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# Moral, health, and aesthetic risks: performance-enhancing drug use and the culture of silence in the UK strongwoman community

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## ABSTRACT

Strength- and muscularity-based sports have a long and enduring association with performance-enhancing drugs (PEDs), most notably anabolic-androgenic steroids (AAS). Strongwoman is a strength and power-based sport with its own attendant subculture around training, nutrition, and shared values. Although extant literature has examined PED use in mainstream sports, there is a gap relating to its use in niche, subcultural sports such as strongwoman, and the voices of those choosing to use PEDs are rarely heard. Based on data from a wider auto/ethnographic study exploring strongwoman's subculture, and primarily drawing on 21 semi-structured interviews with 23 strongwoman competitors of various stages and levels of involvement in the sport, this article examines the attitudes, values, and practices surrounding PED use in the unregulated sport of strongwoman. In comparing novice, intermediate, and elite strongwoman experiences, the findings demonstrate shifting attitudes, perceptions and practices. The analysis indicates that the temporality and intensity of involvement in a sport is crucial to understanding changes relating to perceptions about moral, health, and aesthetic risks and, further, that a 'culture of silence' within a given sporting subculture is perpetuated by complex individual negotiations of risk and reward. The insights from this study have implications for other non-regulated and uncommercialised sports, particularly regarding the development of harm reduction strategies, and how these can be most effective.

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## Introduction

There is now an extensive body of literature examining perceptions of performance-enhancing drug (PED) use in mainstream sports (e.g. cycling (Palmer and Yenkey 2015), athletics (Hauw and Bilard 2012)). Research has shown that the attitudes, beliefs, and values of athletes, based on perceived benefits and risks, are central to understanding PED use (Donovan et al. 2002). Decisions are influenced by the objectives of their use, the assumed and known properties and effects of the substance considered, and the deterrence and consequences of use (Mazanov and Huybers 2010). The values, norms and ideologies of a particular sport or athletic activity provide a context in which the use of varied supplements, recreational drugs and performance enhancing drugs can be justified or rejected and resisted (Matthews and Jordan 2020). Importantly, positioning regarding both the moral and practical stand on PED use has been shown to vary over time (Andreasson and Johansson 2020).

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Donovan et al. highlight the prominence of user narratives referring to a 'cost of getting caught' (2002, 272), implying a 'moral risk' in sports where PED use is either formally prohibited or informally disapproved of. The widespread lay justification for PED prohibition rests on ideas of 'natural' ability contrasted with 'artificial' performance but this often fails to consider more nuanced intersections of biology, morality and sporting ideologies (Loland 2018). Similarly, Kirkwood (2014) suggests that the possibility of PED use raises the question 'what is cheating?'. Kirkwood posits that the 'dominant model' of cheating is one of 'non-cooperation through rule violation' yet also acknowledges another 'shared notion' that cheating is 'wrong' because it 'creates unfairness in the activity' (2014, 58). While these moral dilemmas are central to media coverage of high-profile PED or 'doping' cases, it can be argued that risks to health are being underappreciated in favour of morality narratives around fairness and competition (Pope et al. 2014).

Despite the extensive research and media coverage surrounding the morality of PED use in mainstream sports, there has been limited engagement with PED use in both women's sports and in niche, subcultural and unregulated sports (e.g. bodybuilding, strongwoman). Even in mainstream sports the voices of those choosing to use PEDs are rarely heard (Pappa and Kennedy 2013), and it is reasonable to assume that this might be even more pronounced for female athletes in sports more peripheral to mainstream athletic culture. This article focuses on women's participation and views on PED use within the niche, sub-cultural and unregulated sport of strongwoman, a strength and power-based sport. The extremes of commitment exhibited in many specialist athletic fields can manifest in a form of over-conformity to the goals of athletic success, making the use of punishing training regimes and, potentially, the use of prohibited substances, justifiable (Coker-Cranney et al. 2018). Further, given that social processes shape an individual's introduction to and continuation of PED use (Boardley, Grix, and Harkin 2015), this article responds to calls for more research on PED use in such arenas, which are characterised by intense social attachment.

PEDs, most notably anabolic-androgenic steroids (AAS) – or 'steroids', as they are colloquially known (Huang and Basaria 2018) – have an enduring and problematic association with strength- and muscularity-based sports, and research has established that women experience AAS use differently to men (Piatkowski et al. 2023). Whilst AAS are used to increase strength, stamina, and muscle size, they are also associated with a range of health risks including cardiovascular effects and adverse psychological changes (Hoffman and Nicholas 2006). Other 'virilising' effects, such as receding hairlines, facial hair growth and deepening of the voice (Ainsworth, Shelley, and Petrocozi 2018; Ainsworth, Thrower, and Petrocozi 2022) pose a particular aesthetic risk for female users. AAS-using women have thus found them difficult to process, with negative impacts on self-esteem, social life, body image and sexual function, both during and after use (Ainsworth, Thrower, and Petrocozi 2022; Havnes et al. 2021). The use of AAS among men and women comes alongside some level of acceptance of such risk and harm (Piatkowski and Dunn 2024), and hence recent research has focused on how policy and practice regarding harm reduction can be further developed (e.g. Bonnacaze, O'Connor, and Burns 2021; Piatkowski and Dunn 2024).

