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Understanding and building clean(er) sport together: Community-based participatory research with elite athletes and anti-doping organisations from five European countries

Andrea Petróczi

Kingston University London

Andrew Heyes

University of Birmingham

Sam N. Thrower

University of Roehampton

Laura A. Martinelli

Kingston University London

Susan H. Backhouse

Leeds Beckett University

Ian D. Boardley

University of Birmingham

The RESPECT Consortium^a

^a The RESPECT Consortium comprises of academics from Leeds Beckett University, Kingston University London, University of Birmingham and anti-doping education managers

from Doping Authority Netherlands, National Anti-Doping Agency of Germany (NADA), Slovenian Anti-Doping Organisation (SLOADO), Sport Ireland and UK Anti-Doping (UKAD)

Corresponding author:

Andrea Petróczy, School of Life Sciences, Pharmacy and Chemistry, Faculty of Science, Engineering and Computing, Kingston University, Penrhyn Road, Kingston upon Thames, KT1 2EE, UK. Email: A.Petroczy@kingston.ac.uk

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
- Disbelief and scepticism that 'clean sport' could be achieved was evident
- Problems of anti-doping were identified as systemic, thus solutions must also be systemic

Abstract

Background: In sport the narrative is changing from anti-doping to pro-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: 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 United Kingdom) 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 generally rooted in upbringing, early experiences and love of sport; and characterised by continued, intrinsically motivated commitment to fundamental values and morals acquired in childhood. In contrast, the concept of clean performance-enhancement is highly idiosyncratic and flexible. Elite athletes value anti-doping efforts but their experiences of disparity and unfairness in doping control undermine their trust in anti-doping.

Conclusion: Clean athlete identity is a social endeavour and artefact, which needs to be reflected in and developed through evidence-informed anti-doping interventions. Raising athletes' voices via co-collaboration and participatory research can be an enriching experience for athletes and researchers alike, 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 must be acknowledged, respected and cultivated.

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

Understanding and building clean(er) sport together: Community-based participatory research with elite athletes and anti-doping organisations from five European countries

The mission of the World Anti-Doping Agency (WADA) is to lead a collaborative effort 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).

Anti-doping, particularly the testing and sanctioning elements, is under constant scrutiny and faces criticism on one or more components of its legitimacy (e.g., Reed et al., 2019; 2020; Dimeo, 2016; Hunt et al., 2012; Pitsch & Gleaves, 2020; Pielke & Boyle, 2019; Ritchie, 2013). These policies, practices and organisations entrusted with executing them have been constantly evolving for improvement and meeting new challenges (Ljungqvist, 2017; Reed et al., 2020; Willick et al., 2016). The implementation of anti-doping rules and harmonisation of practices globally is one of these challenges.

Protecting Clean Sport Through Prevention and Education

Mirroring the development of anti-doping moving from deterrence and sanctions to prevention and education, anti-doping rhetoric has shifted the focus from catching dopers and stopping athletes doping to promoting clean sport and the clean athlete ideal. In line with this positive approach, anti-doping research should move away from its fixation on trying to understand what drives some athletes to dope and concentrate on what clean athletes do, or at least incorporate ‘clean sport behaviour’ into the (anti-)doping research portfolio (Englar-

Carlson et al., 2016; Petróczi et al., 2017). Congruently, doping prevention should broaden its traditional focus on the 'at risk' end and incorporate a broader scope of vulnerability as well as the non-problematic clean spectrum.

Prevention Approaches in Anti-Doping

In health promotion terminology, we can define prevention as a collection of actions aimed at *eradicating* as well as *minimising the impact* of a condition, and broadly talk about caring for four or five distinct groups via primordial, primary, secondary, tertiary and quaternary prevention, each with different foci (Kisling & Das, 2020; Health Knowledge, n.d.). The dominant approach in primordial prevention - which is the earliest prevention modality to minimise risk exposure - is through early individual and mass education (i.e., values-based education), coupled with structural community-based actions aiming to create an environment with minimum risks. 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, and is conducive to clean sport behaviour. At every preventive stage, it is vital that actions aimed at individual athletes are considered in the context of their close personal relationships (i.e., teammates and athlete support personnel), broader community and society. This is encapsulated in Bronfenbrenner's (1992) Ecological Systems Theory which considers the complex interplay between a range of factors at individual, relationship, community, and societal levels that may put athletes at risk for doping or protect them from experiencing the negative effect of doping by others (Smith et al., 2010; Petróczi et al., 2017).

