Building clean(er) sport together: Community-based participatory research with elite athletes and anti-doping organisations from five European countries[1]

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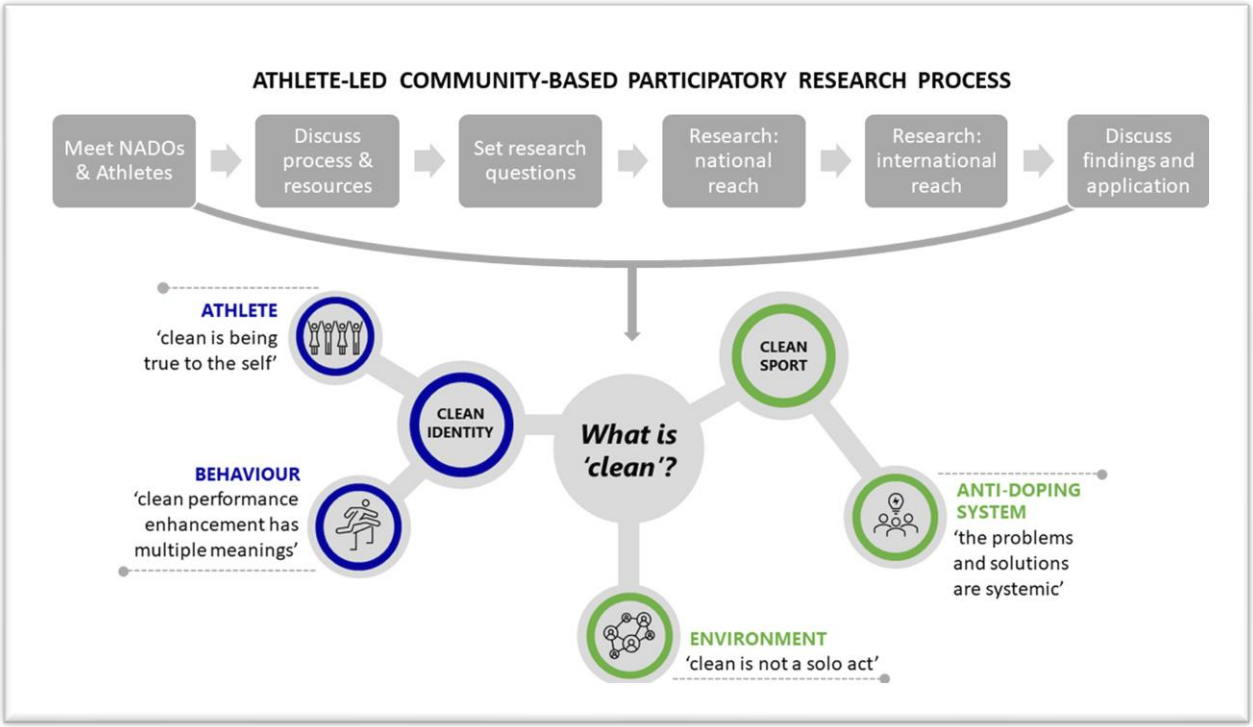
Highlights

- Clean athlete identity is a strong protection against doping and cheating in sport
- Clean athlete identity is rooted in upbringing, early experiences and love of sport
- Definition of clean performance enhancement is highly idiosyncratic
- Clean athlete identity is reinforced, but not created, by values-based education
- Problems of anti-doping were identified as systemic thus solutions must also be systemic

Graphical Abstract



Abstract

Background: In sport the narrative is changing from anti-doping to clean sport. Yet, our understanding of what 'clean sport' means to athletes is notably absent from the literature.

Objectives: Working together with elite athletes and National Anti-Doping Organisations (NADOs), this study explored the meaning and importance of 'clean sport' and 'clean athlete identity'.

Design: For the first time, a community-based participatory research design was employed to explore (a) how elite athletes define clean sport and being a clean athlete; (b) the hopes and challenges associated with clean sport and being a clean athlete; and (c) what can be done in anti-doping to elicit clean sport.

Methods: Five elite athletes in five European countries (Germany, Ireland, Netherlands, Slovenia and UK) were recruited as co-researchers by their respective NADOs, trained for their role as co-researchers and individually interviewed. Seventy-seven elite athletes were then purposefully recruited for 12 athlete-led national focus groups. Finally, the five athlete co-researchers and five athlete participants took part in one 2.5-hour long international focus group.

Results: Reflexive thematic analysis resulted in generating four overarching themes: 'clean is being true to the self', 'clean performance enhancement has multiple meanings', 'clean is not a solo act' and 'the problems and solutions are systemic'. Collectively, the themes showed that the clean athlete identity is highly idiosyncratic and rooted in upbringing, early experiences, and love of sport. It is also characterised by continued, intrinsically motivated commitment to fundamental values and morals acquired in childhood. Whilst elite athletes value anti-doping efforts, their experiences of disparity and unfairness in doping control undermine their trust in anti-doping and they feel action is needed to address these concerns.

Conclusion: Clean athlete identity is a social endeavour and artefact, which should be reflected in and developed through evidence-informed anti-doping interventions. Raising athletes' voices via collaboration and participatory research is an enriching experience for athletes and researchers, and a worthwhile endeavour for sport organisations with responsibility for anti-doping. To make anti-doping education personally relevant, the richness of individual interpretation of 'clean' for the self (i.e., clean athlete identity) and performance-enhancement is advised to be acknowledged, respected and cultivated.

Keywords: *qualitative, focus groups, values of sport, identity, clean sport, prevention, anti-doping*

Introduction

The mission of the World Anti-Doping Agency (WADA) is to lead a collaborative worldwide movement for doping-free sport to build a world where all athletes can participate in a doping-free sporting environment. To fulfil this mission, WADA employs a combination of different anti-doping measures including: controlling doping in sport via prohibition of certain substances and methods, coordinating testing for deterrence and education for prevention globally; and organising and delivering outreach programmes at major sport events. At the centre of these activities is the protection of 'clean sport'. It is this shared ideal - the desire to protect clean sport and to uphold the spirit of sport - that legitimises the anti-doping policies and practices (Woolway et al., 2020).

'Clean sport' as a desirable state is increasingly cited in official documents and statements made by organisations with responsibility for anti-doping, namely national and regional anti-doping organisations (NADOs and RADOs), international sport federations as well as WADA, the International Olympic Committee (IOC) and United Nations Educational Scientific Cultural Organization (UNESCO). Despite the widespread use in contemporary anti-doping documents 'clean sport' is seldom defined. One notable exception is Drugfree Sport New Zealand, which defines clean sport as a desirable state of the sport environment which upholds the spirit of sport and where athletes can compete on a level playing field. In a clean sport environment, athletes are rewarded for their hard-work, talent and skills, adhere to the anti-doping rules and understand the importance of and fully comply with a drug testing regime.

In support for the relentless quests for '*catching the cheats*', much research has been dedicated to the factors associated with doping, typically in isolation or in ad hoc combinations (Blank et al., 2016; Ntoumanis et al., 2014). The importance of the interaction between the individual, social and environmental factors has been highlighted by Backhouse et al. (2018) who posit that surroundings, opportunities and conditions that promote anti-doping rule violations together create a 'dopogenic' environment, which in turn can make athletes vulnerable to doping. Whilst vulnerability in 'dopogenic' environments is certainly an issue not to be overlooked, it is also important to recognise that not all athletes succumb to pressure and move toward doping. This raises the fundamental question of what protects those athletes who can resist pressure, who are not tempted by prohibited means and who stay squarely on the clean side of elite sport and performance-enhancement.

Paradoxically, research dedicated to 'clean' athletes in the anti-doping fight is scarce. From the research point of view, the move toward protecting clean sport (as opposed to having a sole focus on *'catching the cheats'* or stopping deliberate use as well as accidental intake of prohibited substances) was in line with an emerging research trend that called for positive psychology in anti-doping research and shifting the focus from stopping doping to promoting and helping clean athletes (Englar-Carlson et al., 2016; Petróczi et al., 2017). Instead of trying to understand what drives some athletes to dope, anti-doping research should concentrate on what clean athletes do. However, this positive development highlights the fundamental difference in the educational goal of values-based compared with traditional anti-doping education. The former relies on strong values for wanting to compete clean; whereas the latter is information-based and primarily set to ensure that athletes and stakeholders are fully versed in the regulations, procedures and consequences of an anti-doping breach.

To accelerate positive change in the quest for protecting the rights of all athletes to clean sport, this fundamental distinction must be recognised and adequately addressed. Policies and

initiatives generated from the accounts of those that are impacted are more valued, accepted and therefore more effective in reaching the sports community than those imposed upon externally. Athletes' voices are critical to this process and promotion of a clean sport environment, by and large, is wanted and protected by athletes (Woolway et al., 2020). Stakeholders of clean sport also play a crucial role in creating and fostering clean sport culture that is not solely guarded by the threat of detection and sanctions. Developing effective anti-doping educational materials requires significant resources, multiple subject expertise and conceptual clarity. In order to develop effective ways of delivering the targeted education and to evaluate the effectiveness of the anti-doping education accordingly, the anti-doping community must have a clear understanding of what clean sport (as a concept) means to athletes, what are the key cognitive and affective constituents of clean athlete identity, and then map the modifiable components onto precise strategies for targeted anti-doping education. Furthermore, there is a need to have a clear view of how clean sport fits with the conditions and demands of contemporary elite sport.

The anti-doping literature, so far, has offered little help. This is partly because the doping literature dominantly focuses on understanding the driving forces behind doping (e.g., Blank et al., 2016; Ntoumanis et al., 2014). Reasons are important because reasons offer straightforward targets for education and prevention, and because reasons - more so than general attitudes - have direct impact on behaviour choices (Westaby, 2005). However, reasons for doing something are not the polar opposites of not doing it. It is because doing something or avoiding something rely on separate goals and are driven by separate motivation systems. Consequently, cognitions about not performing a behaviour are not simple opposites of cognitions about performing the same behaviour (Richetin et al., 2011; 2012). Therefore, both reasons for use of doping and staying away from doping have predicted doping behaviour in its own unique way (Petróczi et al., 2017). We cannot simply take a set of reasons for doping and flip them to have a set of protective factors against doping. Equally, we cannot take the opposites of the reasons for not doping to explain why an athlete might decide to engage in prohibited practices. Both are equally important, so is understanding the difference. The other limiting factor is that the shared understanding of what clean sport means is taken for granted and seldom interrogated (Englar-Carlson, 2018). Like we often intuitively define health as 'lack of illness or disease', 'clean sport' is thought as 'pure' and 'lacking dirty acts' – but what exactly does it mean? Does the label 'pure' imply that, prohibited or not, no performance-enhancing substances and/or methods are used? Is the 'dirty' label reserved for calculated, deliberate and motivated violation of the anti-doping rules, or include morally questionable practices that technically do not contravene anti-doping rules? Where can we draw the line between morally wrong and sanctionable? More importantly, how can we set clear educational goals and plan education programmes to build clean sport culture without having crystal clear answers to these questions?

