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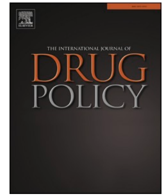

Research Paper

Getting big but not hard: A retrospective case-study of a male powerlifter's experience of steroid-induced erectile dysfunction

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ABSTRACT

This article aims to excavate the lived experience of suffering with steroid-induced erectile dysfunction. By drawing upon original qualitative data, we chart the subjective journey to recovery of a male powerlifter and draw attention to the potential dangers of a self-help approach to treatment. Erectile dysfunction is a common symptom of anabolic-androgenic steroid-induced hypogonadism, a condition not commonly reported or discussed and is therefore a poorly studied health issue. Often considered a taboo subject, detailed accounts of men's experience of erectile dysfunction are relatively sparce, and so this paper makes an important contribution to bolstering what is a limited literature base. Links between contemporary conceptions of masculinity, muscularity, and sexual prowess are explored and form the basis of a critical analysis of popular treatment and prevention strategies. Among the central findings, this article suggests that steroids are not consumed *despite* the well-known risks, but precisely *because* the risks are well-known and ostensibly mitigated through engagement with 'bro-science'. We conclude that there is a concerning misalignment in current treatment and prevention strategies that needs to be addressed if the issue of non-prescribed steroid use is to be effectively tackled. This research therefore raises serious questions for the healthcare profession and its approach towards treating and preventing steroid consumption.

Introduction

Anabolic-androgenic steroids (hereafter, steroids) are synthetic drugs that mimic male sex hormones, particularly testosterone (Harvey et al., 2022). Their consumption yields significant increase in muscle mass, decreases recovery time, and improves healing (Kovac et al., 2015), allowing the user to train harder for longer (Greenway and Price, 2020). This makes steroids particularly popular amongst both elite and amateur athletes, and increasingly, amongst recreational gym enthusiasts (de Ronde and Smit, 2022; McVeigh et al., 2021). Indeed, steroids are by far the most popular image and performance-enhancing drug (IPED) (Gibbs, 2021; Nieschlag & Vorona, 2015; Hall & Antonopoulos, 2020), and, outside of athletic circles, are used far more for aesthetic reasons than for performance (Antonopoulos & Hall, 2016; Andreasson & Johansson, 2021; de Souza & Hallak, 2011). Whilst it is difficult to get a complete picture of the scale of steroid use (Harvey et al., 2022), estimates suggest that the lifetime prevalence of steroid abuse worldwide is 18.4% among recreational athletes (Rasmussen et al., 2016). In the UK, usage has increased over the past decade and is now considered a public health concern (see Greenway and Price, 2020).

The negative side effects of steroids are both well-known and well-documented (see, for instance, Richardson & Antonopoulos, 2019; McBride et al., 2018). Whilst some are more severe than others, Christiansen (2020) points out that anyone who takes significant doses of steroids over a prolonged period will experience some sort of unwanted side effects. Our focus in this paper is on one particular symptom of anabolic-androgenic steroid-induced hypogonadism (ASIH), that of erectile dysfunction (ED). ASIH is not commonly reported or discussed and, therefore, remains a poorly studied health issue (Vilar Neto et al., 2021). Whilst often underestimated as a side effect of steroid abuse, hypogonadism is more commonplace and more problematic than people think (ibid.), and certainly constitutes an emerging issue in need of further research (Kanayama et al., 2015; McVeigh et al., 2021). Focussing on ED as a particular symptom is especially difficult as impotence is considered a taboo subject (Horwitz et al., 2019). Indeed, as we shall explore in further detail later, the hard and erect penis maintains a position of salience in contemporary conceptions of masculinity (Andreasson and Johansson, 2021; Hall, 2015). It is, therefore,

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unsurprising to find that men are reluctant to discuss this sensitive issue, resulting in a paucity of qualitative accounts in the literature.

The aim of this study is to contribute towards shedding some light upon the lived experience of suffering with ED. Located within the broader context of a highly commodified hyper-masculinity (see, for example, Kotzé & Antonopoulos, 2021), the paper charts the subjective journey to recovery of a male powerlifter, who we have called 'Jack', and draws attention to the potential dangers of a self-help approach underpinned by 'bro-science' (Harvey et al., 2022). We are, of course, aware that steroid users are by no means a homogenous group (McVeigh et al., 2021), yet 'Jack's' narrative offers insights that, whilst not explicitly generalisable, are likely to resonate with other male steroid users who have, or who are, experiencing ED. Indeed, although social science tends to favour big sample sizes (Maruna and Matravers, 2007), there is value in utilising a single case-study approach to investigate phenomena of a rare or sensitive nature and previous research is testament to this (Kotzé et al., 2020). Before delving into 'Jack's' story, let us first offer an account of the methods and data which underpin this article.

