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Outline of a typology of men's use of anabolic androgenic steroids in fitness and strength training environments*

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Abstract

Recent research into the use of anabolic androgenic steroids (AAS) in fitness and strength training environments have revealed great variance in users' approach to AAS use and more specifically their approach to health risks and desired objectives. However, there have only been few attempts to develop theoretical frameworks directed at conceptualising the variance in AAS use. In this paper, we propose a unified framework in the form of a typology, which concerns men's general approach to AAS use. The typology is based on sociologist Max Weber's method on the ideal typology. The work comes out of the authors' own qualitative empirical research on male AAS users in fitness and strength training environments, but is also related to and draws on the international literature on the subject. The suggested typology consists of four ideal types: the Expert type, the Well-being type, the YOLO type and the Athlete type. The four types are developed around two overarching categories, namely users' approach to risk and effectiveness. The typology outlines distinct and characteristic approaches to AAS use and can, thus, be employed by researchers as well as health professionals as a heuristic tool for investigation and explanation.

Keywords

Anabolic androgenic steroids, Max Weber, fitness and strength training, ideal typology, theory development, drug education and prevention, doping, performance-enhancing drugs

History

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Introduction

The use of anabolic androgenic steroids (AAS) in fitness and strength training environments is considered a public health problem in many countries (Anti-Doping Danmark, Dopingautoriteit, STAD, Instytut Sportu, & CyADA, 2012; McNamee et al., 2014; McVeigh, Bates, & Chandler, 2015; Pope, Wood, et al., 2014). Whereas the short-term adverse effects of AAS have been known for many years (Hartgens & Kuipers, 2004; Hoffman & Ratamess, 2006), evidence of long-term health consequences are now beginning to accumulate (Kanayama, Hudson, & Pope, 2008; Pope, Kanayama, & Hudson, 2012; Pope, Wood, et al., 2014). Public authorities, thus, have reasons to initiate educational campaigns, harm reduction initiatives or set up rules and regulations aiming to cease use and persuade potential users not to initiate use.

However, in order to institute legislation or set up effective educational campaigns, it is necessary to have a good understanding of the target population. Media portrayals tend to offer a skewed, sensationalist picture of AAS users, focussing on grotesquely huge bodybuilders, violent outburst of the so-called "roid-rage" or teenage suicides presumably

caused by AAS (for a number of good examples see Bell, Buono, & Rawady, 2009). However, both quantitative and qualitative research into the various subcultures where AAS are being used have revealed a much more nuanced picture (e.g. Christiansen & Bojsen-Møller, 2012; Cohen, Collins, Darkes, & Gwartney, 2007; Liokaftos, Forthcoming; Monaghan, 2001; Parkinson & Evans, 2006; Sagoe et al., 2015). Nevertheless, whereas such studies are helpful in elucidating the great variability one can find within AAS using populations, there has only been limited scholarly attempt to develop theories and conceptualise the variance in the use.

We, therefore, formulated the following research question: "How can the great variability in the use of steroids in fitness and strength training environments be conceptualised?". Our study led to an outline of a typology of AAS use which we propose as a theoretical framework and heuristic device that will (a) make it easier for researchers in the field to categorise and understand different types of AAS usage, and (b) make it easier for health professionals and public authorities to target certain groups of users in, for instance, outreach initiatives and educational campaigns. While we acknowledge that substance use on the individual level most often is dynamic and processual, to understand such processes it is worth being able to categorise the user's general approach to drugs at certain points in their trajectory of drug use.

The typology we present in what follows is developed from the qualitative research into the use of AAS in fitness and strength training environments (hereafter: gyms) that each of the three authors have undertaken individually over the course

*The overall idea and some sections of this article are also found in a chapter in a forthcoming Danish language book, by the first author (Christiansen, Forthcoming).

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of 8 years. It is, however, at the same time, related to and draws on the international literature on the subject. We, therefore, believe that the typology is valid beyond the specific individual, social, cultural and institutional cases and settings we studied in our own research.

Background

With his ethnographic studies of the bodybuilding communities in California, Alan Klein was one of the first to provide an in-depth understanding of the cultural and psychological significance of bodybuilding, weight training and AAS use (Klein, 1993). While the work was ground breaking, it also to some extent promoted stereotypical images of AAS users as neurotic males dealing with their insecurities by building overly muscular physiques. Breaking with this approach, British sociologist Lee Monaghan looked instead into the significant differences in the approach to weight training and drug use and the variance he found in what he termed “ethnopharmacological knowledge” among different groups of users. On this background, Monaghan described users according to their body projects, such as bodybuilders, weight lifters, body sculptors and weight trainers. Later years have seen more research detailing the differences in AAS users’ experiences, concerns, reasons for initiation, social background and other central characteristics (Barland & Tangen, 2009; Bilard, Ninot, & Hauw, 2011; Christiansen & Bojsen-Møller, 2012; Cohen et al., 2007; Grogan, Shepherd, Evans, Wright, & Hunter, 2006; Ip, Barnett, Tenerowicz, & Perry, 2011; Kimergård, 2015; Kimergård & McVeigh, 2014; Nøkleby & Skårderud, 2013; Petrocelli, Oberweis, & Petrocelli, 2008; Sagoe, Andreassen, & Pallesen, 2014). The many qualitative studies paint a diverse picture of AAS use based on different experiences, motives, aims, strategies and approaches, which vividly contrasts with the one-sided representations conjured in most media reports.