Literature on bodybuilding has previously highlighted a lack of studies on women taking steroids in comparison to men (e.g. Bunsell 2013; Grogan et al. 2004; L. F. Monaghan 2002), due to the associated stigma for women, equation with masculinity, and higher prevalence of use in men (Sagoe et al. 2014). Bunsell's (2013) study suggested men's steroid use was a method of enhancing natural testosterone levels, whereas for women it was seen as putting something unnatural into their body (see also Klein 1993). As Johnston (1996, 336) observes, 'the discourses around steroid use are sex-specific', with male use framed as accentuating 'natural' masculine qualities but that of women seen as troubling in how it 'disrupts the sexed body dichotomy'. The associated stigma contributes to a reluctance of women who use PEDs to speak openly and collectively about it, encouraging an environment in which there is a lack of knowledge and a 'veil of secrecy' (Bunsell 2013, 88), or a 'code of silence' (Richardson and Antonopoulos 2019, 2). In this strongwoman context, we refer to a 'culture of silence', a term used by sport scholars in other circumstances, e.g. homophobia in football (Mitchell 2012).

There is, therefore, a clear and important gendering of the rewards and risks associated with PED use in strength-based sports. Despite this, a wider cultural shift in the perceived female body ideal from skinny or slim to muscular and strong (Tiggemann and Zaccardo 2018) has contributed to an increased prevalence of AAS use in women across a variety of fitness disciplines (Andreasson and Johansson 2019).

### ***Strongwoman and PED use***

Strongwoman tests competitors' physical capacity (Shilling and Bunsell 2014), combining static tests of strength (e.g. deadlift) with dynamic tests of power, speed, and endurance (e.g. farmers walk). Strongwoman has its own subculture of training and community practices and has in recent years experienced a significant expansion aligned with a wider cultural shift towards acceptance of female strength, power, and muscularity (Newman 2020). Despite this, strongwoman has no official governing body. At novice level, competitions are organised by gym owners, usually with an open entry policy. Higher level competitions are typically organised by a promoter and entry controlled by invitation or qualification. Most competitions are untested with no formal rules against PED use, including the titles of England's and Britain's Strongest Woman. A 'natural' federation prohibiting PED use does exist, albeit with smaller participation numbers. Despite the enduring and problematic association of AAS with strength- and muscularity-based sports (Huang and Basaria 2018) and their prominent use by strength athletes, bodybuilders, and increasingly general gym-goers (Ainsworth, Shelley, and Petrocozi 2018), there has yet to be any sustained empirical examination of the attitudes to and use of AAS within strongwoman.

This study aims to expand understandings of women's use of PEDs, and use in non-regulated and uncommercialised sport, by exploring their use in the UK strongwoman community, asking the following research questions: what are the views of PED use among strongwomen participants? Do these views vary in relation to the different stages of the strongwoman career (novice, intermediate, and elite)? Organising the analysis using Max Weber's 'ideal type' approach (Runciman 1978) to build ideal types based on the journeys of strongwoman participants at the novice, intermediate, and elite level acknowledges an explicit temporal dimension and allows for exploration of the shifting and changing perceptions of, and attitudes towards, PED use at various stages and levels of the strongwoman experience. This is a necessary task, not least because the extant literature focuses almost exclusively on the elite level (e.g. Hauw and Bilard 2012; Palmer and Yenkey 2015), but also due to its potential use and application for harm reduction strategies and how these could differ or be most effective at various stages of involvement. This exploration of PED use among strongwomen is situated within the context of a growing sport at a crucial timepoint regarding its future development and formalisation. As an emerging but still largely unregulated and uncommercialised sport, the analysis aims to add a unique contribution to existing literature on PED use in sport. Critically, it corrects the skew towards mainstream sports, foregrounding the experiences and values negotiated in a subcultural sport, which also has implications for other non-regulated and uncommercialised sports.

## **Methodology and research methods**

### ***Methodological approach***

The research informing this article took an auto/ethnographic approach to explore and investigate the subculture of strongwoman in the UK (see Newman 2020), combining elements of both a traditional ethnographic study in which others are the subject of inquiry, and an autoethnographic approach in which researcher personal experiences are the subject of inquiry. Underpinned by an interpretivist epistemological perspective, accepting that the researcher is inseparably a part of what and who is being studied (Smith 1989), the combined approach was

taken with acknowledgement and acceptance of the first author's own pre-existing status within the culture, having trained and competed in strongwoman for three years prior to the formal fieldwork period.

In this study, immersive fieldwork was conducted by the first author for 1 year. However, their pre-existing relationship with the culture differed from examples of traditional ethnographic research where the researcher enters a community or culture they are not a part of, immerses themselves for a period of time, and then leaves (O'Reilly 2012). The first author's own experiences were thus embraced to advance further understanding of the culture and the experiences of those within it. However, it also remained important to explore the stories and experiences of others. It was felt that the first author's story could not alone provide a full exploration of all the nuances of the strongwoman culture or the diversity of experiences within it. A range of different women are involved in strongwoman, each with varying reasons, motivations and journeys that led them to find their place in the community.