Methods and data

The data presented here is linked to our ongoing ethnographic research on steroid use in a locale in the Northeast of England, which has one of the highest rates of steroid use in the UK (see Kotzé et al., 2020; Kotzé & Antonopoulos, 2021). We have interviewed 'Jack' before as part of our ethnographic work but had never discussed the issue of erectile dysfunction. We had established a good rapport with 'Jack' during our previous research, so much so, it turns out, that he felt comfortable enough to later reach out to us and disclose that he had to inject his penis with chemicals to get and maintain an erection. This afforded us a rare opportunity to engage in research on an incredibly sensitive and under-researched topic. However, not wanting to push our luck too far, we heeded Greenway & Price's (2020) observation that face-to-face interviews may result in the participant withholding sensitive information relating to their steroid use. We therefore employed the use of a self-completion questionnaire that comprised almost exclusively of open-ended questions relating to steroid use, erectile dysfunction, treatment methods, and the concept of masculinity. This qualitative approach to surveys/questionnaires is underutilised but "*can* produce the rich and complex accounts of the type of sense-making typically of interest to qualitative researchers" (Braun et al., 2021: 641, original emphasis). Indeed, this approach yielded a large volume of rich qualitative data because the open-ended question structure allowed the participant to fully express their thoughts and opinions and explain their answers in detail (Caulfield and Hill, 2014). Retrospection seems to have been crucial here as the benefit of hindsight afforded our participant a sense of distanced comfort sufficient to revisit his difficult experience with ED. In this way, it is 'jack's' recovery itself which facilitated the contextualised narrative that follows in the remaining sections. Only after the fact, was he able to come to terms with and coherently recount his experience with, and recovery from, erectile dysfunction. Importantly, this was not something that a traditional self-completion questionnaire, with its heavy reliance on closed questions (Clark et al., 2021), could accommodate. In contrast to closed questions, the results from open-ended questions are more likely to be an accurate representation of the participant's thoughts, feelings, and opinions (Braun et al., 2021; Caulfield and Hill, 2014).

Careful consideration was given to the arrangement of the questionnaire, with questions related to demographic information and steroid use routine positioned first. The ease of these questions allows the participant to 'settle' into the questionnaire, before tackling more intrusive questions relating to experiences of steroid use and ED. This approach of going from easy and more concrete questions to more difficult and potentially abstract ones is well supported (Gray, 2009). Care was also taken to ensure that the questions asked were in no way leading the participant to respond in a particular way. Taken together, these steps help to ensure the validity of the results obtained (ibid.). As we have noted, retrospection can be a powerful research tool, but it would be remiss of us not to consider any potential threats to validity that this may have posed. The most obvious risk is memory recall. This is when participants struggle to accurately recall past events which could lead them to recount information inaccurately or out of sequence. Given the five-year time frame under investigation, this certainly posed a potential threat to validity. We mitigated this in two ways. First, the open-ended question format of the questionnaire facilitated a narrative style response from the participant, allowing them to articulate their experiences in a more free-flowing manner, instead of recalling particular events related to disparate moments during the life-course. Second, we conducted a follow-up telephone interview with 'Jack' some months after he completed the questionnaire. This served two essential functions in further strengthening validity. The first was to probe deeper into some of the answers given, aiding clarity and understanding. The second was to perform a kind of 'member checking' (Cho and Trent, 2006). Through this process, we were able to check for the accuracy of responses by reiterating key questions and obtaining the same information. As is appropriate for an intensive examination of a single case, we engaged in a theoretical analysis. Here our concern is not with finding themes, but rather with connections between different conceptual ideas that develop from the data (Bryman, 2012). In this way, the theoretical arguments are generated from, and supported by, the data in an inductive manner.

There are, of course, limitations to this study that are perhaps inherent in its design. Chief amongst these is the lack of generalisability. Whilst we would argue that 'Jack's' narrative will likely resonate with other male powerlifters consuming steroids, the experience of a single male participant cannot be used to generalise to the whole male steroid using population. Moreover, the data is limited to what the participant has provided, and this may have been influenced by subjective interpretations of what is, and what is not, important to include. Whilst our methodological approach mitigates this to some extent, there can be no guarantee that the information given is a wholly neutral representation of the participant's activities and/or experiences.

