

Challenging Hegemony Through Narrative: Centering Women's Experiences and Establishing a Sis-Science Culture Through a Women-Only Doping Forum

Communication & Sport
2022, Vol. 10(4) 708–729

© The Author(s) 2021



Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/21674795211000657
journals.sagepub.com/home/com



Jesper Andreasson¹  and April Henning² 

Abstract

Understandings of image and performance enhancing drugs (IPEDs) and their use has largely been conceptualized through the lens of male hegemonic patterns, treating women's doping as a threat to the “natural” gender order. This article focuses on an exclusive, women-only online IPED forum. It aims to describe and analyze how this new forum was met within the broader doping community, and how issues related to IPED use and gender are addressed by women when their views are not backgrounded by potential male commentators and misogynistic discourses. The results show that first-hand knowledge is disseminated by women, which contributes to the foundation of a women's ethnopharmacological (sub)culture. Women, their bodies, and experiences become the standard and the “unspoken” norm in the discussions. The secluded space allows women to challenge patterns of hegemonic masculinity, while building and reinforcing women's experiences, bodies, and expertise as the standard. This stresses the importance of moving beyond

¹ Department of Sport Science, Linnaeus University, Sweden

² Faculty of Health Sciences and Sport, University of Stirling, Scotland

Corresponding Author:

Jesper Andreasson, Department of Sport Science, Linnaeus University, 39182 Kalmar, Sweden.
Email: jesper.andreasson@lnu.se

hegemonic conceptualizations to understand the ongoing socio-cultural changes to the gender balance of IPED use and to center women's doping experiences, and the risks associated with use. This has implications for the formation and development of both this community and of a "sis-science" based on women's knowledge and experience.

Keywords

doping, online communication, IPED, gender, women-only

Historically, muscles and muscular bodies have been connected to men and masculinity (Andreasson & Johansson, 2014; Guttman, 1978). As a consequence, women's engagement in muscle building endeavors has often been considered a threat to the "natural" gender order and met with condemnations, contempt, and other means of curbing their participation (McGrath & Chananie-Hill, 2009; Washington & Economides, 2016). This might be particularly true in relation to women's pursuits of strengthening, toning, and in other ways molding their bodies with the help of image and performance enhancing drugs (IPEDs), such as anabolic-androgenic steroids (henceforth steroids) and human growth hormones (hGH). Within the gym and fitness context we refer to the use of IPEDs as "fitness doping."

Outside the sphere of organized elite sport, women's use of IPEDs has been mainly connected to gym and fitness culture and the focus has been on female bodybuilders (Roussel & Griffet, 2000). Essentially, women's bodybuilding practices began in the early 1980s when gym and fitness culture were still largely considered a male and subcultural enterprise. In the decades that followed, however, highly muscular and vascular female bodies gradually gained recognition and paved the way for other women, with other ambitions and ideals, to follow (Bunsell, 2013; Fair, 1999; Liokaftos, 2019). Following *the fitness revolution* that began roughly in the 1990s (Andreasson & Johansson, 2014), gym and fitness culture also transformed from a more or less subcultural and male-connoted enterprise into a commercialized industry in which the masses, to some extent, could exercise and shape their bodies regardless of gender, sexuality, age, or other factors (Dworkin, 2001; Sassatelli, 2011). Consequently, women doing strength training have successfully become a regular feature at the gym (Leeds & Liberti, 2007). In relation to this, women have also increasingly come to defy the strong discursive connection between masculinity and a strong, competent, and muscular body, exemplified by gym and apparel taglines such as "strong is the new sexy," "strong is the new skinny," and "got muscle?" (Boepple et al., 2016).

Hardly surprisingly, in the wake of the global spread and expansion of the gym and fitness enterprise, the doping demography has also widened (Andreasson & Johansson, 2020; Antonopoulos & Hall, 2016; Bates & McVeigh, 2016). According to Huang and Basaria (2018), evidence suggests that consumption of steroids has

increased over the last several decades. Studies of use have been carried out in Europe, North America, Brazil, the United Arab Emirates, and Iran, just to mention a few parts of the world (see also Kotzé et al., 2020). The research is not unanimous, however, regarding prevalence and accessibility of IPEDs, and the extent of use seemingly varies greatly between countries (Christiansen, 2020). For example, one study estimated that in Cyprus as many as 11.6% of young people in gyms, mainly men, used IPEDs (Kartakoullis et al., 2008), whereas these numbers have been estimated to be 4%–6% in countries such as the United States, Denmark, and Sweden (Andreasson & Johansson, 2019; Christiansen, 2020; Johnston et al., 2018). Although scholars agree that the majority of IPED users are (still) male and usually between the ages of 20 and 40 years old (Henne & Livingstone, 2019; Van de Ven et al., 2019), there is also a growing consensus that women's IPED consumption is currently growing, not only among female bodybuilders, but among a broader group of women with diverse motivations and bodily goals (Kotzé et al., 2020). Yet this phenomenon remains relatively under-researched, and studies of doping prevalence among women and their use experiences are scarce (Börjesson et al., 2016; Henning & Andreasson, 2021; Sverkersson et al., 2020).

Regarding risks and potential harms connected to IPED use, the general view is that it can lead to serious physical and mental health problems, including irritability, depression, cardiovascular disease, liver damage, acne, hair loss, and more (Rasmussen, Schou et al., 2018). Women run the risk of developing a deepened voice, clitoral enlargement, disrupted menstruation, and reduction in fertility, while men may experience enlarged breasts (gynecomastia), smaller testicles, and impotence (Rasmussen, Selmer et al., 2016). Scholars have also found that the risks for unwanted side effects of IPEDs are dose related and linked to user's medical knowledge and experience (Monaghan, 2001). Scholars have also shown that the possibility of discussing use strategies with others, perhaps on an online forum, can contribute to both boost curiosity and lessen potential harm related to use (Monaghan, 2012; Sverkersson et al., 2020).

Following this line of thought, this article will take a qualitative and case study based approach to focus on an online IPED forum solely devoted to women and their drug use experiences. The forum is located on the *ThinkSteroids* website, which facilitates a large number of different forums in which doping can be discussed and debated among its members, both men and women. The purpose of the article is twofold. First, we aim to describe and analyze how the introduction of a women-only forum for IPED use is met and understood within the broader (male-centered) doping community on *ThinkSteroids*. Secondly, and mainly, we aim to explore and analyze how issues related to IPED use and gender are addressed by the women active on the forum when their views and experiences are not backgrounded/silenced by potential male commenters. We argue that the women-only forum is of particular relevance as it constitutes a *rare case* (cf. Yin, 2014) of a phenomenon that has been largely conceptualized and investigated through the lens of male hegemonic

patterns. We are thus interested in what happens when such patterns and structures of domination are, at least partly, hindered and put out of play.

