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The role of athlete support personnel in preventing doping: a qualitative study of a rugby union academy

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ABSTRACT

Global anti-doping policy indicates that athlete support personnel (ASP, e.g. doctors, nutritionists) can play an important role in fostering supportive environments that protect against intentional and inadvertent doping. Yet, research into ASP anti-doping roles is limited and no study has examined how (if at all) different members of ASP work together. Therefore, this study investigated anti-doping roles of ASP in a single sports club environment via semi-structured interviews. Through inductive reflexive thematic analysis, three overarching themes were constructed: 1) Everyone has responsibility for anti-doping, but most of the work rests unevenly on a few shoulders, 2) Education is fundamental to doping prevention, and 3) (Preventing doping) It's all about the way we work with players and each other. As the first study of its kind, the findings indicated that actions taken to prevent doping varied across ASP working together in the same environment. The nutritionist and medical staff were most active in anti-doping efforts and least active were strength and conditioning coaches. Factors underpinning anti-doping roles were individuals' relevant expertise/training and overall job responsibilities (e.g. supplements, medications) related to risk of doping. Staff also connected their doping prevention efforts to the club's person-centred philosophy, which prioritised 'individualisation' and supportive relationships. While the data indicates potential for anti-doping responsibilities to be shared amongst ASP who work well together and trust one another, it revealed that reliance on one or two ASP in any environment might allow other ASP to neglect their opportunity to have a positive influence on players' doping-related decisions.

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Introduction

The United Nations' Sustainable Development Goals (2015) see sport as an important force for good. Similarly, the Council of Europe's European Sports Charter (2021) recognises sport's contribution to human development – emphasising the importance of protecting and developing values-based sport as a precondition for maximising the individual and social benefits sport can bring about. However, the outpouring of stories of sexual violence and harassment, manipulation of competitions, and doping in sport highlight the persistent challenge this sector faces in fulfilling its true potential. It has become clear that embedded within the fabric of sport are conditions that give rise to abuse and wrongdoing. For example, the sexual abuse of USA gymnasts by Doctor Larry Nassar evidenced the negligence and complicity of people in positions of power in protecting the

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perpetrators of abuse at the expense of protecting athletes from harm. In the wake of this scandal, the notion that some athletes are commodified in win-at-all cost cultures, that are enabled by responsible persons who deny, ignore, or accept abuse and wrongdoing, was stark (Mountjoy 2019).

Despite such strong evidence that the network of individuals around athletes can have a powerful influence on sporting integrity and athlete welfare, efforts to address doping in sport have predominantly been athlete-focussed. In particular, there has been an emphasis on identifying individual risk factors (e.g. attitudes, knowledge). Yet, some of the most pertinent influences on doping behaviours are situational (e.g. injury, contract renewal) and social (e.g. peers, coaches) (e.g. Kirby, Moran, and Guerin 2011). Referred to as athlete support personnel (ASP) in the World Anti-Doping Code (World Anti-Doping Agency [WADA], 2020), salient social influences on (anti-)doping include coaches, parents, medical personnel and strength and conditioning (S&C) practitioners (e.g. Chan et al. 2014; Smith et al. 2010; Whitaker, Backhouse, and Long 2017). The roles and responsibilities of ASP outlined in the Code include being knowledgeable of anti-doping rules that apply to their athletes, complying with anti-doping processes (e.g. testing and investigations) and 'us[ing] their influence on athletes to foster anti-doping attitudes' (WADA, 2020, 137).

Athletes have reported that having access to knowledgeable and skilled ASP enables them to enhance their performance and minimise their risk of injury in permitted ways, reducing the need for using prohibited substances and methods (Kegelaers et al. 2018). ASP are well-positioned to identify and manage physical (e.g. fatigue, injury) and psychological (e.g. burnout, stress) 'fragilities' associated with doping vulnerability (Aubel and Ohl 2014). Beyond this, individuals may be less inclined to dope if they receive unconditional support from ASP, regardless of success or failure (Kegelaers et al. 2018). Similarly, athletes report being deterred from doping because they do not want to disappoint significant others (Chan et al. 2014) and want to 'pay-back' individuals who have played a role in their development with 'clean' effort and commitment (Erickson, McKenna, and Backhouse 2015).

Despite their potential positive impact, ASP can exert a negative influence on athletes. For example, by openly advocating doping or administering prohibited substances (Chan et al. 2014; Whitaker, Backhouse, and Long 2017), and through the creation of 'win at all' costs or controlling climates (Ntoumanis et al. 2017; Whitaker, Backhouse, and Long 2017). ASP may also be involved in the 'prescription' or endorsement of medications or dietary supplements, and such actions can lead to an athlete returning a positive drugs test (Hauw and Mohamed 2015). Supplement use is a risky behaviour as the threat of product contamination and adulteration has long been recognised (Maughan, Depiesse, and Geyer 2007). Furthermore, the draw of using permitted external means to enhance performance can act as a stepping-stone towards prohibited substance use (Backhouse, Whitaker, and Petróczi 2013; Hurst et al. 2019; Petróczi 2013).

The influence of ASP on athletes' doping – both intentionally and inadvertently – arises from athletes trusting their support team (Erickson, McKenna, and Backhouse 2015) and holding them in high esteem (Chan et al. 2014) due to their knowledge (Smith et al. 2010) and decision-making position (e.g. overseeing selection/playing time; Diacin, Parks, and Allison 2003). Cumulatively, evidence from the athlete perspective highlights ASP as significant drivers of athlete (anti-)doping behaviour. In contrast, we have limited understanding of this influence from the ASP perspective. Most ASP studies have focused solely on coaches (see Backhouse et al. 2016; Barnes, Patterson, and Backhouse 2020 for reviews). These individuals have declared anti-doping attitudes and acknowledge that they can play a part in anti-doping efforts (Allen et al. 2017; Barkoukis et al. 2019; Patterson and Backhouse 2018). With regards to behaviour, coaches report having infrequent informal conversations about doping-related topics (when initiated by athletes), monitoring their athletes (i.e. checking in on them and what medications/supplements they are taking), and facilitating (i.e. organising, but not delivering) their athletes' anti-doping education (Allen et al. 2017; Patterson and Backhouse 2018). However, coaches appear reluctant to *pro-actively* engage with anti-doping efforts (Patterson and Backhouse 2018). Explanations for this reluctance include a lack of anti-doping knowledge (likely due to a lack of opportunities to learn about anti-doping, [Allen et al. 2017;

Patterson, Backhouse, and Lara-Bercial 2019]), concerns about giving incorrect information or prompting doping curiosity, and a perception that anti-doping efforts are not relevant for their environment due to age/stage of athlete development, country, or sport (Allen et al. 2017; Patterson and Backhouse 2018). Coaches have also reported receiving limited guidance regarding what they could do to prevent doping (i.e. their policy-prescribed and locally agreed responsibilities), and a perception that responsibility for anti-doping lies with other ASP in their environment (Patterson and Backhouse 2018).

doping responsibilities lie with other ASP, because there is limited research with managers, dieticians/nutritionists, physicians, physiotherapists, S&C coaches, and other technical staff. The few studies that have been conducted with mixed samples of ASP generally corroborate coach-based findings. For instance, ASP declare they are against doping (Mazanov et al. 2014, 2015; Morente-Sánchez and Zabala 2015), while remaining reactive, and even passive, regarding anti-doping efforts (Mazanov et al. 2014, 2015). In fact, ASP have reported ignoring unethical behaviours (Mazanov et al. 2014) and not reporting doping to anti-doping authorities (Boardley et al. 2019; Mazanov et al. 2015). Much like coaches, initial insights suggest ASP anti-doping behaviours may be linked to a perception of the rarity, and consequent perceived irrelevance, of doping in their context (i.e. level of competition, particular group of athletes) (Mazanov et al. 2014, 2015). Furthermore, there is some evidence that ASP rely on their colleagues to aid them (or take over) anti-doping matters, and this may be linked to knowledge levels (Mazanov et al. 2014, 2015). Given that research with coaches and mixed samples of ASP indicates that many individuals defer anti-doping responsibility to their colleagues, the current study sought to determine how this reliance on colleagues works in the real world; investigating whether doping prevention tasks are shared among staff who work together, or if the buck is being passed from one person to another and stopping with no-one. Addressing this gap in the existing evidence base is important, as research into factors that influence ASP anti-doping roles has so far been heavily focused on individual influencing factors, such as knowledge and attitude. Yet, environmental factors such as the presence of others are emerging as potential influences among ASP and are well-established in athlete-focussed anti-doping research (e.g. Kirby, Moran, and Guerin 2011). Research on ASP working in multi-disciplinary teams in areas beyond doping, such as injury prevention (e.g. Tee and Rongen 2020), also indicates that culture and team dynamics can shape how people behave. Therefore, this study aims to gain a better understanding of ASP anti-doping behaviours and the factors influencing them at individual and environmental levels. As there is no published research that has examined collective responsibility for anti-doping, it will investigate the sharing and coordination of doping prevention across ASP working together within one environment – a professional rugby union academy in England.