Although still lacking a clear definition of 'clean', many anti-doping scholars offer evidence for protective factors at a micro (individual) level. In one of the earliest studies, Bloodworth and McNamee (2010) conducted interviews with 40 talented young athletes and suggested that cultivating a shared sense of responsibility to be 'clean' and to avoid social labels such as 'drug cheats' and the associated social consequences works well as a deterrent for young athletes. However, data were collected exclusively with young UK athletes and whether this approach would hold its appeal universally remains to be seen. Positive social images such as being confident, motivated and committed have also been linked to the non-doper prototype (Whitaker et al, 2012). The results from subsequent studies are hard to synthesize. Reasons identified as deterrence for doping were generally linked to personal factors such as (moral)

attitudes, goal orientation, sportspersonship, identity outside sport, self-control, resilience to social group pressures and religion (e.g., Erickson et al., 2014; Gatterer et al., 2019; Zvan et al., 2017). Situational protective factors such as coaches, social group and family were also identified as deterrent (Byers & Edwards, 2015; Didymus & Backhouse, 2020; Erickson et al., 2014; Overbye et al., 2013), concerns for health along with fear of sanctions and inability to continue their sporting career and side effects (Didymus & Backhouse, 2020; Kegelaers et al., 2018; Overbye et al., 2013).

Piecing evidence together, it is clear that attributes linked to 'clean athlete identity' are among the strong protective factors. However, there is no clear and universal definition – if it can be found - by which we can characterise this unexplored and desirable identity, let alone the question of what (if anything) anti-doping can do to cultivate the clean athlete identity. Scholars agree that doping is a complex phenomenon (Blank et al., 2016; Englar-Carlson, 2018; Henning 2017; Ntoumanis et al., 2014; Woolf & Mazanov, 2017;), so is the landscape of anti-doping rule violations (Chan et al., 2020; Henning & Dimeo, 2014; Petróczi et al., 2017). Therefore, pinning the definition of 'clean sport' and 'clean athlete identity' on the use of prohibited substances and/or methods - although it serves doping control strategies - is overly simplistic and insufficient for developing education strategies. Taking these points into consideration, the aim of this study was to explore the meaning and importance of 'clean sport' and the 'clean athlete identity' together with NADOs and elite athletes. Specifically, the current study set out to address the following research questions: (a) How do elite athletes define clean sport and being a clean athlete? (b) what are the challenges associated with clean sport and being a clean athlete? and (c) what can be done to ensure that sport is clean in the future?

Method

The current study was conducted from a participatory worldview (Creswell & Poth, 2016; Heron & Reason, 1997). Researchers adopting a participatory worldview extend beyond knowledge generation towards promoting societal change through collaborative and action-orientated inquiry (i.e., research is conducted *with* not *on* participants). The participatory worldview is based on a subjective-objective ontology (i.e., the nature of reality) and an extended epistemology (i.e., how reality is known) of experiential, presentational, propositional, and practical ways of knowing (see Heron & Reason, 1997). The following sub-sections outline how the decisions made throughout this study (e.g., research design, data collection and data analysis) are consistent with the assumptions underpinning this philosophical approach.

Research Design: Community-based Participatory Research

In line with a participatory worldview, the current study adopted a community based participatory research (CBPR) design. CBPR is part of a school of participatory research approaches that are based on inclusivity and the value of participants (i.e., stakeholders, users, beneficiaries) engaging in the research process (Cargo & Mercer, 2008, Schinke & Blodgett, 2016). In comparison to other participatory research approaches (e.g., participatory action research), CBPR involves community members in all phases of the research study and shifts the emphasis from solely action and change to more collaborative research activities (Bergold & Thomas, 2012). Specifically, CBPR is based on the following six core components or principles: 1) promotes active collaboration and participation at every phase of research; 2) fosters co-learning; 3) ensures projects are community driven; 4) disseminates results in useful terms; 5) ensures research and/or intervention strategies are culturally appropriate; and 6) defines community as a unit of identity (Israel et al., 1998).

Research Context: RESPECT Project

The current study was conducted as part of the 'Research-Embedded Strategic Plan for Anti-Doping Education Clean Sport Alliance Initiative for Tackling Doping' (RESPECT) project funded by the European Union under their Erasmus+ Collaborative Partnerships programme. RESPECT was a three-year international, collaborative, multi-agency project that aimed to empower the anti-doping community through cooperative actions that bridge the gap between research, policy, and practice. Specifically, the project was a partnership between academics from Leeds Beckett University, Birmingham University, and Kingston University, and stakeholders from UK Anti-Doping (UKAD), Slovenian Anti-Doping Agency, Sport Ireland, National Antidoping Agency of Germany, and Doping Authority Netherlands.

Participants & Sampling

Athlete Co-Researchers: The sampling criteria for athlete co-researchers included one elite athlete from each country (Ireland, Netherlands, Germany, Slovenia, and UK) who had competed at the highest level in their sport (see Swann et al., 2015) and achieved postgraduate level qualifications (e.g., MSc or PhD). Following institutional ethical approval, purposeful sampling was used to recruit five athlete-co researchers (Male = 3, Female = 2) between 24 and 46 years of age (M*age* = 31.60, SD = 8.44). Co-researchers' athletic status were either active (*n* = 2) or recently retired (*n* = 3) and they competed in para-canoe sprint (*n* = 1), badminton (*n* = 1), tennis (*n* = 1), swimming (*n* = 1), and athletics (*n* = 1). In addition, they had either won a medal at the Olympic or Paralympic games (*n* = 1) or participated at the Olympic or Paralympic games (*n* = 1), World or European championships (*n* = 2) or Junior World Championships (*n* = 1). Finally, three of the athlete co-researchers had been in the Registered Testing Pool (RTP) for between 1 to 7 years (*M*= 4.60, *SD* = 3.21).

Athlete Participants: The athlete participant sampling criteria required participants to be elite athletes who had competed at the highest level in their sport (see Swann et al., 2015). Purposeful sampling was used to recruit 77 participants (Male = 47, Female = 30) between 19 and 46 years of age (M*age* = 25.38, *SD* = 5.14) from five European countries: Germany (*n* = 22), Ireland (*n* = 13), Netherlands (*n* = 14), Slovenia (*n* = 13), and the United Kingdom (*n* = 16). Participants competed in 36 different sports, with the most common including: Athletics (*n* = 15), Cycling (*n* = 13), Swimming (*n* = 4), Rugby (*n* = 4), Modern Pentathlon (*n* = 4), Judo (*n* = 4), Shooting (*n* = 3) and Triathlon (*n* = 3). Participants were either competitive athletes (*n* = 70) or had recently retired from competitive sport (*n* = 7). Eighteen had participated and won medals at the World Championships (*n* = 13) or European championships (*n* = 5). In addition, 44 had participated at either the Olympics/Paralympics (*n* = 9), World Championships and/or European Championships (*n* = 33), or Commonwealth Games (*n* = 2). In addition, 15 participants had competed at the highest level within their age group or sport (e.g., national leagues, international competitions, world cups). Furthermore, 61% of the participants were in a 'Registered Testing Pool' (RTP) and 90% had received formal anti-doping education.

Procedure

In line with the core components of CBPR, the current study consisted of six phases (see Israel et al. 2012). *Phase one* involved using existing relationships to invite community partners (i.e., NADOs) to be involved in the RESPECT project. *Phases two* and *three* then involved meetings with NADOs to discuss strengths and resources (e.g., access to elite athletes, delivery of anti-doping education), priority concerns (e.g., meaning of clean sport), and establish the research

questions. *Phase four* included designing and conducting the research with the NADOs (see Figure 1). Specifically, each NADO recruited one athlete co-researcher from their country (i.e., Germany, Ireland, Netherlands, Slovenia, and UK) who met the selection criteria. Athlete co-researchers (*n* = 5) then participated in a 1-hour online training session on how to run a focus group by the second author.

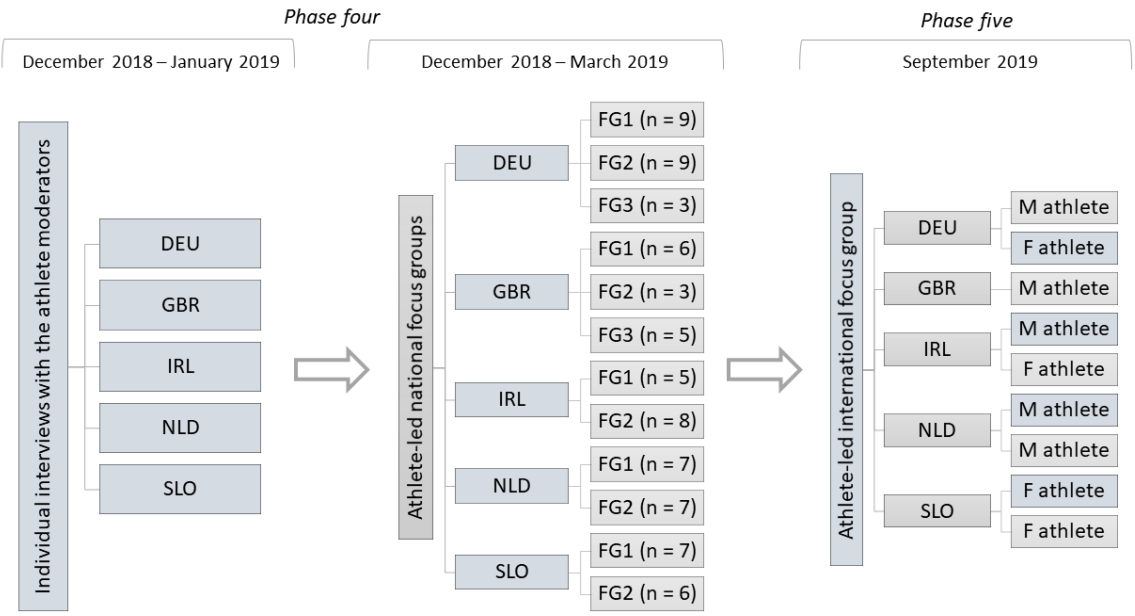


Figure 1: A visual representation of the data collection and analysis CBPR research phases.

