possible with the assistance of drugs, should such races still take place? Such questions threaten the ongoing commercial viability of some sports and as such are generally avoided. Social science research has a key role to play in raising such questions. Research on the motives for doping should thus shift from an individual-centric approach, to one where doping is part of a broader social and cultural context (Smith et al., 2010). From a

INSIDE THE LOCKER ROOM

practical perspective such a shift should be welcome: it is essentially impossible (or at least extremely difficult) to alter the characteristics of athletes (such as their [personality or level](#) of morality), but it is relatively easy ([theoretically at least](#)) to change the behaviours of coaches.

From a policy perspective the findings support and validate the new guidelines and sanctions for athlete support personnel contained in the new WADA (2015) Code. The views expressed in this study suggest that the need for such rules will be acknowledged and endorsed by coaches. Given the increasingly intense academic criticism of the WADA Code, anti-doping organisations and even anti-doping as a goal (for two recent reviews see Engelberg, Moston, Hutchinson, & Skinner, 2014; Stewart & Smith, 2014), this support from coaches implies that the current anti-doping system is unlikely to be challenged by internal forces. While it is possible that the coaches in the current study were giving responses that conformed to a social desirability bias (i.e., anti-doping views) the informal, locker room atmosphere generated in the focus groups appears to have mitigated against any such bias. The open and detailed discussions were in all probability reflective of genuine underlying beliefs.

While coaches were opposed to doping, and might thus be a strong potential voice in anti-doping campaigns, a cautionary note is necessary. Coaches cannot have a strong role if they are not well informed about the rationale for anti-doping. Furthermore, if they can easily pass specific questions about anti-doping onto other professionals then they can largely circumvent their anti-doping role.

Ensuring that coaches are well trained in understanding and explaining the rationale for anti-doping, as well as implementing such beliefs into their training, may represent a significant opportunity for anti-doping campaigns. While it is unrealistic to expect coaches to know details such as which substances are or are not on banned lists, imparting the underlying rationale for

INSIDE THE LOCKER ROOM

anti-doping, including the *spirit of sport* (Henne, Koh, & McDermott, 2013) could be made a part of a coach's job, from junior development through to elite (professional) levels. In short, coaches do have a potential role to play, but knowledge of drug use in sport should not be restricted to the mechanics of testing processes. Instead, it could focus on the underlying philosophy that underpins anti-doping (the spirit of sport) and focusing on the health and well-being of their athletes.

Educating coaches serves two distinct purposes. First, coaches need to understand the current anti-doping regulations and their obligations under those rules. Second, coaches should be an important component in a holistic anti-doping campaign. Anti-doping education is inherently complicated by the poorly articulated rationale against doping in the WADA Code and coaches may be one way through which athletes can easily discuss these ambiguities and receive guidance.

References

- Anderson, J. (2013). Doping, sport and the law: time for repeal of prohibition? *International Journal of Law in Context*, 9(2), 135-159. doi: 10.1017/S1744552313000050
- Arthur, S., & Nazroo, J. (2003). Designing fieldwork strategies and materials. In J. Ritchie & J. Lewis (Eds.), *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (pp. 109-137). London: Sage.
- Australian Crime Commission, A. (2013). *Organised Crime and Drugs in Sport in Australia*. Canberra: Australian Government.