Ethics

We received ethical approval from Teesside University to conduct this research and did so in accordance with the 'Statement of Ethics' as laid down by the British Society of Criminology (BSC, 2015). The participant was informed about the purpose and nature of our research as well as their right not to participate, to withdraw at any stage during data collection, and to have their identity protected at all stages of the research process and beyond. To ensure anonymity we gave the participant a pseudonym. Written consent was provided by the participant in acknowledgment of their willingness to participate in this research. No incentives or inducements were offered to the participant.

Erectile dysfunction and the steroid-sex paradox

Erectile dysfunction can be described as experiencing difficulties in "achieving or maintaining an erect penis throughout the stages of sexual function" (Bruening et al., 2019: 1825). Alongside testicular atrophy, impaired spermatogenesis, and decreased libido, ED is a common symptom of anabolic-androgenic steroid-induced hypogonadism (Rasmussen et al., 2016). ASIH is a product of exogenous testosterone disrupting the hypothalamic-pituitary-gonadal (HPG) axis. Endogenous testosterone works to regulate this axis but prolonged steroid use – particularly at the high dosages commonly associated with 'typical' steroid users (de Ronde and Smit, 2022) – supresses the hypothalamic-pituitary system and impedes the body's natural production of testosterone (Harvey et al., 2022; Nieschlag and Vorona, 2015). Since prolonged steroid use supresses the natural production of

testosterone, the symptoms of ASIH are felt more keenly during the post-cycle period and erectile dysfunction may present first (Sansone et al., 2018). Moreover, evidence suggests that the symptoms of ASIH, including ED, may persist for more than a year after cessation (Kanayama et al., 2015). In fact, some studies suggest that recovery can take several years (Rasmussen et al., 2016; Vilar Neto et al., 2021).

Findings on the extent of ASIH recovery are often discordant, but factors such as age, duration, diversity, and intensity of steroid abuse appear to be salient (Kujawska et al., 2018; Vilar Neto et al., 2021). Sansone et al. (2018) also note that the common practice of 'stacking', that is, taking multiple agents at high dosages (McBride et al., 2018), negatively impacts the time-to-recovery. What is more, ED may persist even when testosterone levels return to normal (Kanayama et al., 2015). This was certainly the case for 'Jack', whose narrative resonates with much of the research literature. For instance, 'Jack' was no stranger to 'stacking', mixing injectables with orals. For the former, he reported taking high dosages of Sustanon, Testosterone Enanthate, and Nandrolone once per week. The latter comprised a daily dose of Oxymetholone (Anadrol) and Methandrostenolone (Dianabol). This was a heavy cycle and 'Jack' was using these orals, particularly the Anadrol, "*to kick-start my cycle*". Previous research has demonstrated that steroid use amongst both men and women is, at least in part, motivated by a desire to achieve physiological results fast, whether they be performance-based or, increasingly, aesthetic-based (Kotzé & Antonopoulos, 2021; Kotzé et al., 2020). This is emblematic of the capitalist injunction to eschew deferred gratification and enjoy one's slice of what Christiansen (2020: 175) calls the "beauty-pie" *now!* What is of interest here, however, is that even the quicker gains achieved with steroids are not enough. The drive to look good is now so intensely felt that even steroids need a helping hand, a kick-start to further speed-up the process.

The pursuit of hyper-muscularity, which is now so deeply intrenched in contemporary ideals of masculinity (Baghurst and Kissinger, 2009; Fabris et al., 2018), is unachievable without enhancement aids such as steroids (Walker and Joubert, 2011). Yet, it is precisely the use of steroids that put masculinity and muscularity in direct conflict with each other (Mossman and Pacey, 2019). Herein lies the paradox; whilst steroids can help enhance social/sexual attraction (Harvey et al., 2022), they also increase the risk that users will be unable to actually *have* sex when the opportunity arises (Christiansen, 2020). 'Jack' was sexually active with his partner during the first few weeks of his cycle but reported that "*once I discontinued the Anadrol after week four, I rapidly lost my ability to get and maintain an erection, despite having a high emotional sex-drive*". Whilst 'Jack' seemed to be operating under the impression that Anadrol would have "*the complete opposite effect*", ED is a noted side effect of this drug, just as it is with the Nandrolone he was taking (Sansone et al., 2018). For 'Jack', ED "*came very quickly and suddenly over the space of a week or so*", and clearly affected his mental wellbeing. When asked how his experience of ED made him feel, 'Jack' replied, "*angry, sad, frustrated, depressed, worried, concerned, and embarrassed*". Notably, he also stated that he felt "*like less of a man*".