In parallel, a growing athlete-driven movement has led to the formation of athlete interest groups situated outside formal representation in committees and boards (e.g., Global

Athlete, the Clean Sport Collective). This movement aligns with the establishment of the Athletes' Anti-Doping Rights Act (WADA, 2020), which serves to “ensure that athlete rights within anti-doping are clearly set out, accessible, and universally applicable” (p.2). The driving force behind these initiatives is complex. On the one hand, athletes want to play a more active role in keeping sport clean and have a say in what is imposed upon them in the name of ‘protecting clean sport’. On the other hand, high profile scandals (e.g., Russian Athletics) and decisions that followed in many athletes about the fairness and effectiveness of the existing anti-doping system, and demand change.

To accelerate positive change in the quest of protecting the rights of athletes at all levels 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 (Petróczi et al., 2017). 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).

Prevention Through Education

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 demands of contemporary elite sport.

Overviews of prevention strategies and anti-doping education at the global level lag considerably behind critical appraisals of doping testing. The limited research investigating educational approaches globally shows that whilst organisations generally offer at least a basic level of education (information provision), a considerable degree of disparity exists between countries (Gatterer et al., 2020) and sports (Mountjoy et al., 2017). This is reflected in elite athletes' views that highlight perceived inequality in testing and sanctioning (Overbye, 2016; Westmattelmann et al., 2018) as well as lack of responsibility and commitment to prevention and anti-doping education (Efverström et al., 2016). Lack of alignment between learning outcomes, elements of anti-doping education and evaluation in the existing anti-doping education initiatives were observed (Woolf (2020)). With a narrow focussed, knowledge-based argument put forward, Woolf (2020) tacitly assumes that anti-doping rule violation is due to lack of sufficient knowledge about doping.

The Meaning of 'Clean' in Anti-Doping

The anti-doping literature, so far, has offered little help to understand clean athlete identity and clean sport behaviour at individual levels. 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), and partly because 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' could be thought as 'pure' and 'lacking dirty acts'. However, to devise and implement meaningful anti-doping measures to help protect clean sport (and to counter cheating in sport), first we need to be clear about what constitutes 'clean' in sport. We need an operational definition of 'clean sport' to be able to set its protection as a goal for anti-doping, and to make its success measurable. In order to do this, we need to have a clear concept about what the 'clean' label

implies. For example, ‘clean sport’ can be interpreted as not using performance-enhancing substances and/or methods at all, or the definition can be limited to the use of prohibited means. Equally, the opposite of ‘clean sport’ (i.e., the ‘dirty’ label) could be 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 such as the infamous case of Bradley Wiggins and the asthma inhaler (DCSM, 2018). To make it operational and actionable (equally including detection, sanctioning, education and prevention), any ‘clean sport’ definition must be accompanied by a clear set of criteria of where to draw the line between morally wrong and sanctionable. Most importantly, clear educational goals and education programmes to build clean sport culture cannot be set without having a clear concept of what we mean by ‘clean sport’.

Reasons for Doping and not Doping

In support for the relentless quests for ‘catching the cheats’, much research has been dedicated to the factors contributing to doping behaviour (Blank et al., 2016; Ntoumanis et al., 2014). These studies characteristically conducted in isolation or in ad hoc combinations without a clearly identified theoretical framework or explicit link to previously used combinations. 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.

Reasons for doing something and for not doing 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 driven by separate motivation systems (Richetin et al., 2011; 2012). Consequently, cognitions about not performing a behaviour are not simple opposites of cognitions about performing the same behaviour. 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 implication of this fundamental distinction is quite simple: to understand clean sport behaviour, research must focus on reasons, values, beliefs and global motives of those who follow clean sport behaviour.

Paradoxically, research dedicated to 'clean' athletes in anti-doping 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 (Englar-Carlson et al., 2016). However, this positive development highlights the fundamental difference between the educational goal of values-based and 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.

Values and Clean Sport

WADA's International Standard for Education (ISE) distinguishes between general values that guide athletes' behaviour throughout their daily lives, and sport-specific values that underpin the Spirit of Sport and are expected to be acted upon in the sport context (WADA, 2021c). Limited available research to date suggests that athletes' likelihood to compete clean was associated with general values. In hypothetical scenarios, the likelihood of doping was positively associated with self-enhancement values but negatively associated with self-transcendence and conservation values (Ring et al., 2020), as well as moral values and the moral aspects of the Spirit of Sport (Mortimer et al., 2020). Research has also indicated differences in the perceived importance of the Spirit of Sport values between the general public, amateur and elite athletes (Mazanov & Huybers, 2015). Values which appear to be important to elite athletes are linked to fairness, ethics, honesty, dedication and commitment and respect for rules and others. However, values as universal guiding principles that motivate actions through influence on people's goal directed behaviour (Schwartz, 2012) are only indirectly linked to behavioural intention and behaviour through exerting influence on reasons for acting in a certain way (Westaby, 2005). Therefore reasons – and especially reasons for clean sport behaviour – are essential for fully understanding the decision-making process about avoiding doping. Values are captured in action through reasons.