INSIDE THE LOCKER ROOM

- Backhouse, S. H., & McKenna, J. (2012). Reviewing coaches' knowledge, attitudes and beliefs regarding doping in sport. *International Journal of Sports Science & Coaching*, 7(1), 167-175. doi: 10.1260/1747-9541.7.1.167
- Barkoukis, V., Lazuras, L., Tsorbatzoudis, H., & Rodafinos, A. (2013). Motivational and social cognitive predictors of doping intentions in elite sports: An integrated approach. *Scand J Med Sci Sports*. doi: 10.1111/sms.12068
- Blatter, J. S. (2006). FIFA's commitment to doping free football. *British Journal Of Sports Medicine*, 40, i1. doi: 10.1136/bjism.2006.027789
- Bringer, J. D., Brackenridge, C. H., & Johnston, L. H. (2002). Defining appropriateness in coach-athlete sexual relationships: The voice of coaches. *Journal of Sexual Aggression: An international, interdisciplinary forum for research, theory and practice*, 8(2), 83-98. doi: 10.1080/13552600208413341
- Brissonneau, C., & Ohl, F. (2010). The genesis and effect of French anti-doping policies in cycling. *International Journal of Sport Policy and Politics*, 2(2), 173-187. doi: 10.1080/19406940.2010.488063
- Cohen, D., & Crabtree, B. (2006). Qualitative Research Guidelines Project. Retrieved from: <http://www.qualres.org/HomeTheo-3806.html>
- Dimeo, P., Allen, J., Taylor, J., Robinson, L., & Dixon, S. (2012). Team dynamics and doping in sport: A risk or a protective factor? Montreal, Canada: WADA.
- Donahue, E. G., Miquelon, P., Valois, P., Goulet, C., Buist, A., & Vallerand, R. J. (2006). A motivational model of performance-enhancing substance use in elite athletes. *Journal of Sport and Exercise Psychology*, 28(4), 511-520.

INSIDE THE LOCKER ROOM

- Donovan, R. J., Egger, G., Kapernick, V., & Mendoza, J. (2002). A conceptual framework for achieving performance enhancing drug compliance in sport. *Sports Medicine (Auckland, N.Z.)*, 32(4), 269-284.
- Engelberg, T., & Moston, S. (2015). Publication Trends in the Social Science Literature on Doping in Sport (2000-2014). *Under review*.
- Engelberg, T., Moston, S., Hutchinson, B., & Skinner, J. (2014). Review of social science anti-doping literature and recommendations for action. Gold Coast: Griffith University.
- Engelberg, T., Moston, S., & Skinner, J. (2015). The final frontier of anti-doping: a study of athletes who have committed doping violations. *Sport Management Review*, 18(2). doi: 10.1016/j.smr.2014.06.005
- Engelberg, T., Skinner, J., & Zakus, D. (2014). What does commitment mean to volunteers in youth sport organizations? *Sport in Society*, 17(1), 52-67. doi: 10.1080/17430437.2013.828900
- Erdman, K. A., Fung, T. S., Doyle-Baker, P. K., Verhoef, M. J., & Reimer, R. A. (2007). Dietary supplementation of high-performance Canadian athletes by age and gender. *Clinical Journal of Sport Medicine*, 17(6), 458-464.
- Fjeldheim, T. B. (1992). Sports Instructors and Sports Leaders: Attitudes Toward Doping in Sports. *Collegium Anthropologicum*, 16(2), 343-348.
- Fung, L., & Yuan, Y. (2006). Performance enhancement drugs: Knowledge, attitude and intended behavior among community coaches in Hong Kong. *The Sport Journal*, 9(3). Retrieved from: http://thesportjournal.org/article/tag/volume_3_number_1/page/10/
- Golshanraz, A., Same-Siahkalroodi, L., & Poor-Kazem, L. (2013). Doping and supplement: The attitude of Iranian national team coaches. *British Journal Of Sports Medicine*, 47(10), 28.