The research therefore comprised of the co-construction of knowledge from their own and others' experiences, a two-way dyadic process allowing for interactive exchanges and joint reflection to produce insight and develop understandings beyond that possible had either been utilised in isolation. Sparkes and Smith (2009) describe this as an interdependency between the knower and the known; the 'findings' the creation of a process of interaction between the two. We labelled this approach as 'auto/ethnographic', the slash deliberately used to signify the combination of these methods.

### *Research methods*

Within this approach, some topics were driven by the first author's own experience and reflection, whilst others arose from observations of or interactions with other people, prompting further reflection. PEDs was an example of the latter, with the (later explored) culture of silence contributing to the first author's own process of discovery through the research process, including their own realisation that PED use was more prevalent than previously thought. The auto/ethnographic approach, therefore, was crucial in exploring the topic, with the first author's insider status integral to the creation of knowledge around PEDs and enabling the level of trust required to permit further discussion.

Semi-structured interviews were conducted with 23 strongwomen (19 one-to-one and two joint interviews) towards the latter half of the formal fieldwork period and were built on earlier ethnographic conversations and observations, providing further opportunity for discussion around PEDs. Whilst insights from the wider auto/ethnographic research are used to contextualise the interview data, the interviews formed the largest source of data related to PED use due to the prevailing silence around the topic unless specifically addressed. Interviewees ranged in age from 25 to 52 and in experience from novice to elite. Interviews were conducted in-person by the first author and ranged between 35 and 90 min in length. They were audio-recorded, and transcribed verbatim. Key topics in the interview guide focused on participants' journeys into strongwoman, the day-to-day experience (training, competition, and nutrition practices) and bodily changes. The final question asked specifically about PEDs: 'what are your thoughts on performance-enhancing drugs in strongwoman?', purposefully placed at the end, acknowledging the need to approach the topic thoughtfully and evoke more open, honest answers.

The interviews were conducted via an autoethnographic reflexive dyadic approach (Ellis and Leigh 2003), where the interviewer also shares personal experience about the topic. This recognised the first author's insider status and pre-existing relationships with all but one interviewee, allowing for open, honest, and trusting discussion of PED perceptions, attitudes, and usage. The joint interviews took the form of interactive conversations, a form of collaborative interview in which each participant is given space to share their story (Ellis and Leigh 2003).

## Data analysis

The analysis of interview data informing this article was part of a wider, iterative-inductive data analysis approach that aimed to build a broader picture of findings interlinking the different data forms from the wider auto/ethnographic study (interviews, fieldnotes, online data). The co-construction of knowledge between the first author and participants meant the analysis was ongoing and iterative, continually informed by first author reflection and learnings throughout the research. The phases of the research process (i.e. data collection, analysis, and writing up) were thus not seen as discrete phases, but inextricably linked (O'Reilly 2012). This approach centred the active role of the researcher (first author) and included routine reflexive practice around their situatedness (as a cultural insider) within the research and the effect of this on the setting, the people being studied, the questions asked, data being collected and its interpretation (Berger 2015). This aligned with the underpinning epistemological and ontological perspective which viewed the researcher as inseparable from knowledge production (Braun and Clarke 2019). The wider auto/ethnographic work thus informed the design of the interview topic guide, and the analysis and interpretation of findings. The fluid, open, exploratory flexible, and iterative reflexive thematic approach to analysing the interview transcripts formed part of an ongoing cyclical or spiral-like process of ongoing learning, reflection and interpretation with continued refinement and development of core analytical concepts, patterns of meaning and themes, whilst moving between data forms. Hence, although the core analytical concepts reported and utilised in the findings herein draw predominantly on interview data, they are also a product of the broader auto/ethnographic research.

## Anonymity and ideal types

The research process highlighted the sensitivity of the topic of PEDs within the strongwoman subculture and accentuated the importance of protecting participant anonymity within the context of the small, close-knit community in the UK. Both in the present article and in the wider auto/ethnographic study (Newman 2020), the analysis is structured around three 'ideal types': 'Nelly the novice', 'Isobel the intermediate' and 'Ella the elite'. These types were constructed using key themes and core concepts identified through the data analysis process, based on the amalgamation of stories and experiences of a range of participants. The motivation and purpose of this three-fold typology is as follows. First, given the small community, participants were likely to know each other and be familiar enough with their stories or backgrounds to make protecting research participants' anonymity impossible, even with pseudonyms used. Organising findings around three composite characters, inspired by Weber's 'ideal types' (Runciman 1978), represents a conceptual tool to understand, and analyse, the lived experiences of participants, an approach used effectively in other studies (Howe and Morris 2009; Klein 1993). Allowing participants' experiences to be presented without risking their anonymity was particularly important given the sensitive topic and potential implications of being a known PED user (e.g. stigma, loss of sponsorship). Second, the three ideal types explore incremental changes in attitudes and perceptions as a participant becomes more involved in and committed to the sport and thus highlight the temporal dimension of the analysis (i.e. that different things matter at different times). This represents a novel departure from previous constructions of ideal types in the study of sports and apprehends the temporal distinction between athletes who are at different stages of their sports journeys and careers which, as we shall see, is highly salient for the analysis of attitudes towards PED use.