Nevertheless, there have only been few attempts in the social sciences studying the use of AAS to develop theoretical frameworks for grasping the variance. Most of these have been oriented towards describing different groups of users, such as those suggested by Monaghan (see above) or as e.g. sport users, occupational users, anti-aging users and cosmetic users (e.g. Donati, 2007; Evans-Brown, McVeigh, Perkins, & Bellis, 2012; Hoberman, 2005). However, beyond the group-specific descriptions, these models have limited explanatory power. In this paper, we aim to go a step farther by suggesting a unified framework in the form of a typology for AAS use in gyms, which concerns identifiable general approaches to such drug use. The typology we propose should, thus, also be able to account for the types suggested by other scholars (e.g. Hoberman, 2005; Monaghan, 2001). When developing the typology, we limited our scope to include only male users of AAS for two reasons. First, most prevalence studies find that women make up only a minor part of AAS users (Johnston, O’Malley, Miech, Bachman, & Schulenberg, 2016; Pope, Kanayama, & Hudson, 2014; Sagoe, Molde, Andreassen, Torsheim, & Pallesen, 2014). Second, and partly due to the first, our own empirical material includes very few accounts from female AAS users.

A note on terminology: for this paper, we have chosen the term AAS “use” as opposed to the scholarly contested and morally loaded terms “misuse” and “abuse” (Hernandez & Nelson, 2010; WHO, 2015). This is not to deny that using AAS can, and in certain cases does, lead to moderate to severe physical and mental health disorders. Some of these conditions can be investigated by the more scientifically sound category of dependence (Ip et al., 2012; Kanayama, Hudson, & Pope, 2009). Equally, we recognise the persistent and multiple ways in which both AAS users and non-users apply the terms “abuse” and “misuse” onto various groups within the gym environment, and how such terminological labelling is part of constructions of social boundaries and proper identities with reference to these substances.

Idea and method

The typology we develop below is meant as a theoretical framework consisting of four ideal-typical approaches to the use of AAS among male users of gyms. The four types are based on two overarching categories consistently appearing in the qualitative literature of the field, namely users’ approach to *risk* and *effectiveness*. Given the qualitative nature of our material, we examined participants’ subjective interpretations of their approaches as well as the information they provided which could be relevant to their AAS use. Hence, for risk, we looked at engagement with medical monitoring and supervision; stated approach to risk management; actual drug use pattern; and overall lifestyle. For effectiveness, we looked at the extent of the desired drug-assisted transformation (from modest to extreme results); stated approach to effectiveness (i.e. how much they cared about their goals), actual drug use; and other training-related patterns.

In developing the four types around the two categories, we have drawn on the sociologist Max Weber’s method on the ideal typology (e.g. Weber, 1970, 2013). Weber held the position that it is the ideal type and not the individual concept that is the social scientist’s characteristic tool, and that this tool has the potential to overcome the notorious dichotomy in the social sciences between subjective meaning on one hand and structural forms on the other hand. According to Weber, when creating an ideal type, the researcher must first pay attention to the “social facts”, i.e. what the social actors bestow with meaning. In this context, the social facts are AAS user’s expression of values, norms, attitudes, behaviours and actions regarding drug use specifically and training and the gym environment more generally. Second, the researcher synthesises the relevant aspects of those facts in relation to the demands of the research question (Hekman, 1983). On this basis, we analysed our interview material regarding the patterns of the meanings users attached to their use and synthesised this around the two axes of risk and effectiveness as described above. This approach allowed us to combine subjective meaning with structural form.

The described process, which is iterative by nature, implies an inductive method in that we moved from our empirical findings to describe the most dominating and conspicuous traits and patterns in them. We then related them to the existing literature to form an initial hypothesis, i.e. that there exist identifiable ideal typical approaches to the use of AAS;

this we explored further, revised accordingly, and ended up suggesting a theory – the typology. Such an approach is in line with the Weberian objective of ensuring that the “social facts” selected are “logically compatible with the theoretic interest informing the investigation and the logic of the social actors’ concepts” (Hekman, 1983, p. 122).

A typology, as opposed to a biography, is concerned with general or ideal-typical traits found in persons with similar approaches and motives. In this context, “ideal” is not used in a normative sense describing desirable qualities. Further, when specific individuals are compared to the ideal type, it is not important whether they match the ideal type in a 1:1 relationship since a typology is concerned with neither “the average” nor the traits most commonly found in real-world AAS users, but with the most characteristic and conspicuous traits (Hekman, 1983). Comparisons can be made in order to assess whether key traits of an individual’s approach resemble that of the type, and to have a reference point for explaining possible deviations. Since our analytical focus is on users’ approaches to their drug use rather than users as individuals, we use the term “type” to refer to types of AAS use.

The ambition underlying the present work is to facilitate an understanding of otherwise confusing and multifaceted motives via the construction of types that emphasise the most consistent patterns in AAS users’ motives, attitudes and behaviours. In reconstructing particular kinds of behaviour and the meanings attached to them, the typology’s value spheres expectedly manifest a consistency which is rarely found in reality (Weber, 1970). It should thus be viewed as a heuristic device that does not necessarily describe real-world people but is a way of learning about the real world (Hekman, 1983). Since the intention here is theory development, future research may of course suggest amendments or revisions to the typology.

As mentioned, in addition to our own data, we drew on the international literature, taking our point of departure in an existing systematic review of qualitative literature on AAS use (Sageo, Andreassen, et al., 2014). We subsequently placed emphasis on in-depth qualitative studies, picked out those who presented quotes from their informants and analysed them for content about risk and effectiveness. Apart from papers included in the aforementioned systematic review, we also examined ethnographic field studies, autobiographies, reports, and other qualitative research papers.