- Gucciardi, D. F., Jalleh, G., & Donovan, R. J. (2010). Does social desirability influence the relationship between doping attitudes and doping susceptibility in athletes? *Psychology of Sport and Exercise*, 11(6), 479-486. doi: 10.1016/j.psychsport.2010.06.002
- Hauw, D., & McNamee, M. (2014). A critical analysis of three psychological research programs of doping behaviour. *Psychology of Sport and Exercise*(0). doi: <http://dx.doi.org/10.1016/j.psychsport.2014.03.010>
- Henne, K., Koh, B., & McDermott, V. (2013). Coherence of drug policy in sports: Illicit inclusions and illegal inconsistencies. *Performance Enhancement & Health*, 2(2), 48-55. doi: <http://dx.doi.org/10.1016/j.peh.2013.05.003>
- Judge, L. W., Bellar, D., Petersen, J., Gilreath, E., & Wanless, E. (2010). Taking Strides Toward Prevention-Based Deterrence: USATF Coaches Perceptions of PED Use and Drug Testing. *Journal of Coaching Education*, 3(3), 56-71.
- Kim, J., Kang, S. K., Jung, H. S., Chun, Y. S., Trilk, J., & Jung, S. H. (2011). Dietary Supplementation Patterns of Korean Olympic Athletes Participating in the Beijing 2008 Summer Olympic Games. *International Journal Of Sport Nutrition And Exercise Metabolism*, 21(2), 166-174.
- Kirkwood, K. (2012). Defensive Doping: Is There a Moral Justification for “If You Can’t Beat ‘Em—Join ‘Em?” *Journal of Sports and Social Issues*, 36(2), 223-228. doi: 10.1177/0193723512437350
- Laure, P., Thouvenin, F., & Lecerf, T. (2001). Attitudes of coaches towards doping. *The Journal Of Sports Medicine And Physical Fitness*, 41(1), 132-136.
- Malcolm, D., & Waddington, I. (2008). 'No systematic doping in football': A critical review. *Soccer & Society*, 9(2), 198-214.

INSIDE THE LOCKER ROOM

- Mendoza, J. (2002). The war on drugs in sport: A perspective from the front-line. *Clinical Journal of Sport Medicine*, 12(4), 254-258. doi: 10.1097/01.jsm.0000022724.57614.f2
- Moran, A., Guerin, S., Kirby, K., & MacIntyre, T. (2008). The Development and Validation of a Doping Attitudes and Behaviour Scale. Ulster: University of Ulster.
- Morente-Sanchez, J., & Zabala, M. (2013). Doping in sport: a review of elite athletes' attitudes, beliefs, and knowledge. *Sports Medicine*, 43(6), 395-411. doi: 10.1007/s40279-013-0037-x
- Morgan, D. L., & Krueger, R. A. (1993). When to use focus groups and why. In D. L. Morgan (Ed.), *Successful Focus Groups: Advancing the State of the Art*. London: Sage.
- Moston, S., Engelberg, T., & Skinner, J. (2014a). Athletes' and coaches' perceptions of deterrents to performance enhancing drug use. *International Journal of Sport Policy and Politics*, in press. doi: 10.1080/19406940.2014.936960
- Moston, S., Engelberg, T., & Skinner, J. (2014b). Perceived incidence of drug use in Australian sport: a survey of athletes and coaches. *Sport in Society*, in press. doi: DOI:10.1080/17430437.2014.927867
- Moston, S., Engelberg, T., & Skinner, J. (2015a). Perceived incidence of drug use in Australian sport: a survey of athletes and coaches. *Sport in Society*, 18(1), 91-105. doi: 10.1080/17430437.2014.927867
- Moston, S., Engelberg, T., & Skinner, J. (2015b). Self-fulfilling prophecy and the future of doping. *Psychology of Sport and Exercise*, 16(2), 201-207. doi: <http://dx.doi.org/10.1016/j.psychsport.2014.02.004>