Feelings of depression associated with ED, and ASIH more broadly, are not uncommon (Kanayama et al., 2015; Vilar Neto et al., 2021). Further compounded by feelings of anxiety and the potential loss of libido, men can often feel emasculated. This sits in stark contrast to the reinforced sense of masculinity some men report feeling with augmented levels of testosterone said to yield porn star levels of sexual prowess (Christiansen, 2020; Harvey et al., 2022). Whilst ED is often associated with the withdrawal phase post cycle, some men experience difficulty in achieving an erection *during* a cycle. Although the practice of 'stacking' makes it difficult to assess each compound's particular effect on sexual function (Sansone et al., 2018), it is commonly understood that Nandrolone (Deca-Durabolin) can cause impotence. In fact, it is so well-known that the phenomenon is called 'Deca dick' in gym parlance (Christiansen, 2020). As previously noted, 'Jack' was injecting Nandrolone but attributed his ED to the discontinuation of Anadrol. Nevertheless, what his narrative shows is that a more nuanced understanding of various steroid 'diets' is required. The common practice of 'stacking' means that cessation and continuation often occur *simultaneously* and to varying degrees. Indeed, whilst coming off Anadrol, and subsequently experiencing ED, 'Jack' continued with the rest of his cycle because:

> *I had faith that it was a low-test situation caused by crashing off the Anadrol, and that my Test Enanthate would soon kick into gear and resurrect things. And I didn't want to abort a cycle I had spent a lot of money on, if it could be resolved quickly. This was just speculation though, and obviously I turned out to be wrong.*

This interplay between cessation and continuation resulted in 'Jack' experiencing a heightened sex-drive whilst being unable to function sexually which, as 'Jack' put it, is "*the worst combination ever*". This was evidently a source of embarrassment; "*so, whilst having a heightened sex-drive, I was obviously more reluctant to have sex out of embarrassment*".

'Jack's' embarrassment is culturally rooted and, therefore, unsurprising. Indeed, Bruening et al. (2019: 1826) note that we occupy "a culture that increasingly links masculinity with sexual prowess". This prowess, however, must manifest in ways which steroid use can both enable *and* negate. Libidinal drive and general virility should be such that one is able to perform again and again with a potency delivered by 'rock-hard' erections (Andreasson and Johansson, 2021; Harvey et al., 2022). Within this context, "sustaining the hard and erect penis is a desired state of the male body" (Andreasson and Johansson, 2021: 21). Yet, in 'Jack's' case, it could be argued that to some extent his pumped and hard body acts as a symbolic stand-in for his penis; unable to achieve or maintain an erection, his physique nevertheless embodies the rock-hard vascular phallus (Richardson, 2004). Aesthetically credible perhaps, but functionally impotent, and so, again, the steroid-sex paradox emerges and forces us to consider the complex interplay between cessation and continuation. Indeed, the well-documented act of polypharmacy and higher rates of erectile dysfunction medication consumption amongst former and current steroid users (Horwitz et al., 2019), tells us that there is at least a general understanding that steroids take with one hand what they give with the other. The literature is replete with examples which evidence that many steroid users are not deterred by the potential, or indeed *experienced*, adverse side effects (Greenway and Price, 2020). Entering his third cycle, 'Jack' was no different: "*I was well aware of the erectile dysfunction risks through bodybuilding communities when it came to steroids, so I already had some advanced knowledge of it*". The belittlement of risk is well-documented and appears both amongst users who are knowledgeable (Kovac et al., 2015) as well as those who are only vaguely informed (Nieschlag and Vorona, 2015). For 'Jack', previous experience of successfully treating ED perhaps militated against deterring future use.

Misaligned treatment risks extending time-to-recovery

The preference for self-help among steroid users is well-known and is often informed by what has been referred to as bro-science (Harvey et al., 2022; de Ronde and Smit, 2022). This equates to a knowledgebase formed by a combination of experience, (mis)interpreted academic research findings, and so-called 'gym experts'. As a source of information and guidance, bro-science holds significant credence, particularly amongst the bodybuilding community. 'Jack's' previous experience of treating ED is indicative here:

> *In a previous cycle, I had lost my sex-drive after coming off* [steroids] *and had some erectile dysfunction, although not too severe. I used clomiphene during a PCT* [Post Cycle Therapy] *alongside tamoxifen, which, at the time, was a recommended procedure within the bodybuilding community for getting back to normal, and this worked really well for my erectile dysfunction the first time.*

The basic premise of post cycle therapy (PCT) is to consume a range

of drugs and/or supplements to counter the negative side effects of steroids (Gibbs, 2021; see also Antonopoulos & Hall, 2016). As 'Jack's' narrative suggests, this is a common practice amongst steroid users. However, although clomiphene and tamoxifen are certainly among the drugs normally recommended in the treatment of ASIH (Vilar Neto et al., 2021), the efficacy of their use as part of a post cycle therapy plan is unproven (de Ronde and Smit, 2022). In fact, some studies have thrown into question the beneficial impact of PCT, particularly its use as a means of restoring the endogenous production of testosterone (de Ronde and Smit, 2022). 'Jack's' account adds additional weight to this because whilst his use of PCT worked well the first time, "*this time it had absolutely zero effect*".