The present work is based on in-depth, semi-structured qualitative interviews with 37 men conducted by the authors between 2007 and 2015. Although the interviews were originally conducted for three different research projects, the applied interview guides had overlapping themes and explored many of the same issues, which allowed us to treat the interview material as one set. All interviews were conducted in accordance with the guidelines for semi-structured qualitative interviews (Creswell, 2013; Kvale & Brinkmann, 2009). Many interviewees were from Denmark (all interviewed by the first two authors), but we also had participants from England, Greece, Germany, Spain, Australia, Russia, France and the USA (all interviewed by the last author). Participants were between 21 and 42 years of age at the time of interview and all had personal experience with the use of AAS. The interviews lasted between 37 min

and 3 h, were subsequently transcribed in full and coded for content, using an inductive coding approach. Since some informants talked about issues that were regarded criminal in their country, we found it paramount to protect their anonymity. On this issue, we have followed the guidelines of the American Anthropological Association on the responsibility of the interviewer and the necessity of protecting the anonymity of informants (Spradley, 1979, p. 35).

The four types

In the following sections, we will present the four types as they have emerged out of the analysis of our interviews: *the Expert type*, *the Well-being type*, *the YOLO type* and *the Athlete type*. We will do so by highlighting the special traits and patterns we have found for each type primarily concerning risk and effectiveness, relate those to some general lifestyle traits and substantiate with quotes from the participants illustrating these traits and patterns. After this, in section The typology – discussion, we condense our descriptions, consider the international literature and discuss our findings’ implications and limitations. As noted, we position the four types in a matrix divided by the two axes of risk and effectiveness. As an initial illustration, and before qualifying their characteristic traits, the four types can be located in the matrix seen in Figure 1.

The expert type

For the Expert type, involvement with AAS is part of what could be termed an applied science project. In many cases, this is based on a fascination with the effects of pharmacological substances on human physiology as well as the knowledge and control one can acquire over one’s body. Gathering and synthesising information from different sources, including online fora and scientific papers, a Danish participant, aged 27, said:

I find the medical science behind it fascinating, and I can come up with many excuses for how I justified using gear [AAS], but I like the idea of putting theory into practice and see if you have learned enough by reading online. . . if you can put that into practice. And I could. So, I think it’s nice that you can learn such things by yourself.

Others, such as the 27-year-old informant below, described a similar disposition in terms of a critical and methodical posing and exploring of questions, a search for reliable results, and the gradual learning process involved in such an undertaking:

I went from listening to other [steroid] users to study it myself. How does it work? Why does it work? What should be taken into account and so on? It’s been a process where I over the course of seven to eight years have built up knowledge. Actually, by now I think I could take a minor degree in the body’s hormonal system.

The medical monitoring of their body project and health can be seen as an aspect of what such participants perceive to be a scientific approach. Expert types present themselves as informed about possible side effects and mindful to address

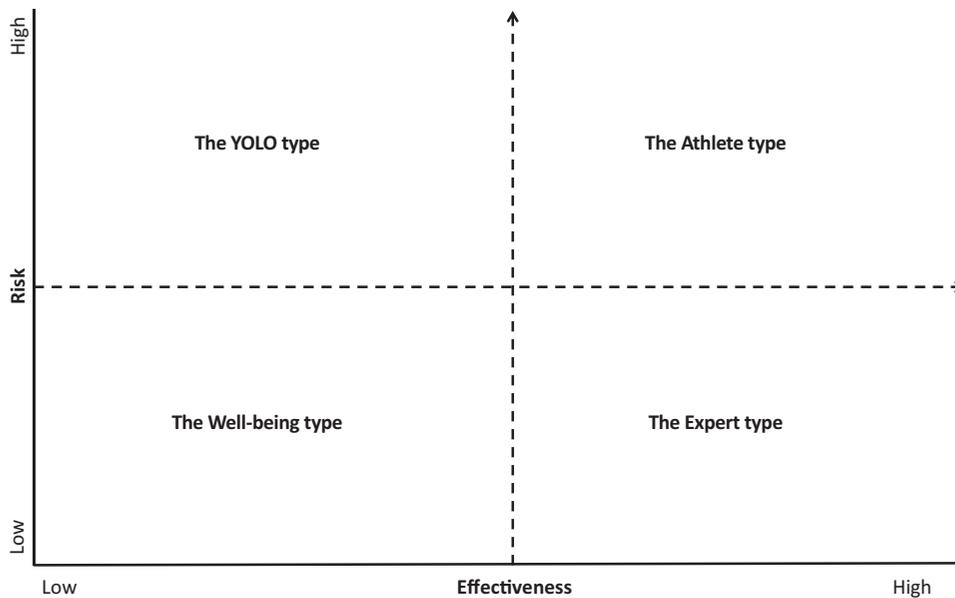


Figure 1. Outline of the typology of AAS use in gyms.

the risks involved in a systematic way, as illustrated by this 25 year-old man:

I measure my blood pressure at home every other day, and then I make a note simply to see if it's going up or down. Everyone should do that. At least if you're on a cycle [of steroids]. And you should also be doing it when you reach a certain age in life. Because you cannot really feel elevated blood pressure.

Apart from self-monitoring, participants of the Expert type often come across as willing to consult and collaborate with health professionals. Speaking of their encounters following blood tests, the following 27-year-old participant from Denmark recalled his doctor telling him that:

“There's something wrong, it's not supposed to be this high”. And then he [the doctor] told me either to stop using the oral steroids or never to contact him again, because then he wouldn't be part of it. So I said: “Okay. I'll stop now and then we'll see if it gets better in a couple of weeks”. And that has happened a few times since with different drugs where he raised the alarm.

Such medical monitoring is also aligned with the correlation between risk and effectiveness which characterises the Expert type. Aged 25, the respondent below spoke in a precise way about the need to assume only calculated risks. Setting limits, being reflexive and in control of the entire process were crucial ingredients in his narrative:

Interviewer: What do you think about the notion of risk?
Well, if you have a specific goal I think you should weigh that against the [health] risks, and if the risks outweigh the benefits... I mean, if what you get in return when you reach your goal cannot outweigh the risks, you shouldn't be doing it. For me it's worth it as long as I have as few side effects as I have now. If suddenly I get a hell of a lot of

side effects with the same results, then I would choose to say; “Well, I have to stop”. Because then it doesn't pay off [...] It has to be a calculated risk. You must be willing to quit any time, if you see that you're moving down a slippery slope. If you're so addicted that you cannot withdraw when it's necessary, you should seek help. Because that's untenable.