The second author also led individual bracketing interviews (Tufford & Newman, 2010) with each co-athlete researchers in order to generate awareness of presuppositions regarding the topic and familiarise themselves with the focus group guide; and was an interviewee beforehand. Next, each NADO organised two or three focus groups with athlete participants in their country, which were facilitated by their athlete co-researcher. NADO's were encouraged to recruit a diverse range of athletes (e.g., age, gender, ethnicity, sport type) who met the 'athlete participant' sampling criteria. A total of 12 focus groups were conducted in Germany (*n* = 3), Ireland (*n* = 2), Netherlands (*n* = 2), Slovenia (*n* = 2) and the UK (*n* = 3). Academic researchers were not present during the national focus groups. Each focus group was conducted in the native language and lasted between 22:27 and 90:34 minutes (*M* = 61:02, *SD* = 20.54). *Phase five* then involved athlete co-researchers (*n* = 5) and one English speaking athlete participant (n = 5) from each country reflecting on the data collected, the researchers' interpretations of the analysis, and providing opportunity to elaborate on existing findings via a focus group (Levac et al., 2019). This focus group was led by the second and third authors and lasted 151:23 minutes. All focus groups during *phases four* and *five* were conducted face-to-face and recorded using a digital voice recorder. Finally, *phase six* involved a discussion of the findings (interpretation of the results and formulating recommendations), which were disseminated through RESPECT project conferences, an internet-based Clean Sport Knowledge Exchange Platform (see www.cleansportalliance.org), videos, and informed the Delphi-study formulating a 10-Year Research-Embedded Strategic Plan for Anti-Doping Education (disseminated separately).

Data Collection:

Phase 1: Athlete Focus Group Guide. Focus groups were used as the method of data collection to give participants the opportunity to enter into conversation with other athletes in a safe setting to discuss clean sport (Bergold & Thomas, 2012). The semi-structured focus group guide was divided into five main sections. Section one explored participants views regarding the definition and personal importance of 'clean sport' and being a 'clean athlete' (e.g., we hear the term 'clean athlete' often when we talk about doping in sport. When you hear 'clean athlete' what comes to mind?). Following this, section three examined the challenges to clean sport and being a clean athlete (e.g., what do you think the main challenges are today?). Section four asked participants about their hopes and possibilities for the future (e.g., given the pressures that athletes face, what more do you think could be done to ensure that sport is clean?). The final section gave participants an opportunity for an open discussion in relation to clean sport.

Phase 2: International Focus Group Guide. The focus group guide for phase two was based upon the themes generated during data analysis and areas which were discussed during the athlete focus groups. As such, the focus group guide aimed to confirm and, in some cases, explore further the initial themes generated during data analysis. Specifically, section one presented a brief overview of the definition of clean sport and further explored the view that clean sport is broader than just anti-doping. Following this, section two focused on further exploring the clean identity (e.g., athletes spoke about wanting to win but knowing it is only achieved through hard work and felt they were still motivated for the same reasons driving their initial participation in sport, do you think this captures the clean sport identity?). Section three then examined the split view that for some it is fine to use supplements until it is banned whilst others will stay away (i.e., the 'grey zone') (e.g., what are your individual views/beliefs on this and where do you feel you should draw a line?). Section four and five explored the factors (e.g., parents, systems, cultures) that facilitates doping and preventing and deterring athletes from doping respectively. Finally, section six focused more on the future of anti-doping, and athletes' beliefs that doping would never be eradicated, but can be kept under control.

Data Analysis

Following each focus group, audio recordings were transcribed verbatim and professionally translated into English. Consistent with the exploratory nature of the research questions data were analysed using thematic analysis to identify patterns of meaning (i.e., the meaning of 'Clean Sport' to athletes) across the dataset (Braun & Clarke, 2006; 2019). Although multiple versions of thematic analysis exist, reflexive thematic analysis was selected as it emphasises researcher subjectivity as well as reflexive (collaborative) engagement with data and interpretation (Braun & Clarke, 2019, 2020). Specifically, the six-phases of reflexive thematic analysis were primarily conducted by the fourth author using NVivo. Phase one involved reading, and then re-reading the transcripts to promote content familiarity. During this phase data was read analytically and initial thoughts, ideas, interests and interpretations in relation to the research questions were recorded via written notes (Braun et al., 2016). Following this, phase two involved inductively coding (at both a sematic and deeper latent level) aspects of data which had relevance to the research questions. Phase three then involved organising coded data and generating (initial) themes. This process included clustering different codes together to create *overarching themes* (e.g., clean is being true to self) as well as *themes* (e.g., clean values and morals have been there from the beginning) and *sub-themes* (e.g., condemn cheating) (Braun & Clarke, 2019). During phase four, themes were reviewed by considering whether they formed a coherent

pattern across the whole data set, and whether there was coherence between the theme and the coded extracts. At this point of the analysis an initial thematic map of the data and written descriptions were developed. As outlined above, these interpretations were then shared, reflected upon, and discussed during the international athlete focus group as well as with the NADOs and academic partners at conferences and projects meetings. Phase five involved using these reflections to refine the focus of each theme, generate theme definitions (see Table 1), and identify names which captured the essence of the theme (see Appendix for the refined thematic map). Finally, phase six involved selecting appropriate extracts (i.e., quotes) and providing an analytical commentary whilst writing the results section.

Quality Criteria

Drawing upon a 'relativist' approach (Sparkes & Smith, 2009), the current study can be evaluated by using existing criteria for judging the quality of CBPR (see Lavac et al., 2019; Schinke et al., 2013). Specifically, the current study was *community driven* (e.g., NADOs were involved in identifying the broad research questions, research design, and participant recruitment, whilst athlete-co researchers were involved, to various degree, in developing focus group guides, training, data collection, and interpretation of results); *decentralized university academics* and promoted *capacity building* (e.g., training and involvement of 'athlete co-researchers'), provided *project deliverables* (e.g., websites, videos, and the current research article), and demonstrated *prolonged engagement* and *project sustainability* (e.g., 3-year research project and ongoing commitment to a 10-Year Research-Embedded Strategic Plan for Anti-Doping Education). In addition, Braun and Clarke's (2020) tool for evaluating the quality of the thematic analysis can be used to assess the data analysis per se. Broadly speaking, this list of 20 evaluation questions focus on: (a) the choice and explanation of the methods and methodology, and (b) the extent to which the analysis was well-developed and justified.

Results

The analysis of the thirteen focus groups generated four overarching themes: clean is being true to the self, clean performance enhancement has multiple meanings, clean is not a solo act, and the problems and solutions are systemic (see Table 1). Together, the results offer representations of the participants' beliefs and experiences regarding the meaning of the clean athlete identity and clean sport, the problems that inhibit the realisation of clean athletes and sport, and changes or action that is needed in the future to protect the integrity of sport and the welfare of athletes.

Table 1. Definitions of overarching themes and themes.

Overarching Themes	**Lower-order themes**	**Definitions**
Clean is being true to self		An athlete's sense of self as clean is something that is felt deeply as a person and as an athlete, hence clean is about being true to the self in terms of values and morals.
	Clean values and morals have been there from the beginning	Clean athletes are those with an upbringing in which significant others taught them to value fairness, equality and honesty and to condemned cheating.

	Clean is to value the quality of the process and experience in sport	Clean athletes are not exclusively focused on or motivated by winning, hence they value the quality of the process and experience in sport and demonstrate this by having a love for and enjoying the sport, celebrating and focusing on the individual journey and perceiving doping performances as inferior.
Clean performance enhancement has multiple meanings		There are multiple interpretations of what constitutes clean performance enhancement, hence there are differences amongst athletes as to whether a given performance enhancing substance, method or behaviour is regarded as clean.
	Follow the WADA Code	A clean athlete is cognisant of the WADA code and behaves in ways that does not break the rules. In order to follow the WADA code, the athlete needs to be responsible and proactive. Yet, athletes vary in their beliefs about how inclusive or conservative they need to be with respect to their willingness to engage in performance enhancing substances, methods or behaviours.
	Personal Boundaries	There were several personal boundaries that informed an athlete's appraisals as to whether a given performance enhancing substance or method is clean. Notably, athletes consider the nature and administration of a substance, the negative and positive impact it has on their health, whilst they also acknowledged the role of a visceral and implicit response as a way to determine if the substance or method is clean.
Clean is not a solo act		Being a clean athlete has an interpersonal quality to it; it is something that is influenced by others on a daily basis. Hence, there are a variety of recent sport-specific experiences an athlete has with and of others that facilitate or inhibit his/her ability to be clean.
	Perceived prevalence of clean	An athlete's ability to be clean is influenced by how prevalent they think clean athletes are. A clean athlete is typically someone who perceives that clean is the norm i.e. that the majority of the athletes they personally know, interact with, train alongside or competed against are clean, In contrast, perceiving dopers in the majority is key to an athlete engaging with banned performance enhancing substances and methods.

	Interactions with others	A variety of interactions between an athlete and other individuals can inadvertently or directly lead the athlete to accidentally or purposefully dope. These interactions include conversations that create a sense of external pressure to achieve, acts of trust between the athlete and support personnel, and verbal advice about doping.
The problems and solutions are systemic		Organisations and systems relevant to or within the sport domain operate in ways that are counter to the pursuit of clean hence change at a systemic level is needed and wanted.
	Clean sport is valued but unachievable	Despite valuing the pursuit of clean sport, there is disbelief and scepticism that 'clean sport' in an absolute sense can be achieved. This is because eradicating doping was considered the key to clean sport, but participants recognised the action needed to eradicate doping was impossible to implement, and because doping will always be ahead of anti-doping science.
	Disparity in the anti-doping system	Disparity exists within the anti-doping system and prevents progress towards clean sport and athletes. Disparity is experienced in terms of anti-doping education, anti-doping controls and authorisation, and the consequences for breaking the WADA code. This disparity is a signal that clean sport is not a universal priority and that anti-doping system lacks fairness and equality.
	Doping is not risky enough and this needs to change	The system has failed to make doping risky for all. To increase the perceived risk, action needs to be taken to improve the (e)quality of anti-doping education and support, to independently enforce and monitor procedures and authorisation of anti-doping controls, and to make the punishment for doping harsher and more transparent.

Clean is Being True to the Self

The first overarching meaning that clean is being true to self represents inferences drawn from the data that a participants' sense of self as "clean" was something that they felt deeply about as a person and an athlete in terms of their values and morals. Clean athletes were individuals with an upbringing that had taught them to value fairness, equality and honesty, and to condemn cheating. In addition, clean athletes were those who valued the quality of the process and experience in sport as indicated by their love for and need to enjoy the sport, their ability to celebrate and focus on the individual journey, and to perceive doping performances as inferior.

By extension, clean sports were therefore environments with practices and measures in place to support the athlete in upholding these values and morals.

Clean Values and Morals have been there from the Beginning

In distinguishing themselves as clean, the participants spoke of a historic quality to this identity, whereby being clean was rooted in an upbringing underpinned by clean values and morals. As part of this, emphasis was placed on the influence that significant others, such as parents, siblings and teachers, had in promoting clean values and morals. Furthermore, participants suggested that it was because of their "*clean*" upbringing that they did not consider or take an interest in the possibility of doping. These meanings are evidenced by the following quotation:

> I just learnt as a little kid and, like you said, whether it's on the playground or playing sports in school, it could be a teacher that says something or maybe an older kid on the playground outside. Before we even start talking about doping in sport, we need to think about morals, values and how we were raised. For me, that's the most important thing because when it comes down to this issue, my morals and values are so [s.l. knitted] into my everyday behaviour that my mind doesn't even think, 'Oh, is this even an option?' (International Focus Group).