> *My erectile dysfunction remained all the way through the rest of my cycle, when my testosterone levels were sky high from Test Enanthate. I tried all sorts of things to rectify the issue, from using drugs like Viagra to PCT drugs to control oestrogen levels, and kick-start natural testosterone production.*

It has been recognised for quite some time that steroid users do not regard the medical community as sufficiently knowledgeable about steroids, their perceived benefits, and the potential consequences (Ip et al., 2019). This lack of confidence in practitioners' knowledge can act as a barrier to service engagement (McVeigh et al., 2021), and this is particularly true for men, who are less likely to engage with healthcare services than women (Harvey et al., 2022). Failure to provide helpful treatment when men *do* engage with healthcare services can make matters worse. Indeed, Harvey et al. (2022: 281) note that participants in their study "who were not offered help because their testosterone ranges were viewed as normal turned to self-medication". This was also the case for 'Jack', who commented that "*they* [doctors] *were unsure* [about what to do] *as my testosterone levels were apparently within normal range*". Considering that we know ED may persist after normal testosterone levels are restored (Kanayama et al., 2015), this professional oversight seems somewhat egregious when it could lead to people taking professional healthcare into their own hands. Again, 'Jack's' account is indicative here: "*although I did seek professional help, the online bodybuilding community, and studies relating to the endocrine system proved far more useful*". Informed by our previous sketching of 'bro-science', 'Jack' went on to tell us about his rather risky "*trial and error*" approach to treatment.

> *I tried to address potential oestrogenic problems through trial and error with drugs that I had previous erectile dysfunction related success with, such as clomiphene and tamoxifen. I tried DHT* [dihydrotestosterone] *supplements, natural boosters, all to no joy. I also tried Cialis and Viagra. These would help me to gain erections but didn't help me much to maintain them; I would quickly lose them.*

Seemingly at his wits end, 'Jack' resorted to extreme measures to regain what he perceived to be the loss of his masculinity.

> *The only drug that worked flawlessly for me was sadly the most extreme erectile dysfunction drug, Alprostadil, which has to be injected directly into the corpora cavernosa of your penis. Pretty unpleasant, painful, and very awkward thing to do before sex, but this would give me rock-solid erections for up to four hours straight. Sadly, these were like cement erections that you literally couldn't get rid of, even if you went out for a walk.*

In a study looking at the availability, and ease of acquisition, of steroids and testosterone preparations on the internet, McBride et al. (2018) note that 62% of websites surveyed offered at least one form of ED medication. It was also highlighted that such products were remarkably easy to purchase on the internet without a prescription. Previous work by Hall and Antonopoulos (2016: 63) gives us further cause for concern here. They evidence that erectile dysfunction medicines are not only in high demand but are amongst the most counterfeited products circulating in what is "a huge global online market for lifestyle drugs". This further highlights the dangers of self-help approaches apropos perceived professional failure to offer effective treatment.

Aside from the extreme measures taken by 'Jack' to combat his ED, what is of interest in his account is his reference to "*rock-solid erections*". Paired with the stated timeframe of performance which suggests that he was 'up for it' again and again, this vernacular is indicative of "the intertwined nature of muscularity, masculinity, and sexual virility" (Andreasson and Johansson, 2021: 12). Moreover, in enduring pain in the management of his condition to satisfy his sexual partner, 'Jack' performatively *demonstrates* his masculinity (Andreasson and Johansson, 2021). In defining masculinity, 'Jack' reveals that his understanding of the concept is broadly in keeping with mainstream Western ideals. For example, he noted that masculinity equates to:

> *The quality/level of general characteristics that a person possesses which are deemed by society to project that of a strong, charismatic, motivated person of the male gender. So, physical attributes such as toughness, muscularity, and the psychological attributes that compliment them.*