As mentioned, the Expert type emphasises scientific knowledge and controlled risk-taking. He is, therefore, also concerned with the quality of AAS products and information in circulation and their potential ramifications, particularly on younger people. After referring to counterfeit steroids and related health risks, a 37-year-old respondent from Spain, with 13 years of experience in the gym industry as manager and personal trainer, raised the following points:

If an eighteen years-old guy is reading in a magazine that a famous athlete uses for example X, then if this person is not clever he can go and buy this product and use it. Then it is really dangerous. Therefore, I think it is very important to give good information about it – both the positive and negative effects. [...] I think in the [bodybuilding] magazines or in the gyms once or twice a month good information should be given about all the products. Because people can get their hands on them. They can always find this friend who will say “Are you interested in this product?” But nothing else... without any information. Then I'd rather prefer... For example in my gym, I say; “Friends, you can use this product. This product is positive in this and this dosage but more than that, it is really bad”. Then you are free to make up your mind. It is better that way, because the people who want to do it will do it anyway.

The above is exemplary of the pragmatic stance that the Expert type typically assumes. The focus is on harm minimisation through free but educated choices. Through this

stance and the subsequent social profile he has in the gym environment, this type often gets recognition for and is approached as a source of expertise on AAS.

The Well-being type

The Well-being type is the least risky and least results oriented in the typology. At the same time, however, it is a type with significant variation in terms of user populations and goals represented. The Well-being type is oriented towards looking and feeling good. This was articulated by our participants in more than one way. For some, it is about the transformation of an ailing body into a healthy body. A 22-year-old respondent talked about AAS as a catalyst in his process of restoring normality:

Well, I was born with an injury-prone body, and I've had all kinds of injuries throughout my life. But since I started training and taking steroids, I've had nothing. My general well-being has improved a lot, so the training and the steroids really made a difference. I feel much better than I did before. The pain in my back is completely gone. I had chronic back-pain before, that's just gone now because I spend so much time in the gym.

This emphasis on the embodied feeling of well-being was echoed by respondents with other priorities. Asked about his combined use of anabolic steroids and human growth hormone (hGH), a 36-year-old participant referred to the capacity of hGH to make him feel rejuvenated and fight the ageing process:

I think it helps you to stay young, right? You feel a little better, and you feel more rested in the morning. Your skin becomes more youthful to look at, and your energy level is generally higher. I see it as a supplement for well-being, so I'm not using it [hGH] to gain size but mostly to improve my own well-being.

In this context, drug use figures as a component in a narrative of taking care of oneself. Concerned with avoiding high health risks, the same user described his current engagement with the drugs as a mature, long-term, lifestyle choice:

I'll most likely be using it [AAS and hGH] for the rest of my life. At least as long as I'm able to take care of myself and to continue training. But I think now I'm more reflexive about the substances and dosages that I use. And as I've grown older it is now also more a question of well-being and of maintaining my level of fitness rather than setting unrealistic goals that can only be achieved by taking massive doses of something really toxic.

As in the above account, Well-being types often see themselves as sensible in their approach and modest in their goals through direct or indirect contrasts to a mode of use characterised as improbable and hazardous. Using 250 mg/week of testosterone for 12 weeks in a year and without stacking (i.e. without using other steroids), the 25-year-old respondent below distances himself from the excessive, "monstrous" body aesthetic. Here, AAS figure as a tool for

achieving a more measured, mainstream physical goal as opposed to an ongoing search for size and muscularity:

Well, I'm simply going for a shape that satisfies me, and that's [a body] around 90 kg. My weight is 88 kg at the moment, and I'm actually quite happy with that. My fat percentage is around 8-10, and I'm kinda like: It doesn't have to get any bigger. Because I don't like that. It can become too much.

Interviewer: What do you see when you look in the mirror? I see a nice body... you know, my chest is proportionate with my arms and my shoulders. I'm relatively slim because my fat percentage is low. Then there's a few veins... I think... Again, I'm not a mass monster. It's quite moderate.

Apart from body aesthetics, the Well-being type contrasts to the kind of extremism often associated in the public consciousness with AAS users also in terms of overall approach to body transformation through drug use. Rather than fanatical and fixated on maximum results, Well-being users appear as health conscious and more relaxed in their approach compared with the other types. Their way of talking about AAS as a "supplement" or "a little help" speaks both to this attitude and to the related normalisation of the substances as a benign, unexceptional kind of aid. In the words of a 41-year-old participant:

I'm quite relaxed about what I eat. I eat healthy five days a week, but on Saturdays and Sundays, I do whatever I like. As you can see, there are two muffins on the table over there. So, that's how serious it is. It's vanity, nothing more. I like the feeling [on steroids]. It's no problem for me to stay at 120 kg without having to take steroids, but I need a little help if I want to, say, hit 125 kg and be in a slightly better shape, you know, just in order to go beyond my genetic limits. And I usually do that during the summer when it's 'shorts and t-shirt time'. So, for me it's sheer vanity.

Such accounts demonstrate how well-being transpires as a continuum, which extends from the restoration of a healthy, 'normal' body to include the better-than-well position. Further, Well-being type users often talk about AAS use in terms consistent with a popularised masculinity concerned with image and desirability. They regularly make references to "everyday life" situations where social benefits are expected, which makes this approach to drug use seem to be about aligning oneself with hegemonic cultural values such as strength, youthfulness, appearance and competitiveness. Therefore, while in a sense they wish to stand out by having an attractive body, in another sense they are concerned with fitting in.