Clean values were cited as fairness, equality and honesty. In addition, part of the moral positioning of a clean athlete was to condemn cheating in all its forms. As stated by a participant in an Irish focus group:

> When you're growing up as a child, you're always told, 'Don't cheat in a race.' If you're even playing, you're not allowed to cheat in a football match. You're not allowed to cheat in school. You can't cheat in tests. It comes from that moral understanding as well. It goes a bit deeper than just doping in sport. It's how you're brought up from a very young age as well.

Clean is to Value the Process and Experience in Sport

Although winning and sporting success were important goals, there was more to the clean athlete's sporting existence. A clean athlete was conveyed as someone who valued the quality of the process and experience in sport. Conversely, doped athletes were recognised as those who: "…do not care how/by which means they can improve their performance. They [doped athletes] simply want to be as good as possible irrespective of how they get there." (German focus group). Participants believed that a clean athlete was someone who had a love for the sport and who needed to have enjoyable sporting experiences, hence it was important for a clean athlete to experience pleasant/positive feelings. As stated by a participant in an Irish focus group: "Clean sport comes down to the bottom line of having fun and enjoyment; like being a kid again and enjoying sport for what it is." Participants also indicated that being clean was about celebrating and focusing on their individual journey. Key to this was the ability to prioritise personal achievements, natural capabilities and hard work, and to accept that, at times, podium finishes and lucrative rewards were out of their reach. For example, a participant in the international focus group said:

> It's quite difficult to think about it because there are countries out there [who condone and support doping]...and this did come up in our focus group. We have

> to make a choice, at times, between medals, between funding and between us being clean athletes.

Finally, a clean athlete was someone who perceived doping performances as inferior, thus clean performances were held in greater esteem. Indeed, when describing performances that had been achieved through doping, words such as "*fake*," "*artificial*," and "*void*" were commonly used by participants. Similarly, one participant in a Slovenian focus group said: "My personal view of doping has never changed. I would never have taken anything, because, as we said before, it devaluates the results."

Clean Performance Enhancement has Multiple Meanings

This second overarching meaning captures the way clean performance enhancement was defined in different ways by the participants and offers insight into key phenomena that athletes draw upon differently to create these multiple interpretations of clean performance enhancement. Whilst participants agreed that a clean athlete was someone who was responsible and proactive in ensuring their performance enhancing behaviours and practices adhered to the WADA Code, there were differences between participants in terms of what they would consider clean performance enhancement. For example, some understandings of clean performance enhancement required that the athlete exclusively rely on a food-based diet, whereas other understandings enabled the athlete to use pharmaceutical products (e.g., dietary supplements, minerals, pain medications and other over-the-counter products). There were also occasions when a given participant varied in their personal understanding of clean performance enhancement. For example, a participant whose usual understanding excluded the use of needles was able to revise this understanding to permit the use of a needle in order to receive a one-off intravenous infusion to treat food poisoning at a competition. Hence, clean performance enhancement had multiple meanings, and this was related to differences in the ways that participants followed the WADA Code and whether any additional personal boundaries were drawn upon.

Follow the WADA Code

The WADA Code (hereafter, the Code) was routinely drawn upon by participants to make sense of clean performance enhancement. More specifically, following the Code was about being cognisant of the Code and behaving in ways that did not break the rules. Before the sub-themes are individually described and illustrated, it is important to note that participants agreed that in order to follow the Code, a clean athlete needed to be 'responsible and proactive,' but could either take an approach of 'rule abiding to the limit' or 'staying away from the doping line'. Essentially, these two approaches represented opposite ends of a continuum regarding how to follow the Code. Consequently, as an athlete moved toward the end of the continuum anchored by 'rule abiding to the limit,' they increasingly entertained and engaged with performance enhancing substances and methods.

Participants agreed that in order to follow the Code they had to be responsible and proactive, with participants using phrases such as "*being on top of things*," "*being on the ball*" and "*being conscious.*" Indeed, participants believed that a clean athlete took responsibility for being clean and was aware that they would be held accountable for any changes to their clean status, hence they strove on a daily basis to follow the Code. Examples of being responsible and proactive included possessing anti-doping knowledge, being vigilant of food and drink they ingested by

checking for prohibited substances, and if they had been signed up for whereabouts testing, they ensured their location matched any schedule they had previously provided.

For some, following the Code was about 'rule abiding to the limit'. This approach was characteristically inclusive, whereby it enabled the athlete to engage with a variety of performance enhancing substances and methods so long as they could not be classified as doping at the time of use. Participants who perceived rule abiding to the limit as clean conveyed a willingness to operate as close as possible to the WADA thresholds for doping, hence the athlete was able to use legal limits of banned substances. Salbutamol (marketed as Ventolin among other brand names), which is a short-acting, selective beta2-adrenergic receptor agonist, is a good example for this. Salbutamol is used in the treatment of asthma and COPD but also has performance-enhancing effect in endurance sports (e.g., cycling, distance running). Use of salbutamol by inhalation is not prohibited – except nebulization which is prohibited unless used with Therapeutic Use Exemption - up to a maximum of 1600 micrograms over 24 hours in divided doses not to exceed 800 micrograms over 12 hours starting from any dose, as long as no diuretics or masking agents are used simultaneously (WADA, 2020). Other examples include taking substances that were not yet banned (e.g., thyroid hormones or tramadol) and taking substances that were previously prohibited but now permitted and legal (e.g. caffeine). Here clean performance enhancement was synonymous with not doping. As long as the athlete did not break any WADA rules that were in operation at that time, and that the athlete changed their conduct in accordance with any changes to the WADA rules, these participants perceived themselves as clean. For example, a participant in a Netherlands focus group stated: "…when your values show 0.1 and the limit is 5.00, why not try to increase those just a bit? Before I would be against that, but now, if that makes me perform better…". There was also recognition that this approach was more common in an elite context: "If you're a full-time athlete and you're training hard, it's your job to get results. Should you do everything possible, that's still legal, to give you [a] performance advantage? Would be irresponsible not to, given that that's your profession?" (Irish focus group).

An alternative approach to following the Code was to 'stay away from the doping line', which was a characteristically conservative approach that encouraged the athlete to reduce and minimise their engagement with performance enhancing substances and methods. On those occasions when these participants had used prohibited substances and methods, this was in the form of a Therapeutic Use Exemption (TUE). Consequently, participants distinguish between clean and unclean TUE behaviour by examining the way the TUE had been obtained and the way the related substance or method was used by the athlete. Participants believed that unclean behaviour was when a TUE had been gained without a genuine and clearly presenting medical need, hence participants expressed their awareness of the ways that the TUE system could be "*abused*" or "*exploited*" by unclean athletes. This is illustrated in the following excerpt from an Irish focus group:

> If you have a doctor that's onboard, you'll probably get a couple of TUEs for a couple of things you don't need that are definitely performance enhancing and you won't get caught. You won't test positive and technically, everything you're doing is legal but that's where I'm not comfortable with that myself. …Let's say if you train at altitude. Skip dinner; go to bed; get up the next morning; train hard again; skip breakfast; go to the doctor; say you've been feeling like this for a few days; get a blood test done. I don't know what it's called but he'll be willing to

> arrange to get a TUE for growth hormone or something like that. These are stories you hear and you could actually get a TUE.

Clean athlete behaviour in relation to TUEs was in direct contrast to the above i.e. they gained a TUE for an otherwise prohibited performance enhancing substance or method because of a genuine and clearly presenting medical condition. Furthermore, a clean athlete in the context of TUEs was described as someone who would look to take the minimal dose prescribed and who would stop using the substance if their condition improved. For example, a participant in a Netherlands focus group highlighted his self-perceived clean use of an inhaler:

> I noticed that at the finish line I was totally out of breath, I was wheezing. I had a doctor's appointment, did some tests, and was told that I was suffering from quite serious exercise-induced asthma ... I needed it [inhaler] to be able to cycle, so it didn't worry me. After a while I had some tests done which showed I didn't need to use it that often, so I changed the frequency.

Personal Boundaries

Whilst clean performance enhancement was distinguished by the athlete following the Code, participants also highlighted several personal boundaries that informed their appraisal as to whether a given performance enhancing substance or method was clean. One personal boundary was to do with the nature and administration of a substance Here, is was important to the participant that the substance was a nutrient and could be locally purchased at an affordable price to facilitate their perception that it was a product available to all. Furthermore, such participants needed to perceive that their behaviour in relation to the substance was representative of a normal, everyday practice (e.g., drinking coffee to benefit from its caffeine).

A second personal boundary was health, whereby participants considered the impact that a performance enhancing substance or method had on their health. As stated by a participant in a German focus group: "If we leave competitions aside, clean sport also stands for doing something for your health." Clean performance enhancing substances and methods were those that did not pose a threat to the athlete's health. Indeed, participants explained that they did not dope or engage with certain legal substances and methods because of the dangers that these posed to their health, and emphasis was placed on the importance of living a long and healthy life after sport. Health was also used as a personal boundary in terms of justifying their engagement with performance enhancing substance or method as clean because it was done to address a health deficiency.

Finally, clean performance enhancement was reflected in the athlete's visceral and implicit response, whereby clean performance enhancement was gauged according to a personal feeling and knowing that was not always easily articulated. This is illustrated in the following dialogue from the international focus group in which the participant is being asked to explain why, in a situation where they could receive a one-off iron infusion of 49ml (with a TUE), they perceive pills as clean and the intravenous infusions as unclean:

> Participant: I probably have had low iron a couple of times and have got it back up by taking iron pills. It might have been quicker and easier for me just to have an iron infusion. It's not banned and it's not against the rules. I think that's maybe where I'm different to you. I kind of feel a little bit wary of stuff like iron infusions.

> Group Facilitator: What's causing the conflict for you? The difference between, say, a pill or an infusion?
>
> Participant: It's not rational. I don't have a clear reason to explain why it makes me feel a little uncomfortable.

When participants were able to elaborate on their personal feelings, they indicated that a performance enhancing substance or method could be perceived as clean if the athlete would still be able to feel happy and proud of any consequential performances. Conversely, unclean performance enhancement was signalled by the anticipation of guilt, shame and fear, as well as more general states of discomfort and "*horrible*" feelings. Furthermore, participants expressed that an athlete would know that something was unclean performance enhancement because it would lead to a feeling of moral incongruence.