We acknowledge that the use of ideal types as a conceptual tool involves an 'analytical construct' (Hammersley and Atkinson 2007) that does not allow space to portray all nuance of experiences. It neither does nor is intended to correspond to every detail in all observed cases. Whilst progression from novice to intermediate to elite occurred for some, it is important to recognise that not all strongwomen progress through all stages, either through choice, ability, or personal circumstances. The three ideal types are formulated as short, constructed narratives of

different sporting career stages, used as a tool to present the differences and complex negotiations of moral, aesthetic and health considerations at various stages of involvement and commitment.

## Findings

The findings draw primarily on interviews with strongwomen participants, with their anonymised views and experiences taking the form of three narrative ideal types. The analysis also presents and discusses interview quotes which illustrate discussions about PED use in the strongwoman community, and is additionally informed by the first author's auto/ethnographic research. The findings demonstrate shifting perceptions of, and attitudes towards, PED use across the novice, intermediate, and elite strongwoman experiences, and emphasise the importance of understanding transitions between moral positions regarding PED use (Andreasson and Johansson 2020).

These three temporal phases are presented in turn, via the three ideal types which represent short, constructed narratives, that, given participants' level of involvement in the sport, situate the combination of concerns and values held in relation to PEDs. These shifting and changing perceptions predominantly centre around concepts of risk. For each ideal type we focus on the interplay of moral, health, and aesthetic risks and the culture of silence that underpins them. Whilst gender is not the main axis of analysis, we discuss gendered implications as relevant and important to the exploration of the three types of risk. Each ideal type is followed by an analysis of this interplay of risk associated with decisions about PED use, and attitudes towards others' usage.

The following constructed narrative depicts the first ideal type (Nelly the Novice) and the key themes and concepts underpinning the novice experience of and attitude towards PEDs within this phase:

### *Nelly the Novice<sup>1</sup> Strongwoman: morality and health as temporal concerns*

Nelly the novice has not directly encountered PEDs during her time in strongwoman so far. Beside the occasional speculative remark from someone at her gym about someone else who competes, she has not heard them spoken of, and certainly has not heard any strongwoman openly discuss their use. It does not occur to Nelly that PEDs could be prevalent in this sport, she views them as something quite distant that she cannot link to anyone she knows or knows of in the sport. When family and friends outside of strongwoman raise the subject, expressing concern that she may also consider PED use, Nelly dismisses any suggestion of it. She's certain that they're conflating strongwoman with bodybuilding, as is common for those not involved. 'Maybe in bodybuilding', she says, 'but not strongwoman, it's not like that'.

Nelly does not see PEDs as something she would ever consider using. She views them as a threat to health – particularly as something that could have significant impact on fertility – and a threat to feminine appearance, regarding what she considers the unwanted side effects such as facial hair growth and deepening of the voice. Nelly is also vehemently against the use of PEDs in the interest of fairness. She does not believe that it is fair for athletes using PEDs to compete alongside those who are not, as she does not deem this a level playing field. She has no reason to believe they are, but thinks that if anyone is using PEDs, they should be open and honest about it. This would then help other strongwomen to not feel inadequate or incapable due to unfair comparisons or skewed perceptions of what level of strength is physically possible as a natural competitor.

Nelly's attitudes to PEDs align with her reasons for competing in strongwoman and perceptions of the sport priding itself on its inclusivity and egalitarianism (Newman 2020). Being motivated by health and social benefits of participation, rather than performance and competition success, for Nelly it does not make sense that a novice strongwoman would consider using PEDs. However, Nelly's lack of awareness and knowledge of PED use within the sport reflects the culture of silence that appears embedded, like the 'veil of secrecy' found in female bodybuilding (Bunsell 2013). This

silence means PED use is not ‘common knowledge’ amongst newcomers to the sport and, as we shall see, only gradually reveals itself as participants become more immersed.

### *Moral risks – objection to PED use based on fairness*

Despite there being no PED regulations, the concept of fairness was addressed by all strong-women interviewed. These conversations captured a wide range of opinions, with a noticeable shift in perspective between those just starting out and those further immersed. Central to the opinions of many novice strongwomen was the notion of a ‘level playing field’, with PED use positioned as a transgression of the avowed egalitarian ethos of the sport which many novices found appealing. PED use was framed as a moral risk which novices were unwilling to take. For example, one said ‘I don’t like it or don’t agree with it. But I don’t agree with anyone ... not cheating but having a helping hand’. This participant hesitates to describe PED use as ‘cheating’ in this context, but the phrase ‘helping hand’ suggests a perspective aligned with widespread justification for PED prohibition as ‘artificial’ performance (Loland 2018). Similarly, another said, ‘If you’re competing against a natural athlete and you’re roided up, [taking steroids] that puts you at a massively unfair advantage’. The juxtaposition between a ‘natural’ athlete (someone who does not use PEDs) and a ‘roided up’ athlete demonstrates that PED use is considered cheating by this participant. These perspectives position PED use as the single, defining factor in determining a level playing field. Another though acknowledged the complexity of the level playing field notion and the difficulty of determining what, if anything, could be considered fair given the huge variation in participants’ physical capacities. She reflected that:

no one’s ever on a level playing field because you’re taller than me, I’m short, so when we do a medley, I’m always going to have a disadvantage, but when we do a squat, I’m going to have an advantage because I’m shorter and closer to the floor ... But when you add things that enhance muscles, strength, endurance, and I know that they’re not necessarily illegal but when you add things that are enhanced like that you take away that level playing field.