The YOLO type

YOLO is an acronym for "you only live once". This is a popularised term in youth culture often used to denote risky behaviour in pursuit of new experiences and excitement. It implies that one should enjoy life fully even if that entails taking risks and going over one's limits. For the purpose of

our discussion, the defining characteristic of the YOLO type is a largely uncritical and haphazard engagement with steroids. YOLO types come across as marked by a certain naivety, frequently owing to carelessness and/or lack of discipline and experience with these substances. Thus, their desires and decisions regarding AAS use are often shaped by figures that appear authoritative due to their perceived success and notoriety, as noted by this 39-year-old informant:

Interviewer: When did you use AAS for the first time?
 When I was 21. I simply ate 12 pills of Dianabol [oral AAS] every single day for I don't know how long [laughing].
 Interviewer: What do you think about that now?
 It was just fucking insane, and I didn't get any advice at all. No one did anything to help me. I just thought it would be interesting to try out the same things as Arnold Schwarzenegger, and as a huge friend of mine who trained and was using [AAS]. As he said: "Well, you need a Thai cycle". Because that's what we called it [Dianabol] back then.

The same respondent also referred to the lack of other parameters, such as the use of mid- and post- cycle therapy (MCT and PCT)² which is widely considered among Expert type users as part of a carefully planned and well thought-out mode of AAS use. In such a context of randomness, the onset or not of considerable side effects is relegated to a matter of happenstance: *"There was no Post Cycle Therapy or anything of that kind. Right now I'm just happy that I didn't develop breasts and other weird stuff, that my cock was still working and that I was able to get kids."*

A characteristic of the YOLO type that often came up in our interviews is an inclination to experiment with different substance combinations or lengths of use on an *ad hoc* basis. In certain cases, this was explained with recourse to individual psychological traits. For instance, when asked why he had abandoned his initial "plan" and opted to prolong his cycle by up to 50%, a 39-year-old informant who had used steroids for 15 years replied:

I'm simply experimenting, because I'm so curious. As I said before, I'm an extremely adventurous guy, and all this express itself here [regarding steroids] as well. I try out different things, and sometimes I write online [on a steroid forum] that I do this but I might in fact do something else.

In other cases, it is the environment of a youth male culture as fertile ground for various kinds of experimentation that comes to the fore. Here, recreational substance use, hedonism, rituals of male bonding and the prospect of impressing girls are an equally important aspect of the picture, as explained by this 25-year-old former AAS user:

Well, it was the steroids that had our focus on weekdays. We rarely went downtown on Thursdays and Fridays. But on Saturdays we often gathered together after having finished our training sessions, and occasionally you would've bought a very tight t-shirt or shirt in advance. We always started out by having something to eat. Then we

began to drink, and eventually amphetamine was put on the table. . . or, mostly amphetamine, because then we could drink a lot more and stay awake for much longer, but sometimes cocaine was also brought to the table. And, of course, we drank like alcoholics. You can drink much more than usual when you take amphetamine, so I guess we ended up each drinking a whole bottle of booze before going downtown.

Continuing the account of this "party" setting, the imagined effects of steroids used in this context point further to what could be described as an impressionable approach:

. . .sometimes one of us would take some Winstrol [anabolic steroid] before leaving, just, you know, to feel a bit more ripped and all that. We were a handful of friends of which only one didn't train and take steroids, so instead he took some of the other drugs, amphetamine for instance.

This informant also assessed that the combination of AAS, alcohol and amphetamines on weekends also meant that he ended up in more arguments and sometimes even fights than he would otherwise have done: *"Otherwise, I'm typically the person who says 'Calm down guys!' But the fuse was much shorter than normally"*.

Unlike the other types, the YOLO type does not look at steroids as an integral part of a wider regimen marked by discipline, attention to training and diet, and clear objectives. Instead, AAS feature as a quick fix in a poorly understood and defined endeavour. Recalling his YOLO years, this 25-year-old former AAS user said:

I ate a can of tuna a day. There were no vegetables in my diet and we had no knowledge on how much protein you can absorb. We thought of vegetables as something reserved for rabbits and fitness girls. And I didn't mind eating pizza immediately after training. Our approach lacked as much seriousness as it possibly could. There was some talk about what you should eat but no one did anything seriously about it. It required too much work, so you just didn't bother. Rather than cooking, it was easier to just jab something [steroids] in the thigh.

Health is not a high priority for this type. Medical cheques and supervision are rare or non-existent, while understandings of risk are usually vague and substantiated with reference to peer experiences and lore. When asked about how he thought about risk in relation to his steroid use, a 23-year-old respondent who had been using for a year and a half replied:

I don't give it [risk] much thought. Others that I know haven't really experienced any side effects, and some of them have been on [steroids] for many years. 15 years or so, you know. And they've never experienced any serious side effects.

Interviewer: Do you go to your doctor for medical supervision?

No, I don't.

Interviewer: So your doctor doesn't know about it?

No, he doesn't.

The Athlete type

For the Athlete type, the primary reason for using AAS is to prepare for and perform at competitions. In our material, it was competition bodybuilders that exemplified this type of use. However, the traits observed can apply to sportsmen in other activities, such as fitness competitors, power lifters, strongmen, etc. The following 36-year-old respondent, a top amateur bodybuilder in France participating in international contests and aiming at becoming a professional at the time of the interview, drew an analogy with other sports:

Naturally, your body has some limits. It is the same in every sport. People who come to watch athletes wanna see supermen. They want to see people who can go beyond the limit [...] I am the same when I go to watch Formula 1 or something else I know I cannot do, where I know there is a lot of work and that you need to be professional to do it. [...] So you have to have a physique that is more than natural, therefore you need to do some drugs. [...] For me it was normal to do it. I know where I want to go, I know what I want, so taking the drugs it was natural, I didn't really have to make a choice.