Clean is Not a Solo Act

The third overarching meaning, titled 'clean is not a solo act,' represents inferences drawn from the data that being a clean athlete had an interpersonal quality to it; it was something that was influenced by others. The historical influence of others has already been presented as part of 'clean is being true to the self' whereby others, such as parents, were acknowledged for the role they played in instilling clean values and morals in the athletes. The current theme therefore addresses the more recent sport-specific experiences an athlete has of others that impact his/her ability to be clean. As part of this, participants spoke of the impact that an athlete's perception of the prevalence of clean had, whereby it influenced the likelihood of an athlete staying clean or exploring doping. Participants also identified more specific interactions with others that caused an otherwise clean athlete to inadvertently or purposefully dope.

Perceived Prevalence of Clean

An athlete's perception about the prevalence of clean people in sport played an important role in the athlete's propensity to be clean. Hence, the extent to which clean athletes were considered to be more or less prevalent compared with dopers was a recurrent meaning drawn from the data. Participants argued that the majority of the athletes they knew, interacted with, trained alongside or competed against were clean, hence they perceived clean as the norm. In addition, the perception that clean was the norm was reinforced by a belief that it was part of their national and cultural identity. As stated by a participant in a UK focus group: "I feel like when you're competing in the UK, you're against British athletes. I'm on the start line pretty much knowing that every other athlete I'm competing against is clean because we have things in place." There was also the suggestion amongst some participants that they would take action to ensure clean was the norm by distancing themselves from suspected dopers (i.e., not training with the athlete) or whistleblowing.

Another way in which participants spoke about the current theme was to consider environments in which dopers were perceived to be in the majority. Here, participants spoke of sporting environments in which supplement use was so accessible and visible that it created a perception that doping was prevalent:

> Basically, if you wanted to get your hands on it…go into any public gym and look for the shadiest characters you can find. That's one of the reasons it's becoming more prevalent is because in sports that are not tested and in body building,

> there's far more of it out there. It's far more accessible than it ever was. (International Focus Group)

Participants were able to imagine or recall cases where an athlete who had clean values and morals but who was in an environment where dopers were perceived to be in the majority would eventually dope. As stated by a participant in a Netherlands focus group: "…you are an up-and-coming junior athlete and know that 90% of the other athletes are using doping. If you want to realise your big dream, you might have to start using too." The power of the sport culture was further elaborated on in the international Focus Group:

> I think you only have to look at the example of cycling to see that the culture of a sport can have a huge impact on the levels of doping. At certain times in the 90s, maybe 80% of the peloton were doping. In other sports, you'd never get a figure that high. Clearly, if you were in that culture, you were much more likely to be doping. The culture of the sport has a big, big role to play.

Further on culture, or perceived culture within a specific sport, participants also drew attention to sports with reputations for doping because of the number of high-profile athletes who had failed drugs tests. Taken together, aspect of the theme highlighted that an athlete's perception that they were in the company of dopers had the potential to create a pathway to doping, even for athletes who otherwise had a clean background and standing in sport (i.e. clean is being true to the self).

Interactions with Others

Participants described a variety of interactions between a clean athlete and other individuals that would inadvertently or directly lead the athlete to accidentally or purposefully dope. These interactions have been more specifically grouped as either (i) external pressure to achieve, (ii) interactions of trust, or (iii) advising about doping.

In terms of interactions that involved an external pressure to achieve, participants believed that others could place a demand on the athlete to achieve to the extent that the athlete may consider doping. Within these interactions, others did not explicitly instruct the athlete to dope but instead communicated the consequences of not achieving. Examples of an external pressure to achieve included a coach telling the athlete that they would be dropped, or a representative from a funding body telling the athlete that they would lose financial backing, with participants emphasising that as clean athletes they rarely experienced this. In the example below, a participant in the international focus group shared her thoughts about the relationship between parental pressure to achieve and doping:

> There's a lot of emotional blackmailing in [a] way, where kids don't feel like they're enough, in the sense of 'If I'm not fast enough, my parents are not going to love me. If I'm not good enough, they're not going to love me.' I can imagine having this internal need to satisfy your parents' expectations... from the root cause of 'I want your love and attention.' From that circumstance, when you grow up, you could possibly look for ways to fulfil those expectations, just in search of love and acceptance. There's a lot of that with young athletes today. At least I've never been judged as a result in my family. Luckily, I've never been treated as a result. I was always a different [person] when I got out of the pool. I feel that today when I work with athletes, I really need to work with the coach and the parents as well so that we're all on the same page. No matter how I mentally equip the athlete

> with all these skills and tools to battle the challenges, the kid comes home and then is mentally tortured by the parent, in the sense of saying, 'Why did she beat you? Isn't she faster than you? Don't you train harder than her? When are you going to get a medal? I'm investing so much time, money, effort and driving you around. This isn't worth it.' I can imagine how those kids then internalise those messages and look for ways to go faster, bigger and better to satisfy that need.

Participants highlighted a second set of interactions, namely interactions of trust. Participants believed that trusting athlete support personnel was an important factor in their clean status. They recognised that, on a daily basis, they placed trust in the professionals who supported them to have accurate anti-doping knowledge and clean intentions and practices. Because of this, participants recognised that an otherwise "clean" athlete might unintentionally dope because they had wrongly placed their trust in people who, for example, had poor anti-doping knowledge and therefore wrongly advised the athlete or who lied to the athlete about the substances that were in products the athlete ingested. As such, support staff may inadvertently or intentionally cause the athlete to dope. In an example of this, a participant in the UK focus group said,

> Obviously you put your trust in like your physios and your S&C's and stuff and like especially if you're a young person coming into the environment and you are building a relationship, if they're saying 'oh just take this, it will be fine' it will help you now, you probably wouldn't question it because you think they know better so you wouldn't really have much ground to argue on I suppose.

A final set of interactions that participants referred to suggested that doping acts were the result of a network of people explicitly advising the athlete about doping. As stated by a participant in a UK focus group: "They've [the athlete that dopes] not done it on their own. They've been advised by someone. They've got it from somewhere. It's not just individuals. There must be a network around them of people that are helping them." More specifically, participants indicated that others might (i) advise the athlete about the ways that doping would improve their performance (ii) put the athlete in contact with others who can enable the doping act, and (iii) be the administrator of the prohibited substances and methods. Furthermore, interactions with others that encouraged doping were those that created a perception of protection or diminished sense of responsibility. As stated by a participant in a Slovenian focus group: "Colleagues or those who work with him [the athlete], will tell him that he will not be caught out if he dopes".

The Problems and Solutions are Systemic

The fourth overarching theme represents the perception that organisations and systems relevant to or within the sport domain operate in ways that are counteractive to the pursuit of clean sport, hence systemic factors were identified as requiring change to better support athletes. More specifically, although there were discussions about the value to the current anti-doping system, there was disbelief and scepticism amongst the participants that 'clean sport' in an absolute sense could be achieved because the action needed to change the system was regarded as impossible to implement. Participants highlighted disparity in the anti-doping system as a systemic barrier to clean sport and athletes believed that the anti-doping system needed to do more to make doping a risky activity.

Clean Sport is Valued but Unachievable

Participants valued the pursuit of clean sport; they argued for the importance of clean sport and gave positive feedback about efforts made to 'clean up' sport. However, there was disbelief and scepticism that 'clean sport' in an absolute sense could be achieved. This was because eradicating doping was considered as the key to clean sport, yet the action needed to eradicate doping was considered impossible to implement. In speaking about the value of the current anti-doping system, participants highlighted that "*things have improved*" thus the anti-doping approaches taken during the participants' lifetimes were perceived to have reduced doping and played an important role in protecting many athletes from (voluntarily or not) engaging in dangerous practices that were counter to the pursuit of clean sport. This latter point about the value of the anti-doping system in terms of protecting athletes from dangerous performance enhancing practices was often raised when discussing why it was not appropriate to legalise doping in order to level the playing field. As stated by a participant in a German focus group: "There are various reasons why prohibitive laws are in place, mainly in order to protect the people from their own actions. And to protect athletes from their own actions." In elaborating on what they were sceptical about, participants perceived that the action needed to eradicate doping was not viable because of logistical and financial issues with continuous surveillance of athletes. For example, when talking about the measures needed to make all sport competitions clean, a participant in a Netherlands focus group said:

> I would think it is totally impossible. I still want to be honest, if you would take all the sportsmen three months before the tournament, simply place them in a camp. Without coaches, without doctors, with normal people from the top who could not have contact with the outside world and the outside world not with us. That would make it more honest [and clean], but that of course is impossible to realise.

Participants also spoke of the impossibility of the cultural change needed to eliminate the desire for sporting success and related corruption which were considered fundamental to sustaining doping. Indeed, there was a general impression amongst participants that certain nations and sports behave or operate in ways that suggest success is more important that being clean, and that this desire and related corruption is so deeply engrained in some sport systems, it is unlikely to ever be resolved. Related to this, participants highlighted cultures or nations where doping was a necessary risk worth taking because of the potential financial gains of sporting success that would in turn enable the athlete to improve their own and others' (e.g., parents, spouse, children) quality of life. Indeed, despite participants earlier arguments about the personal characteristics that distinguished them as clean athletes (and therefore differentiated them from doping athletes), participants were understanding and even sympathetic of the situations that prompted some to forgo a clean identity and engage in doping activities. One participant in the Irish focus group explained:

> I think when countries have a lot of poverty for those athletes where, you know, because if they achieve a gold medal it's you know, it's a whole different way of life. So I think for those countries, probably, they maybe risk it because then they're going to have a better lifestyle as such athletes erm, like you know, because some of the poorer countries like Belarus, Romania, are like poorer areas, because when I originally, when I was part of [country omitted for anonymity], I was with a lot of really poor countries, but then like I heard when they win Olympic medals they get like bonuses of ridiculous amounts of money, like two million Euro so for me that was, you know, you completely understand then kind of how this process

> is going to do anything for a better way of life in a way for them, it's not ethically, they don't think of ethics and it's like money.

A final distinct meaning that underpinned participants' doubt and scepticism focused on the perception that doping would always be ahead of anti-doping science. Participants believed that there would always be a proportion of doping activities that were undetected and insufficiently prosecuted by the anti-doping system. As stated by a participant in a UK focus group, "the tests are always going to be one step behind the drugs.".

Similarly, there were frustrations regarding the detection of doping in terms of the time lag between when a performance enhancing substance and/or method is used, prohibited, and subsequently detected and sanctioned. In addition, participants' perception that doping was ahead of anti-doping was sometimes underpinned by an awareness of the legal difficulties experienced by anti-doping prosecutors, particularly in relation to accumulating sufficient and robust evidence to sanction individuals who have enabled doping (e.g., medical professionals, coaches). As one participant said in the international focus group: "You don't have that irrefutable evidence of involvement. It would be great in theory but how do they actually put that into practice?... It then becomes a tangle for the lawyers."