Taking the values to the policy level, Loland and McNamee (2019) argue that Spirit of Sport – a peculiar set of values rooted in Victorian virtues and the Olympic ideal – form a set of normative values which then are (or should be) actioned for athlete protection and the preservation of the integrity of sporting competition. This value-laden normative criterion for prohibiting a substance and/or method in elite sport is the underpinning influence for athletes' perception of normative anti-doping legitimacy. While athletes and other stakeholders generally agree that anti-doping has high normative legitimacy, views vary more about the

other component, procedural legitimacy, reflecting on fairness in anti-doping rule implementation and outcomes (Woolway et al., 2020).

Clean Is a Value that Protects Against Doping

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). Focusing specifically on enablers and barriers to clean sport, a recent meta-synthesis of qualitative accounts of athletes and athlete support personnel identified lack of knowledge and awareness of anti-doping rules and regulations, and supportive doping environments as major barriers to clean sport behaviour (Williams et al., 2020). Congruently, a need for tangible support (i.e., how to enhance performance without prohibited means) and limited access to prohibited substances were highlighted as key

enablers of clean sport behaviour. Beliefs about widespread doping and seeing doping as a normalised practice in sport were considered a threat to clean sport.

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; Pitsch & Gleaves, 2020). 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 aimed to explore (a) how elite athletes define clean sport and being a clean athlete; (b) 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. Working together with an athlete researcher and NADO partners, we interpreted athletes’ thoughts about clean identity and clean performance enhancement in the context of anti-doping education and prevention.

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 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, an extended epistemology of experiential, presentational, propositional, and practical ways of knowing (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 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 clean sport community through cooperative actions that bridge the gap between research, policy, and practice to develop effective anti-doping education programmes. 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 the Antidoping Authority of the Netherlands.

Research Approach: Community-based Participatory Research

In line with a participatory worldview, the current study adopted a community based participatory research (CBPR) approach. In contrast to more traditional research, CBPR begins with an issue of real importance to the community and involves community members (and other stakeholders) throughout the research process (Minkler & Wallerstein, 2011). As such, CBPR is scholarly work undertaken in partnership with communities, which draws upon multiple sources of knowledge, crosses disciplinary lines, and is mutually beneficial (Schinke & Blodgett, 2016). In comparison to action research, participatory research shifts the emphasis from action and change to more collaborative research activities (Bergold &

Thomas, 2012). As a result, CBPR does not always incorporate a direct-action component although it is committed to using the results to inform change (Israel et al., 1998). CBPR is based on the following six core components or principles (Israel et al., 1998; O’Fallon & Deary, 2002): 1) Defines community as a unit of identity (i.e., consistent with WADA’s view, the ‘clean sport’ community consisted of both NADOs and self-declared clean athletes due to their shared values, aspirations and commitment to clean sport); 2) Promotes active collaboration and partnership at every stage of the research (i.e., NADOs or athlete co-researchers were involved in generating research questions, data collection, interpretation of results, and application of the results to address community concerns); 3) Fosters co-learning (i.e., researchers learnt about the meaning of clean sport from athletes and community partners (athletes and NADO practitioners) learnt how to conduct research); 4) Ensures projects are community driven (i.e., research questions were based on the concerns of the NADOs); 5) Disseminates results in useful terms such as community conferences, websites, videos, article (see Supplementary material 1 for a short video summarising the key outcomes from this project to practitioners¹); 6) Ensures research and/or intervention strategies are culturally appropriate (i.e., involvement of a diverse range of community partners from five European countries in both the research process and knowledge dissemination).

Participants & Sampling

Athlete Co-Researchers

The sampling criteria for athlete co-researchers included one self-declared clean 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)

¹ https://youtu.be/_hQOfk2NmJs

between 24 and 46 years of age ($Mage = 31.60$, $SD = 8.44$). 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)² for between 1 to 7 years ($M = 4.60$, $SD = 3.21$).