Harvey et al. (2022) highlight that an internalisation of what they refer to as hegemonic masculinity could, in part, account for why some men return to steroid use as a form of Testosterone Replacement Therapy (TRT) to overcome the loss of virility. Indeed, it is not an uncommon finding that some men resume steroid use as a means of treating the symptoms of ASIH (Christiansen, 2020; Kanayama et al., 2015; McVeigh et al., 2021). 'Jack' was no different in this regard. When his erectile dysfunction was at its worst, he kept on using a low dose of Testosterone Enanthate – 150mg, in a kind of long-term 'cruise', injecting himself once per week. During a follow-up telephone interview 'Jack' explained that "*I knew long term that it wouldn't fix the problem; but I had some optimism that perhaps a less superhuman dosage, prolonged TRT style, would work*". This determined self-reliance and almost stoic persistence in attempts to rectify his ED perhaps further reflects 'Jack's' internalisation of hegemonic masculinity. Yet, despite this kind of 'do it yourself' TRT becoming a more regular practice (de Ronde and Smit, 2022), it goes against current expert advice which suggests that long breaks between cycles can help to mitigate negative side effects (Harvey et al., 2022).

This mismatch between advice and practice speaks to a broader issue in what appear to be misaligned treatment strategies. There are currently no definitive guidelines on how to treat ASIH (Vilar Neto et al., 2021), but the prime measure often forwarded is the complete and immediate cessation of steroid use (de Souza and Hallak, 2011; Nieschlag and Vorona, 2015). Whilst this is, of course, very good advice, it does not sit comfortably within a liberal-postmodern society increasingly obsessed with body image, to which the size and shape of one's genitals is becoming more and more important (Hall, 2015). Our contemporary society is one in which deferred gratification is eschewed in favour of a drive to enjoy *now!* Within this context, potential long-term health risks that may accompany the use of steroids are outweighed by the short-term aesthetic gains (Kotzé et al., 2020). Importantly, these are gains which, as we have already highlighted, elevate one's social/sexual standing. It is unlikely, therefore, that "the best policy is to strongly discourage steroid use" (de Souza and Hallak, 2011: 1863-1864). Indeed, Christiansen (2020: 140) makes the point well in noting that to the men on the receiving end of advice that advocates cessation, the message can sound something like this:

> *You should go back to the life you had, back to the time when you lacked self-confidence and had a hard time talking to girls. That was better than the life you have now, with self-confidence to spare, more friends, and girls galore.*

This is certainly a hard sell for men like 'Jack', who echoed Christiansen's point when stating that "*the confidence* [whilst on steroids] *lead me to doing things socially that I perhaps never would have done, that have socially bettered me*".

The context of consumption is therefore important, and we have touched upon this here and elsewhere (Kotzé & Antonopoulos, 2021; Kotzé et al., 2020). Liberal-postmodern consumer capitalism has created an increasingly fractious landscape, which cultivates feelings of anxiety, and socio-economic insecurity and instability (Kotzé & Lloyd, 2022). Devoid of cultural yardsticks and collectively understood benchmarks or milestones, the self becomes the ultimate horizon of meaning. We are all at once free to carve out our own way *and* yet still crave direction in getting there (Winlow and Hall, 2013). In lieu of traditional forms of secure labour, which would often frame the expression of identity (Lloyd, 2013), the construction of the self – the 'who am I' – becomes increasingly reliant upon the fads and trends of consumer culture. Here, core tenets which lie at the heart of our contemporary socio-symbolic order – competitive individualism, immediate gratification, short-termism and the cultivation of envy in others – come to the fore. Importantly, as one of the last aspects, or increasingly, an asset, seemingly within one's control, such tenets often manifest through the body itself. In this way we are engaged more and more in 'bodywork'; and while this has arguably been the case for women for some time now, "men are increasingly held accountable if they fail to invest time and resources in their appearance" (Hall, 2015: 105). This is something 'Jack' seemed to be acutely aware of:

> *We live in a very competitive, body image obsessed culture where people's perceptional standards are being catapulted through the roof, and everyone feels inclined to get a quick fix for everything. And we market things in such a way that people believe they can simply ice over their insecurities instantly.*

For us, this tacitly draws attention to the precariousness of manhood. Against the backdrop we have just sketched, the status of manhood is elusive, subject to constant appraisal that must be confirmed by others, and as such is easily lost (Christiansen, 2020). Understood in this way, it is perhaps easier to see why some men will feel the need to re-establish their masculinity after it has been threatened (ibid.).