Disparity in the Anti-Doping System

When considering the current problems and challenges clean athletes face, participants were frustrated by the disparity that they perceived to exist in the anti-doping system and regarded it as a key problem preventing progress towards clean sport. Specifically, participants were able to identify inconsistencies across contexts in relation to the anti-doping education delivered to athletes, anti-doping controls and authorisation, and consequences for breaking the WADA Code. In turn, these examples of disparity in the anti-doping system were interpreted by participants to suggest that clean was not a universal priority, and that the anti-doping system was lacking fairness and equality.

In speaking about the disparity in anti-doping education, participants believed that athletes received different information and knowledge resources depending on the country, sport and competition level, and considered this to be a key barrier to the realisation of clean sport. Furthermore, there was a perception that clean athletes could often be distinguished from dopers on the basis of anti-doping knowledge whereby dopers were typically perceived as those who had not received sufficient education about what doping is, the associated dangers and the causes of accidental doping. Countries or sports in which anti-doping education was perceived to be poor or lacking were labelled by some participants as taking a "*tick box approach."* The following quotation taken from a UK focus group involves a participant imagining such an approach by recognising that some athletes only receive WADA approved anti-doping education when in attendance at an international competition:

> I'm massively assuming here, but a country like Pakistan, potentially don't get much education domestically so when they come to a world cup that's when they will get, they'll have the 15 players and the coaches will have a sit down and they'll have a, you know, a seminar from WADA…

As part of perceptions that there was disparity in anti-doping controls and authorisation, participants recalled differences across contexts (e.g., countries, sports and competitions) in the day-to-day surveillance of athletes, the rigour of in-competition testing and the processes of

gaining a TUE. Participants often cited the national or internal regulation of anti-doping and monitoring of athletes as key to creating and maintaining this disparity.

The following dialogue taken from a UK focus group provides an example of the disparity perceived in the quality of competition testing:

> Participant: I've had a couple of weird experiences when I've been abroad which makes me think, 'Come on, this is just a bit ridiculous,' but it's never been like that in the UK.
>
> Group Facilitator: From your experience with the UK Anti-Doping testers, it's always been very good?
>
> Participant: Yeah, it's just sometimes been a bit ropey in other countries. I had one in [country A] where no one came into the toilet with me. I thought, 'Okay, this is weird.' I said, 'Do you want to come in?' They said, 'No, it's fine.' Actually, in [country B] this year and it's only when I reflected on it that I thought it was weird. I did a partial and they put a stopper in but then they didn't tighten the lid. They put a stopper in so it couldn't spill and then I was allowed to go and see my family for ten minutes with a chaperone but I didn't know where my sample was. I came back and then did my other sample and put it in. A couple of weeks later, me and [name omitted] said, 'That was weird because I didn't know where that was.' Someone could have quite easily taken the stopper out and put something in. That, to me, is weird.

Importantly, disparities in doping controls and authorisation, were perceived as holes in the anti-doping system that were being exploited and abused; these holes created opportunities for dopers to hide or be hidden. As stated by a participant in a Slovenian focus group when talking about athletes who are able to obtain unnecessary TUEs: "I think they're abusing the (TUE) system. The system allows it, and more and more athletes are using it." Participants could envisage or knew of the ways that dopers could reduce the risk of being caught by the anti-doping system because of predictable or infrequent testing schedules. For example, speaking about athletes who were not in a registered testing pool, a participant in a UK focus group stated: "If they're not out-of-competition tested, they'll think, 'It's October and I don't compete until June. What's my deterrent to not take it? Absolutely nothing. No one is coming. Why wouldn't I?'" Similarly, participants suggested that some dopers played the anti-doping system by carefully orchestrating their doping activities by residing in untestable geographical locations, missing competitions or even timing their movement up competition levels to evade doping controls. The latter stemmed from the belief that the higher the performance level or the more professional the environment, the more frequent testing was, thus some participants suggested that some dopers carefully timed their doping activities and movement up competition levels to avoid detection. Participants also believed that testing selection bias was enacted by some organisations to ensure test results were favourable or that positive test results were "*swept under the rug*" by some organisations and therefore hidden from public conscience.

In considering the disparity in the consequences of not complying with the Code, participants highlighted that whilst doping would be career-ending for them, they continued to see some dopers being reinstated and sponsored and thus allowed and supported to train and compete again. Similarly, participants were frustrated because they perceived that, too often, dopers were able to lessen the severity of the punishment by claiming that the doping act had

been unintentional or accidental, and/or by employing legal representatives to find flaws in the evidence or to strike deals. As an example of participants sensing disparity in the punishment of dopers, a participant in a German focus group said:

> In Germany you are basically fucked if you take anything. That is the point. In the USA there are plenty of names that have been barred. Sometimes it is only for half a year or so and there are plenty of excuses like I kissed my girlfriend and she had just taken coke. It is bullshit, in the end, and it all depends on how it is dealt with from the top. As soon as this system does not change, nothing is going to happen. As a German athlete you do not want to take anything because you will be fucked. Just take a look at the people who have been found with doping in Germany; there is no chance for them to get another foot in the door. They are the black sheep and their lives are more or less over. In the USA it is much easier to have a comeback. You may even get another Nike sponsorship and so on; nobody cares.

Doping is Not Currently Risky Enough

Linked to the participants perceptions about the disparity within the anti-doping system, a recurrent theme in the data was the way that doping was regarded as not currently risky enough. To explain, participants suspected that many dopers were typically lacking knowledge of the risks and dangers associated with doping that would otherwise deter them from engaging in doping. Participants also believed that doping was not risky enough for many athletes because of the low probability of being tested and because the sanctions given to dopers were infrequently career-ending. It is therefore unsurprising that participants' spoke of changes needed within the system to increase a sense of risk. Such discussions mainly focused on (i) improving the (e)quality of anti-doping education and support; (ii) changing procedures and authorisation of anti-doping controls; and (iii) harsher and more transparent punishment for doping.

The need for (e)quality anti-doping education and support was identified as key to making doping riskier because this was about improving sport participants' knowledge of the risks and better supporting or resourcing athletes in their endeavour to train and compete without using prohibited substances or methods. Participants believed that action was needed to ensure all athletes received centralised anti-doping education alongside their training, with some arguing that engagement with anti-doping education should be a competition requirement. In addition, participants believed the equality of anti-doping education could be improved by extending its reach; specifically, doing more to engage youth sport participants. Some participants also argued that there is the need to improve the quality of the teaching methods used to deliver anti-doping education in order to help athletes better understand the risks and how to avoid doping. This was essentially about sport organisations doing more to empower its athletes in the context of anti-doping, as opposed to taking a tick box approach that merely provided athletes with anti-doping information. As stated by a participant in a UK focus group:

> I don't want someone to come at me and say, 'You shouldn't take this, this and this,' using all the long words because that doesn't mean anything to me. They released this list of long words which said, 'Don't take anything with this in it.' I thought, 'What's in that?' …They put all these words out and you think, 'I don't know what that means. I don't know if I've put that in my body by accident.'

Similarly, there was a general feeling conveyed by participants that more investment was needed in the resources available to support athletes in their endeavours

and that would in turn reduce the excuses used by suspect athletes for their non-compliance and breaches of the Code. Here, participants' points typically focused on the difficulties they faced in trying to maintain and prove their clean status, with critical comments about the quality of resources available to help an athlete be vigilant of prohibited substances (i.e., avoid inadvertent doping) and to adhere to location logging requirements if selected as part of a registered testing pool. For example, participants were aware of the prospect of suspension if they missed a designated number of tests, yet they felt that the technology, such as the Anti-Doping Administration & Management System (ADAMS) website and phone apps, was a barrier rather than facilitator to anti-doping compliance. As stated by a participant in a German focus group:

> Generally, I think it is a good idea to have a new app and a new website. If I look at the current website I just want to run away. We are much more advanced technically speaking these days. The app is really rudimentary and it would be good to have something that is better and faster.

Participants also wanted to see more clean athletes receiving financial backing either for the purpose of rewarding the athlete for their compliance with the Code or to support the athlete in spreading their passion and knowledge. As stated by a participant in the International focus group:

> I'm a retired athlete and I am so passionate about these subjects. I'm willing to commit my time and energy to come here and do the interviews but in Slovenia, you don't get paid to do this. You don't get paid to speak up, or run a workshop with kids, or show up at events and maybe have a banner with leaflets. I'm willing to do that but, at the same time, I need to make a living as a retired athlete.

A second key area of change that participants wanted to see related to the procedures and authorisation of anti-doping controls, with requests for more advanced, regular, transparent and externally vetted testing. Hence, clean athletes perceived more could be done to replace urine tests with blood tests, to increase the number of athletes being tested at a given competition, and for athletes to be tested more frequently throughout the year; irrespective of their competition ambitions and schedule. Importantly, some participants highlighted that the purpose of more testing was not exclusively to catch the athletes using prohibited substances; instead it should also be viewed as a stimulus to promote vigilance and sense of risk. For example, in speaking about the testing approach taken at competitions, a participant in a UK focus group said: "UKAD should just say, 'We're going to test a player from each team,' in order to get people more aware of it, shouldn't they? Even if they think, 'We don't think you're doping but let's raise awareness.'' Participants also wanted the test outcomes to be more transparent and accessible to others so that it was easier to see the extent to which a given athlete had attended a test and the test outcome. Furthermore, there were calls from participants that, in order to combat the corruption that they believed existed in the internal regulation of anti-doping controls and which enabled many doping activities, action was needed to create an external and independent body to monitor and inspect testing procedures across nations and sports. Related to this, participants believed that the authorisation of TUEs needed to be an externally vetted procedure. As stated by a participant in an Irish focus group:

> I think there should be a sports office somewhere that you have to go to certify your TUE. If you had documents which you need them to go and compete with it,

> it should be a doctor across the board and you have to get clearance from them rather than just your own family doctor who is your dad's best friend.

The third key area within the anti-doping system that was identified as in need of substantial change was the consequences of doping. Specifically, participants called for harsher and more transparent punishment for doping. Much of the conversation concerning this theme were connected to participants' appraisal that opportunities and experiences (e.g., sponsorship, self-belief, podium/medal ceremony moment) they had personally missed out on because of dopers could have been avoided if the punishment and consequences for doping had been harsher and more severe to deter athletes from doping to begin with and to ensure dopers did not return to competitive sport. Indeed, participants often spoke negatively about the kinds of messages that temporary suspensions from sport sent to the sporting community, and this is exemplified in the following quotation take from a UK focus group:

> He's like the equivalent of say Anthony Joshua in America. He's a huge star. He got six months for taking drugs. For me, that sends out a really, really bad message to all the other boxers; knowing that if you do take drugs, you'll be banned for six months. He's the type of boxer who'll have six months off between the fights anyway. He fights twice a year, so it's not really a deterrent.