Background

Historically, IPED use has mainly been linked to either the elite sport context or to bodybuilding among men (Christiansen, 2020; Liokaftos, 2019) and women (McGrath & Chananie-Hill, 2009). Broadly, the practice has been situated within dominant conceptions of masculinity and traditional gender norms and configurations. Christiansen (2020), for example, developed a typology of male fitness dopers and discussed a range of use motivations. Although not made explicit, the types of users identified were discursively filled with competences and ideals related to normative masculinity, such as performance, power, adventure, risk-taking, knowledgeability, self-control (do-it-yourself), and more. In contrast, women's IPED use in the realm of muscle building has tended to be addressed both by scholars and in public discourse from sensationalist perspectives, and as an abnormality and spectacle (McGrath & Chananie-Hill, 2009). In their specificity of particular groups of IPED users, scholars have also sometimes tended to narrow their focus (on bodybuilders, men, and so on), missing out on broader historical trends, such as the changing gender dynamics attached to the practice being analyzed. Recently, however, this has begun to shift and scholars have looked at diverse demographic user groups who have a variety of motives for their engagement in this practice (Andreasson & Johansson, 2020; FAIR, 2020; Frenger et al., 2016; Havnes et al., 2021; Henning & Dimeo, 2015).

Part of the difficulty in capturing the prevalence and experiences of doping is the often-illegal status of IPEDs or their use. This has also led to a relocation of groups who use IPEDs to online spaces where they can anonymously share and acquire knowledge about dosing, side effects, and other experiences (Andreasson & Johansson, 2016; Dunn et al., 2017; Pope et al., 2014; Smith & Stewart, 2012). In a way, what we are seeing is the evolution of new forms of ethnopharmacological learning processes and cultures. However, while men have had access to such online forums for some time (Monaghan, 2012; Smith & Stewart 2012), women have largely been excluded (Jespersen, 2013). This has been discussed by Bunsell (2013) in terms of a "veil of secrecy" and a "taboo," through which women's experiences have come to be understood as bound to others (read: men) who guide them. This was also addressed by Bilgrei (2018) who labeled online community members' interactions as the development of a "broscience" through which members (men) develop their understanding of the drugs, discuss possible (side) effects, harm reduction, and other use-related issues (see also Andreasson & Johansson, 2016; Monaghan, 2012).

Consequently, women have been gradually included in doping cultures and online communities (Henning & Andreasson, 2021; Van Hout & Hearne, 2016), which has been suggested to be a result of changing gender norms and dynamics

(see Boepple et al., 2016, Dworkin, 2001; 2009). Still, online doping cultures have continued to background women's voices and limit their possibilities for discussing experiences and sharing information. The development of "sis-science" doping cultures have thus been limited due to rigid male-connoted gender configurations (Sverkersson et al., 2020), although drug supplementation differs per gender, with women being more likely to use substances such as ephedrine, hGH, clenbuterol, or human gonadotropin, as opposed to muscle enhancing supplements (Jespersen, 2013; Van Hout & Hearn, 2016). Studies of other women-only online forums have found, for example, that women were more open and descriptive in discussions of physical conditions with other women who share similar experiences (Flower et al., 2014), and that women were empowered to challenge cultural norms that silence concerns, fears, or discomfort around experiences such as pregnancy (Cohen & Raymond, 2011). At the same time, studies have shown that the engagement in doping forums is unevenly distributed. Indeed, men still tend to dominate discussions even when (side) effects concerning the female body are debated (menstruation, enlarged clitoris, deepened voice, pregnancy), which has been referred to as a form of *cultural manspreading* (Henning & Andreasson, 2021). Therefore, in this article we have focused on the development of a women-only doping forum with the intent to analyze what possibilities such a forum brings for women users. Although women's voices have been heard to some extent in the online context (Germain et al., 2021; Henning & Andreasson, 2021; Van Hout & Hearne, 2016), as well as in the long tradition of understanding the body from a feminist perspective (see for example Butler, 1998; Woodward, 2009; Woube, 2018), to the best of our knowledge no previous research has sampled data from a secluded, women-only online doping forum.

Analytical Framework

As suggested, IPED use in the realm of muscle building has been largely developed in relation to a historical pattern of hegemonic conceptualizations of masculinity (Connell, 1995). Hegemony is understood here as the dynamic ways men's dominance over women is legitimized and upheld in different social and cultural contexts. In the context of gym and fitness culture, men have historically been able to reap social status and recognition for their muscular bodies, whereas women embodying such competences have been questioned and stigmatized (Dworkin, 2001; Dworkin & Wachs, 2009; McGrath & Chananie-Hill, 2009). At the same time, hegemonic conceptualizations refer to a historically mobile and dynamic structure, which is connected to how we think about and theorize stability and change (Haywood et al., 2018; Hearn, 2004; Howson, 2006). Therefore, relationships between different groups of men and women can be contested and are always situated in arenas of tension and conflict (Connell & Messerschmidt, 2005). Gender designations and conceptualizations are in a constant process of being made, remade, and redefined. Explanations of how the body is socially molded and

constructed, and how power relations are inscribed on the flesh, also suggest that the body can be seen as the starting point of a discussion about how to counteract and eventually change social representations, power structures, and dynamics (Andreasson & Johansson, 2021).

This line of thinking, which not only aims to dissect and analyze structures of oppression but also tries to work towards more utopian goals concerning women's emancipation and empowerment, is eminently present in the writings of many feminist scholars, such as Donna Haraway (1990), Judith Butler (1990), Sara Ahmed (2006), and others. In somewhat different ways, each has shown how gender norms and the heterosexual gender order are social and cultural constructions/structures that can be called into question and challenged/resisted. A scholar highly relevant for this discussion, and our analysis, is Rita Felski (1995) and her thoughts on the gendering of history (which in the case of this article would be exemplified in the cultural control that masculinity has historically held over doped bodies). In her groundbreaking work, *The Gender of Modernity*, Felski suggested that our understanding of history and culture is shaped by the explanatory logic of narrative, which indisputably houses the presence of power, gender norms, and structures. Felski aimed to challenge conventional and male-centered theories and understandings (of modernity), offering alternative lenses of analysis. She explained:

The issue is not one of going “beyond” history, but rather one of acknowledging that the act of constructing a relationship to one's past is always already invested with interests and prejudice (prejudgment) rather than embodying the creation of value-free science / . . . / I have sought nevertheless to destabilize a periodizing category that has often been simplistically defined in the context of feminist theory in order to explore some of the varying ways in which women have been seen, and have seen themselves, as modern subjects. (Felski, 1995, p. 207; 209)

Using these thoughts, and in contrast to historical constructions of femininity as vulnerable and weak, we embrace the possibility of considering women's IPED use in terms of its own explanatory logic of narrative, possibly breaking with hegemonic conceptualizations of the practice. Suggesting that building bodies through the use of IPEDs is not necessarily masculine enables an epistemological approach and analytical frame in which women's doping practices and a women-only IPED forum can be understood less in terms of gender and gender norms, and more in terms of female subjectivity, and thus as an “act” through which physical accomplishments, health, women-specific harm reduction, and more are given meaning (cf., Roth & Basow, 2004). Analyzing how the introduction of a women-only forum for IPED use is understood within a broader doping community and how women talk about IPEDs when not interfered with or directed by male commenters will thus enable us to get closer to the ongoing socio-cultural changes in the gender balance and dynamics of IPED use, looking at it through a lens that centers women's (only/own) experiences, rather than from an explanatory logic of narrative saturated in hegemonic

conceptualizations and patterns. We argue that it is when new configurations and dynamics emerge, in this case within an online forum, that previously gendered practices can begin to be challenged and rethought (see also Butler, 2005, p. 29). Following Felski (1995), these are “the alternative lenses” that we are offering through this article.