Athlete Participants

The athlete participant sampling criteria required participants to be self-declared clean 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 ($Mage = 25.38$, $SD = 5.14$) from five European countries including: Ireland ($n = 13$), Netherlands ($n = 14$), Germany ($n = 22$), 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 ($n = 2$). Furthermore, 15 participants had competed at the highest level within their age group or sport (e.g., national leagues, international competitions, world cups).

² Athletes at the highest level of their sport are selected for what is known as a Registered Testing Pool (RTP). Athletes in the RTP are required to log their whereabouts in ADAMS (Anti-Doping Administration & Management System) to facilitate unannounced out-of-competition testing. Doping testing is not limited to RTP. In fact, only a small fraction of the tested athletes are in the RTP.

Furthermore, 61% of the participants were in RTP and 90% had received formal anti-doping education.

Procedure

In line with the core components of CBPR, community partners (i.e., NADOs or athlete co-researchers) were involved in all six phases (see Figure 1; Israel et al., 2012). However, the level of involvement of NADOs and athlete co-researchers differed within each phase due to the nature of the research questions and management of power relationships.

[Insert Figure 1 here]

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 current anti-doping systems and educational provisions, resources (e.g., access to elite athletes), priority concerns (e.g., defining clean sport, clean athlete identity, challenges associated with clean sport, ensuring sport is clean in the future), and establishing the research questions and methods. Following this, a draft semi-structured ‘National Focus Group Guide’ was developed by the researchers informed by Social Identity Theory (see Tajfel & Turner, 1979) and the conceptualisation of legitimacy perception (see Levi et al., 2009; Woolway et al., 2020) and shared with NADOs for feedback and input. *Phase four* included designing and conducting the research with the NADOs (see Figure 2). In order to manage potential power issues, each NADO recruited one athlete co-researcher from their country (i.e., Ireland, Netherlands, Germany, Slovenia, and UK) who met the selection criteria. The UK athlete co-researcher (second author), who had previous experience of qualitative data-collection, conducted a 1-hour online training session on how to run a focus group for the athlete co-researchers in each country. He also led individual bracketing interviews (Tufford & Newman, 2010) with each athlete co-researchers to generate awareness of presuppositions regarding the topic and familiarise themselves with the

‘National Focus Group Guide’ (see below). Before conducting the bracketing interviews, he was also interviewed. Next, NADO’s recruited a diverse range of athletes (e.g., age, gender, ethnicity, sport type) who met the ‘athlete participant’ sampling criteria and could provide important ‘Experiential knowledge’ not affiliated with NADOs (Levac et al., 2019). Each NADO organised two or three focus groups with athlete participants in their country, which were facilitated by their athlete co-researcher. A total of 12 focus groups were conducted in Germany ($n = 3$), UK ($n = 3$), Ireland ($n = 2$), Netherlands ($n = 2$), and Slovenia ($n = 2$) (i.e., presentational knowledge). This verbal form of presentational knowledge was grounded within athlete participants’ experiential knowledge. NADOs were not present during the national focus groups to allow athletes to openly discuss anti-doping practices. Each focus group was conducted in the native language and lasted between 22:27 and 90:34 minutes ($M = 61:02$, $SD = 20.54$). Due to university ethical guidelines, initial analysis of the raw data was conducted by the researchers to generate themes and sub-themes which formed the basis of the ‘International Focus Group Guide’ (see below). *Phase five* then involved athlete co-researchers ($n = 5$) and one English speaking athlete participant ($n = 5$) from each country reflecting on the themes identified, challenging the researchers’ interpretations of the analysis, and providing opportunity to further explore tensions and differing perspectives (e.g., the ‘grey zone’) via an international focus group (i.e., propositional knowledge). This focus group was led by the UK athlete co-researcher (second author) and third author 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 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 ongoing 10-Year Research-Embedded Strategic Plan for Anti-Doping Education (i.e., practical knowledge).

Data Collection

National 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 four 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 two examined the challenges to clean sport and being a clean athlete (e.g., what do you think the main challenges are today?). Section three 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.

International Focus Group Guide

The focus group guide for the international focus group was based upon the themes generated during initial data analysis and areas which were discussed during the national athlete focus groups. As such, the semi-structured 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 that was generated from the national focus groups linking ‘cleanness’ to rules, not specific substances or methods (i.e., clean sport is first and foremost seen as ‘cheating-free’, not ‘drug-free’); 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 challenges to clean sport behaviour (e.g., the split view that for some it is fine to use supplements or even prescription medication until it is banned whilst others will stay away from this ‘grey zone’, 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’ hopes about the future and beliefs about what can be done for making sport cleaner.