Previous anti-doping research indicates that the structural and cultural conditions that shape every day practices are unique to each sport (Smith et al. 2010). Rugby union was selected as it has recorded a higher proportion of the total anti-doping rules in the UK than any other sport – as of 25 May 2021, rugby union accounted for 39% of current ($n = 22/56$) and historical sanctions ($n = 55/140$) listed on the UK Anti-Doping (UKAD) website (www.ukad.org). Furthermore, an academy context was chosen because a published review of UK doping sanctions in rugby identified individuals under 25 years as a particularly 'at-risk' group (Whitaker and Backhouse 2017). It has also been suggested that young aspiring rugby players are at increased risk due to their 'search for size' and may perceive doping as necessary to reach the highest levels of competition, secure a professional contract (Till et al. 2016) and cope with the demands of the sport (Didymus and Backhouse 2020). Focussing on a single – potentially 'high risk' – environment enables an exploration of how athletes might be influenced by a number of people collectively at the same time, and how all these influences might be coordinated to bring the expectations of the Code to life. By examining the reciprocal relationships between ASP for the first time,

the current study can inform the development of effective guidance and support for ASP around anti-doping to ensure they are willing and able to play an active role in doping prevention to maximise the positive influence they have on athletes and peers. To this end, the three research questions framing the study are: 1) Do ASP based in the same environment work together to prevent doping? 2) What (if any) behaviours do ASP enact to prevent doping? 3) What factors influence the behaviours undertaken by ASP to prevent doping?

Materials and methods

Philosophical underpinnings

This research was designed and conducted through an interpretivist lens, as we believe in a relativist ontology and constructionist epistemology (Sparkes and Smith 2014). Specifically, we ascribe to the belief that research findings are co-created through interactions between us and the participants, and that our experiences and values are central in data generation. Therefore, it is helpful for readers to know that all three authors are trained sport and exercise scientists, who have completed undergraduate, post-graduate and doctoral level degrees. They are all involved in educating the next generation of ASP through curriculum delivery, research supervision and mentoring within higher education. LP and SB have over 15 years' experience of conducting doping-related research and have designed and delivered anti-doping education to athletes and ASP. BJ is a practicing sport scientist in multiple sports and is responsible for supervising multidisciplinary sports science and medicine teams across various team sports.

Participants

At the time of data collection, the academy was one of fourteen Regional Academies in England. There were 14 ASP working in the club and 11 were interviewed. Participants represented all possible ASP roles, including club leadership ($n = 2$, Director of Rugby and Head of Athletic Performance [i.e. S&C, sport science]), academy leadership ($n = 2$, Academy Manager, Player Development Manager/Head Coach), medical ($n = 2$, Doctor, Physiotherapist), nutrition ($n = 1$) and S&C ($n = 2$ senior academy S&C coaches working with players aged 18 and over, and $n = 2$ junior academy S&C coaches working with players aged under 18). Representation of all departments was critical because considering the whole community who 'produce performances' and 'define the norms of what is and is not acceptable' (p. 4) is key to understanding 'the structural and cultural conditions that shape every-day practices' (Aubel and Ohl 2014, 2). Furthermore, investigations should include managers who are in a position to 'regulate the workplace environment', by influencing anti-doping policies and practices (Engelberg and Skinner 2016).

Ten individuals were male and one was female. Staff experience relevant to their role ranged from one year to 20 years, and duration of staff holding their current positions ranged from five months to ten years. Several interviewees had completed a post-graduate ($n = 7$) or undergraduate ($n = 2$) degree in a range of sport-related topics (e.g. sport coaching, physiotherapy, sport/exercise physiology, sport/exercise science). Seven interviewees also held specialist qualifications relevant to their role (e.g. coaching certificates, International Society for the Advancement of Kinanthropometry skinfold measurement) and/or were accredited ($n = 5$) or were working towards accreditation ($n = 2$) by a professional body (e.g. United Kingdom Strength and Conditioning Association). Four staff worked with the first team as well as the academy players, so were asked to focus on the academy context specifically during the interview.

Procedures

Individual, semi-structured interviews were undertaken in-person at a time and location chosen by participants. The University Ethics Committee granted approval for the study and prior to their interview all participants received an information sheet and signed a consent form. Interviews lasted between 33 and 96 minutes ($M_{Minutes} = 58 \pm 18$) and were audio recorded, with participant permission.

The interview guide was informed by previous research with ASP (e.g. Mazanov et al. 2015; Patterson and Backhouse 2018). Each interview began by gaining insights into the individual's current position (i.e. job title, years in post, qualifications related to their role) to build rapport. Next, individuals were asked about their role in player development, including which players they currently work with (i.e. age range), what capabilities they work to develop in their players (i.e. technical, physical, psychological), if/why these are important to them/their players, and if/how their effectiveness at their job is determined.

As the interview progressed, participants were asked if they have a part to play in doping prevention. If so, participants were asked to provide examples of behaviours they undertake in their every-day practice and describe instances where they have interacted with their players and colleagues on this topic. As this was the first study to interview a mixed sample of ASP from the same environment, questions around influencing factors were intentionally broad, e.g. 'Is there anything about you as a person that influences your anti-doping role?' and 'Is there anything about your environment/context [e.g. club/the sport of rugby union] that influences your anti-doping role?' Slight amendments to the questions were made to tailor the content to each person being interviewed (e.g. some questions that would be asked of S&C coaches might not be relevant to managers).

Data analysis and rigour

Audio recordings were transcribed verbatim, before inductive reflexive thematic analysis was conducted (Braun and Clarke 2019a). An inductive ('bottom up') approach was appropriate due to the limited existing insights into ASP anti-doping behaviours and influencing factors. However, we acknowledge that inductive thematic analysis 'does not equate to analysis in a theoretical vacuum' (Braun and Clarke 2020, 18). Aligned with our philosophical position, we recognise the influence our knowledge and experiences had on the analysis process. For instance, we may have been looking for the same or similar behaviours and influencing factors previously noted with coaches, and other ASP, such as knowledge, confidence, and perceptions of irrelevance. Yet, we are confident that the final themes represent patterns of shared meaning amongst the participants underpinned by a central organising concept (Braun and Clarke 2020). Furthermore, the third author did not share an extensive knowledge of anti-doping literature, and therefore acted as a 'critical friend' (Smith and McGannon 2017) during the analysis process.

The first author underwent a complex process similar to that described by Trainor and Bunden (2021). Specifically, she began by immersing in the data through reading/re-reading printed transcripts and listening to audio recordings. Each transcript was then 'open coded' by hand, whereby descriptive labels were added to segments of text that represented insights relevant to the study aims (i.e. identifying ASP anti-doping behaviours and influencing factors). Anything 'striking' from each conversation was recorded in a separate summary note. To create themes, codes from all transcripts were grouped together where there were patterns (whether agreeing or contrasting), and an initial thematic map was created on poster paper. Aligned with the iterative and recursive way of working through reflexive thematic analysis (Braun and Clarke 2020), the thematic structure was reconfigured several times by going back and forth to the data. This was not a quick process, as periods of reflection and 'sitting with the data' were required to make sense of the findings.