As part of the belief that the punishment and consequences of doping needed to change, participants wanted doping bans to be longer in general, for the original ban length to be stuck to, and to hear about more cases where athletes were being given life bans. A matter of contention was the point at which life bans should be given (i.e. at first or second doping offence) and the extent to which the nature of the substance and level of intent should influence the punishment given. This is illustrated in the following quotation taken from a Slovenian focus group in which participants were discussing a hypothetical example of doping:

> Participant 1: I think he will not repeat the offence, in the time he is suspended. He will train in an even less controlled environment, and he comes back in the same condition after two years.
>
> Participant 2: …OK, but I think that if he repeats this, there is no question.
>
> Participant 1: But I think you violated things even in the first time.
>
> Participant 2: I think that everybody should get a second chance so they can better themselves. That is my opinion but I do not support doping at all.
>
> Participant 1: …If he did it once, he will repeat it. He broke the moral code. But there are cases where someone took medicine without knowing what it really was. I think if you got something through your vein, you should know at this age that this is doping, right?
>
> Group facilitator: So now we are talking about two things, with intention and without?
>
> Participant 2: But how will you get to the bottom of things, if he knew or not.
>
> Participant 1: I would say that precisely due to this, if someone knows he has a [second] chance, even if they caught him, he will use this, but if there would be a final punishment for the first time...

Furthermore, participants were critical of the lack of additional consequence for dopers, whereby there was anger and frustration that dopers were seldom made to surrender medals and the financial rewards of doped performances. As stated by a participant in a Slovenian focus group: "…those that were caught should be financially liable, and those funds should be used for preventive measures in doping and development…". Related to this, participants highlighted that more could be done to illustrate and publicise the indirect negative consequences of doping (i.e., to show how an athlete's career, reputation and livelihood has been ruined by their involvement in doping). Indeed, participants were negative about the media coverage that doping received that was perceived to do more to fuel scepticism about the genuineness of sports performances and encourage doping than to educate the public about the work being done to stop doping and to provide sports participants with illustrative examples of how catastrophic ones involvement in doping can be. For example, a participant in a UK focus group said,

> The BBC brought out a documentary about micro doping [dosing] a few years ago like why do that. It shows you how much performance benefit you can get from micro [dosing], like 10% increase over, what is it ten weeks or something without changing training. Why publish it, that just makes it, more people question it and think it's a possibility and easy to do.

Finally, participants wanted more done to implicate the doping network. Whilst participants were aware of the difficulties in accumulating robust evidence to warrant the prosecution of these "*others*" it was an area that participants believed needed more attention and action; particularly in cases where athlete support personnel were repeatedly found to be associated with athletes found to be using prohibited substances and/or methods.

Discussion

This study sought to explore the meaning and importance of 'clean sport' and 'clean athlete identity' through the use of a CBPR approach which involved collaborations amongst beneficiaries, users, and stakeholders within the elite athlete community. These collaborations made it possible to conduct, for the first time in anti-doping research, multiple athlete-led national focus groups and an athlete and a researcher-led follow-up international focus group. Together, these focus groups addressed elite athletes' understandings of the definition of 'clean sport' and 'clean athlete identity', the challenges associated with clean sport and being a clean athlete, and how to ensure that sport is cleaner in the future. Reflexive thematic analysis of the focus group data generated four overarching themes: clean is being true to the self, clean performance enhancement has multiple meanings, clean is not a solo act, and the problems and solutions are systemic.

How clean athlete identity connects to values-based education as preventive measure has not yet been specifically outlined. Building on previous research (e.g., Byers & Edwards, 2015; Erickson et al., 2014), the current study provides a number of important contributions to the anti-doping literature. Firstly, this research highlights that clean athlete identity is a social endeavour and artefact, which is advised to be reflected in anti-doping initiatives. Clean sport identity is characterised by early life experiences created by others that promote values and morals compatible with the classic values of sport. Hence an athlete's sense of self as "*clean*" has a historical quality to it and relies on primary care-givers to promote equality, fairness, honesty and rule-following. A growing body of research has started to address the role of parents in doping prevention (e.g., Blank et al., 2015a, 2015b; Madigan et al., 2016; McNamee, 2009) and

suggested that, owing to the enduring influence of parents on shaping athletes' attitudes, experiences and behaviours toward doping, parents should be included in specific anti-doping education (Dodge et al., 2015; Erickson et al., 2017). Furthermore, key anti-doping messages (i.e., promoting fairness and honesty) should be further integrated within existing grassroots sport parent education programmes (e.g., Thrower et al., 2019).

The clean athlete identity was also characterised by a continued commitment to these values and morals as evidenced by an approach to sport that values the quality of the process and experience above winning. However, athletes' propensity to remain clean (i.e., athletes' ability to continue to fully comply with the Code) is influenced by others on a daily basis (i.e., clean is not a solo act). Therefore, anti-doping efforts should target the interpersonal environment at various points in an athlete's lifespan to help the them embrace and maintain clean sport. Furthermore, it is recommended that research and practice alike recognise that 'clean athletes' should not be taken for granted. They deserve attention from anti-doping governance, not to 'prevent doping use' but to help cope with the challenges of sport and the demands of complying with anti-doping requirements such as the whereabouts requirements (e.g., Overbye & Wagner, 2014), doping control procedures (e.g., Elbe & Overbye, 2014; Overbye & Wagner, 2013), and the meticulously logging of supplements and over-the-counter medication to treat minor illnesses in case of contamination (e.g., Chan et al., 2018).

Athletes' views on doping and their conceptualisation of clean sport and clean performance enhancement are in line with the literature that identified deterrent factors as more value-linked citing shame and guilt (e.g., Kirby et al., 2015; Bloodworth & McNamee, 2010) and morality (Engelberg et al., 2015; Rebner et al., 2015). Our results offer further support for Woolf and Mazanov's (2017) work which showed that athletes' idealistic notion about what sport stands for is still present and many participants struggled with the artificial enhancement aspect regardless of legality or prohibition. Unfortunately anti-doping often misinterprets this complex mix of value-priorities, self-realisation, limitations and exploitation; and works from the default position that all athletes are at risk for using prohibited substances or methods unless deterred with sanctions as well as compelling moral and health-protection arguments. The present study makes an important step toward changing this limiting view and promote a holistic approach to anti-doping. The latter calls for re-thinking the concept of prevention in anti-doping to accurately reflect on what anti-doping does, can and should do for athletes who are not tempted or willing to using prohibited means, yet are impacted by others who are and are doing so. Furthermore, recognising that clean athletes do not form a homogeneous group is critically important and has practical implications for anti-doping education.

Recent years have witnessed a growing grass-root movement among athletes which has led to the formation of athlete interest groups (e.g., the Clean Sport Collective) outside formal representations in committees and boards; and the Athletes' Anti-Doping Rights Act (WADA, 2020). Findings from our study also suggest that in the current anti-doping system, 'clean athletes' feel disenfranchised. Indications of similar feelings has already emerged from research on athletes' perceptions of anti-doping legitimacy (e.g., Efverström et al., 2016; Overbye, 2016; Quarfordt et al., 2019). Clean athletes in our sample were clear that they do not need to be convinced about the health or ethical consequences of doping or prevented from such use – they were already mindful of them – but this may not be the case for all athletes. Clean athletes want help to stay clean. However, the focus of the current system on 'catching the cheats' means that little attention or support is afforded to those upholding the integrity of sport. Our findings show

that athletes are often left to their own devices to navigate the complex landscape of anti-doping and to cope with the omnipresent fear of tarnishing their reputation with an accidental mistake.

Defining prevention as a collection of actions aimed at eradicating or minimising the impact of a condition, the different levels of prevention (Kisling & Das, 2020; Health Knowledge, n.d.) offer targeted approaches for anti-doping. In the context of anti-doping, primordial prevention (with actions and measures to inhibit the emergence of risk factors from environmental, economic, social, and behavioural conditions and cultural patterns) translates to creating a clean sport culture where doping is not present as a risk factor for vulnerable athletes nor as stressor for clean athletes. The dominant approach in primordial prevention is through early individual and mass education (i.e., values-based education), coupled with structural community-based actions. Examples given by athletes within the current study speak volumes on how these two - early adoption of values about fairness, authenticity and integrity; and their privileged position of living in a developed country with good funding, support system, alternative career options and relative wealth – together protected them from doping. Primordial prevention for this group should materialise in support for dealing with the daily regimen of doping control and the ever-presence stress of accidental anti-doping rule violation as well as existing and competing in an environment where directly or indirectly they are affected by the presence of doping in elite sport. In contrast, primary prevention - which aims to reduce the possibility that the event or condition will ever occur and utilises both general campaigns and specific targeted measures right at the potential onset - translates to deterrence via doping control and anti-doping education, the latter including health and moral reasons as well as specific information to ensure compliance with the WADA Anti-Doping Code.

Secondary and tertiary prevention specifically focus on the 'problem cases' (i.e., dopers and cheaters), and spans beyond education, yet they impact clean athletes just the same. Secondary prevention aims to stop the problem and restore the desired status quo by identifying dopers and sanctioning rule breakers. By doing so, it protects the rights of other athletes in the community to doping-free sport. Although previous research has suggested that athletes generally perceive the existing anti-doping system as appropriate, fair and just (Woolway et al., 2020), results from the current study suggest that there is also a palpable discontent among clean athletes that they have nothing to show for their effort to stay on a straight path on the right side of the anti-doping rules. Their effort is practically invisible to the outside world unless and until they fail. Athletes want to show their clean status and differentiate themselves, which is impossible because one cannot prove innocence, only the opposite. The lack of a positive test does not mean lack of guilt, only lack of evidence for guilt. Sensing this unfilled desire, alternative systems offer solutions of questionable quality which not only do not help athletes but potentially put them at greater risk owing to the misuse of existing doping control data and/or scientifically unproven methods (Petróczi et al, 2020). However, some of these issues can be fixed – some needs little effort – others may involve re-thinking and re-designing the anti-doping system. For example, athletes cannot prove that they are 'clean' but they can show that they are rule compliant (i.e., when and how many times they have been tested, up-to-date with their whereabouts, etc.). Making testing figures (limited to the number of times an athlete tested within a set period of time, i.e., last 12 months) public – with athletes' consent – would not only help demonstrate athletes' compliance, but having this level of transparency could lead to NADOs and IFs to improve testing plans and make them more meaningful and reinforce the clean athlete identity. Of course, it must be acknowledged that this should only be implemented if athletes are unequivocally supportive because absence could raise suspicion of doping without reasons. Our

NADO partners also cautioned that this proposal would not be supported by all organisations with anti-doping responsibility.