[Insert Figure 2 Here]

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, 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. Following this, phase two involved inductively coding (at both a semantic 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). Throughout phases one to three the UK athlete co-researcher (second author) acted as a critical friend (Smith & McGannon, 2018). 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 Supplementary material 2), and identify names which captured the essence of the theme (see Supplementary material 3 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 Levac et al., 2019; Schinke et al., 2013). Specifically, the current study was *community driven* (e.g., NADOs were involved in identifying research questions, research design, and participant recruitment, whilst athlete-co researchers were involved in developing focus group guides, 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 via www.cleansportalliance.org), 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 (Boardley et al., 2021). 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 Supplementary Material 2). 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 wanted in the future to protect the integrity of sport and the welfare of athletes.

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. Clean athletes were those who valued the quality of the process and experience in sport and who 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 prioritised 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 participants recognised that 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, participants expressed or developed an awareness through the focus group process that clean athletes were not necessarily a homogenous group in terms of their view of what constituted clean performance enhancement. 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. Participants agreed that in order to follow the Code, a clean athlete was ‘responsible and proactive.’ In describing what this responsible and proactive state was like, participants described “*being on top of things,*” “*being on the ball*” and “*being conscious.*” 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.

Hereafter, participants demonstrated a preference for either 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.

Rule abiding to the limit was characteristically an inclusive approach to performance enhancement, 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. For example, the use of salbutamol (an asthma medication) by inhalation up to a set limit is not prohibited and could be used with a Therapeutic Use Exemptions (TUE) by athletes with asthma for its performance-enhancing effect even without acute medical need. 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 a 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 with a 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 such as getting a TUE for an otherwise prohibited performance enhancing substance or method because of a genuine and clearly presenting medical condition. Furthermore, participants who adopted the “stay away from the doping line” interpretation argued that 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. The nature and administration of a substance was a key consideration made by participants when deciding if they would engage with a performance enhancing substance or method. There was a preference 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, participants also spoke of the importance of perceiving that their substance-use behaviour was representative of a normal, everyday practice (e.g., drinking coffee to benefit from its stimulating effect).

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. 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.

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. 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.

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 counterproductive 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 perceived as necessary 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 (e.g., disparity in education, anti-doping controls and authorisation, and consequences of breaking the WADA code) 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. 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."

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. Participants perceived logistical and financial issues with continuous surveillance of athletes

that was otherwise required to ensure and protect clean sport. For example, when talking about the measures that would 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 required 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 than 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. 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... when I was part of [country name omitted], 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 .

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 sanctions 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 a different quality and quantity of 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 [country from the Far East], 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 in terms of the conduct of testing officials:

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.

Other 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. Participants were also 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. Hence, participants' spoke of changes within the system that could 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 equality and quality of 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 improving the quality of the teaching methods used to deliver anti-doping education would 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 could be made 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 RTP. 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 making compliance with anti-doping rules unnecessarily harder, instead of facilitating the daily practicality of 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:

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. For example, participants 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. 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 would benefit from being 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 where athletes wanted to see change was the consequences of doping. Specifically, participants called for harsher and more transparent punishment for doping. 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.

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 one's involvement in doping can be.

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 wanted to see more attention and action by WADA; 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 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.

The Meaning of ‘Clean’ to Athletes

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, 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.

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.

Link Between Values-based Education and Clean Athlete Identity

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 needs 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 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 need to target the interpersonal environment at various points in an athlete's lifespan to help them embrace and maintain clean sport. Furthermore, research and practice alike need to 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).

Place of Clean Athletes in Anti-Doping

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 do not need to be convinced about the health or ethical consequences of doping or prevented from such use – they are already mindful of them. 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 rule-violation.

Prevention is important even for ‘clean athletes’, but it must be relevant to be meaningful. Examples given by athletes within the current study speak volumes on how 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 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 need 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.). Potentially, making testing figures public at the individual athlete level – 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. Needless to say, such a level of transparency can only be implemented if athletes are unequivocally supportive because absence could raise suspicion of doping without reasons. Furthermore, in discussion with our NADO partners it was flagged 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.