'Critical friends' beyond the research team were also instrumental throughout the analysis process. Early in the analysis process the lead author discussed three transcripts and initial interpretations with another researcher in the anti-doping field who was not involved in the current study but had conducted research on doping in rugby union for several years. An early version of the thematic structure was also presented at an international conference and a local workshop. These activities enabled the first author to talk through the findings with individuals representing different perspectives (e.g. different countries, sports, and roles as academics, coaches, sport psychologists, etc). This contributed to ensuring that the thematic structure made sense of the participants' experiences and the narrative was well-received (e.g. defensible, plausible). For instance, both the anti-doping researcher and a member of ASP in the audience at the international conference resonated with the findings and noted that the situation described by the participants was likely commonplace.

During the final stages of the project, two colleagues from within our department were asked to review a draft version of this manuscript due to their expertise as an experienced qualitative researcher and a researcher specialising in talent development and youth sport environments. Within the written feedback provided by these individuals was the recommendation that we rephrase the theme names to ensure they represent shared meaning, rather than only capturing a main pattern in the data. Moreover, our critical friends helped us to ensure that the themes could easily be understood in relation to the study aims, when standing alone. Finally, we want to acknowledge the role of the reviewers as critical friends in the peer review process. Their feedback prompted further reflections on the names of the themes, as well as prompting us to draw out some of the latent findings within the data more strongly in our presentation of this manuscript.

Collectively reflecting on multiple sources of feedback, the research team named the themes to capture central ideas and meaning and identified data extracts that illustrate the essence of each theme when finalising this manuscript. Pseudonyms were not used alongside quotes, as this would allow the role of the one female participant to be identified, which, in turn, may enable the club to be identified.

Adopting a relativist approach, we view the quality of this study in light of the specific context and purpose, rather than a universal/fixed set of criteria (Sparkes and Smith 2014). Based on contemporary views of developing rigour in qualitative research (Smith and McGannon 2017; Smith and Sparkes 2020), we wish to highlight the worthiness of the topic because it is 'relevant' and 'interesting' to engage with ASP populations due to the significant influence they have on athlete doping behaviours, as well as their own vulnerability to being sanctioned if they (unwittingly or intentionally) play a role in doping. As the first study to focus on a mixed sample of ASP from the same environment, the findings provide a 'substantive contribution' to the field, with insights into 'things we did not know before' (Smith and Sparkes 2020). Beyond this, utility (Smith and McGannon 2017) and coherence (Smith and Sparkes 2020) are achieved by employing methods that are effective in accomplishing the study aims. Coherence is further achieved because the research was conducted in line with our philosophical position from start to finish. In this vein, we repeatedly reflected on how our own knowledge, skills and experience had shaped the aims of the study, how we interacted with participants in the interviews, and the themes generated during the analysis process – demonstrating reflexivity (Smith and McGannon 2017).

Results

Figure 1 shows the three themes, and the associated sub-themes, that were generated related to ASP anti-doping roles and the factors underpinning the actions they undertake to prevent doping. Theme 1 describes how ASP perceive their own and others' responsibility in doping prevention. Building on this, the main behaviours undertaken by ASP to address doping are summarised in Theme 2. While some influencing factors are alluded to throughout, the final theme describes the connection between ASP anti-doping roles and an over-arching 'way of working' in the club.

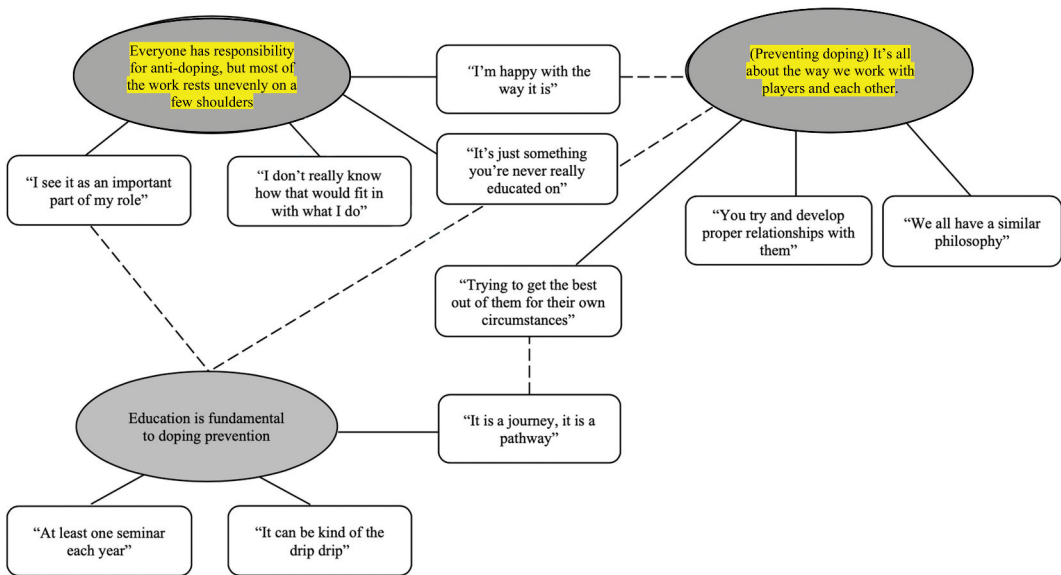


Figure 1. Thematic map. Note: Ovals represent the three main themes and rounded rectangles represent the sub-themes; solid lines show direct connections from each theme to its sub-themes and dashed lines indicate additional connections across themes and sub-themes.

Everyone has responsibility for anti-doping, but most of the work rests unevenly on a few shoulders

Six of the 11 staff reported that they have a part to play in doping prevention. The nutritionist, doctor and physiotherapist indicated that they made the most active contributions to anti-doping efforts, and their actions were supported by the Academy Manager, Player Development Manager and Head of Athletic Performance. The nutritionist explains:

I see it as an important part of my role, if I'm going to be advising players to take supplements or not take supplements then I need to have an understanding of that from an anti-doping side as well as a nutrition side, just to strengthen the messages that I'm giving them.

The nutritionist and four of the five other individuals who had explicitly identified themselves as having a role in doping prevention described anti-doping as a shared responsibility. The Head of Athletic Performance illustrates:

It's a responsibility that I've already got, I've got it, the Docs got it, the coaches have got it, the players have got it. I think it's an ongoing thing here, I don't think it needs a person that's [told] "you're in charge about this", it's a club role ... It's a cleaner, it's the groundsman, it's everybody. We all love the club. We all want what's right for the club and for the players.

Despite this espoused claim of collective responsibility for doping prevention from the Head of Athletic Performance, there appeared to be ambiguity amongst other staff when it came to their anti-doping roles. Three of the four strength and conditioning coaches acknowledged their potential influence as a role model and source of guidance, but they each engaged in anti-doping activities to a lesser degree and attributed this to a lack of knowledge and time. One senior academy S&C coach (1) commented 'Erm, I don't know how it sort of fits in, but there's probably a role for me in sort of looking out for things and preventing ... but I don't really know how that would fit in with what I do'. Our conversations seemed to indicate that the S&C staff had not *consciously* disengaged from anti-doping because the interview questions prompted them to realise that they do not do much and

that they probably could/should do more. Nevertheless, they suggested that players might be more likely to talk to other staff on doping-related topics, such as the medical team, and some comments implied a diffusion of responsibility for doping prevention in this context.

Similar explanations of limited contact time, lack of knowledge, and the belief that a colleague is taking responsibility, were also proposed by the two individuals who reported not having an anti-doping role. One of the junior academy S&C coaches (1) stated *'it's just something you're never really educated on'* and *'there's very little contact time . . . [So] sometimes it is just a case of going in, doing my job and leaving'*. Attributing not undertaking an anti-doping role to the fact that they know others are doing this, the Director of Rugby explained, *'If you work for me, and I think I know you, and I trust you then I'll, you know, effectively I will allow you to get on with your job. So, I delegate that responsibility, that's how it should work'*.