Research Design

This article builds on an in-depth investigation of ongoing online discussions found on a website called *ThinkSteroids.com*. On this website anybody with an internet connection can gain access to discussions on doping, as well as publish pictures and posts about their own experiences and developments. The site can in a way be understood as a “doping mall” in which members can enter different stores in the form of thematized forums dedicated to users’ diverse areas of interest (e.g., “Steroid Pictures Forum,” “Steroid Legal Forum,” “Human Growth Hormone and Peptides”). Each of these forums (stores) are then further subdivided into different ongoing discussions or threads (akin to individual products offered in shops) made up of member posts. Although personal information on users is usually limited, it is clear that the majority of the posts in these various forums are by men (see Henning & Andreasson, 2021).

As discussed, the male user largely constitutes the norm regarding doping practices, which seemingly also stretches into the context and textuality of online communication within doping forums (see Background section). However, on *ThinkSteroids* there is space dedicated solely to women. In this article we focus on a forum called “Women’s Steroid Experiences” that was launched in 2020 as a “Dedicated space for WOMEN ONLY to engage, discuss, and share their steroid experiences with other women” (ThinkSteroids.com, 2020). Following the aims of the study, we focus our analysis, first, on how the introduction of this forum was received when launched, and second, on how this forum then evolved as a variety of women engaged in discussions.

Regarding epistemology, the study was based on a qualitative case study approach. As we see it, the “Women’s Steroid Experiences” forum can provide a rich portrait of a rare case (Pearson & Hobbs, 2003; Yin, 2014), and this article can thus be read as an archeology of women’s online fitness doping and how women’s discussions of IPEDs evolve when male hegemonic voices are put in parentheses. The contribution thus lies in the unique case chosen and in connecting users’ subjective and diverse experiences and ambitions with different (gendered) conceptualizations of the practice and its (side) effects. In this article, we are not primarily focused on what individuals express in their posts and will not analyze these in detail, for example in terms of diverse embodied subjectivities and femininities being pursued through drug using practices. Put differently, though the information and knowledge shared on this forum is relevant for and expressed by competitive female powerlifters and bodybuilders, as well as women setting up other goals with

their training and use, we will not analyze the individual and diversity of motives, ideals, and femininities per se. Instead, we view the group of women engaged in the “Women’s Steroid Experiences” forum as our main object of study. Thus, we direct our attention to the cultural formation and textuality of this secluded space/forum and how it develops in order to analyze what it brings in terms of gender-specific issues and dynamics related to the use of IPEDs when addressed exclusively by women. We view these discussions as cultural manifestations taking place within a particular (and gendered) spatiality and community.

In our analysis we approached the online space of *ThinkSteroids* as a platform designed to attract specific groups of people and lifestyles, with the perspective that there are no impenetrable lines between online communication and cultural practices away from keyboard (see Anderson-Levitt, 2006; Pink, 2009). Rather, inspired by the words of Kozinets (2010, p. 22), as we see it, technology and culture interact and become intertwined through the use of online communication. Thus, the possibilities facilitated and the texture and preconditions for how communication is made/done on the selected forum is seen as part of the construction of cultural meaning. This is why we turn our focus to women’s posts and narratives on doping in this study.

When conducting the study, in the sampling process we initially read the ongoing discussions on the women-only forum, at the time consisting of 244 unique threads. These threads varied in length and number of comment posts, stretching from one to 47 comments. The threads, copied to a word document and saved on a secured disk, were read repeatedly and thematically organized in relation to the theoretically informed and two-fold purpose of the study (Aspers, 2007). In this process we also made theoretically informed notes in order to contextualize the posts in relation to gender, power, and more. Moving between our empirical data and the theoretical framework as described, we looked for excerpts that, in a nuanced way, could provide insights into how women conceptualized their use and understood the forum in relation to the community as a whole (cf. Hammersley & Atkinson, 2005). Analytically this meant that we opted to construct a creative research environment, by early on in the process experimenting with writing, collecting data, and theoretical influences (Back, 2007). In the presentation of our findings we have, however, chosen an empirically driven approach. This has not been done with the intent to separate the empirical material from the theoretical ideas and conceptual framework that initiated the study, but with the intent to center the women’s posts and how these can be read not only in terms of individual experiences but also as cultural manifestations of a highly gendered practice: IPED use. Following this, posts have been approached as already theoretically impregnated (Gomm et al., 2000).

Certainly, engaging in studies of online communication raises questions regarding research ethics. For example, using this kind of material may blur the distinction between public and private, bringing forward central questions concerning confidentiality and participants’ ability to decide whether to participate or not (formal consent). Forums on *ThinkSteroids* are not password protected and anyone with an internet connection can view the discussions. Based on this, we have concluded that

the members have no reasonable expectation of their personal privacy needing to be normatively protected (Grodzinsky & Tavani, 2010, p. 45). Adding to this, members do not use their real names on the forum. Consequently, we do not know who they are, and (if not explicitly addressed) we could not discern age, ethnicity/race, sexuality, or other characteristics. Of course, this does not give us free rein to use the material as we please. In order to protect the anonymity of those quoted, we have made sure not to include any potentially personally identifiable information (Franzke et al., 2020). We have also chosen to construct new usernames and restricted our use of quotations to those that promote relevant analysis in our presentation (Andreasson & Johansson, 2016). Formal ethical approval to carry out this study was secured from the Regional Ethical Review Board of Linköping University, Sweden (Ref. No. 2017/469-31).

Findings

Introducing “WOMEN ONLY”

As a result of “female member feedback,” a moderator of *ThinkSteroids* explained in the spring of 2020 that it had decided to open up a new forum called “Women’s Steroid Experiences.” Women members had expressed that they experienced a tendency among (some) male members to background their voices, colonizing discussions even when women’s experiences and bodies were debated. In Henning and Andreasson (2021) this tendency was analyzed and it illustrated how men’s dominance in discussions served to block the development of a women’s community of practice. In order to meet the needs of women members of *ThinkSteroid*, and to address such concerns, a forum exclusively dedicated to posts by women was launched. The following notice appeared on the *ThinkSteroids* website announcing the news:

Effectively [sic] immediately, the “Women’s Steroid Experiences” subforum permissions will only allow women’s participation to POST NEW THREADS and RESPOND to EXISTING THREADS.