We have already seen how the hard and erect penis constitutes part of the essential symbolism associated with contemporary ideas of masculinity. ED, therefore, constitutes a threat to that image of masculinity and attempts to self-medicate can be understood as an effort to re-establish one's masculinity as soon as possible, and without any professional mediators. If this is indeed the case, then it is clear to see why even the riskiest self-help practices tend to trump directives to stop using steroids and other drugs and "to await recovery in patience" (Nieschlag and Vorona, 2015: 51). Patience is counterintuitive to the liberal-postmodern subject and is arguably anathema to the steroid user, who engages in its consumption precisely to speed things up, to avoid waiting for slow and incremental gains. Like others documented throughout the literature, 'Jack' saw steroid use "*as a window of opportunity to double my efforts for twice the reward*". He also disclosed that the "*first time I went on cycle, I basically thought I would turn into Superman after ten weeks*". The same logic of speeding things up also applies to recovery and underpins the consumption of PCT drugs and, in 'Jack's' case, the use of Testosterone Enanthate as a form of TRT. In fact, 'Jack' persisted self-medicating for three years in what was ultimately a fruitless effort to treat his ED.

> *At the end of a three-year long battle of playing with PCT drugs, and low TRT dosages of testosterone, ultimately the slow and painful answer seemed to be coming off absolutely everything and praying that my own HPTA* [hypothalamic-pituitary-testicular axis] *and hormones would somehow come back into a normal level of production.*

He went on to note that "*it took a very, very, long time to recover. It took me about two years of going cold-turkey on all drugs to get back to normal*". This demonstrates the extent to which contemporary treatment strategies jar with the norms and values of liberal-postmodern consumer capitalism. The two dictums sit in stark contrast to each other. On the one hand, the contemporary super-ego enjoins pleasure, quick fixes, and immediate gratification (Myers, 2003). On the other, the preferred treatment strategy demands abstinence and patience.

'Jack' wrestled with these competing injunctions for a long time, regaining erectile function five years after the onset of ED. Whilst this timeframe may seem extreme, it is not that dissimilar to other findings which suggest that ASIH and its symptoms are neither necessarily occasional nor transient (Rasmussen et al., *2016*; Vilar Neto et al., 2021). With the benefit of hindsight, 'Jack' was able to reflect upon the consequences of his steroid use, stating that, "*I have most likely knocked years off of my life, for the sake of looking good for five minutes at a time lifting heavy things in front of people*". He also went on to say, "*and the gains are never permanent, you have to give them up at some point anyway, and it will always be depressing when you eventually do*". For us, this insight is crucial in helping to understand the persistence of steroid use despite its well-known adverse side effects. There seems to be a tendency, within both the academic literature and healthcare practice (see for example de Ronde and Smit, 2022; Nieschlag and Vorona, 2015), to assume the issue is one of knowledge, or, more precisely, a lack of it. 'If steroid users only knew the risks of consumption, they would stop or perhaps never even have started'. This assumption does not accord with the evidence presented here, nor with that in the wider literature which suggests that many users are aware *in advance* of the risks associated with steroid use (See for example Greenway and Price, 2020; Harvey et al., 2022; Kovac et al., 2015).

Rather than not knowing, we suggest that steroid users engage in something called fetishistic disavowal. That is to say, they willingly repress inconvenient knowledge into the unconscious; by disavowing troubling or problematic knowledge, they can continue to pursue a course of action they *know* is likely to have negative consequences (Kotzé & Lloyd, 2022). Put simply, this can be expressed as, 'I know that steroid consumption is risky, but I do not want to know that I know – because of the proven aesthetic gains – so I act as if I do not know'. Borrowing from Kuldova (2019), the fact that various awareness campaigns fail time and again to change the actual behaviour of steroid consumers should tell us that ignorance is not the problem. Indeed, for some, including 'Jack', the opposite is true. It is the *perception* of knowledge that gives them subjective licence to consume steroids. As we have demonstrated here, 'Jack' had advanced knowledge of the ED risks posed by steroids and was certainly knowledgeable of the drugs often associated with its treatment. Yet, it could be argued that it is precisely this knowledge which both provided the subjective permission to consume steroids *and* prolonged his time-to-recovery through trial and error with PCT drugs. Therefore, steroids are not consumed *despite* the well-known risks, but precisely *because* the risks are well-known and ostensibly mitigated through engagement with 'bro-science'. The upshot is that treatment measures based on advocating abstinence and patience, and prevention methods based on increasing awareness are unlikely to prove effective. The proliferation of ED medication and the growing prevalence of steroid use amongst recreational gym enthusiasts is testament to this (McBride et al., 2018; McVeigh et al., 2021).

It is our contention that if clinical advice and/or interventions are to prove effective, they must acknowledge the extent to which the lifestyle and body-image ideals associated with hardcore bodybuilding have become much more mainstream and are intimately connected to dominant conceptions of masculinity (Andreasson and Johansson, 2021). Indeed, we can no longer view steroid use as somehow cutting against the grain of society's norms and values, or the tenets driving liberal-postmodern consumer capitalism.