Generally, individuals seemed satisfied with the efforts to prevent doping that were being undertaken in the club. Yet, diffusion of responsibility was again illuminated by the fact that staff were content with anti-doping being covered primarily by the nutritionist and the medical staff. Those staff diffusing responsibility asserted that the medics and nutritionist were 'best-placed' due to their remit (e.g. supplements, medications) and expertise (e.g. relevant knowledge, training). This perspective is perhaps not surprising, as these three individuals had received anti-doping education/information within their qualifications (e.g. a module related to anti-doping was integrated into their sport-related degree). In contrast, some ASP only learned about anti-doping via updates from the governing body (the RFU), which sometimes came directly to them via email or via the doctor or Academy Manager during team meetings. Additionally, several ASP learned through self-directed means, such as reading research papers or searching for information on websites. Lastly, some staff experienced anti-doping education by attending the face-to-face sessions that were directed at the players. This learning opportunity for staff was optional rather than mandatory, so not everyone did this. This was something the Player Development Manager highlighted as a potential avenue in the future:

There might be one or two come in now, erm, medical staff come in, because they've set up the meeting and they might feel a responsibility for being there, or they might feel a responsibility for "right this is my group of players that I'm working with", so, I don't know, that's maybe something I could do that I say "right, actually guys, we're all going in there as staff, I think it's important that we're there showing support for this . . . We're going to make a stand on performance and illicit drugs".

Although many support personnel had not been formally educated in relation to anti-doping and reported varying levels of knowledge, most described themselves as having a good understanding of the anti-doping topics that were relevant to their current role. Throughout the interviews staff demonstrated their knowledge of the risk of inadvertent doping via supplements and medications, and how to minimise risk by searching online databases (e.g. Informed Sport, GlobalDRO). This knowledge and understanding reinforced the main messages (e.g. a 'food first' approach) conveyed to players in the club, which will be discussed in the second theme. Despite acknowledging that it is always possible to develop greater knowledge, those who reported any doubts about their knowledge seemed reassured by the presence of others in the club, who they can refer players to or go to themselves, if needed. One junior academy S&C coach (2) stated, *'everybody's within easy reach, like, we all talk constantly . . . I definitely feel strong, to be able to go straight to them with any issues and I wouldn't have any reservations in doing so'*. While it is positive that the staff are content with the current setup, this statement further exemplifies the diffusion of responsibility for doping prevention from some ASP, particularly those in S&C positions.

Education is fundamental to doping prevention

Although staff themselves may not have all been formally educated in relation to anti-doping, educating players was consistently identified as the main doping prevention activity undertaken within the club. All staff were aware that mandatory anti-doping education was delivered to players

by an external individual, from the RFU and/or UKAD, at least once every year. This was organised by the academy leadership¹ and the medical staff.² The Player Development Manager explained *'I'll just speak to our Physio, or the Doctor, they'll then contact, we've got two contacts at the RFU, one of those guys will come up and present'*. The physiotherapist corroborated this:

On an annual basis, it's compulsory for the club to deliver some type of education talk on drugs to the academy athletes, and that's actually something that I am responsible for organising ... So, I've just kind of taken that as one of my roles within the club. So, I liaise with a couple of gentlemen who are from the RFU.

Staff described the session as covering a range of topics including consequences of doping, updates to the Prohibited List, the need to check medications and supplements, and doping control (testing) processes. If any players are unable to attend (e.g. due to injury or illness) the physiotherapist, doctor or nutritionist would deliver the session content to these players later. This is because these individuals have engaged with anti-doping education to fulfil the requirement of the RFU to have two trained personnel within each club. When reflecting on our conversations with the ASP, it seemed as though this compulsory education session was valued (e.g. the staff seemed proud that their club met this requirement), but it was not thought of as the most powerful preventive action being taken within the club.

In terms of 'formal' education, greater value was placed on a number of other workshops that the nutritionist and medical staff delivered. Specifically, the doctor delivers information regarding Therapeutic Use Exemptions (TUEs) and the need to check medications to ensure they do not contain prohibited substances. The nutritionist educates players on enhancing performance without supplements and minimising the risk of doping associated with supplement use. They do this by developing players' awareness of a balanced, healthy, and adequate dietary intake, enhancing players' skills to bring this knowledge to life through cooking and shopping workshops, and encouraging players who are going to use supplements to use third-party certified products (i.e. Informed Sport).

Beyond the formal education sessions delivered by specific staff, all staff reported educating the players in a less formal way through conversations. When interpreting the ASP accounts, we formed the impression that staff believe these conversations are their most significant means of educating – and, consequently, preventing doping. The Head of Athletic Performance said, *'It's every day – it's a one-off session to everybody to just, to say that you've done that one-off thing – but it's [also] an ongoing thing'*. These conversations were not typically about intentional doping. Instead, conversations were most often about nutrition, dietary supplements, and medications. To elaborate, the nutritionist, S&C staff and (less often) the Player Development Manager had been approached regarding nutrition, mostly around weight management and supplements. Here, the majority of staff explicitly discussed 'natural nutrition' and advocating a 'food first' approach to *'get them into good habits and eating well'* (Junior Academy S&C, 2) from a young age. The physiotherapist and doctor were most likely to be approached to discuss medications, as the physiotherapist explains, *'there have been occasions where lads have asked me ... in terms of "Am I allowed to take this?" ... I will always point them towards the resources that are from the RFU ... or pointing them, usually to [doctor] if there's any doubts about that'*. When having conversations with players on these topics, staff reported advising players to check both medications and supplements to minimise their risk of inadvertent doping, which reiterates the messages being conveyed in formal education sessions.

A notable finding was that all staff had conversations with players about their performance development, which they explicitly suggested were a crucial component of doping prevention. For example, the Academy Manager suggested that players are less likely to dope if they have opportunities to develop and understand their performance:

I think that's our biggest job, within the environment, it's their perception of what's around them. And I think that if we can help them frame the perception of what's around them by making them see it as their journey, every player is different ... I think that's the most powerful part we can play ... and it really does relate to anti-

doping and other things by coincidence, but really that's our job anyway – is to make sure the players are supported and they understand the next steps to achieve their potential ... if they have a real sense of belief about what it actually is, that will help.

The Academy Manager was one of several staff to highlight the importance of mentoring and reassuring players so that they do not have tunnel vision and understand that their development is a 'journey', where progress is gradual and likely will take longer than wanted. When interpreting the data, we picked up on an apparent consensus across staff that there is no pressure placed on players to develop quickly. Despite this, staff recognised that players themselves strive for progress to happen rapidly because they are ambitious. To address this, staff reported having to provide consistent and regular feedback, which includes advising the players to be patient, allow themselves time to grow and mature, focus on incremental progress, and work hard to fulfil their potential. One of the senior academy S&C coaches (2) summarised:

I think in our environment it's the lack of pressure, I think it's the constant feedback that they are improving, showing them the positives rather than the negatives, so they feel as a player that they are improving. That helps because there's no need to go for you know, other means, if they know that they're improving to their best, or they're improving at the rate at which they can, if you know what I mean? So, I think that constant feedback and support, and the fact that there isn't a massive pressure on them is huge.

The way that staff commonly described their approach to performance development is discussed in greater depth in the final theme.

(Preventing doping) it's all about the way we work with players and each other

Throughout the conversations, the first author sensed that the interviewees thought one of their main protective mechanisms against doping was the overall way they worked with players. When asked at the start of the interview to articulate what they aim to develop, most staff initially identified a particular area related to their job. For example, the medical team suggested injury/illness prevention and treatment. When analysing the data, we categorised the aims of player development as 1) performance enhancement, 2) injury management, and 3) developing the players as people. When speaking about the latter, several staff emphasised the need to help players develop certain values, such as professionalism, teamwork, hard work, and honesty. Yet, the point that stood out the most to the interviewer from the conversations was the club's 'individualised' approach – whereby each player's progress is considered in relation to their previous performances/measures rather than compared to others' or arbitrary markers. Staff appeared to be suggesting that supporting players in this way reduced players vulnerability to doping. The Academy Manager explained the approach:

We work individually in terms of development planning with each of those players. And some of them will have a very strong focus on physical development, others it will be more around the technical, tactical, or psychological. So, it's very much led around the player themselves.

