

### **Drugs: Education, Prevention and Policy**



ISSN: 0968-7637 (Print) 1465-3370 (Online) Journal homepage: <a href="https://www.tandfonline.com/journals/idep20">www.tandfonline.com/journals/idep20</a>

# Anabolic steroid coaching certification in India: The role of capital in digital fitness spaces

Luke Cox, Timothy Piatkowski & Luke A. Turnock

**To cite this article:** Luke Cox, Timothy Piatkowski & Luke A. Turnock (02 May 2025): Anabolic steroid coaching certification in India: The role of capital in digital fitness spaces, Drugs: Education, Prevention and Policy, DOI: 10.1080/09687637.2025.2490579

To link to this article: <a href="https://doi.org/10.1080/09687637.2025.2490579">https://doi.org/10.1080/09687637.2025.2490579</a>

9	© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
	Published online: 02 May 2025.
	Submit your article to this journal 🗹
ılıl	Article views: 152
ď	View related articles 🗹
CrossMark	View Crossmark data ☑



**3** OPEN ACCESS



## Anabolic steroid coaching certification in India: The role of capital in digital fitness spaces

Luke Cox<sup>a,b</sup>, Timothy Piatkowski<sup>c</sup> and Luke A. Turnock<sup>d</sup>

<sup>a</sup>School of Sport and Exercise Science, Swansea University, Swansea, UK; <sup>b</sup>Faculty of Movement & Rehabilitation Sciences (FaBeR), KU Leuven, Leuven, Belgium; <sup>c</sup>School of Applied Psychology and Griffith Centre for Mental Health, Griffith University, Queensland, Australia; <sup>d</sup>School of Social and Political Sciences, University of Lincoln, Lincoln, UK

#### **ABSTRACT**

**Background:** Anabolic androgenic steroid coaches (ASCs) provide tailored drug-related advice to clients for a fee. While ASCs operate worldwide, the scant and emerging research available has largely focused on ASCs within a Western context, overlooking the Global South. This exploratory study aimed to investigate ASCs further, specifically in India, where anecdotal evidence suggests an ASC "boom."

**Method:** A digital ethnography was conducted over a 12-month period. To analyse, convey and situate key findings, we draw upon Bourdieu's seminal work on sociocultural capital.

**Results:** A dominance of companies and individuals in India were willing to certify ASCs, with certification primarily aimed towards bodybuilding competition preparation. To promote ASC certification, various marketing strategies were used to attract potential ASCs, including the promotion of ASC accreditation through well-known Indian bodybuilders, who shared courses on their Instagram accounts, drawing upon their sociocultural and body capital to attract potential customers. A form of institutional capital underpinned the accreditation process, reaffirming ASC accreditation legitimacy within the community. Finally, ASC accreditation contributed to chemical capital.

**Conclusion:** Drawing on various aspects of capital, ASC potentially shape anabolic androgenic steroids use in India. Future research should review the course material offered in ASC accreditation to ensure they are reliable.

#### **ARTICLE HISTORY**

Received 28 November 2024 Revised 1 April 2025 Accepted 3 April 2025

#### **KEYWORDS**

Anabolic androgenic steroids; image and performance enhancing drugs; sociocultural capital; social media; India

#### 1. Introduction

Global prevalence estimates for anabolic androgenic steroid (AAS) use have previously been suggested to be 3.3%, with lower rates in Asia (0.2%), Africa (2.4%), and North America (3.0%), and higher-than-average rates in Europe (3.8%), South America (4.8%), and the Middle East (21.7%) and among males (6.4%) (Sagoe et al., 2014; Sagoe & Pallesen, 2018). Although these estimates vary across geographical regions, the public health impact of these drugs has been recognized internationally (Bilgrei & Sandy, 2015; McVeigh & Begley, 2017; Piatkowski et al., 2023).

People who use AAS (PWU-AAS) have typically been young men aged 19–35 years old (Christiansen, 2020); however, recent research suggests increasing use among older men (Hearne et al., 2022) and female consumers (Piatkowski, Robertson, et al., 2024), indicating that PWU-AAS and the communities they belong to are becoming increasingly heterogeneous. Moreover, while AAS were once seen as a Western issue (Christiansen, 2020; Pope & Kanayama, 2012), a growing body of evidence suggests that AAS use has become a global

problem, with an increasing number of South Asian countries, specifically India and Pakistan, becoming "hotspots" in recent times (Pany et al. 2019; Uddin et al., 2019; VICE, 2022).

Despite this growing concern, research on AAS use in the Global South is scarce. Given the diverse harms and public health concerns associated with AAS (see Pope et al., 2014; McVeigh, 2020; McVeigh & Begley, 2017), the continued diffusion of these drugs into South Asian populations is concerning and warrants urgent attention.