Future of Clean Sport

There was a lack of belief among athletes that cheating in the form of doping will ever be eradicated. Hence, athletes are hopeful, yet sceptical, about the future. Clearly this view might be unique to our sample of self-declared clean athletes who felt strongly enough about clean sport and threats to clean sport to volunteer to participate in this research, and were confident and comfortable with their own 'clean athlete' identity. Whilst they acknowledged the privileged position they were in (i.e., can afford to be an elite athlete for the love of sport), and expressed understanding that others might not be that fortunate, they were keen on distancing themselves from the 'dopers' in every possible way: physically, emotionally and intellectually. The strong social identity as 'clean athletes' offers them comfort, a cocooned existence, in the dopogenic environment that surrounds them. The disparity within the anti-doping system - recognised and discussed among athletes -

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), could afford testing 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).

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. For example, data about testing, that is when tests were conducted and attempted but missed owing to inconsistencies in whereabouts, could be made public at individual level. 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 ISE (WADA, 2021c). The latter include more efficient technology, improving the whereabouts app and developing an app that would allow scanning barcodes of nutritional supplements for record keeping and to facilitate accuracy in doping control forms. Having a special fund for compensating clean athletes who lost out on medals and prizes due to doping was also suggested.

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 should openly start discussing and agreeing upon 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 (Hallward & Duncan, 2019). For example, 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 a good approach by athletes in the study by Hallward and Duncan (2019), was not mentioned by the athletes in our study.

Advantages and Challenges in CBPR for Stakeholder Involvement in Anti-Doping

The current study also offers a number of insights in relation to participatory research. Using CBPR in the anti-doping context, which to our best knowledge was for the first time, turned out to be a worthwhile but challenging exercise. Firstly, it was challenging to our NADO partners to navigate between their roles as executioners of anti-doping policies, athlete educators and being a co-researcher and a critical voice. Perhaps it is unique to anti-doping because of the need for global harmonisation, but organisations with responsibilities for anti-doping (national anti-doping organisations such as our research partners and sport federations) are primarily interested in research with tangible outcomes that can be implemented at the local, operational level. Among our NADO partners, there was a genuine striving for – and interest in – improving the day-to-day interactions with athletes and finding ways to best serve their sport community. However, suggesting system level changes was considered by our NADO partners as being beyond their roles and thus there was reluctance to making direct recommendations. Finding the balance between the different needs and roles of the stakeholders (athletes, practitioners and academic researchers) resulted in tentative language in some parts. Although we frame this as a potential limitation, it is also a practically relevant and useful outcome to inform future research endeavours of a similar kind. With this project, we were committed to going beyond the typical academic practice of discussing implications for anti-doping at the end of an academic research, without the input of those tasked with implemented the ideas. By working in collaboration, we have started to bridge the gap between academic research and practice. Although we encountered a number of challenges with this way of working, we were able to overcome the difficulties due to the trust and mutual respect fostered within the team.

Taken together, 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 process, NADOs unequivocally agreed that the research was valuable and athletes responded positively to the opportunity to voice their views. Feedback from NADOs, and athletes via their respective NADOs was positive. Athletes appreciated that they were asked to participate in the research, seizing the opportunity to talk freely among themselves about their frustrations, fears and hopes in relation to clean sport. The focus group transcripts offer ample evidence that athletes enjoyed learning about doping and anti-doping in different sports and countries. Future research will benefit from exploring the dynamics of CBPR with diverse stakeholder groups in order to develop practical solutions for managing role conflicts, clashing interests, and role constraints.

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 we initially set out to explore the latter further (i.e., how socially constructed meaning of 'clean' – through clean athlete identity – relates to self-image, self-esteem and individuality), it became 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 investigation of the

formation of athlete identities, and clean athlete identity specifically, through in-depth individual interviews is recommended. Primordial anti-doping education will benefit from targeted research into the stability of general values, as well as exploration of the fluidity and flexibility of value-systems in the context of uniform 'clean identity' and highly idiosyncratic 'clean performance-enhancement'.

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). In this study, we purposely focused on stakeholders of clean sport who play a crucial role in creating and fostering clean sport culture, mostly the athletes. Those who choose clean sport behaviour, independent of anti-doping interventions, have been taken for granted as being non-problematic and chiefly overlooked for too long. The meaning, motives and reasons, and the management of clean sport behaviour can only be understood through the lens of the clean athletes. Athletes who doped or incidentally committed anti-doping rule violations form different community groups with their own unique motives, norms, values and ostensibly different definitions for 'clean sport'. Therefore, further research is warranted to explore the shared views about clean sport by athletes who have been sanctioned for doping, athlete support personnel, regulatory bodies, media and fans/spectators. Exploring how athletes who act against the rules see 'clean sport' is an intriguing but different research question. Conceivably, due to the strong social stigma attached to being a 'drug cheat' (e.g., Sefiha & Reichman, 2017), accessing this community is a very challenging task. Athletes who have doped but managed to evade detection are very unlikely to come forward. Denial and self-protective moral disengagement strategies (Boardley et al., 2015; Engelberg et al., 2015; Kirby et al., 2011), as well as employment of image management strategies publicly are not uncommon among athletes who are sanctioned for anti-doping rule violation (Pöppel et al.,