A key component to working effectively to develop players was creating relationships. Staff described themselves as visible and stated that they make a conscious effort to get to know/understand players, form connections with them, build trust, and show them that they care. To achieve this, staff emphasised the need for open and honest communication between them and players:

I think when players come in, it's being clear about your expectations as a club, you know, what you expect of them, what the ambitions of the club are. I think the more open and honest you are with the players, the better. Erm, I think that has always stood us in good stead ... how [we] communicate, how we deal with things, I think that's massive, I really do. (Director of Rugby)

Building on the concept of wanting to get to know players, several staff described conversations they had with players about life and lifestyle. While this sometimes related to rugby (e.g. getting adequate amounts of rest, hydrating, and not drinking alcohol), some staff also had conversations with players about life beyond rugby, including relationships, finances, their education, and their mental health. The medical staff in particular engaged in these conversations, as the doctor explained the different components of his role:

Let's call it [the] sports medicine side of things, so injuries, concussion and all the different aspects that go with that, that's one side. And then you've got your kind of general medical problems. Then life problems. So, life and social ... the girlfriend ... A lot of my work is pastoral, for, you know, stuff that is clearly non-medical, we're dealing with ... you know, alcohol or lifestyle issues.

Staff suggested that the relationships they forged with players led to players confiding in them and valuing their opinions. Staff seemed to be suggesting that this helped them to prevent doping because of the enhanced 'buy in' to their advice:

I just, generally just try and chat to the lads and get to know them as most I can, so if it's talking about how school's going, or have they thought what their education plans are for the future, or even if it's things about hobbies or what do they do at the weekend. Like, I think you get a lot more buy in from players if you develop relationships with them and they see you more [as] somebody they can have a chat with rather than just this figure barking orders at them in the gym and telling them to do this and that. (Junior academy S&C coach, 2)

Notably, staff framed the ways in which doping is (presumably) prevented – by fostering caring relationships and focussing on individual development – as an *implicit* part of the shared values and working practices of ASP within the club, rather than as actions that had been explicitly articulated and attributed.

With regards to values, the senior academy S&C coaches commented '*we all have a similar philosophy*' (1) and '*everyone in the academy is on the same page*' (2). Individuals in club leadership positions, who had worked in the club for the longest periods of time, reported that it had always been this way, '*it's driven by the club. When I came into this club, erm, they had the same beliefs that I had*' (Head of Athletic Performance). Further insights into how hiring people with the same 'agenda' had helped to sustain the shared values over time came from the Director of Rugby:

I think we employ coaches that we feel can improve players, that can coach players, and make them better, erm, but I think it's about, hopefully giving people an environment that they're happy to come in on a morning and you know, they know exactly their players, erm, even when things aren't quite going so well, we stick together, we work as a team, you know, but no-one's got their own agenda, really. (Director of Rugby)

Staff suggested that their shared values fostered 'joined up thinking' and 'agreement happen[ing] organically', which, in turn, led to greater consistency of messages being relayed to players (including around anti-doping). The ASP 'being on the same page' also contributed to staff feeling well-supported by one another.

Picking up on this final point, and focusing in on working practices, an important factor contributing to the satisfaction that ASP exhibited about their working environment was the sense that they were trusted and valued. Staff described their environment as 'relaxed' and saw themselves as being 'empowered' and able to 'self-manage'. The physiotherapist and senior academy S&C coaches explained that the autonomy given to staff was due to the Academy Manager's overall approach to performance development and working with players (as described previously as an individual journey). Yet, whilst the emphasis on staff autonomy was acknowledged as a positive aspect of the working environment, it perhaps presented some challenges when it came to governance matters. Staff reported not being given any guidance by the club on their anti-doping responsibilities, nor were these specified in their contracts or during their induction to the club. Staff had also not been told what they should do in the event of a doping-related occurrence (e.g. suspicions

amongst the players about doping within the team). One junior academy S&C coach (2) commented, *'I can't remember being told what I should do . . . No it's never been mentioned, erm, no we've never had any kind of formal procedures put in place like if this happens or whatever'*. In the absence of formal guidance on anti-doping, a number of staff stated they implicitly knew it was part of their role and saw it as part of their professional responsibility. The doctor explained that this was the case with other responsibilities, not only anti-doping:

With all of my role I've never had a formal meeting about the different things which, there are things which are just part of my role. For example, concussion management is big here. I know that's a part of my role, and I want to be the person to lead on that one, but I've never had a conversation about it, but it's kind of . . . so I've never had that formal meeting, but it just is.

While some staff possessed a strong understanding of their own professional responsibilities and the boundaries around their role, others suggested that more guidance on components of their role should be provided when being appointed by the club. For instance, one of the junior academy S&C coaches (1) commented, *'I think that's where I was a bit rushed really, like in most jobs . . . it was "right, coaching starts tomorrow night", just get in the gym and coach really. That was it'*. With regards to anti-doping specifically, some staff called for the club-level position on anti-doping (including nutritional supplement use) and process for how to deal with any doping-related issues to be explicitly communicated to them. Receiving this direction appears to be an important action, as staff were not familiar with any formal guidance for ASP anti-doping roles that exists beyond their club environment, such as national and global anti-doping policy. Even the nutritionist, who was the most well-trained and proactive member of staff in anti-doping terms, was unaware of the policies for ASP, *'I don't think I am very aware of that kind of stuff. Erm, probably something I should look into but I'm, I'm not actually sure if there are policies specifically for staff'*. Therefore, while ASP are engaged and supported – in relation to both player and staff development – anti-doping could be more explicitly addressed as part of the broader way of working. This could be particularly important for those staff who are not engaging as proactively in doping prevention activities.

Discussion

The aim of this study was to advance our understanding of the behaviours enacted by ASP to prevent doping and the factors influencing these behaviours. In particular, we examined the way that ASP in one environment work together in doping prevention efforts. This research is original and significant as there is no published study that has investigated the (potential) coordination of anti-doping roles across a group of ASP. In the current context – a professional rugby union academy in England – variability was noted in the anti-doping roles of ASP, with the medical staff and nutritionist engaging more actively in anti-doping behaviours than others (e.g. leadership and S&C staff). Educating the players was the main activity undertaken by ASP to prevent doping; delivered formally through sessions/workshops and informally through conversations. Whilst not an intentional doping prevention approach, staff reported that open and honest conversations with players regarding their performance development were particularly important for reducing doping vulnerability. We believe that such conversations were couched within the overall 'philosophy' of the club. Specifically, staff described a person-centred approach to player development and collective action/mutual trust amongst staff, where they worked well together and had autonomy in undertaking their job. Notably, this autonomy meant that formal guidance on anti-doping processes and responsibilities was not in place within the academy setting. Addressing this was not seen as an urgent need by staff, as they were satisfied with the way of working (in general, and specific to anti-doping). However, some staff commented that greater guidance could be beneficial, and providing this could minimise the risk of some individuals diffusing responsibility for anti-doping.

Overall, staff engagement in educating players is encouraging, given that other ASP (especially coaches) have shown reluctant to act in this area (Allen et al. 2017; Patterson and Backhouse 2018). Such engagement was influenced by a combination of individual and environmental factors, supporting previous research (e.g. Mazanov et al. 2014, 2015). At an individual level, a (perceived) lack of knowledge acted as a barrier to action for some groups, particularly S&C coaches. Yet, having knowledge enabled other staff, namely the nutritionist, doctor, and physiotherapist, to be the most active in anti-doping efforts. These three individuals had established their capability to support players through foundational knowledge gained during their professional training. This was then extended by specific anti-doping education they received to fulfil requirements of an RFU policy to have two trained 'Advisors' within each club.³ Not only did this contribute to their preparation, but also it affected how they were perceived by other ASP in the academy – as the 'go to' people regarding anti-doping. The decision to designate the nutritionist and medical team as anti-doping advisors was not surprising, as their general responsibilities align with the most common reasons for anti-doping rule violations in rugby (www.ukad.org; Whitaker and Backhouse 2017) – namely supplements and medications.