From this standpoint, AAS use is appreciated as a necessary enhancement in a high-performance sport context. It is regarded an inevitable but calculated risk.

Most of the respondents using AAS in pursuit of a clear and substantial sport objective claimed that theirs was an informed approach, and often engaged in some form of medical monitoring. Yet, a *de facto* high-risk enterprise such as elite sport competition, including extreme physical training and dieting, may entail a tacit normalisation of possible health risks and actual adverse effects of AAS use. Thus, various incidences may go unnoticed, unreported or are dealt with in a very downplayed, matter-of-factly way. A 32-year-old informant reflects below on the risks of using insulin with AAS, a combination he nevertheless found highly effective:

I've had a couple of incidents where I was about to go into sugar shock. But I've always been able to feel that "now I'm about to shut down!" And then I've just taken whatever and stuffed myself. Fast carbohydrates like honey on a rice cake for instance or sugar-water or something. Then, two minutes pass and you feel stable again. And that's just something you need to understand and accept before you start playing with this. You need to have something sugary at hand if things go wrong.

Such accounts are indicative of an "insider" drug-related knowledge which individuals engaged in competition tend to seek within their own community. Asked where he and his peers got their knowledge on AAS from, a 27-year-old informant replied:

From former and present users inside the bodybuilding community – both here in Denmark and in the USA. Also, we know a couple of physicians who are in the inner circle, but who don't use themselves. But they train and know how it works so they can offer their advice.

Respondents from this environment often describe AAS as much safer and more manageable in comparison to other enhancements. This hierarchy of risk is articulated with references not only to things long established in the subculture, such as diuretics or insulin use, but also to those still at the experimental level. The following comparison of steroids to gene doping by a 36-year-old retired top amateur bodybuilder and AAS advocate from the US is illustrative:

It is a little scary only that [with gene doping] we start modifying the DNA in the body and the long-term risks are kind of unknown. You do not know if cancer is going to start. You are switching off genes that should not be switched on and off. Now you are looking at long-term possible problems as opposed to the use of toxic anabolics. With steroids you know that you stop them and the toxicity goes away, your body cleans itself up. But with the gene structure, you are talking about persistent side effects.

Factors affecting one's approach to risk and effectiveness in the Athlete type include an emphasis on performance and the search for subcultural recognition for one's superior achievements and commitment, which can include risk taking. In such a milieu where body image and identity are intimately bound up, AAS can considerably influence one's sense of self. The following quote belongs to a 37-year-old participant whose use of AAS alongside insulin and growth hormone shifted as he identified ever more deeply as a bodybuilder and prepared to compete in the prestigious heavyweight class. He explained how he lost control of his use by increasing dosages and decreasing off-cycle periods to a point where he was using AAS continuously:

I think it was the fear of losing weight when I wasn't on a cycle [of steroids]. The fear of shrinking. That I would fade away and no longer be voluminous, big, strong, invincible and beautiful. That I was declining. So, I simply replaced some substances with others and used them for a couple of months, before I switched to something else again. I did that several times. So, instead of taking breaks between cycles I simply shifted between different substances.

Reflecting on that process at the time of the interview, he attributed his collapse 3 weeks prior to competition and his subsequent hospitalisation and detoxification ordeal to a downward spiral ending up in what he termed abuse. Even though he had initiated his chemically assisted journey by collecting information from other culture insiders and being careful to minimise possible side effects, his intense engagement with the dream of athletic competition and recognition gradually led to a state diagnosed by his doctors as life-threatening.

Most of the participants with an Athlete-type approach spoke of health risks associated with AAS use as something they believed they were in control of, even if some realised in hindsight this had not been the case. In contrast to that, one of our participants from Denmark (aged 22) put forth himself as aware in the present of considerable risks and willing to assume them. The way his desire to excel in competition influenced his take on AAS, of which he was planning to use 4200 mg/week (equal to about 40 times the therapeutic

dosages and 80 times the natural body production) is described as follows:

Actually, I don't think about it [health risks]. Because, if I began worrying too much about risks I would probably realise that I couldn't fulfil my dream [of competing]. Then I would have to be realistic and say 'this has to stop'. Indeed, there are risks that may materialise in the future. It can have consequences. You just have to keep your fingers crossed.

The typology – discussion

In Figure 2, the four ideal-typical approaches to AAS use are placed in the matrix with effectiveness of use on the X-axis and risk on the Y-axis. The purpose of such visualisation is not to imply that use can be put on formula and calculated precisely but to place the different types in perspective.

The *Expert type* on the bottom right corner focuses on using AAS as effectively and as safe as possible in order to get the muscles and strength he wishes. To achieve this, he applies an extensive taxonomic knowledge on drugs and groups of drugs, dosages, duration of various cycles as well as pros and cons for different combinations of drugs. Even though his awareness of available information cannot be equated to scientific knowledge, he acquaints himself with the available (scientific) literature and reads blogs and websites on the subject. On this background, he combines drugs in various preferred cycles and will include other drugs in mid- and post-cycle therapies (MCT and PCT). He is likely to have made contact with a physician who, for instance, surveys his liver and blood values. In the belief that AAS users generally know too little about the drugs and the risks involved, he feels an obligation to share his knowledge and takes pride in giving advice to others. The *Expert type* is well described in other studies such as those by Bilgri (2013), Christiansen and Bojsen-Møller (2012), Grogan et al. (2006), Hoff (2016), Maycock and Howat (2007), Monaghan (2001) and Walker and Joubert (2011).