The “Women’s Steroid Experiences” subforum is a dedicated space for WOMEN ONLY to engage, discuss, and share their steroid experiences with other women.

A new second subforum was created in the women’s section tentatively called “Women and Steroids—Open to Everyone.” This subforum was created in recognition of the fact that some women specifically welcome feedback from both men and women, some men seek feedback from women who have used steroids, and both men and women can contribute to the knowledgebase in this area. (TheHost)

Whereas the need for an exclusive forum for women was debated among the members when this news was presented on *ThinkSteroids*, most seemed supportive of the changes made and the potential benefits they could accommodate. Despite the discussion around need, the new forum was not explicitly opposed. Taking into

consideration that there are quite a few men who are encouraging of women's experiences and approach the forum in a reasonable way, the website moderators also decided to keep this door open with an "all-are-welcome" forum called "Women & Steroids." As a result, forum members can discuss issues concerning drug use, bodies, harm reduction, and more regardless of gender, while still providing women the ability to opt out of the all-comers forum if feeling the need to do so. This development, to some extent, meets scholars' concerns regarding the lack of reporting on women's experiences and the hidden nature of their IPED use (see for example Sverkersson et al., 2020; Van Hout & Hearne, 2016). A woman member commented on the recent developments on *ThinkSteroids*.

I think this is a good direction to go in . . . so you boys stay at bay and behave but still can read our posts. It won't get cluttered with unnecessary posts. It's our own little section where we can say and ask anything and know there's only female feedback coming. It's a good move. We just need the ladies back again! (MuscleEmpress)

There were several posts from both men and women in favor of this approach. Forming vocabularies of justification (cf., Monaghan, 2012), MuscleEmpress suggested that the new forum could facilitate a space where women's experiences and feedback could be discussed uninterrupted. Adding to this, the new forum also offers the possibility of bracketing the heteronormative and misogynistic responses made by some men on the all-are-welcome forum, and which was conceptualized by Henning and Andreasson (2021) as an online example of cultural and discursive *manspreading*. As one male member explained in support of the women-only area/forum: "we had a female introduce herself just this week, and low and behold one of the first members to say hello had been previously banned for sexually harassing a female member." Thus, such occurrences were understood as a clear enough reason for why the women-only forum, and the alternative lenses that it could provide (Felski, 1995), was needed. MuscleEmpress, above, also added a layer of complexity in her acknowledgement that though the new forum is to be used by women only, men are still able to read the discussions. In theory, at least, they are freed from men's interference and heteronormative ideas (on what women should do and look like), but their experiences on the forum are still potentially subject to male surveillance (Dworkin & Wachs, 2004; Jespersen, 2013; Sverkersson et al., 2020). This may have implications for how individual women choose to present and legitimate themselves relative to men's silent surveillance and hegemonic gaze (see Connell & Messerschmidt, 2005). Nevertheless, old (and new) women members have found their way back to the forum to engage in discussions, seemingly as a result of the changes made on the website.

Looks like some ladies came out of the woodworks since the change. I haven't seen @Laura post in a long time. Glad to see some of the ladies making their way back to the site. (PeptideJudy)

In the discussions, there were several woman members who talked about the women-only forum as creating a space of their own. Some women were also actively working to build up their new community and collective experience-based knowledge through their own posts. One member, for example, presented an extensive report on her current course and described what drugs she uses, their effects, and reasons for dosages. She ended her post by describing her politicized motivation for engaging in the forum.

Mostly posting this for FYI for others. I find there is little information for women and steroids out there. At least real usage and hard truths. (#StrongWomen)

Initiating a women-only forum opens the possibility for women to set the female body and morphology as the standard and norm for discussion in a way that was previously understood as less likely to occur on *ThinkSteroids*. This can be partly understood as a way for women to break the historical link between doping and hegemonic conceptualizations of masculinity (Andreasson & Johansson, 2016; 2019). In doing so, it also becomes increasingly possible for women to occupy this subcultural space and discuss their experiences less in terms of gender (filtered through the male and heteronormative gaze) and more in terms of, for example, harm reduction, health, bodily issues, and lifestyle strategies. This will be further discussed in the next section.

Advice, By and For Women

Since launched, the women's forum has had a fair number of topics introduced by female members. The topics vary, stretching from women searching for advice regarding substances, to how to deal with side effects and different experiences with the drugs. There are also recurrent discussions that concern the relationship between IPED use and being a woman. Largely following a route similar to male-dominated online communities (Andreasson & Johansson, 2016; Bilgrei, 2018), discussions are usually introduced by a member searching for or giving advice, along with a comprehensive explanation regarding their point of departure regarding use. This excerpt exemplifies this pattern:

Hi ladies,

I recently introduced myself briefly in the New members thread. Just some quick Infos about myself, so you don't need to jump back if you are in a rush. I'm in my mid-30s, tiny 5'2" / 130 lbs. I have been involved in sports pretty much for my entire life (mainly gymnastics and a bit of climbing and Tae Kwon Do back in my teenage life) and fell in love with barbell training back in 2017. I did my first powerlifting meet in 2018 and since then a couple more. Last one was back in 12/2019. So far my best 1 RMs are: squat 245, bench 150 and deadlift 300. Currently I'm training 5x week and eating in a deficit, as I got a little chubby over the last months. / . . . / I have read a lot in

Meso and ordered some Var from a big source from here. Not sure, if I need to get it analyzed . . . Any opinion on that? I'm planning on starting with 2,5 mg am/pm and see how I react. I might increase it up to 7,5 mg am/pm during the cycle, I'll just see how I feel. I'm not on hormonal birth Control, but injecting a TNF Alpha blocker once a week due to a chronic disease. (which is under control thanks to these meds). I get my blood work done every 6–8 weeks, including liver Enzymes etc, so if there are some changes due to the AAS, Ill post it here. Any questions or tips for a first timer are very welcome! (LadyVar)

This post, presented here in part, constitutes a comprehensive explanation of LadyVafs physical status, her previous experiences, weight, height, and other personal information. The information provided includes the basic information (usually) requested and required to be seen as part of the *ethnopharmacological (sub)culture* that develops in drug communities such as *ThinkSteroids* (see Andreasson & Johansson, 2016; Monaghan, 2012; Smith & Stewart, 2012). Further, this refers to a communicative culture in which knowledge about IPEDs is maintained, contested, and passed on by and through different users. What is described here, mirroring previous research conducted mainly or exclusively on men (Monaghan, 2012; Smith & Stewart, 2012), is thus a point of departure, and with the help of information about physical conditions, knowledge, and goals, advice was solicited from (in this case and in contrast to previous research) other woman members. The questions and advice in this forum do not necessarily concern only women-specific issues. Rather, the discussions are more broadly approached in terms of IPED use and experiences. In some threads, however, the focus on women becomes explicit. One member explained her approach to possible side effects with IPEDs.