#### 1.1. Anabolic steroids in India

In recent times, the "ideal" Indian male body type has shifted (Baas, 2018), influenced through popular media, which has increasingly shown images of lean and muscular male bodies on sidewalk advertisements, Indian movies and television advertising. Collectively, this shapes beauty standards within the country and drives individuals to pursue such ideals, giving rise to increasing use of gyms and resistance training (Baas, 2016, 2018). Body image is also intertwined within

India's complex class-system, with social mobility possible for men who sculpt lean and muscular physiques (Baas, 2016). Haq (2024) outlines that India's increasing trends towards muscular appreciation mirror Western standards and align with perceptions of success and fame. Reflecting the rapidly changing economic landscape in India (Baas, 2016), the contemporary ideal Indian body has paved way to an emerging "middle-class profession," which includes personal trainers, providing young men typically from working-class backgrounds, the opportunity to generate income and the potential for social mobility (Baas, 2016, 2018). Indeed, it is their physical appearance that helps facilitate this process, providing potential clients with visual reassurance that these trainers know what they are doing.

While social scientific research focusing on AAS use in South Asia is limited, a recent study highlighted the rapid growth of competitive bodybuilding in India, alongside its commercialization, with sponsorship deals available for the best competitors (Baas, 2024). Acknowledging AAS are deeply rooted within bodybuilding subcultures (Monaghan, 2002), it is perhaps no surprise that anecdotal evidence is suggestive of increasing AAS use within India. High rates of AAS use were identified amongst bodybuilders in one Eastern Indian city, Bhubaneswar, by Pany et al. (2019), who reported from 84 bodybuilders, 74 of them had used AAS. Though AAS are an inherent part of bodybuilding subculture, such high rates are notable. Indian bodybuilders were also a focus of research for Baas (2018) who outlines that Indian bodybuilders invest heavily into AAS, sometimes spending more on these drugs each month than their income - a significant concern if health harms arise. Though AAS are illegal in India without prescription, laws are said to be loosely enforced (Pany et al., 2019), something that is likely to have little effect on deterrence, a point further underscored through evidence that 73% of (n=84) Indian bodybuilders were unaware of the legal status of AAS in India (Pany et al., 2019). Coupled with the fact that only 7% of people consulted with a healthcare professional before using AAS (Pany et al., 2019), this is concerning when the health harms associated with such drugs are considered.

Alongside AAS use, India has become a stable source of AAS, with many small manufactures supplying pharmacies. In India, AAS are typically sold to people without prescription and cost much less than when purchased in Western countries (Hall & Antonopoulos, 2016; Llewellyn & Tober, 2010). Additionally, unlicenced medications like AAS are manufactured in India legally, further reinforcing the significance of India within the AAS market. Thus, India has attracted the attention of the international market, with AAS sold online and imported illegally, sent straight to the customer's house (Fink et al., 2019). Acknowledging AAS are easily available and poorly regulated in India, it is unsurprising that AAS use is a growing issue within the country. Moreover, India has a population of over 1.366 billion people in 2022, a young demographic, with a median age around 28 years old (Statista, 2024), and fragmented access to healthcare and education. It is against this backdrop that AAS use in India represents a specific challenge that requires investigation to better understand the cultural nuances of AAS communities within the country.

#### 1.2. Anabolic steroid coaching

Gym and bodybuilding communities have long valued information and knowledge exchange from members within their community (Harvey et al., 2019), with lived-living experience (Akrigg et al., 2025; Piatkowski, Akrigg et al., 2025; Piatkowski, Cox et al., 2025), over healthcare professionals who they distrust (Underwood, 2019) and fear stigmatization from (Cox et al., 2024; Turnock & Mulrooney 2023). Information sharing occurs within gyms, between group members, and online, through internet forums and social media platforms (Cox & Paoli, 2023; Tighe et al., 2017) but has also expanded within the community, contributing towards the development of "anabolic steroid coaches" (ASCs) (Gibbs et al., 2022; Piatkowski, Cox, et al., 2024; Piatkowski, Cox, & Collins, 2024).

ASC are individuals who provide information and advice related to AAS and drug protocols. ASC draw upon their living-lived experience, to convey messages to clients for a fee. Learnt through self-experimentation, ASC have acquired significant "chemical capital" (Piatkowski, Cox, Gibbs, et al., 2024; Piatkowski & Cox, 2024), a bank of information stored and compounded from using various drugs over time. This knowledge is packaged up by ASC and sold on to clients for a fee. Though the services provided by ASC differ between clients and coaches, it is the provision of instructive drug-related services that largely defines an ASC. Some ASC have earnt themselves significant followings online, with social media (e.g. Instagram and YouTube) further propagating their online persona and services. Paoli and Cox (2024) note ASCs sometimes provide a range of additional services outside of ASC, which include the provision of discount codes for nutritional supplements and AAS, which further muddy the waters. However, little is known about ASCs outside of the Western context, and to the best of the authors knowledge, no research has examined ASCs operating in India, something this exploratory study sought to address.