While the RFU policy of having at least two trained advisors in the club seemed to be helpful in preparing some individuals for a part in anti-doping efforts, it might also have had unintended consequences – in allowing other ASP to avoid, or remain unaware of, their responsibilities as outlined in the Code. Our findings revealed that some individuals with the potential to have a powerful influence on players' doping behaviours are playing a very small (if any) part in doping prevention. S&C coaches were least active in anti-doping efforts and one of the main explanations offered for this was the presence of others. This supports previous ASP research that shows 'reliance on colleagues' as a key environmental influence on ASP anti-doping roles (e.g. Mazanov et al. 2014, 2015). While we are in no way suggesting that all ASP have to undertake the same type and intensity of anti-doping action(s), the S&C coaches themselves acknowledged that they could be an important figure in doping prevention, due to their role in performance enhancement. Indeed, individuals are less likely to dope if they have a good sport science support team in place (e.g. Kegelaers et al. 2018; Aubel and Ohl 2014). Therefore, effective ways of overcoming diffusion of responsibility and engaging this influential community in anti-doping efforts must be found to harness their potential in reducing doping vulnerability. Notably, engaging S&C coaches in upholding the integrity of sport by fulfilling their expected responsibilities outlined in global anti-doping policy could be even more critical in environments beyond the current club (where potentially harmful behaviours were not apparent), because previous research has indicated several maladaptive behaviours amongst this group, including directly encouraging doping (Whitaker, Backhouse, and Long 2017) and offering ill-informed guidance on food and supplements (that is often at odds with the advice provided by the nutritionist) (Bentley et al. 2019).

Findings from this study suggest the need to make explicit connections between what S&C coaches can do to prevent doping and what they already do in their role in general. For instance, helping them recognise that supporting players to increase mass and avoid injury via legitimate methods would address two important factors affecting doping in rugby union (Didymus and Backhouse 2020; Till et al. 2016; Whitaker, Backhouse, and Long 2017). In addition, concerns about 'personal resources' (i.e. time, energy and information) (Boardley et al. 2019) must be addressed. While all S&C staff had completed post-graduate degrees in various sport-related topics, these qualifications had not covered anti-doping specifically in any great depth. Consequently, integrating anti-doping learning opportunities into the professional development process of S&C coaches warrants serious consideration. A number of interventions for coaches that have recently shown potential (Nicholls et al. 2020; Ntoumanis et al. 2021) might be helpful in this regard. However, the current study emphasises the need to develop tailored programmes to best support the S&C (and other) profession(s). Indeed, our data suggests there is a need to move away from the catch all 'one

size fits all' approach to ASP roles and responsibilities articulated in the Code. Therefore, research and/or consultations regarding S&C coaches' learning needs should be conducted, similar to those previously undertaken with coaches (e.g. Patterson, Backhouse, and Lara-Bercial 2019).

At an organisational level, staff would benefit from receiving guidance on their anti-doping role from within their club. This would satisfy several individuals' requests for the implementation of anti-doping protocols. It would also capitalise on the fact that the 'way things were done' in the club was influential to staff behaviour (in general, and specific to anti-doping). The Academy Manager appeared to be a key agent in determining the approach to player development and ASP working practises. Therefore, individuals in leadership positions explicitly emphasising the importance of each staff member contributing to anti-doping efforts and explaining how doping prevention links to their existing player-centred philosophy appears to be critical to enhancing protective actions among ASP. Given the value that staff placed on open communication and mutual trust in one another's efforts, the formalisation of anti-doping roles and responsibilities should be based on discussion and collective agreement. Supporting the need for this same approach to be taken by other clubs/sporting environments, this action is underpinned by literature highlighting the importance of collective decision making and clearly defined roles and responsibilities within effective multi-disciplinary teams (e.g. Reid, Stewart, and Thorne 2004; Sporer and Windt 2018).

Though anti-doping efforts might be improved by clarifying responsibilities and enhancing the capability of some ASP, the collective actions of staff within the club may already be positively contributing to reduced doping vulnerability. For example, the importance that staff placed on building relationships with players to prevent doping aligns with findings that close and trusting relationships are highly influential to doping-related decisions (Barkoukis et al. 2019). Similarly, the potential of the club's 'individualised' approach to player development as preventive of doping is corroborated by research with rugby players, which proposed that training and competition load should be carefully scaffolded to facilitate adaptive long-term development and minimise maladaptive outcomes (Didymus and Backhouse 2020; Phibbs et al. 2018). Therefore, the prioritisation of relationships, communication and building a community with shared values could serve as a potential blueprint for other organisations. Before offering these strategies as examples of 'good practice' to other clubs, it would be beneficial to gain the perspective of players in the club to see if they receive the messages the staff purport to communicate and the support they suggest they provide. Furthermore, insights into whether players may be thinking about, or have committed, doping should also be garnered to understand if what the ASP do 'works'. At the time of the current study, the club had not experienced any anti-doping rule violations, but not being 'caught' does not necessarily equate to effective doping prevention.

Reflections

The findings should be viewed with the limitations of the study in mind, and the main considerations surround the sample. Firstly, ideally, we would have interviewed all fourteen members of ASP from within the club to ensure all voices were heard. However, this was not possible due to limited availability of staff ($n = 2$) and decisions to decline the invitation ($n = 1$). Still, the ASP we interviewed ($n = 11$) represented a range of responsibilities within the academy structure (i.e. club leadership, academy leadership, medical, nutrition, S&C) and none of the individuals who were unable to participate were referred to in our interviews when discussing anti-doping efforts undertaken in the club. We are therefore confident that in the quality of our data (i.e. relevant richness, depth, diversity and complexity) and believe that the subsequent reflexive thematic analysis (Braun and Clarke 2019b) answers our research questions.

Secondly, regarding representativeness of the sample, it is important to acknowledge that all but one of the ASPs interviewed in this study identified as men. Therefore, this research is framed from this perspective and reinforces the position that women's underrepresentation in high-performance sport, such as coaching (Norman and Simpson 2022), is endemic. How anti-doping fits within the narrative of women's experiences of sport – and rugby union specifically – is therefore still to be carefully considered. In addition, it might be suggested that the findings cannot be generalised to other contexts (e.g. clubs, levels of competition, countries, or sports). Yet, 'small samples purposefully chosen are ... unique strengths of qualitative research, not weaknesses' (Smith 2018, 139). With this in mind, we propose that the findings from the study might demonstrate *naturalistic generalisability* and *transferability* (Smith 2018). We have presented rich, in-depth insights into participants' experiences through quotations, and we encourage readers to think deeply about our findings in relation to their own 'experiences, settings they move in, events they've observed or heard about, and people they have talked to' (naturalistic generalisability; Smith 2018, 140). We also encourage readers to consider if the findings present something that can be applied in their own situation (transferability).

Though we believe that the study has potential for naturalistic generalisability and transferability, this may be limited to environments that have not experienced doping – since, like other studies (e.g. Barkoukis et al. 2019; Mazanov et al. 2015), the ASP interviewed in the current study had little or no direct experience with players or peers who committed ADRVs. Therefore, to extend our understanding of the actions taken by ASP and the factors that influence them it would be beneficial for researchers to engage with ASP working in a context that has direct experience of doping. A second extension to the design that could offer further insights in the future is to conduct longitudinal research exploring staff and player interactions related to doping over time. Such research could illuminate patterns in ASP anti-doping behaviours and connections between ASP behaviours and player moments of vulnerability. It could also explore the relationships and more informal interactions that ASP in the current study proposed form a key part of their doping prevention efforts. Understanding how these relationships take shape, are maintained or altered, what pressure points are, and how these are effectively managed, could inform interventions for both ASP and players that support them at times when they are most needed/are of most benefit. Explorations of these factors may benefit from paying attention to previous research into organisational culture within and beyond sport (e.g. Shein 2004; Wagstaff and Burton-Wylie 2018). We believe we began to scratch the surface into the 'culture' of this club, including what are the accepted norms and how the Leadership shape and sustain these. Yet, further investigation is needed to gain a more developed and nuanced understanding of culture as it applies to sporting integrity and athlete welfare.