I'm okay with temporary acne (I used to have heavy breakouts as Teenager, so it might come back) and faster hair grow (but not in the face). I shave anyways daily while I'm in the shower. As for voice deepening and clit enlargement: This is a bit scary to me, so once I feel my voice crack, I'll lower the dose (if possible) or stop it. As for clit enlargement, I'm not sure how to feel it? (If that makes sense). I mean, e.g. a swelling due to increased blood circulation isn't the same as a "growing" process. (ElitaOne)

In contrast to a fanatical obsession with muscular hypertrophy overshadowing potential health costs, which was found in Smith and Stewart's (2012) study on a bodybuilding and powerlifting community, we can see here how a more reflexive approach to drug use emerges (see also Monaghan, 2012; Van Hout & Hearne, 2016). ElitaOne's anxiety highlights an ambivalence towards some possible effects. Though she accepted these may happen, she was also concerned. Soon after posting her thoughts about potential side effects of the drugs, ElitaOne received the following response from a fellow community member that points towards a more accepting perspective on side effects.

Oh my, the bigger and more fuller clit is amazing. I love it. It's scary at first but once it happens, it's the best. It all varies on how much your strength gains can be. If your training and nutrition is on point. You can gain 10-100 pounds in your lifts. The higher dosages you take the higher your lifts can increase. Side effects can happen at any dosage. We all have different body chemistry and muscle goals. When I'm on cycle and I notice negative effects, I keep going and pushing harder as long as I have good strength and energy. Some women will do what I do. Some women will get scared and quickly drop dosages at the first sign of anything negative (most of the time the women who stop or drop dosages to soon will greatly slow down their muscle progress). (Grrrlzilla)

This post highlights a reframing of negative (often masculinizing) side effects as indicators that positive change is happening elsewhere. Grrrlzilla foregrounded the strength and energy gains while encouraging acceptance of some side effects in order to maximize muscle building, and in doing so also promoted a muscular meritocracy (cf., Smith & Stewart, 2012). While this could be understood as a shift in embodied understandings of femininity that goes beyond gender norms to focus on pleasure and potential harm (see McDermott, 1996), this exemplifies how the social negotiation within the community moves understanding of the body away from hegemonic conceptualizations. Here, ElitaOne is supported in her negotiation from Grrrlzilla, who provides an alternative narrative for understanding the physical change and, ultimately, the self. The women-only space provides room for this community-driven change that may not be possible when interrupted or influenced by male participants. Although there is still some ambivalence expressed around side effects, there is a clear shift towards centering positive (muscle growth) and pleasurable (clitoris enlargement) IPED experiences (see Mulrooney et al., 2019). Adding to Grogan et al. (2004), who suggested that (side) effects of concern usually are those that have a direct effect on issues such as body image and fertility, we can thus see how women socially negotiate how effects are understood to form an online ethnopharmacological culture (Monaghan, 2001). Another member concludes this by posting the following: "Some women can handle only low dosages, other women like me can handle much higher dosages. What side effects are you willing to tolerate?"

Although the discussions are predominantly in favor of IPED use, there are also posts that address more troublesome experiences, as in the below post centering the female body. The subject of the thread was "female problems":

Ok, so, I've been taking birth control pills FOREVER and now that i am over 50 continue to take them for HRT. I haven't had a period in years because i started taking them back to back without the placebo pills that constitute the last week of the pack. Well, at 8 weeks out from my show (I'm 4 weeks out now) i stopped taking them all together. to help reduce water retention. And . . . this morning I was entertaining a gentleman friend (er hmmm) and all of a sudden we both realize there was blood. Like I had

started my period. WTF??? It wasn't real serious, but it was there. I guess I should go back to taking half a pill a day to see if that helps correct this problem? I have avoided this for years! Ugh!! (TheEntertainer)

In occupying this exclusive subcultural space, the women on the forum are able to discuss and reconceptualize their use in relation to physical conditions set by a normative female body rather than in relation to male biology and hegemonic conceptualizations (see Felski, 1995). Instead of being drawn into processes of othering, similarly to how male bodies have been constructed as the norm with female bodies as a variation throughout the history of medicine (see for example Underwood, 2017), this section thus shows how the female body, in diverse ways, becomes centered, a starting point for discussion. Further, including negative experiences works to more fully develop the collective knowledge within this community of women, no matter what their motives and ambitions are when engaging in IPED use. The development of this women-led ethnopharmacological culture, perhaps unsurprisingly, bears resemblances to male-dominated communities in which some male-centered negative effects are addressed and negotiated (e.g. low libido/Deca-dick, testicular atrophy, gynecomastia) (see for example Smith & Stewart, 2012). This is usually followed by discussion on the likelihood of occurrence and harm reduction, or on what level of side effects are thought of as reasonable or acceptable (see Bilgrei, 2018). Nevertheless, in the secluded space of a women-only forum, male-centered IPED experiences and gender norms are largely absent. This means women do not have to debate their use in terms of justifying the subversion of norms and explaining aesthetic goals in an environment where criticism is to be expected. In contrast to previous research (Andreasson & Henning, 2019; Havnes et al., 2021, McGrath & Chnanie-Hill, 2009), we can thus see how the discussions have taken form on the women-only forum when not met by (male) misogynistic discourses, condemnations, and heterosexist notions of how women should be and what they should look like. In the next section, we zoom in on the possibilities that this brings and how women deploy their ethnopharmacological expertise and culture in support of other women community members.

“Coaching” and Sis-Science

By giving space for women to center their own experiences and bodies, the women-only forum opens the possibility of women supporting one another through giving advice and support in a kind of coaching relationship. As suggested by Kotzé et al. (2020) “IPED coaching” can be seen as part of ethnopharmacological cultures mostly driven by men (see also Monaghan, 2001; 2012; Underwood, 2017). Here, we see how women engage in this as they set and pursue new goals. For example, ElitaOne, whom we met above and who worried about different side effects, explained (after a couple of months) that her ideals and goals had changed. She described how she now wants to outgrow her pant-legs (and potentially looks

forward to an enlarged clitoris, which she rethought as a source of more pleasure rather than an abnormality to some extent). The supportive context and empowerment in this narrative was emphasized by another member, She-Hulk, who commented on ElitaOne's goal by noting, "It will take lots of hard work to make your legs out grow your pants. I did it, you can do it too."

Although the majority of posts concern women searching for solid advice from other women, there are also threads in which members related their experiences as an explicit strategy to contribute to a solid foundation for a women-centered understanding of IPED use. For example, KickInKate responded to a post asking about oral versus injected Primobolan:

For me oral primo was not as good as the injection primo. I had better results with injection. If you choose to use the oral form, start with half a pill per day to see how it works with you. After 1-3 weeks you can increase your dosages by half pill till you find what dosages work for you and your goals. Primo works slow. Takes about 6 weeks to fully kick in. Make sure your well hydrated. (KickInKate)

KickInKate drew on her own experience to make concrete suggestions on use modality and dose, contributing to a mutually supportive culture around use. In doing so, she presented options from which the original poster could choose, while also making these alternatives available for other women on the forum. Additionally, indicating her previous use and experiences worked as a way of legitimizing herself as qualified to give such guidance.