Here, PED use is positioned as one determinant of many that complicate the existence of a level playing field, given other naturally occurring variations, such as height. This quote suggests that PEDs have different implications for fairness because they produce athlete variations that are unnatural and enhance physical attributes most crucial to performance. This perspective poses an interesting question about the place of other less-vilified substances regularly used by strength-sport athletes, such as creatine (Kreider et al. 2017), and assistive equipment such as lifting belts and straps. It could be argued that these are also non-naturally occurring performance aids, however they are more visible or ‘front stage’ (Goffman 1959), whereas PED use can be hidden or kept ‘backstage’. The definition of ‘natural’ and the boundary between acceptable and unacceptable is hence blurred and this contributes to the ‘moral dilemma’ of PED use.

### *Health risks – objection to PED use based on personal danger*

As described in Nelly’s narrative, for the novice strongwomen potential performance benefits of PED use did not outweigh the potential risks to health. For example, one strongwoman said:

I would never do it because I think at the end of the day, I know what that shit does to you. It’s pretty nasty shit and ... do you really want that kind of stuff in your body? For me personally, eurgh, no thank you ... I would never take them, I have no desire to. I’m just too conscious of all the other shit that does to your body.

Importantly, such comments are expressed with certainty, with little or no suggestion that this could change. Further, as relative newcomers to the sport with limited first-hand experience of PEDs, perceptions of risk are derived from high-profile accounts in mainstream media and other sources. This strongwoman described one such account when discussing the health risks of PED use:

'It's dangerous. What was that guy? The big bodybuilder that died last year, the American dude? They were all like nah it isn't drugs . . . of course it is. You can't look like that and not take stuff . . . and put a massive strain on the heart'.

Here, the main concern about health risks is the personal dangers, and ultimately death. Overall, the novice strongwoman view is largely characterised by limited knowledge of the existence and details of PED use within the sport, contributed to by the culture of silence which permeates such usage, and an anti-PED perspective based on the perceived moral and health risks. Beyond health risks, which align with common motives for novice participation in strongwoman where health takes priority over performance-enhancement (Newman 2020), aesthetic risks were also alluded to but not prevalent in the thoughts and perspectives at this stage. It seems the moral and health risks of PEDs were deemed so significant that their potential use was disregarded before consideration was given to impact on appearance. This absence of consideration of aesthetic risks differed, however, for the intermediate and elite categories, as the analysis will now consider.

### *Isobel the Intermediate<sup>2</sup> strongwoman: dilemma and ambivalence as temporal concern*

Isobel has now progressed beyond novice competitions to her first regional qualifier and has met some more accomplished strongwomen. She has full admiration for them, but the more she becomes involved, the more she thinks about PEDs. Isobel begins to quietly question others – 'Is she? Isn't she? She's super strong and her shoulders are huge, but she doesn't look like a man, and her voice isn't THAT low, is it?' She has noticed the occasional reference to PED use and now doubts her previous thoughts that these practices do not occur in strongwoman.

Although Isobel has never heard anyone admit to using PEDs, she is beginning to think that usage is probably more common than she first believed. She is re-thinking her own stance and feels conflicted. She previously viewed all PED use as deeply unfair, and it is hard to shed these negative perceptions. However, in her recent enthusiasm to be the strongest she can, Isobel is starting to see how the temptation might occur. Considering her inconsistency of training and nutrition though, Isobel knows she has more potential to fulfil naturally first. Occasionally, she feels a strong desire for this 'magic' substance that might give her the added strength she is craving, mostly when perceiving herself as missing out to others who seem to have 'an edge'.

These feelings are, however, superseded by the reasoning and remembrance that she is still only just starting out. Besides, she knows very little about the impact of steroids – on health, appearance, or performance – and she doesn't know who to approach for help or how to obtain them. Isobel has noticed a distinct shift in her attitudes and approach to PEDs, though. The drive to be stronger, she reflects, has triggered a temptation to cross a line she never thought she would.

### *Moral risks of PED use – dilemma and ambivalence*

For those intermediate strongwomen who maintained a strong anti-PED stance as they progressed, morality and fairness were still central to their perspective. Like the novices, many intermediates framed PED use as undermining the achievements of 'natural' athletes or those who succeed 'on their own' and as disrupting a 'level' playing field. For some, this perspective is strong and unwavering:

'I kind of can't put into words just how much I dislike it, I just don't . . . I don't think it's fair . . . If someone takes performance enhancing drugs and can be the best in the world, and I found out they take those, I have no respect for that person whatsoever. Because you haven't done it solely as you. So, I really don't like it'.

The anger and frustration expressed by this intermediate was clear. However, this phase was characterised by a wider range of attitudes towards PED use than found among either novice or elite, perhaps symptomatic of a wider grapple with increasing commitment to the sport, including how and which ways to conform with behaviours required for athletic success (Coker-Cranney et al. 2018). Indeed, several intermediate competitors' interviews differed from the experiences and

attitudes Isobel's character portrays. Notably, several intermediates maintained a strong anti-PED stance even while citing elite level individuals as inspiration, seemingly unaware of those idols' PED usage.