Lastly, the absence of a theoretical framework may be viewed as a limitation of this research. However, given the dearth of evidence related to ASP anti-doping behaviours and influencing factors, we deemed an inductive approach to be most appropriate. Aligned with Woolf and Mazanov (2017), we saw our approach as a way of investigating a specific context, and novel 'problem', in depth, while also believing that the findings from those 'specific observations' might enable the development of more 'generalised observations or propositions ... leading to new insights, explanations and, eventually, theorising' (p. 304). As we conclude that a range of influencing factors were present at both individual, interpersonal and environmental levels, future research could benefit from utilising systems theories that have previously been used to understand athlete doping (e.g. Smith et al. 2010). Recent reviews of anti-doping literature (Backhouse et al. 2016; Barnes, Patterson, and Backhouse 2020) have also advocated for the use of 'meta-theory', such as the Capability-Opportunity-Motivation-Behaviour model ([COM-B], Michie, Van Stralen, and West 2011) as they offer comprehensive frameworks and expand the focus beyond individual influencing factors.

Notes

1. The Player Development Manager also reported obtaining parental consent for doping control (tests), submitting Whereabouts information, and chaperoning players during tests.
2. The Doctor also reported applying for Therapeutic Use Exemptions and managing doping control test results.
3. It has not been possible to locate details of this policy by searching the RFU website or the internet more generally.

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References

- Allen, J., R. Morris, P. Dimeo, and L. Robinson. 2017. "Precipitating or Prohibiting Factor: Coaches' Perceptions of Their Role and Actions in Anti-Doping." *International Journal of Sports Science & Coaching* 12 (5): 577–587. doi:10.1177/1747954117727653.
- Aubel, O., and F. Ohl. 2014. "An Alternative Approach to the Prevention of Doping in Cycling." *International Journal of Drug Policy* 25 (6): 1094–1102. doi:10.1016/j.drugpo.2014.08.010.

- Backhouse, S. H., L. Whitaker, and A. Petróczy. 2013. "Gateway to Doping? Supplement Use in the Context of Preferred Competitive Situations, Doping Attitude, Beliefs, and Norms." *Scandinavian Journal of Medicine & Science in Sports* 23 (2): 244–252. doi:10.1111/j.1600-0838.2011.01374.x.
- Backhouse, S. H., L. Whitaker, L. B. Patterson, K. Erickson, and J. McKenna. 2016. "Social Psychology of Doping in Sport: A Mixed-Studies Narrative Synthesis." Montreal, Canada: World Anti-Doping Agency. Accessed 26 May 2021. https://www.wada-ama.org/sites/default/files/resources/files/literature_review_update_-_final_2016.pdf
- Barkoukis, V., L. Brooke, N. Ntoumanis, B. Smith, and D. Gucciardi. 2019. "The Role of the Athletes' Entourage on Attitudes to Doping." *Journal of Sports Sciences* 37 (21): 2483–2491. doi:10.1080/02640414.2019.1643648.
- Barnes, L. T., L. B. Patterson, and S. H. Backhouse. 2020. "A Systematic Review of Research into Coach Perspectives and Behaviours regarding Doping and Anti-Doping." *Psychology of Sport and Exercise* Advance online publication. doi:10.1016/j.psychsport.2020.101780.
- Bentley, M. R. N., N. Mitchell, L. Sutton, and S. H. Backhouse. 2019. "Sports Nutritionists' Perspectives on Enablers and Barriers to Nutritional Adherence in High Performance Sport: A Qualitative Analysis Informed by the COM-B Model and Theoretical Domains Framework." *Journal of Sports Sciences* 37 (18): 2075–2085. doi:10.1080/02640414.2019.1620989.
- Boardley, I. D., J. Grix, N. Ntoumanis, and A. L. Smith. 2019. "A Qualitative Investigation of Coaches' Doping Confrontation Efficacy Beliefs." *Psychology of Sport and Exercise* 45: 101576. doi:10.1016/j.psychsport.2019.101576.
- Braun, V., and V. Clarke. 2019a. "Reflecting on Reflexive Thematic Analysis." *Qualitative Research in Sport, Exercise and Health* 11 (4): 589–597. doi:10.1080/2159676X.2019.1628806.
- Braun, V., and V. Clarke. 2019b. "To Saturate or Not to Saturate? Questioning Data Saturation as a Useful Concept for Thematic Analysis and Sample-Size Rationales." *Qualitative Research in Sport, Exercise and Health* 1–16. doi:10.1080/2159676X.2019.1704846.
- Braun, V., and V. Clarke. 2020. "One Size Fits All? What Counts as Quality Practice in (Reflexive) Thematic Analysis?" *Qualitative Research in Psychology* 1–25. doi:10.1080/14780887.2020.1769238.
- Chan, D. K., S. J. Hardcastle, V. Lentillon-Kaestner, R. J. Donovan, A. J. Dimmock, and M. S. Hagger. 2014. "Athletes' Beliefs about and Attitudes Towards Taking Banned Performance-Enhancing Substances: A Qualitative Study." *Sport, Exercise, and Performance Psychology* 3 (4): 241. doi:10.1037/spy0000019.
- Council of Europe. 2021. "European Sports Charter." <https://www.coe.int/en/web/sport/european-sports-charter>
- Diacin, M. J., J. B. Parks, and P. C. Allison. 2003. "Voices of Male Athletes on Drug Use, Drug Testing, and the Existing Order in Intercollegiate Athletics." *Journal of Sport Behavior* 26 (1): 1–16.
- Didymus, F., and S. H. Backhouse. 2020. "Coping by Doping? A Qualitative Inquiry into Permitted and Prohibited Substance Use in Competitive Rugby." *Psychology of Sport and Exercise* 49. doi:10.1016/j.psychsport.2020.101680.
- Engelberg, T., and J. Skinner. 2016. "Doping in Sport: Whose Problem Is It?" *Sport Management Review* 19 (1): 1–5. doi:10.1016/j.smr.2015.12.001.
- Erickson, K., J. McKenna, and S. H. Backhouse. 2015. "A Qualitative Analysis of the Factors that Protect Athletes against Doping in Sport." *Psychology of Sport and Exercise* 16 (2): 149–155. doi:10.1016/j.psychsport.2014.03.007.
- Hauw, D., and S. Mohamed. 2015. "Patterns in the Situated Activity of Substance Use in the Careers of Elite Doping Athletes." *Psychology of Sport and Exercise* 16: 156–163. doi:10.1016/j.psychsport.2013.09.005.
- Hurst, P., M. Kavussanu, I. Boardley, and C. Ring. 2019. "Sport Supplement Use Predicts Doping Attitudes and Likelihood via Sport Supplement Beliefs." *Journal of Sports Sciences* 37 (15): 1734–1740. doi:10.1080/02640414.2019.1589920.
- Kegelaers, J., P. Wylleman, K. De Brandt, N. Van Rossem, and N. Rosier. 2018. "Incentives and Deterrents for Drug-Taking Behaviour in Elite Sports: A Holistic and Developmental Approach." *European Sport Management Quarterly* 18 (1): 112–132. doi:10.1080/16184742.2017.1384505.
- Kirby, K., A. Moran, and S. Guerin. 2011. "A Qualitative Analysis of the Experiences of Elite Athletes Who Have Admitted to Doping for Performance Enhancement." *International Journal of Sport Policy and Politics* 3: 205–224. doi:10.1080/19406940.2011.577081.
- Maughan, R. J., F. Depiesse, and H. Geyer. 2007. "The Use of Dietary Supplements by Athletes." *Journal of Sports Sciences* 25 (S1): S103–S113. doi:10.1080/02640410701607395.
- Mazanov, J., S. H. Backhouse, J. Connor, D. Hemphill, and F. Quirk. 2014. "Athlete Support Personnel and Anti-Doping: Knowledge, Attitudes and Ethical Stance." *Scandinavian Journal of Medicine and Science in Sports* 24 (5): 846–856. doi:10.1111/sms.12084.
- Mazanov, J., D. Hemphill, J. Connor, F. Quirk, and S. H. Backhouse. 2015. "Australian Athlete Support Personnel Lived Experience of Anti-Doping." *Sport Management Review* 18 (2): 218–230. doi:10.1016/j.smr.2014.05.007.
- Michie, S., M. M. Van Stralen, and R. West. 2011. "The Behaviour Change Wheel: A New Method for Characterising and Designing Behaviour Change Interventions." *Implementation Science* 6 (1): 1–12. doi:10.1186/1748-5908-6-42.
- Morente-Sánchez, J., and M. Zabala. 2015. "Knowledge, Attitudes and Beliefs of Technical Staff Towards Doping in Spanish Football." *Journal of Sports Sciences* 33 (12): 1267–1275. doi:10.1080/02640414.2014.999699.
- Mountjoy, M. 2019. "Only by Speaking Out Can We Create Lasting Change: What Can We Learn from the Dr Larry Nassar Tragedy?" *British Journal of Sports Medicine* 53 (1): 57–60. doi:10.1136/bjsports-2018-099403.