What became clear in posts like the above is how women moved beyond just sharing experiences or offering encouragement. Women in this forum were positioning themselves as experts on IPEDs and muscle building in their own right. They often gave clear and direct advice in a coaching capacity. For example, in response to questions on using and dosing the steroid nandrolone phenylpropionate (NPP), two women drew on their own knowledge and experiences to make specific recommendations:

Gains are awesome but hard to keep after. Sides I experienced—voice change, facial not go back to normal after btw). Never was able to retain the gains after a cycle. I've cycled it three times and will never use again. My dose was 10 mg every 3 days. I will stick with Var, gh and primo now. My advice if you decide to run it, if sides are too much, drop that shit. Some sides will become irreversible. Keep that in mind. And good luck!!! (SideWatch)

Females, I recommend a dose between 30 mg and 50 mg per week split into doses taken every 3 days. Run it typically 8–12 weeks. Keep your diet super clean. (IronLady)

This type of coaching indicates not only (potential) side effects, but also how use strategies are discussed on the forum. Women are offering and receiving support for their goals as well as normalizing women's use, bodies, and muscularity. These

discussions evolved into a more focused discussion on diet, goals, body ideals, and how to reach sought-for goals (cf. Huang & Basaria, 2018). In this section, we have shown how such a culture of support and coaching was driven by women's fellowship and how women exerted their own expertise to bolster other women's ambitions. In doing so, the women-only forum helps not only to challenge conventional and male-centered understandings of IPED use, but also creates a narrative/lens through which women's experiences and knowledge can be presented and debated "uninterrupted" (see Felski, 1995). As the women cannot and are not interested in applying ethnopharmacological knowledge created in reference to men and male bodies (see Christiansen, 2020; Monaghan, 2012), they instead have initiated the formation of a women-centered ethnopharmacology. Sex-specific knowledge and experiences of the drugs and their impacts can then be diffused among the members, introducing a kind of "sis-science" (Andreasson & Johansson, 2016; Sverkersson et al., 2020).

Conclusions

Felski (1995) suggested that our understanding of history and culture is shaped by the explanatory logic of narrative, which houses power and gender norms. In this study we have shown that the women-only forum on *ThinkSteroids* provides a communicative and narrative space in which women and their views and experiences are centered. This not only allows women to connect with one another directly—avoiding having their voices drowned out by men and heterosexist and misogynistic discourses (Henning & Andreasson, 2021)—but it also enables a new women's doping subculture to form. First-hand knowledge is disseminated or diffused by women sharing their own courses, results, and ways of managing effects, all of which contribute to a foundation for a women's ethnopharmacological subculture. In such an exclusive space, women are no longer interlopers or exceptions. Instead, women become the standard and their bodies and experiences become the "unspoken" norm in debates and discussions. Women are further able to legitimize themselves as experts in this realm, asserting their knowledge in the form of direct advice to other women on dosing and use practices. By taking up such "coaching" positions, women are also staking their claims as experts on this topic and empowering other women to redefine and work towards new goals. Actively engaging as experts and sharing experience and advice also helps sever the grip masculinity has had on muscularity/doping, aided by simply bracketing men's voices out of discussions. Men's experiences and insights may still have value, but they are no longer the only legitimate arbiters of doping or muscle building.

More importantly, and in contrast to previous research (Christiansen, 2020; Henning & Andreasson, 2021; Sverkersson et al., 2020), we can see how women are actively creating their own narrative of IPEDs and muscle building (see Felski, 1995). Bracketing out hegemonic notions of masculinity and its cultural connection with muscularity seemingly frees the discussions on IPEDs from revolving around

men's views, experiences, desires, and bodies. Rather than being an adjunct to male-centered narratives of IPEDs and muscularity, women on this forum are co-creating a narrative in which use and practices are debated in terms of health, harm reduction, identity, and body ideals. These narratives are also important for what they do not include, such as a focus on maintaining normative femininity or heterosexual attractiveness. This has implications for the formation and development of this community (Henning & Andreasson, 2021), as well as the further development of a "sis-science" based on women's knowledge and experience (Sverkersson et al., 2020). Women are able to speak and interact without interruption from men, allowing them to potentially halt the processes of othering women's bodies and remake them according to women-led narratives derived from this community. Indeed, some women accepted or pushed acceptance of (initially thought to be) masculinizing effects as part of being a woman who uses IPEDs. This acceptance in some ways sets a new standard for women in this community based on the lived experiences of its members that goes beyond hegemonic norms of masculinity and emphasized femininity.

Of course, we cannot totally separate this forum from broader social structures and patterns of hegemonic masculinity, as these permeate doping and fitness subcultures. However, in this newly exclusive preserve women are challenging these—intentionally or not—while building and reinforcing women's experiences, bodies, and expertise as the standard within this developing community. Although this paper does not analyze the women's individual experiences or impacts of their specific characteristics and motivations, it shows the importance of moving beyond hegemonic conceptualizations of femininity in order to understand the ongoing sociocultural changes to the gender balance of IPED use, in part by analyzing women's doping and muscle building on women's own terms.


Declaration of Conflicting Interests


The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Forskningsrådet för Hälsa, Arbetsliv och Välfärd (FORTE) (Grant number: 2017-01572).

ORCID iDs

Jesper Andreasson  <https://orcid.org/0000-0003-1631-6475>

April Henning  <https://orcid.org/0000-0003-3276-0533>

References

Ahmed, S. (2006). *Queer phenomenology: Orientations, objects, others*. Duke University Press.