Continuing clockwise, we locate the *Well-being type* on the bottom left corner. Even if muscle mass and strength are important considerations, what counts more is the physical, mental and social well-being he experiences from training and building what he perceives to be an appealing, fit-looking body. For this reason, he typically uses lower dosages than the *Athlete type* and the *Expert type*. He possibly had his point of departure for AAS use in one of the other types before he was the *Well-being type*, which can in some cases explain why he is typically older than users in the other types. He is conscious about having an attractive body, and it makes him feel younger and more self-assured. He considers the risks involved in using AAS and takes precautions by using, for instance, PCTs to counter side effects, even though he is not as devoted to the subject as is the *Expert type*. The *Well-being type* can be said to exemplify how the use of AAS is becoming part of a more mainstream health and fitness culture. The "satisfaction" discourse of *Well-being type* users is indicative hereof as it contrasts to the "never-ending progress" discourse of *Athlete type* users. This also goes

against public conceptions that often identify AAS users with the extreme, in-your-face bodybuilder type of body and person. The *Well-being type* bears resemblance to the typical AAS user described by Cohen et al. (2007), and the values he has are also dominant in the portraits of users described by e.g. Bilgri (2013), Hoberman (2005), Kimergård (2015), Pedersen et al. (2014) and Walker and Joubert (2011).

In the upper left corner, is the *YOLO type*. His lifestyle, which may include junk food, alcohol and recreational drugs, means that his AAS cycles and training regimes are less effective than they could otherwise have been. He uses AAS in the belief that a muscular body confers status and recognition and can be a means for climbing up the social hierarchy in his environment. Compared with the other types, he typically initiated AAS use at a younger age. Of the four types, he is the one who is less disciplined and pays less attention to the character and effects of various types of AAS, dosages and cycles. He is often "flying blind" regarding side effects, an issue about which he seems to care little, which resembles his approach to health generally. He may very well be doing risky cycles and it is not unusual for him to combine AAS with recreational drugs like alcohol, cannabis, amphetamine or cocaine on the weekends. His knowledge on AAS is primarily based on what he has learned from own experience or that of his peers or dealer. The overall lifestyle means that he more often than the other types ends up in forceful discussions or even fights. In this context, it is unimportant whether AAS causes or even contributes to aggressive behaviour and violence. The point is that the *YOLO type* is more likely to end up in fights because of his lifestyle with its focus on male bonding, which involves various kinds of risk taking, including sometimes violence. With the *YOLO type*, we thus also suggest a different way of looking at the connection between AAS use and violence, which can complement other work in this area (e.g. Jessen & Johannessen, 2015; Kanayama, Hudson, & Pope, 2010; Klotz, Petersson, Isacson, & Thiblin, 2007; Lundholm, Kall, Wallin, & Thiblin, 2010). The *YOLO type's* characteristics come across in a number of other studies, such as Barland and Tangen (2009), Bilgri (2013), Christiansen and Bojsen-Møller (2012), Hoff (2016), Khorrami and Franklin (2002), Monaghan (2001) and Maycock and Howat (2005).

The *Athlete type* on the upper right corner is committed to sporting performance and competition. He has a constant focus on progress and effectiveness, much like the Olympic swimmer or professional cyclist who always reflects on how to optimise all relevant parameters around their performance. The knowledge he gathers concerns how he can become better – optimising workouts, gaining muscles, becoming leaner – according to his overall aims. Unlike the *Well-being type*, he is not expressly concerned about what people from outside the culture think of his size and shape. He perceives himself on par with other elite athletes, and, therefore, compares his body to that of his competitors. He trains hard, disciplined and often, avoiding partying, alcohol and recreational drugs that can affect his regimen. This dedicated and uncompromising attitude can cause him to increase dosages if the expected results are higher or if he learns that fellow competitors use larger dosages than he does. Therefore, even if he has quite some knowledge about drugs and hormones, he is more