- Nicholls, A.R., L. R. W. Fairs, M. Plata-Andrés, R. Bailey, E. Cope, D. Madigan, K. Koenen, et al. 2020. "Feasibility Randomised Controlled Trial Examining the Effects of the Anti-Doping Values in Coach Education (ADVICE) Mobile Application on Doping Knowledge and Attitudes Towards Doping among Grassroots Coaches." *BMJ Open Sport & Exercise Medicine* 000800. doi:10.1136/bmjsem-2020-.
- Norman, L., and R. Simpson. 2022. "Gendered Microaggressions Towards the "Only" Women Coaches in high-performance Sport." *Sports Coaching Review* 1–21. doi:10.1080/21640629.2021.2021031.
- Ntoumanis, N., V. Barkoukis, D. Gucciardi, and D. Chan. 2017. "Linking Coach Interpersonal Style with Athlete Doping Intentions and Doping Use: A Prospective Study." *Journal of Sport and Exercise Psychology* 39 (3): 188–198. doi:10.1123/jsep.2016-0243.
- Ntoumanis, N., E. Quested, L. Patterson, S. Kaffe, S. H. Backhouse, G. Pavlidis, L. Whitaker, et al. 2021. "An Intervention to Optimise coach-created Motivational Climates and Reduce Athlete Willingness to Dope (Coachmade): A three-country Cluster Randomised Controlled Trial." *British Journal of Sports Medicine* 55 (4): 213–219. doi:10.1136/bjsports-2019-101963.
- Ntoumanis, Nikos, Eleanor Quested, Laurie Patterson, Stella Kaffe, Susan H Backhouse, George Pavlidis, Lisa Whitaker et al, 2021. "An Intervention to Optimise Coach-Created Motivational Climates and Reduce Athlete Willingness to Dope (CoachMade): A Three-Country Cluster Randomised Controlled Trial." *British Journal of Sports Medicine* 55 (4): 213–219.
- Patterson, L. B., and S. H. Backhouse. 2018. "'An Important Cog in the Wheel', but Not the Driver: Coaches' Perceptions of Their Role in Doping Prevention." *Psychology of Sport and Exercise* 37: 117–127. doi:10.1016/j.psychsport.2018.05.004.
- Patterson, L. B., S. H. Backhouse, and S. Lara-Bercial. 2019. "Examining Coaches' Experiences and Opinions of anti-doping Education." *International Sport Coaching Journal* 6 (2): 145–159. doi:10.1123/iscj.2018-0008.
- Petróczi, A. 2013. "The Doping Mindset—Part I: Implications of the Functional Use Theory on Mental Representations of Doping." *Performance Enhancement & Health* 2 (4): 153–163. doi:10.1016/j.peh.2014.06.001.
- Phibbs, P. J., B. Jones, G. Roe, D. Read, J. Darrall-Jones, J. Weakley, K. Till, and K. Till. 2018. "The Organised Chaos of English Adolescent Rugby Union: Influence of Weekly Match Frequency on the Variability of Match and Training Loads." *European Journal of Sport Science* 18 (3): 341–348. doi:10.1080/17461391.2017.1418026.
- Reid, C., E. Stewart, and G. Thorne. 2004. "Multidisciplinary Sport Science Teams in Elite Sport: Comprehensive Servicing or Conflict and Confusion?" *The Sport Psychologist* 18 (2): 204–217. doi:10.1123/tsp.18.2.204.
- Schein, Eh. 2004. *Organizational Culture and Leadership*. 3rd ed. Jossey-Bass, San Francisco.
- Smith, A., B. Stewart, S. Oliver-Bennetts, S. McDonald, L. Ingerson, A. Anderson, G. Dickson, P. Emery, and F. Graetz. 2010. "Contextual Influences and Athlete Attitudes to Drugs in Sport." *Sport Management Review* 13 (3): 181–197. doi:10.1016/j.smr.2010.01.008.
- Smith, B., and K. McGannon. 2017. "Developing Rigor in Qualitative Research: Problems and Opportunities within Sport and Exercise Psychology." *International Review of Sport and Exercise Psychology* 11 (1): 101–121. doi:10.1080/1750984X.2017.1317357.
- Smith, B. 2018. "Generalizability in Qualitative Research: Misunderstandings, Opportunities and Recommendations for the Sport and Exercise Sciences." *Qualitative Research in Sport, Exercise and Health* 10 (1): 137–149. doi:10.1080/2159676X.2017.1393221.
- Smith, B., and A. Sparkes. 2020. "Qualitative Research." In *Handbook of Sport Psychology*, edited by Gershon Tenenbaum and Robert Eklund, 1001–1019. 4th ed. Hoboken, New Jersey: John Wiley & Sons.
- Sparkes, A., and B. Smith. 2014. "Qualitative Research Methods in Sport, Exercise and Health." In *From Process to Product*. London: Routledge. <https://www.taylorfrancis.com/books/mono/10.4324/9780203852187/qualitative-research-methods-sport-exercise-health-andrew-sparkes-brett-smith>
- Sporer, B. C., and J. Windt. 2018. "Integrated Performance Support: Facilitating Effective and Collaborative Performance Teams." *British Journal of Sports Medicine* 52 (16): 1014–1015. doi:10.1136/bjsports-2017-097646.
- Tee, J. C., and F. Rongen. 2020. "'How' a Multidisciplinary Team Worked Effectively to Reduce Injury in a Professional Sport Environment [Pre-Print]." *SportRxiv*. Accessed 26 May 2021.<https://osf.io/preprints/sportrxiv/7qh4c/download>
- Till, K., B. Jones, J. McKenna, L. Whitaker, and S. H. Backhouse. 2016. "The Search for Size: A Doping Risk Factor in Adolescent Rugby?" *British Journal of Sports Medicine* 50 (4): 203–204. doi:10.1136/bjsports-2015-094737.
- Trainor, Lisa R, and Andrea Bundon. 2021. "Developing the Craft: Reflexive Accounts of Doing Reflexive Thematic Analysis." *Qualitative Research in Sport, Exercise and Health* 13 (5): 705–726.
- United Nations. 2015. "Resolution Adopted by the General Assembly on 25 September 2015." *Transforming our world: the 2030 Agenda for Sustainable Development*. https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=
- Wagstaff, Christopher RD, and Suzanna Burton-Wylie. 2018. "Organisational Culture in Sport: A Conceptual, Definitional and Methodological Review." *Sport & Exercise Psychology Review* 14 (2): 32–52.
- Whitaker, L., and S. H. Backhouse. 2017. "Doping in Sport: An Analysis of Sanctioned UK Rugby Union Players between 2009 and 2015." *Journal of Sports Sciences* 35 (16): 1607–1613. doi:10.1080/02640414.2016.1226509.

- Whitaker, L., S. H. Backhouse, and J. Long. 2017. "Doping Vulnerabilities, Rationalisations and Contestations: The Lived Experience of National Level Athletes." *Performance Enhancement & Health* 5 (4): 134–141. doi:[10.1016/j.peh.2017.06.001](https://doi.org/10.1016/j.peh.2017.06.001).
- Woolf, J., and J. Mazanov. 2017. "How Athletes Conceptualise Doping, Winning, and Consequences: Insights from Using the Cognitive Interviewing Technique with the Goldman Dilemma." *Qualitative Research in Sport, Exercise and Health* 9 (3): 303–320. doi:[10.1080/2159676X.2016.1272480](https://doi.org/10.1080/2159676X.2016.1272480).
- World Anti-Doping Agency. 2020. "World Anti-Doping Code." Montreal, Canada: World Anti-Doping Agency. Accessed 26 May 2021. https://www.wada-ama.org/sites/default/files/resources/files/2021_wada_code.pdf