Conclusion

Body image ideals are increasingly caught up in the broader cultural pursuit for aesthetic perfectibility. Within this context it is perhaps unsurprising that steroid consumption has increased over the last decade to such an extent that it is now considered a public health concern. The negative side effects of steroid use are well-known and well-

documented, but the issue of steroid-induced hypogonadism remains a poorly studied health issue. It is far more commonplace and more problematic than people think but is not commonly reported or discussed, leading to a paucity of qualitative accounts in the academic literature. Our focus in this paper has been on one particular symptom of ASIH, that of erectile dysfunction. Often presenting first, this symptom is considered a taboo subject because the hard and erect penis maintains a position of salience in contemporary conceptions of masculinity. Indeed, to reiterate Bruening et al. (2019: 1826), we occupy "a culture that increasingly links masculinity with sexual prowess".

The paradox, of course, is that steroids put masculinity and muscularity in direct competition with each other. On the one hand, steroids can enhance one's social/sexual standing, whilst on the other hand, they can make it difficult or even impossible to have sex when the opportunity arises. Moreover, evidence suggests, and 'Jack's' narrative supports this, that ED may persist for years after cessation and even after testosterone levels return to normal. Herein lies the crux of the issue; men suffering from ED are stuck between a rock and a hard place, whereby getting hard is negated by getting big. Ascription to hyper-idealised conceptions of masculinity renders it difficult to be *completely* masculine as defined by contemporary expectations; one is either big, or hard, not both – at least not all the time. Efforts to overcome this trade-off involve the polypharmacy of post cycle therapy. However, the efficacy of PCT as a means of treating ED is questionable and in fact may prolong the time-to-recovery. Informed by bro-science, 'Jack' endured a risky process of trial and error, experimenting with various substances before resorting to the extreme measure of injecting his penis with Alprostadil.

In line with medical advice, 'Jack' eventually found that abstaining from all drugs was the only way to recover his erectile function. Why, then, did it take 'Jack' so long to follow the preferred medical dictum "to await recovery in patience" (Nieschlag and Vorona, 2015: 51)? It is because this dictum cuts against the grain of liberal-postmodern consumer capitalism. Within this cultural terrain, deferred gratification is eschewed in favour of a deep-seated injunction to enjoy *now!* The same logic that stimulates the consumption of steroids to acquire quick gains applies to attempts to speed up recovery. Why walk the slow and frustrating road to recovery when the readily available cocktail of PCT drugs, or indeed a return to steroids as a form of TRT, promise more immediate results. Moreover, this drive to speed up recovery is intimately connected to contemporary ideals of masculinity which sees the hard and erect penis as an essential part of its symbolism. Accordingly, ED constitutes a threat to this image of masculinity and must be remedied as soon as possible, even if that means engaging in risky self-help treatments.

The fundamental upshot is that contemporary treatment and prevention strategies appear misaligned on two fronts. First, treatment measures based on advocating abstinence and patience fail to acknowledge that this cuts against the grain of liberal-postmodern consumer capitalism, to which steroid users hyper-conform. Second, prevention methods based on increasing awareness are unlikely to prove effective precisely because the lack of knowledge is not the issue. Consumers of steroids engage in a process of fetishistic disavowal. They know that there are health risks involved but choose to repress this inconvenient knowledge into the unconscious, allowing them to proceed in their image and performance boosting practices *as if* they do not know that they may be damaging their health. What is more, 'Jack's' narrative suggests that it is the *perception* of knowledge that provides the subjective licence to consume steroids. Therefore, steroids are not consumed *despite* the well-known risks, but precisely *because* the risks are well-known, but thought to be mitigated through engagement with bro-science.

This single case study has shed light on the lived experience of suffering with erectile dysfunction and highlights the potential dangers of self-help approaches to treatment. It has contributed original qualitative data to what is a relatively sparce literature base. In doing so, we have drawn attention to a concerning misalignment in current treatment and prevention strategies. Future research should be directed towards realigning these strategies so that they stand a more realistic chance of success. Moreover, research efforts should be focused on finding ways to address the socio-symbolic causes of steroid consumption rather than simply treating the symptoms. This is crucial if we hope to seriously tackle the issue of non-prescribed steroid use.

CRediT authorship contribution statement

Justin Kotzé: Writing – review & editing, Writing – original draft, Visualization, Formal analysis, Conceptualization. **Andrew Richardson:** Writing – review & editing, Methodology, Investigation, Conceptualization. **Georgios A. Antonopoulos:** Writing – review & editing, Supervision, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethics approval

The authors declare that they have obtained ethics approval from an appropriately constituted ethics committee/institutional review board where the research entailed animal or human participation.

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