INSIDE THE LOCKER ROOM

- Ntoumanis, N., Johan, Y., Ng, Y., Barkoukis, V., & Backhouse, S. H. (2014). Personal and psychosocial predictors of doping use in physical activity settings: A meta-analysis. *Sports Medicine*. doi: 10.1007/s40279-014-0240-4)
- Ohl, F., Fincoeur, B., Lentillon-Kaestner, V., Defrance, J., & Brissonneau, C. (2013). The socialization of young cyclists and the culture of doping. *International Review for the Sociology of Sport*. doi: 10.1177/1012690213495534
- Overbye, M., Knudsen, M. L., & Pfister, G. (2013). To dope or not to dope: Elite athletes' perceptions of doping deterrents and incentives. *Performance Enhancement & Health*, 2(3), 119-134. doi: dx.doi.org/10.1016/j.peh.2013.07.001
- Pedersen, I. K. (2010). Doping and the perfect body expert: Social and cultural indicators of performance-enhancing drug use in Danish gyms. *Sport in Society*, 13(3), 503-516. doi: 10.1080/17430431003588184
- Peters, C., Schulz, T., Oberhoffer, R., & Michna, H. (2009). Doping and Doping Prevention: Knowledge, Attitudes and Expectations of Athletes and Coaches. *Deutsche Zeitschrift Fur Sportmedizin*, 60(3), 73-78.
- Peters, C., Selg, P. J., Schulz, T., Pabst, H., & Michna, H. (2007). Doping from the sports physicians' point of view: experiences from German team physicians and Bavarian sports physicians. *Deutsche Zeitschrift Fur Sportmedizin*, 58(6), 160-177.
- Pitsch, W., & Emrich, E. (2011). The frequency of doping in elite sport: Results of a replication study. *International Review for the Sociology of Sport*, 47(5), 559-580. doi: 10.1177/1012690211413969
- Pitsch, W., Emrich, E., & Klein, M. (2007). Doping in elite sports in Germany: results of a www survey. *European Journal for Sport and Society*, 4(2), 89-102.

INSIDE THE LOCKER ROOM

- Probert, A., & 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. doi: 10.1080/16184740903331838
- Ritchie, J., Spencer, L., & O'Connor, W. (2003). Carrying out qualitative analysis. In J. Ritchie & J. Lewis (Eds.), *Qualitative research practice: A guide for social science students and researchers* (pp. 219-262). London: Sage.
- Robinson, S. (2007). Drugs in sport: A cure worse than the disease? A Commentary. *International Journal of Sports Science & Coaching*, 2(4), 363-368. doi: 10.1260/174795407783359713
- Rushall, B. S., & Jones, M. (2007). Drugs in sport: A cure worse than the disease? *International Journal of Sports Science & Coaching*, 2(4), 335-361. doi: 10.1260/174795407783359722
- Scarpino, V., Arrigo, A., Benzi, G., Garattini, S., La Vecchia, C., Bernadi, L. R., . . . Tuccimei, G. (1990). Evaluation of Prevalence of Doping Among Italian Athletes. *Lancet*, 336, 1048-1050.
- Shields, D. L., & Bredemeier, B. L. (2007). Can sports build character? In D. Smith & M. Bar-Eli (Eds.), *Essential readings in sport and exercise psychology*. (pp. 423-432). Champaign, IL US: Human Kinetics.
- Smith, A., Stewart, B., Oliver-Bennetts, S., McDonald, S., Ingerson, L., Anderson, A., . . . Graetz, F. (2010). Contextual influences and athlete attitudes to drugs in sport. *Sport Management Review*, 13(3), 181-197.

INSIDE THE LOCKER ROOM

- Stewart, B., & Smith, A. (2010). Player and athlete attitudes to drugs in Australian sport: implications for policy development. *International Journal of Sport Policy*, 2(1), 65-84.
doi: DOI: 10.1080/19406941003634040
- Stewart, B., & Smith, A. (2014). *Rethinking Drug Use in Sport: Why the War Will Never be Won*. London: Routledge.
- Sullivan, P. J., Feltz, D. L., LaForge-MacKenzie, K., & Hwang, S. (2014). The preliminary development and validation of the Doping Confrontation Efficacy Scale. *Psychology of Sport and Exercise*. doi: <http://dx.doi.org/10.1016/j.psychsport.2014.04.011>
- WADA. (2003). *World Anti-Doping Code*. Montreal: WADA. Retrieved from <http://www.wada-ama.org>.
- WADA. (2009). *World Anti-Doping Code*. Montreal: WADA. Retrieved from <http://www.wada-ama.org/>.
- WADA. (2015). *World Anti-Doping Code 2015*. Montreal: WADA. Retrieved from <http://www.wada-ama.org/>.
- Waddington, I., Malcolm, D., Roderick, M., & Naik, R. (2005). Drug use in English professional football. *British Journal Of Sports Medicine*, 39(4), e18. doi: 10.1136/bjism.2004.012468