- Anderson-Levitt, K. (2006). Ethnography. In J. Green, G. Camilli, & P. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 279–296). Lawrence Erlbaum.
- Andreasson, J., & Johansson, T. (2014). *The Global gym: Gender, health and pedagogies*. Palgrave Macmillan.
- Andreasson, J., & Johansson, T. (2016). Online doping: The new self-help culture of ethnopharmacology. *Sport in Society: Cultures, Commerce, Media, Politics*, 19(7), 957–972. <https://doi.org/10.1080/17430437.2015.1096246>
- Andreasson, J., & Johansson, T. (2019). *Fitness doping and gym culture*. FORTE. <https://forte.se/en/publication/rb-doping/>
- Andreasson, J., & Johansson, T. (2020). *Fitness doping: Trajectories, gender, bodies and health*. Palgrave Macmillan.
- Andreasson, J., & Johansson, T. (2021). Negotiating female fitness doping: Gender, identity and transgressions. *Sport in Society*, 24(3), 323–339. <https://doi.org/10.1080/17430437.2019.1672152>
- Antonopoulos, G. A., & Hall, A. (2016). “Gain with no pain”: Anabolic-androgenic steroids trafficking in the UK. *European Journal of Criminology*, 13(6), 696–713. <https://doi.org/10.1177/1477370816633261>
- Aspers, P. (2007). *Etnografiska metoder* [Ethnographic methods]. Liber.
- Back, L. (2007). *The art of listening*. Berg Publishers.
- Bates, G., & McVeigh, J. (2016). *Image and performance enhancing drugs: 2015 survey results*. Centre for Public Health.
- Bilgri, O. R. (2018). Broscience: Creating trust in online drug communities. *New Media and Society*, 20(8), 2712–2727. <https://doi.org/10.1177/1461444817730331>
- Boepple, L., Ata, R. N., Rum, R., & Thompson, J. K. (2016). Strong is the new skinny: A content analysis of fitspiration websites. *Body Image*, 17(2016), 132–135. <https://doi.org/10.1016/j.bodyim.2016.03.001>
- Börjesson, A., Gårevik, N., Dahl, M., Rane, A., & Ekström, L. (2016). Recruitment to doping and help-seeking behaviour of eight AAS users. *Substance Abuse Treatment, Prevention, and Policy*, 11(11). <https://doi.org/10.1186/s13011-016-0056-3>
- Bunsell, T. (2013). *Strong and hard women*. Routledge.
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. Routledge.
- Butler, J. (1998). Athletic genders: Hyperbolic instance and/or the overcoming of sexual binarism. *Stanford Humanities Review*, 6(2), 103–111. <https://web.stanford.edu/group/SHR/6-2/html/butler.html>
- Butler, J. (2005). *Undoing gender*. Routledge.
- Christiansen, A. V. (2020). *Gym culture, identity and performance-enhancing drugs: Tracing a typology of steroid use*. Routledge.
- Cohen, J. H., & Raymond, J. M. (2011). How the internet is giving birth (to) a new social order. *Information, Communication & Society*, 14(6), 937–957. <https://doi.org/10.1080/1369118X.2011.582132>
- Connell, R. W. (1995). *Masculinities*. Polity Press.
- Connell, R. W., & Messerschmidt, J. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & Society*, 19(6), 829–859. <https://doi.org/10.1177/0891243205278639>

- Dunn, M., McKay, F., & Piatkowski, T. (2017). Information sought, information shared: Exploring performance and image enhancing drug user-facilitated harm reduction information in online forums. *Harm Reduction Journal*, 14(1), 1–9. <https://doi.org/10.1186/s12954-017-0176-8>
- Dworkin, S. (2001). “Holding back”: Negotiating a glass ceiling on women’s muscular strength. *Sociological Perspectives*, 44(3), 333–350. <https://doi.org/10.1525/sop.2001.44.3.333>
- Dworkin, S., & Wachs, L. (2004). “Getting your body back”: Postindustrial fit motherhood in shape fit pregnancy magazine. *Gender & Society*, 18(5), 610–624. <http://www.jstor.org/stable/4149421>
- Dworkin, S., & Wachs, L. (2009). *Body panic. Gender, health, and the selling of fitness*. New York University Press.
- Fair, J. D. (1999). *Muscle town USA: Bob Hoffman and the manly culture of York Barbell*. The Pennsylvania State University Press.
- FAIR. (2020). *Fair-forum for anti-doping in recreational sport 2019: Final report*. Europe Active.
- Felski, R. (1995). *The gender of modernity*. Harvard University Press.
- Flower, A., Bishop, F. L., & Lewith, G. (2014). How women manage recurrent urinary tract infections: An analysis of postings on a popular web forum. *BMC Family Practice*, 15(1), 162. <https://doi.org/10.1186/1471-2296-15-16>
- Franzke, A. S., Bechmann, A., Zimmer, M., & Ess, C., & the Association of Internet Researchers. (2020). *Internet research: Ethical guidelines 3.0*. <https://aoir.org/reports/ethics3.pdf>
- Frenger, M., Pitsch, W., & Emrich, E. (2016). Sport-induced substance use: An empirical study to the extent within a German sports association. *PLoS ONE*, 11(10), Article e0165103. <https://doi.org/10.1371/journal.pone.0165103>
- Germain, J., Leavey, C., Van Hout, M. C., & McVeigh, J. (2021). 2,4 dinitrophenol: It’s not just for men. *International Journal of Drug Policy*, 95, Article 102987. <https://doi.org/10.1016/j.drugpo.2020.102987>
- Gomm, R., Hammersley, M., & Foster, P. (2000). *Case study method*. Sage.
- Grodzinsky, F., & Tavani, H. (2010). Applying the “contextual integrity” model of privacy to personal blogs in the blogosphere. *International Journal of Internet Research Ethics*, 3(1), 38–47. https://digitalcommons.sacredheart.edu/computersci_fac/2
- Grogan, S., Evans, R., Wright, S., & Hunter, G. (2004). Femininity and muscularity: Accounts of seven women body builders. *Journal of Gender Studies*, 13(1), 49–61. <https://doi.org/10.1080/0958923032000184970>
- Guttman, A. (1978). *From ritual to record: The nature of modern sport*. Columbia University Press.
- Hammersley, M., & Atkinson, P. (2005). *Ethnography: Principles in practice* (3rd ed.). Routledge.
- Haraway, D. (1990). A manifesto for cyborgs: Science, technology and socialist feminism in the 1980’s. In L. J. Nicholson (Ed.), *Feminism/postmodernism* (pp. 190–233). Routledge.