A top-down culture of silence was therefore seen to affect those competing at an intermediate level through a potential danger that elite competitors' covert PED use portrayed unachievable results and false hopes of natural achievements. This left those striving to achieve the highest standards without PEDs, through training hard and controlling nutrition, subject to harmful negative self-perception, reinforcing a belief that they 'are not good enough'. This and similar conversations with competitors are concerning because of the clear incongruity between their opinions on PED use, and their beliefs about the athletes they aspired to most. This incongruity exemplifies the culture of silence and can exacerbate the impact of unrealistic expectations set by some strongwomen for themselves in pursuit of higher standards often (unknowingly to them) aided by PED use. It also suggests that temporality, or use of stages/levels of engagement in a sport, are crucial in understanding perceptions and attitudes towards PED use.

However, some intermediate strongwomen did describe their speculation regarding others' PED use, such as this participant:

'I have to admit when I went to the regional qualifiers, I was thinking to myself I wonder if I'm up against people who are and looked around and thought, *probably*. You know, never accused anyone of anything but just thinking yeah if you're right at the top end of this you probably are, aren't you?'

Although this participant is not saying whether she accepts PED use at her level of the sport, the speculation she articulates in the quote allows for degrees of doubt which may open for an increasingly pragmatic, and less moralising, view of PED use. Within a more open or questioning view, both the temptations and risks became more palatable as the intermediates moved beyond the initial phases of engagement.

### *Health risks from PED use – ambivalence and consideration*

There was a distinct shift for some intermediate strongwomen away from the priority of health over performance described at the novice stage. As in Isobel's narrative, some began to view the health risks as something to be 'weighed up' alongside potential benefits to performance. Thus, the emerging ambivalence regarding health over performance had shifted to a point at which, for some at least, the two were given more equal importance and consideration. This quote demonstrates an example of this measured consideration, which implies a rational decision and, as such, a move away from the moral certainties that characterised the novice perspective:

'It's personal preference and you weighing up the balance of the side effects and what it does to your body... I know girls who use it, and it is what it is, I don't necessarily see it as a bad thing, or a disadvantage, everyone's got a choice and it's a choice that you make ... it's not something I've done yet, but not something that I'm saying I'm never ever going to do, it's just personal preference'.

Here, any concerns about fairness and a level playing field are notably absent, and PED use has no moral connotations, which contrasts starkly with the more dichotomous views of novice participants discussed earlier. Moreover, this interviewee elaborated on her emphasis on 'preference' by suggesting that information was central to this, adding 'I'd like more information on it and the risks and all that kind of stuff'. Existing research has shown that medical orthodoxy is challenged by 'lay' knowledge about the benefits and risks of AAS use (L. Monaghan 1999). Similarly, intermediate strongwomen in this study suggested that networks 'on the ground' were key to the sharing of such lay knowledge and the main source of information on PEDs in this context.

Overall, the intermediate strongwoman experiences of PEDs are characterised by dilemma and ambivalence, rather than dichotomous categories such as fair versus unfair, good versus bad. At the intermediate level, strongwomen appear to make numerous decisions regarding their future in the sport and its place in their lives. Decisions regarding PED use are one dimension of this, although

arguably the one that involves the most significant, and potentially harmful, consequences. As such, it seems that any harm reduction strategies would need to be implemented at, or even before, this stage. Amongst the diversity of attitudes and decisions at this stage are those who remain staunchly anti-PED, those who were anti-PED but now find them intriguing, and those ambivalent to others' use but would not consider it themselves. There are also those actively looking to pursue it, and those torn between the perceived consequences on their health and performance. There is a sense of finality in this decision-making process, as though the decision to take PEDs is one that once taken cannot be reversed – that your status as a 'clean' or 'natural' athlete will be forever tainted, even if use is discontinued.

### *Ella the Elite<sup>3</sup> Strongwoman: pragmatic acceptance and performance enhancement as choice within gendered culture of silence*

Ella the elite strongwoman is a user of PEDs, believing you *must* make that choice to compete at the highest level. She says most at the elite level have made that choice, so if you don't, you *will* lose. If you want to win, and be the best, you must take PEDs. Ella doesn't view PED use as cheating. To her, the sport is untested and there are no rules against it, and therefore no rules are broken by their use.

However, Ella also thinks some make the decision to start using PEDs too early in their strongwoman career, or at an inappropriate level. She feels there is no need to take PEDs when competing at lower levels, where competitors should reach their highest level of strength without the help of PEDs. Ella acknowledges the gravity of the decision, feeling it should only be done at the point where it is necessary to achieve more, or win. She knows that steroid/testosterone based PEDs can have significant impact on female physiology beyond helping with strength and muscle growth.

Ella notes that because of the reluctance of people, particularly women, to talk about steroids, there is a significant lack of information available for those looking to use them. She has confided in other strongwomen that she trusts and observes that many will go to a man for advice, like she initially did – usually a male coach, strength athlete or user at their own gym, who they presume will have the knowledge required. While she understands the hesitancy, Ella feels that strongwomen do not communicate openly enough about PEDs between themselves, and that they all could benefit from more open communication.