2020). For those hoping to return to sport after suspension, ‘*omerta*’ rules (e.g., Bell et al., 2016; Billard et al., 2011; Whitaker et al., 2014). Bringing together athletes from these different stakeholder groups for a joint discussion could be very interesting academically but perhaps holds limited practical value. For this reason, in this study, we prioritised giving a voice to the key stakeholders of clean sport, the clean athletes, which has been long overdue.

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. We are acutely aware that leaving interesting and important themes out of this paper was inevitable. Even with this lengthy account of our work, we had to set intriguing issues aside. However, we intend to re-visit and re-analyse the data with different research questions in mind, focussing on issues which appear across all previously identified themes.

Although concerns are often raised about generalisability within CBPR, we hope the detailed nature of the result section will resonate with other elite clean athletes and enable them to make connections to their own lives (i.e., naturalistic generalisability; Smith, 2018). Furthermore, by involving community partners (i.e., NADOs and athletes) from five European countries, other anti-doping organisations and sporting bodies may be able to adapt key messages from the current study to inform their anti-doping education and promote clean sport (i.e., transferability; Smith, 2018). However, with the WADA ISE now in place, future research to support the development of 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. 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. However, it is important to note that the current study focused exclusively on clean 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.

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 potentially a strong protective influence 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 constructed phenomenon, clean identity and clean performance concept 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. The latter need to be 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 they are 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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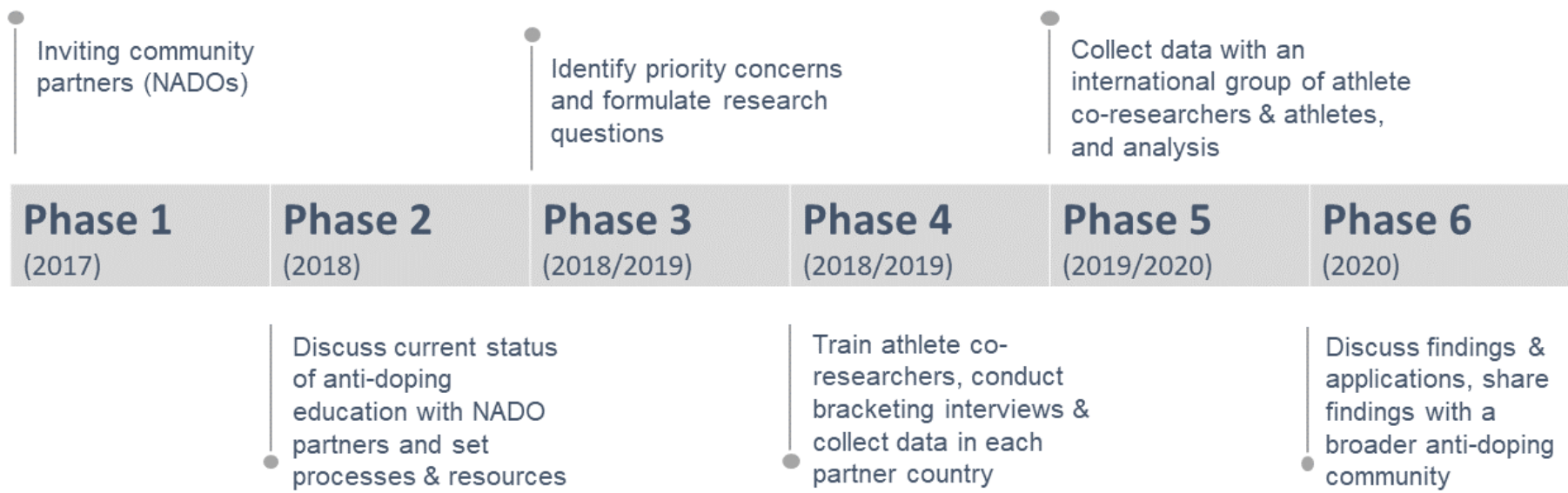