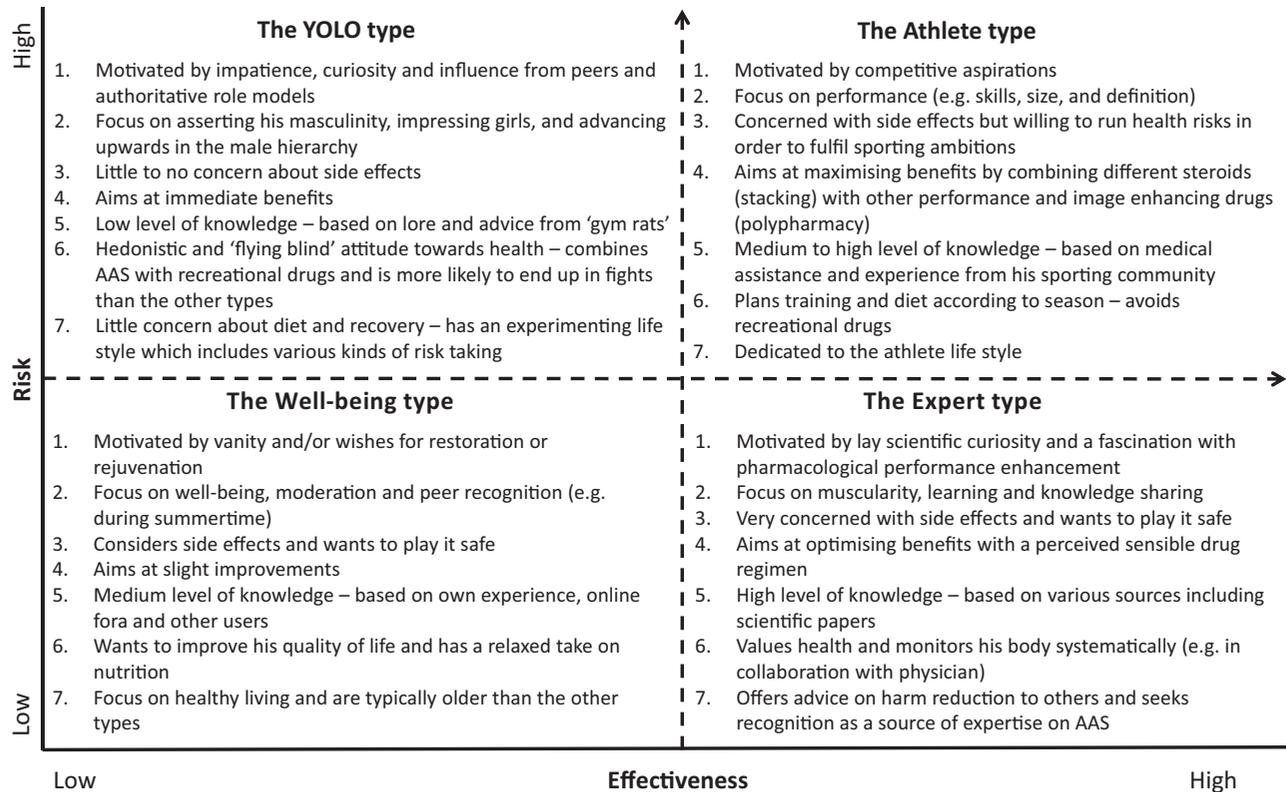


Figure 2. Details of the typology of AAS use in gyms. (1) Motives, (2) goals, (3), attitude towards (health) risk, (4) attitude towards effectiveness, (5) level of knowledge, (6) approach to AAS-related activities (training, nutrition, sleep, etc.), (7) overall life style.

willing than the Expert type to run health risks if he considers them necessary to achieve his goals. The Athlete type is described in several works. Besides Klein (1993) and Monaghan (2001), it is worth mentioning Fussell’s autobiography (1991) as an insightful portrait of this lifestyle (other examples can be found in e.g. Andreasson & Johansson, 2014; Grogan et al., 2006; Hoff, 2016; Liokaftos, Forthcoming; Maycock & Howat, 2005; Probert, Palmer, & Leberman, 2007).

In summary, and as indicated in Figure 2, the Athlete and YOLO types tend to run greater health risks than the Expert and Well-being types. Likewise, the Athlete and Expert types put greater emphasis on effectiveness than does the Well-being and YOLO types. Manifested in different masculinities and the cultural values and ideals embedded therein, such as productivity, technophilia, experimentation and youthfulness, the coordinates of risk and effectiveness are key for understanding drug-related attitudes and behaviours. This, in turn, can inform potential interventions, for example by providing different users with tailored risk-related information, safer alternatives for reaching their goals, and appropriately prioritised and delivered health messages.

As expected in a conceptual undertaking like the present one, looking into individual users’ biographies renders it clear that no one fits the proposed ideal types in a 1:1 relationship. Overlap exists both in the sense that users may exhibit traits of more than one type at one given moment, and in the sense of a characteristic appearing in more than one type. For example, there is a noticeable recurrent belief across the four types that if AAS are used sensibly, side effects can be kept at a

minimum (Grogan et al., 2006; Petrocelli et al., 2008; Walker & Joubert, 2011). Additionally, users who take more than one cycle are likely to evolve and change their approach over time as demonstrated in several of our interviewees’ accounts. Transitions from one type of use to another can be determined by factors such as critical events, changes of environment, subcultural immersion, passage between life stages and varying access to and processing of information. Although we recognise these complex dynamics as areas for further detailed research, the ideal typology we propose aims to identify general approaches to AAS at points in users’ trajectories.

Admittedly, the ideal typology cannot describe all possible approaches to AAS use, especially as the latter is being taken up in new socio-cultural contexts. However, as theory and a heuristic tool for investigation, it sets out to classify and systematise empirical observations on AAS use, and offer a conceptual platform for overcoming both abstractions, on one hand, and particularism in the form of multifaceted individual voices, on the other hand. Thus, the ideal types should be viewed as reference points for investigations and explanations and not as static or inalterable frames. As such, the typology could assist future research into the dynamic phenomenon of AAS use and support appropriate responses to it on the part of policy makers and health professionals. Future investigations may include quantitative studies on prevalence (e.g. age or percentage distribution of the proposed types) or qualitative research on transitions in use trajectories, the significance of gender and the emergence of novel users’ approaches to AAS.

Conclusion

We have suggested an ideal typology as a new approach to studying the use of anabolic androgenic steroids (AAS) in fitness and strength training environments. The typology consists of four types: the Expert type, the Well-being type, the YOLO type and the Athlete type. These represent four ideal-typical approaches to AAS use that emerge out of an analysis of users' attitudes to risk and effectiveness. The typology is based on our own empirical research into male AAS users in fitness and strength training environments, as well as being related to and drawing on the international literature on the subject. While the typology only suggests four ideal-typical approaches to AAS use, it is worth stressing that there is considerable variation both across and within types. Having this in mind, the typology can be used as a heuristic tool for investigation and explanation of AAS use in and around fitness and strength training environments that can combine users' subjective meanings with structural forms.

Notes

Exogenous administration of AAS results in decreased endogenous testosterone production, which is why testicular atrophy may occur during a cycle of AAS. This happens because the Hypothalamic–pituitary–testicular axis (HPTA), a negative feedback loop, is suppressed in response to the elevated levels of testosterone. This has prompted many users to include drugs such as human chorionic gonadotropin (hCG), aromatase inhibitors (AI's) and selective estrogen receptor modulators (SERM's) either during (MCT) or after (PCT) a cycle of AAS in order to counteract the adverse effects (see for instance Hoffman et al., 2009).

Declaration of interest

There are no conflicts of interest to report.

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