### *Moral risks – pragmatic acceptance of PED use to enhance performance and success*

In Ella's narrative, the elite perspective differs greatly from that of the novice. It is evident that performance (desire for success, rather than financial reward) has overtaken morality or health concerns as a priority when considering PED use. Progression to this stage means that once unthinkable compromises to not just health and safety (Coker-Cranney et al. 2018) but also to moral certainty have been made. Critically, the ethos of fairness has been rationalised now they have reached elite levels where performance has become priority. A more pragmatic approach has taken root, where PED use is not banned and is therefore not cheating but a logical, if significant, choice in the pursuit of performance excellence. This is demonstrated in the following quote by an interviewee who emphasises the need to enhance performance via PED use:

'If you're going to compete at that level it's going to be something that you need to do . . . if you go into it natural at that level you are going to lose because these women are helped . . . I was once asked if I thought it was cheating and my answer was no, I don't think it is cheating. It's an untested sport'.

Similarly, the fact that PEDs are not banned was the basis for a similar perspective on fairness described by this elite competitor:

'I feel that obviously if people are competing in a tested federation or something then they shouldn't do it. Because for your own moral standard. But if you're competing in an untested something or other then you have the choice and the information and the education to make an educated decision, it's completely up to you'.

Such stances, which simultaneously individualise the decision to use PEDs and attribute it to a structural feature of the sport as unregulated and untested, are at odds with the many novice and intermediate strongwomen who were anti-PEDs. For most novices and many intermediates, fairness was associated with and derived from the narrative that surrounds PED use in mainstream sport and media, where those found using PEDs are cast as 'drugs cheats' (e.g. Ingle 2016; Magdalinski 2000). At elite level, however, a different range of considerations and far wider acceptance of PED use indicate the complex and contested nature of defining 'what is cheating?' (Kirkwood 2014). The decision to use prohibited PEDs is morally complex and has been shown to involve various mechanisms for disengaging from moral positions which would previously render the choice to use morally unjustifiable (Boardley, Grix, and Harkin 2015).

### *Negotiating aesthetic risks of PED use*

In conversations with elite strongwomen, health risks were only raised in terms of how they could be mitigated and avoided once in possession of correct and reliable information. Discussion tended instead to focus on aesthetic risk, particularly in relation to gender. As they did not perceive PED use in strongwoman as cheating, the stigma surrounding the impact of PED use on gendered appearance emerged as an important factor driving the culture of silence. This elite strongwoman suggested that previous examples of strongwomen experiencing undesirable physiological changes had created a stigma around women's PED use:

'There's much more known about things to help you with being strong that don't turn you into a guy and that's what I think the biggest thing was then, people didn't maybe know what was going to happen, and then you could see it and it wasn't nice ... I think it comes from the stigma attached to it. First of all, you've got women lifting weights and people are already freaking out about that, so then if you're going to be like oh, we've got women lifting weights and taking steroids then this is what she's going to look like, and you see images of the past of people and it's just not like that'.

This suggests that female athletes who are using PEDs are now trying to distance themselves from the aesthetic risks that others in the past had experienced because of the amount, or type, of steroids they had used. Today, they can use new knowledge that enables a safer use of PEDs which 'help you with being strong' without 'turn[ing] you into a guy'. This is reiterated by another elite strongwoman:

'If you take these in the wrong way, or something goes wrong with it, you are essentially going to look like a man, and that's not what most of us are going for. I think that stigma around it is what makes it such a taboo subject because there's the potential for you to look a way you don't want to look and sound a way you don't want to sound'.

Their description of PEDs and the impact to gendered appearance portrays a balancing act between achieving performance benefits whilst limiting the aesthetic risk of gendered changes associated with maleness and masculinity (e.g. voice deepening, facial hair growth). Echoing Bunsell's (2013) ethnographic study of female bodybuilders, the implied ramifications of failing to retain this balance were strongly perceived as negative, both in relation to personal desires for their aesthetic, and the social stigma that exists for women who 'look like men'.

However, the decision to use PEDs for performance enhancement may also indicate a strategic choice to use the lack of regulation as a 'permission' to use PEDs despite potential risks to hegemonic femininity. As Ella's narrative depicts, strongwomen often seek information from men, indicating a dominance of men's voices on the subject, which could be blocking the development of a women's code of practice (Henning and Andreasson 2019). Those who are unable to obtain correct information may be liable to experiencing unwanted, irreversible changes to their body and/or external appearance.

## Concluding thoughts

This study aimed to expand understandings of women's use of PEDs by exploring their use in the UK strongwoman community. It did this using ideal types based on three stages in the journeys and careers of strongwoman participants: the novice, intermediate, and elite level. This follows an explicit temporal dimension, characterised by and revealing the shifting and changing perceptions of, and attitudes towards, PED use at different stages of engagement. The experiences of strongwomen in this study regarding PED use show a great diversity of perspectives and opinions. Rather than any fixed attitude or ethos, this diversity is related to how perceptions of moral, health, and aesthetic risks shift and change across the strongwoman journey or career, demonstrating a clear link to the temporal stages of sporting journeys and careers.