- Havnes, I. A., Jørstad, M. L., Innerdal, I., & Bjørnebekk, A. (2021). Anabolic-androgenic steroid use among women: A qualitative study on experiences of masculinizing, gonadal and sexual effects. *International Journal of Drug Policy*, 95, Article 102876. <https://doi.org/10.1016/j.drugpo.2020.102876>
- Haywood, C., Johansson, T., Hammarén, N., Herz, M., & Ottemo, A. (Eds.). (2018). *The conundrum of masculinity: Hegemony, homosociality, homophobia and heteronormativity*. Routledge.
- Hearn, J. (2004). From hegemonic masculinity to the hegemony of men. *Feminist Theory*, 5(1), 49–72. <https://doi.org/10.1177/1464700104040813>
- Henne, K., & Livingstone, B. (2019). More than unnatural masculinity. In K. Van de Ven, K. J. D. Mulrooney, & J. McVeigh (Eds.), *Human enhancement drugs* (pp. 13–26). Routledge.
- Henning, A. D., & Dimeo, P. (2015). Questions of fairness and anti-doping in US cycling: The contrasting experiences of professionals and amateurs. *Drugs: Education, Prevention and Policy*, 22(5), 400–409. <https://doi.org/10.3109/09687637.2015.1029872>
- Henning, A., & Andreasson, J. (2021). “Yay, another lady starting a log!”: Women’s fitness doping and the gendered space of an online doping forum. *Communication & Sport*, 9(6), 988–1007. <https://doi.org/10.1177/2167479519896326>
- Howson, R. (2006). *Challenging hegemonic masculinity*. Routledge.
- Huang, G., & Basaria, S. (2018). Do anabolic-androgenic steroids have performance-enhancing effects in female athletes? *Molecular and Cellular Endocrinology*, 15(464), 56–64. <https://doi.org/10.1016/j.mce.2017.07.010>
- Jespersen, M. R. (2013). “Definitely not for women”: An online community’s reflections on women’s use of performance enhancing drugs in recreational sports. In J. Tolleneer, S. Sterckx, & P. Bonte (Eds.), *Athletic enhancement, human nature and ethics* (pp. 201–218). Springer.
- Johnston, L. D., Miech, R. A., O’Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2018). *Monitoring the future national survey results on drug use: 1975–2017—Overview, key findings on adolescent drug use*. Institute for Social Research, The University of Michigan.
- Kartakoullis, N. L., Phellas, C., Pouloukas, S., Petrou, M., & Loizou, C. (2008). The use of anabolic steroids and other prohibited substances by gym enthusiasts in Cyprus. *International Review for the Sociology of Sport*, 43(3), 271–287. <https://doi.org/10.1177/1012690208098545>
- Kotzé, J., Richardson, A., & Antonopoulos, G. A. (2020). Looking “acceptably” feminine: A single case study of a female bodybuilder’s use of steroids. *Performance Enhancement & Health*, 8(2-3), Article e100174. <https://doi.org/10.1016/j.peh.2020.100174>
- Kozinets, R. (2010). *Netnography: Doing ethnographic research online*. Sage.
- Leeds, M. C., & Liberti, R. (2007). “Cause that’s what girls do”: The making of a feminized gym. *Gender & Society*, 21(5), 676–699. <https://doi.org/10.1177/0891243207306382>
- Liokaftos, D. (2019). Natural bodybuilding: An account of its emergence and development as competition sport. *International Review for the Sociology of Sport*, 54(6), 753–770. <https://doi.org/10.1177/1012690217751439>

- McDermott, L. (1996). Toward a feminist understanding of physicality within the context of women's physically active and sporting lives. *Sociology of Sport Journal*, 13(1), 12–30.
- McGrath, S., & Chananic-Hill, R. (2009). “Big freaky-looking women”: Normalizing gender transgression through bodybuilding. *Sociology of Sport Journal*, 26(2), 235–254. <https://doi.org/10.1123/ssj.26.2.235>
- Monaghan, L. F. (2001). *Bodybuilders drugs and risk: Health, risk and society*. Routledge.
- Monaghan, L. F. (2012). Accounting for illicit steroid use: Bodybuilders' justifications. In A. Locks & N. Richardson (Eds.), *Critical readings in bodybuilding* (pp. 73–90). Routledge.
- Mulrooney, K. J., van de Ven, K., McVeigh, J., & Collins, R. (2019). Commentary: Steroid madness- has the dark side of anabolic-androgenic steroids (AAS) been over-stated? *Performance Enhancement & Health*, 6(3-4), 98–102. <https://doi.org/10.1016/j.peh.2019.03.001>
- Pearson, G., & Hobbs, D. (2003). King pin? A case study of a middle market drug broker. *The Howard Journal*, 42(4), 335–347. <https://doi.org/10.1111/1468-2311.00290>
- Pink, S. (2009). *Doing sensory ethnography*. Sage.
- Pope, H. G., Kanayama, G., Athey, A., Ryan, E., Hudson, J. I., & Baggish, A. (2014). The lifetime prevalence of anabolic-androgenic steroid use and dependence in Americans: Current best estimates. *The American Journal on Addictions*, 23(4), 371–377. <https://doi.org/10.1111/j.1521-0391.2013.12118.x>
- Rasmussen, J. J., Schou, M., Madsen, P. L., Selmer, C., Johansen, M. L., Hovind, P., Ulriksen, P. S., Faber, J., Gustafsson, F., & Kistorp, C. (2018). Increased blood pressure and aortic stiffness among abusers of anabolic androgenic steroids: Potential effect of suppressed natriuretic peptides in plasma? *Journal of Hypertension*, 36(2), 277–285. <https://doi.org/10.1097/HJH.0000000000001546>
- Rasmussen, J. J., Selmer, C., Østergren, P. B., Pedersen, K. B., Schou, M., Gustafsson, F., Faber, J., Juul, A., & Kistorp, C. (2016). Former abusers of anabolic androgenic steroids exhibit decreased testosterone levels and hypogonadal symptoms years after cessation: A case-control study. *PLoS One*, 11(8), Article e0161208. <https://doi.org/10.1371/journal.pone.0161208>
- Roth, A., & Basow, S. (2004). Femininity, sports, and feminism: Developing a theory of physical liberation. *Journal of Sport and Social Issues*, 28(3), 245–265. <https://doi.org/10.1177/0193723504266990>
- Roussel, P., & Griffet, J. (2000). The path chosen by female bodybuilders: A tentative interpretation. *Sociology of Sport Journal*, 17(2), 130–135. <https://doi.org/10.1123/ssj.17.2.130>
- Sassatelli, R. (2011). *Fitness culture: Gyms and the commercialisation of discipline and fun*. Palgrave Macmillan.
- Smith, A. C. T., & Stewart, B. (2012). Body perceptions and health behaviors in an online bodybuilding community. *Qualitative Health Research*, 22(7), 971–985. <https://doi.org/10.1177/1049732312443425>
- Sverkerrsson, E., Andreasson, J., & Johansson, T. (2020). “Sis science” and fitness doping: Ethnopharmacology, gender and risk. *Social Sciences*, 9(4), 1–13. <https://doi.org/10.3390/socsci9040055>

- ThinkSteroids. (2020, September). *Women's steroid experiences*. https://thinksteroids.com/community/forums/womens-steroid-experiences.60/?prefix_id=1
- Underwood, M. (2017). Exploring the social lives of image and performance enhancing drugs: An online ethnography of the Zyzz fandom of recreational bodybuilders. *The International Journal of Drug Policy*, 39(2017), 78–85. <https://doi.org/10.1016/j.drugpo.2016.08.012>
- Van de Ven, K., Mulrooney, K. J. D., & McVeigh, J. (Eds.). (2019). *Human enhancement drugs*. Routledge.
- Van Hout, M. C., & Hearne, E. (2016). Netnography of female use of the synthetic growth hormone CJC-1295: Pulses and potions. *Substance Use and Misuse*, 51(1), 73–84. <https://doi.org/10.3109/10826084.2015.1082595>
- Washington, M. S., & Economides, M. (2016). Strong is the new sexy: Women, Crossfit, and the postfeminist ideal. *Journal of Sport and Social Issues* 40(2), 143–161. <https://doi.org/10.1177/0193723515615181>
- Woodward, K. (2009). *Embodied sporting practices: Regulating and regulatory bodies*. Palgrave Macmillan.
- Woube, A. (2018). Racing against age? Gender, age, and body among senior participants in women-only sports races. *Loisir et Société/Society and Leisure*, 41(2), 297–310. <https://doi.org/10.1080/07053436.2018.1482672>
- Yin, R. (2014). *Case study research: Design and methods*. Sage.