Figure 1: Timeline of the Community-Based Participatory Research process

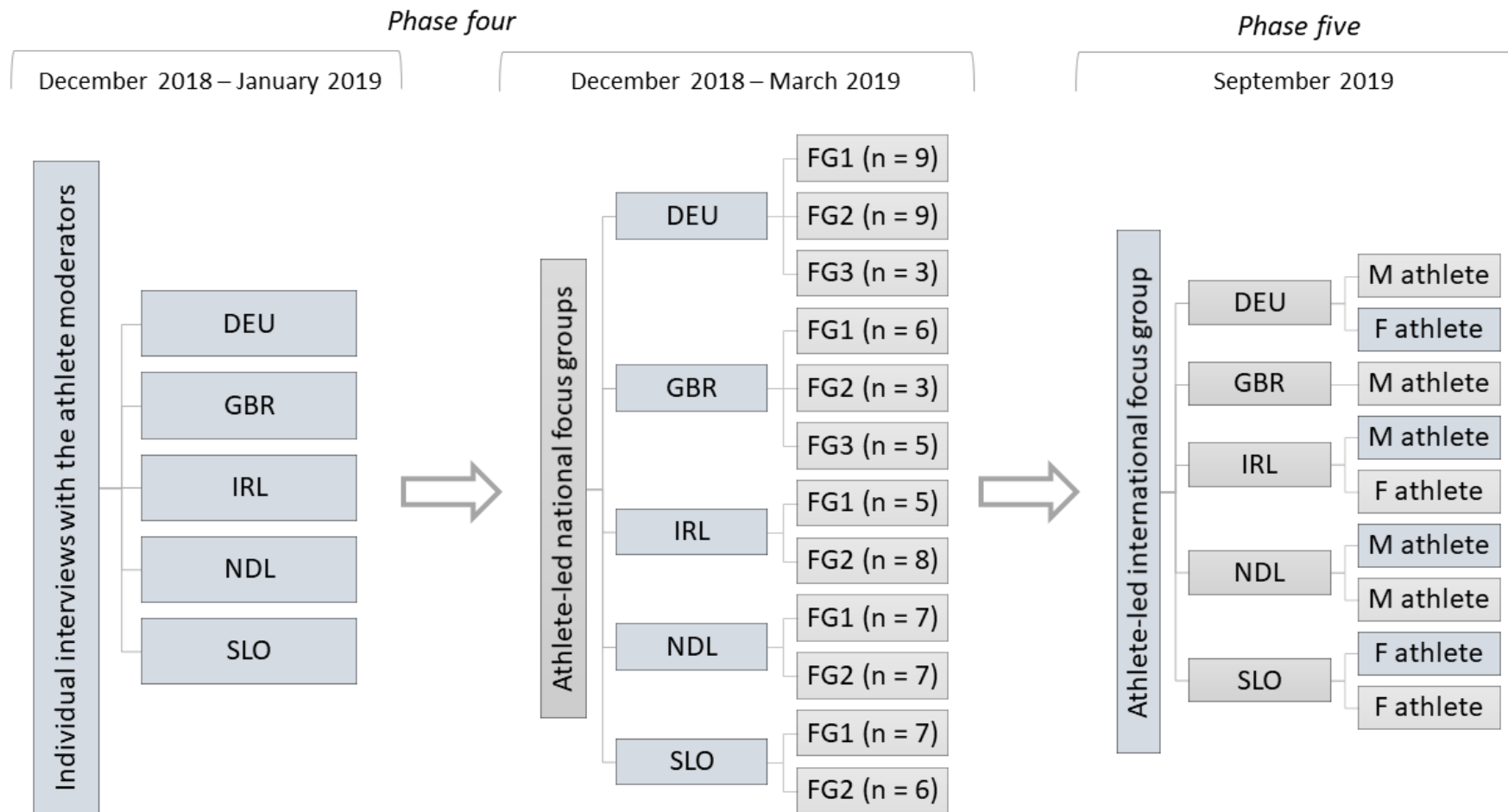


Figure 2. A visual representation of the data collection and analysis CBPR research phases.

Supplementary material 1: The Athlete Voice: Video Summary of the Key Findings

Supplementary material 2: Definitions of Overarching themes and Themes.

Research Question	Overarching Themes	Lower-order themes	Definitions
The meaning of clean in elite sport: athletes' definition of clean sport and being a clean athlete	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.
Challenges associated with being a clean athlete	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.
Challenges associated with clean sport and what can be done to ensure that sport is clean in the future	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.
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Supplementary Material 3: Thematic Map