While a culture of silence is evident throughout the strongwoman experience, like that identified in related research (e.g. Bunsell 2013; Richardson and Antonopoulos 2019), this is a silence from the top down. At the novice stage, characterised by certainty and naivety, moral and health risks are the main concerns, with a clear understanding of PED use as objectionable due to a perceived threat to fairness. At the intermediate stage, the shift to moral ambivalence and some tentative acceptance is key, but some continue to emphasise PED use as 'undermining' and not fair towards natural athletes. Finally, in the elite stage, benefits to performance outweigh risks to morality, health and aesthetics, and PED use is pragmatically accepted as a strategic, permissible choice in an unregulated, untested sport. For elite participants, notions of fairness and a level playing field are no longer a concern. This temporal analysis is a valuable contribution to extant literature focusing on elite sporting cultures in which the stakes are very high (e.g. Palmer and Yenkey 2015). The moral complexity surrounding PED use (Boardley, Grix, and Harkin 2015) is brought to the fore through this analysis of different levels and intensities of involvement in a particular athletic subculture. It demonstrates how the complex decision-making and framing processes shift and change over time, adding to understanding of PED use not just for strongwomen, but for sport more broadly.

Furthermore, this temporal analysis of PED use has wider implications for other non-regulated sports, particularly in its potential practical application regarding harm reduction strategies, the decision-making process, and identifying how and when these strategies could be most effective, considering the differing perspectives at various stages of involvement. The findings suggest that harm reduction strategies or interventions need to be implemented early, preferably at novice and/or intermediate levels, as the intermediate stage is where key decisions regarding PED use appear likely to be made. Such interventions ought to work with and within, rather than against, the social processes (Boardley, Grix, and Harkin 2015) through which an individual immerses themselves into an intensive competitive culture where the use of PEDs becomes morally permissible. This finding also, through highlighting women's perceptions of the health and aesthetic risks, reiterates the importance of recognising the unique needs and experiences of women in the development of harm evaluation strategies, adding to previous research around AAS use and harm reduction (Piatkowski and Dunn 2024) suggesting that a focus on substance literacy and stigma management is crucial (Piatkowski et al. 2024).

When sports are unregulated, the question becomes who should be responsible for harm reduction strategies? There is thus scope for future research comparing attitudes and strategies of PED use and control in sports with established institutional governance and those with a more sub-cultural ethos. Such research could explore the potential forms that governance structures, regulatory frameworks and harm reduction strategies can take in non-regulated, non-governed sport, expanding on existing literature exploring the role of 'drug coaches' (experienced members of the community) and peer-driven support networks (Gibbs, Cox, and Turnock 2022; Piatkowski and Dunn 2024), as well as wider health professionals (van de Ven, Boardley, and Chandler 2022), in promoting harm reduction measures.

The findings of this research contribute an important temporal understanding to the literature examining the use of, and attitudes towards, performance-enhancing drugs in competitive sport,

as well as that exploring potential harm reduction strategies. Rather than supporting fixed categories of use(r) and non-use(r), the analysis emphasises transitions made along a path into PED use (Andreasson and Johansson 2020). It does this through a rare chance to analyse the moral narratives of participants in a niche sport including those who use PEDs, as well as those who assume they never will (Pappa and Kennedy 2013). It provides an original contribution to the study of AAS use in sport by exploring the temporal and shifting nature of attitudes to PED use among strongwomen across different stages of their sporting journey, echoing other studies in which moral certainty becomes blurred with competing concerns and pragmatic compromises (Coker-Cranney et al. 2018). The differing and conflicting perspectives add an important contribution to wider discussions regarding morality (e.g. Ainsworth, Shelley, and Petrocozi 2018; Ainsworth, Thrower, and Petrocozi 2022; Andreasson and Johansson 2019, 2021; Bunsell 2013), and to further exploration and development of harm reduction strategies. The article highlights the need for ongoing research and open discussion around PED usage and policy both within strongwoman and beyond.

## Notes

1. Novice strongwoman competitions are open to anyone who has competed in less than three to five previous competitions, and/or has not placed in the top three positions at any previous competition. The specific rules on this are dictated by each competition organiser and therefore differ for each individual competition. For the purposes of this research, the novice strongwoman phase applies to those who have only competed in 'novice' competitions.
2. 'Inters', short for intermediate, is a category used for those who have moved beyond novice events, either because they no longer classify as a novice (as dictated by competition organisers), or because they feel their ability surpasses it. The shift from novice to intermediate features an increase in commitment and immersion into the community. The term 'intermediate' is used here to describe the experience of those who have moved beyond novice competitions but are not yet competing at an elite level and therefore fall between the newest or most casual participants and the most committed.
3. 'Elite' describes those competing at the top end of the sport, either internationally or nationally. Reflective of the limited commercial development of the sport, none of these are full-time professional strongwomen and the majority balance their training with either full- or part-time work. However, 'Elite' level involvement requires considerable skill and commitment.

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## Ethics statement

Ethical approval for this research was obtained through the Loughborough University Ethical Approvals (Human Participants) Sub-Committee via submission of the Ethical Clearance Checklist.

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