Finally, tertiary prevention includes all the measures available to reduce or limit the impact of doping on the person, on sport and on the society. Athletes' recollections during the focus groups regarding how doping by their opponents impacted their thoughts and feelings leave little doubt that tertiary stage is, by and large, missing from doping prevention. To athletes, retrospective management of sport event results and records appears ad hoc and haphazard, not as something that is designed to be an integral part of the system, and often managed as an afterthought as if doping control stops at catching the cheats. According to the athletes, this problem is further exacerbated by the time-lag between events and bringing doping cases to closure, which is too long for an athlete's career. Reinforcing the findings from Erickson et al. (2016), clean athletes in our sample unequivocally expect sport organisations to do a better job of managing the consequences and build a system that 'makes up' for their losses.

Secondly, athletes who identify as clean interpret the meaning of clean performance enhancement in a variety of ways. Hence, there are individual differences in the substances and methods that 'clean athletes' are willing and comfortable to use for the purpose of performance enhancement. This means that athletes do not see clean sport as 'drug-free' sport, but instead it is defined as cheating-free sport, with doping representing one form of cheating. The need for instilling values and morals in early-life experiences necessitate a critical examination of the true meaning of values-based education for clean sport. If clean sport is not totally drug free sport, then values-based education cannot be built on or around the 'drugs'. It must be about 'no cheating' and playing within the rules. Building from the results of this study, namely that clean sport is first and foremost defined as cheating-free (and not drug free) sport, it is recommended that early values-based education focuses on sport integrity in general with doping specific rules to prevent inadvertent rule-breaking and deliberate cheating added at a later stage. Although good practice examples for such approach exist (e.g., in Canada and Slovenia) this is not yet globally adopted – often because of the lack of resources, disconnection between governance of education, elite sport development and/or anti-doping. WADA offers support for school-based education programmes for 8 – 12 year olds via its education programme called "Sport Values in Every Classroom" and UK Anti-Doping has recently launched its values-based education programmes "Get Set for the Spirit of Sport".

At the same time, such an approach – albeit positive and desirable – places doping into a bigger picture of sport integrity where doping is only one form of rule breaking in the rich array of tampering with equipment, cheating as short-cutting in competitive situation, performance manipulation for betting or for strategic advantage. Equally, early stages of values-based education (again, with focus on the integrity of sport as a whole and not prohibited means of performance enhancement) perhaps is best embedded in schools and sport development processes. Organisations specifically responsible for anti-doping (national and regional anti-doping organisations) may not be the best placed to deliver such education at early stages.

Thirdly, there is disbelief that cheating in the form of doping will ever be eradicated. Hence, athletes are sceptical about the future, and the disparity that exists within the anti-doping system undermines the promotion of clean sport because athletes believe the disparity signals a lack of fairness, equality and clean ambition within and across sports. Transparency about the efforts, and better communication with athletes, as well as other stakeholders, are needed for building legitimacy for the anti-doping system. Failing to do that, alternative systems with

questionable rigour and motives step in to fill the gap, potentially causing more harm than good (Petróczi et al., 2020). Addressing the disparity in testing as perceived by the athletes requires a long-term solution. Athletes want to be sure that their competitors have been tested, and within a practically relevant timeframe. One theoretical option is to roll out the state-of-the art testing to a wider pool of athletes with improved (and ideally externally managed) sampling and testing. However, taking the costs and logistics into consideration, it is an unlikely scenario. An alternative solution could be to adopt a two-tier system where emerging methods such as Dried Blood Spots (Thevis et al., 2020) or alternative matrices (Thevis et al., 2016) focusing on a small number of key doping substances and methods such as anabolic steroids, blood doping and EPO, hormones, asthma medication and potent painkillers) afford to test widely across all sports and levels. This can co-exist with the state-of-the-art (highly specialised and expensive) methods, reserved for the high-risk sports and podium athletes, with intelligence-led targeted testing (e.g., Faiss et al., 2019; Marclay & Saugy, 2017). It is readily acknowledged that such approach must be thoroughly investigated for feasibility, effectiveness and impact on athletes and testing authorities, and at the end it may deemed impractical. We hope that raising this idea here will start a transparent discussion about how to improve doping testing at the global level.

Fourthly, in addition to the continued efforts to catch the rule-breakers (including the network of people who facilitate doping) and to effectively remove them from the sport environment, athletes want anti-doping initiatives to do more to support them in being clean. Suggestions include creating better transparency about the extent to which athletes comply with and undergo testing procedures. A general agreement exists that improving the provision of education across all nations, as well as investment in technology, would help building a cleaner sport globally. The former recognised the disparity in education across countries which is now being addressed by the new International Standard for Education (WADA, 2020a). The latter include suggestions made by some of the athletes in our sample such as developing an app that would allow scanning barcodes of nutritional supplements for record keeping and to facilitate accuracy in doping control forms, or having a special fund for compensating clean athletes who lost out on medals and prizes due to doping. Improving the whereabouts app was also suggested in almost all discussions.

Overall, athletes have recognised that having 100% clean, pure and completely drug free sport is the ideal, a desirable but realistically unachievable goal. The anti-doping community would benefit from an open discussion about what is considered good enough or 'clean enough' and focus the available resources accordingly. Chasing the impossible goal of pure clean sport only means that anti-doping constantly 'fails' or is perceived as 'failing' despite the sustained effort and considerable advances in doping control and education. It is time to celebrate the achievement even if the system is not perfect yet, or never will be.

The importance of anti-doping education is emphasised by the athletes in this study. Nonetheless, the inconsistencies across contexts of anti-doping education delivered to athletes and disparity in having educational provision cause concern among athletes, seeing the lack of education as a reason for doping among their opponents. Early education accessible to all athletes has been identified as key. This partially resonates with athletes' views and recommendations for anti-doping education in the study by Hallward & Duncan (2019). Athletes in our study appear to agree about lack of education to all athletes, importance of early start and need for a collective effort but scare-tactics i.e., "no need to be long, you just need to scare them") identified as good approach by athletes in the study by Hallward & Duncan (2019), was not mentioned by the

athletes in our sample.

Although in this paper we focused on being a clean athlete and the meaning of clean sport from the athletes' point of view, athletes' direct and vicarious experiences with doping affected them and was interlaced within all themes. The impact of doping on clean athletes is also multifaceted and goes beyond the obvious bitterness of being cheated out of opportunities (medals, sponsorship deals, better life in economic sense). Processing and prosecuting doping takes too long and even so, retrospective correction does not bring back the moment of standing on the podium or knowing how close one was to a medal position (as highlighted by Erickson et al., 2016). Retrospectively awarded medals are not highly valued, nor do they feel real. For clean athletes, doping is also experienced as an act against the sport they love.

As a final point, the use of a CBPR approach in the current study offered a number of tangible benefits. Participating athletes not only defined clean sport (as it is for them) and identified problems but offered practical solutions. Academic researchers acted as facilitators of this process but also offered a unique insight into elite athletes' daily lives, thought processes and genuine efforts to stay true to their own definition of clean sport. NADOs have also gained positive experiences from being involved in academic research. After initial apprehension about the research process, NADOs agreed that the collaborative research process was valuable. Feedback from NADOs, and athletes via their respective NADOs were positive. Athletes appreciated that they were asked, seized the opportunity that they could talk freely among themselves about their frustrations, fears and hopes. The focus group transcripts offer ample evidence that athletes truly enjoyed learning about doping and anti-doping in different sports and countries.

Limitations and directions for future research

Core to our findings is the 'clean athlete identity'. However, with the chosen approach to this project, namely co-development of the clean sport concept through a series of athlete-led focus groups with a large number of international elite athletes of various ages and career stages, the present study did not allow for an in-depth investigation of the individual aspect. In the present study, we focused on the socially constructed meaning of 'clean' in anti-doping context and in relation to athletes' self-positioning within. Although initially we were set to explore the latter further, that is how socially constructed meaning of 'clean' – through clean athlete identity – relates to self-image, self-esteem and individuality, it become apparent that during data collection that athletes did not give much thought to the meaning of 'being clean' and struggled to discuss this at length in a group setting. For them, 'being clean' is the norm, something that they do not feel they deserve praise for. Further exploration of clean athlete identity through in-depth individual interviews is recommended.

We also recognise that the social representation of 'clean sport' we explored in this study is a collection of values, ideas, metaphors, beliefs, and practices that are shared among a unique subset of members of the sport community (i.e., clean European athletes). Further research is warranted to explore the shared views about clean sport by athletes who sanctioned for doping, athlete support personnel, regulatory bodies, media and fans/spectators. Rather than offering answers, this paper serves as a foundation for clean identity research to further explore how clean athlete identity develops, what are the influential factors throughout an athlete sport career and how clean identity influences behaviour choices about performance-enhancements was beyond the aim and scope of this research.

With the WADA International Standard for Education coming to effect in 2021, future

research in support for developing anti-doping education will benefit from employing similar participatory approaches. This should include expanding the scope to countries and cultures outside Europe, which will not only enhance our understanding of clean sport meaning in cultural context but also foster knowledge transfer between athletes, athlete support personnel and NADOs. Future research is also warranted to explore the impact of doping on clean athletes and what strategies athletes intuitively develop to deal with the persistent stress from being in and staying clean in a 'dopogenic' environment (Backhouse et al., 2018). As a first step, the current data could (and should) be re-analysed with these themes in mind to maximise the use of such rich and unique dataset and to inform future research in this direction.

It is also important to note that the current study focused exclusively on athletes' views from developed western countries. Athletes themselves recognised that they are in a privileged position of having well-funded sport development system, good anti-doping education and alternative career choices beyond sport. At the same time, many are fully aware that failing as an athlete for anti-doping rule violations may impact their lives beyond sport. Furthermore, our NADO partners have already been engaging and working with athletes. This, on one hand, made this project feasible. On the other hand, it limits the breadth of experiences for NADOs, and the conclusions we can draw from the collaborative process, to the research aspects. Benefitting from the lessons learned in this study, future collaborative endeavour should involve organisations new to both athletes' involvement and research to gain novel insights and to facilitate knowledge transfer.

Conclusion

This study presents the first ever community-based participatory research on anti-doping with a large international group of elite athletes. The results evidence that clean athlete identity is universally a strong protective factor against doping as rule breaking, and clean sport is primarily defined as free of cheating, not free of drugs. Athletes' approach to performance enhancement, including performance enhancing substances and methods, varied widely within the non-prohibited spectrum and the approach was highly personalised. As socially constricted phenomenon, clean identity and clean performance concept being socially constructed has implications on anti-doping education. It appears that clean athlete identity – stemming from upbringing and early years' experiences - can be reinforced, but it is not created by anti-doping education throughput. It should be considered whether the latter is better conceptualised and placed within the context of sport integrity. Systemic problems of anti-doping call for systemic solutions. Athletes are prepared to play their role and beyond, but the majority feel powerless in implementing systemic solutions. Athletes want to actively support the pursuit of clean sport by working closely with stakeholders and regulatory bodies to create a cleaner sport environment that protects the integrity of sport and the welfare of athletes, now and in the future.

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Conflict of Interest

The authors declare no conflict of interest.

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Appendix: Thematic map