#### 1.2.1. Underpinning theory

Previous research has identified that ASCs play a crucial role within IPED communities (Gibbs et al., 2022), drawing upon their lived-living experience, to facilitate comprehension and understanding within the wider IPED community. Through this knowledge exchange, ASCs play an important role as "gatekeepers" to health, sharing important information.

Drawing upon Bourdieu's (1984) theory of capital, which suggests that assets within the social world are accumulated, we argue that ASCs draw upon various types of sociocultural capital (Monaghan 2002; Piatkowski et al., 2023) to attract customers and "sell themselves"—a practice that acts as a form of quality assurance to potential clients. More recently, ASCs have been said to rely on their physical appearance (body capital; Wacquant, 1995) and their drug use experience (chemical capital) (Piatkowski, Cox, Gibbs, et al., 2024; Piatkowski & Cox, 2024) to convey a certain status. ASCs are sometimes well-known and popular figures within bodybuilding communities who provide a range of additional services over social media. Paoli and Cox (2024) coin the term "IPED-influencers" to describe these individuals who, like traditional influencers, hold power and influence over their followers, shaping drug use and patterns. Various forms of capital (see Bourdieu, 1986) therefore underpin and provide credibility for this emerging and dynamic sector. However, it is essential to highlight the significance of capital in such a rapidly evolving landscape. In this context, where the backdrop of ASC is still emerging and social scrutiny may be low, the role of capital becomes even more pronounced. Effectively marketing and leveraging capital can significantly impact an ASC's popularity and success. Therefore, while anecdotal evidence suggests that ASCs also operate within the South Asia region, the aim of this exploratory research is to better understand the phenomenon of ASCs in India.

#### 2. Method

#### 2.1. Data collection

The data presented in this article is derived from the first author's digital ethnographic observations (Hine, 2007) conducted on one major social media platform: Instagram. The first researcher made observations over a 12-month period, from September 2022 to September 2023, where he passively observed, a method known as "lurking," to learn about and understand the cultural language of the online fitness space on Instagram (Gibbs & Hall, 2021).

The social media platform Instagram was selected for this study due to the global prominence of its use, with over 2 billion monthly active users (Statista, 2024a) and specifically in India, which has the greatest Instagram audience in the world, with a total of 362 million users (Statista, 2024b). Moreover, existing research highlights the influential nature of the Instagram within the AAS space, with the platform identified as a marketing tool for ASC, "PIED Influencers" and used to promote AAS (see Cox et al., 2024; Cox & Paoli, 2023; Gibbs, 2023).

The researcher did not use a specific social media account on Instagram; rather, observations were made using the open and publicly accessible search function. To further enhance the searches, the search engine Google was used to identify relevant data. Searches conducted on Google used the open search engine function, employing the following keywords: "anabolics coaches," "anabolic steroid coaches," "steroid coaches," and "PED coach" to identify accounts on Instagram and webpages on Google. Greater specificity was achieved by adding keywords such as "India," "Indian," "educational course," "information course," and "knowledge course" after the aforementioned keywords. On Instagram, key terms were entered using the standard search function and through "hash tagging" ("#" followed by a specific word, e.g. #steroidcoach). On Google, key phrases were entered using the standard search function tool. Focus was then placed on understanding the cultural contexts in which information was shared—an approach that parallels "netnography" (Kozinets, 2010) and has been specifically used within the field of IPEDs (see Brennan et al., 2018).

The research team leveraged their existing knowledge to select keywords, drawing on their expertise in resistance training, nutritional supplements, gym cultures, and research in the field of AAS and IPEDs. This embedded knowledge facilitated enhanced insight into the phenomenon under study. Instagram's "suggested," and "similar" accounts function further increased accessibility to data, a process referred

to as "algorithmic sampling" (see Sidoti, 2023). This functionality meant that once an account had been identified, a range of similar social media accounts offering comparable services were suggested by the platform's algorithm. Google also provided a range of webpages related to the primary search terms. These results were presented in order, starting with paid advertisements, followed by results ranked by relevance to the search terms, with the most pertinent appearing highest in the search results.

In the case of Google, over 60 separate pages of search results were reviewed, with each page containing more than 20 hits. This was a considerable task; for instance, using the search term "steroid coach" on Google yielded over 4,300,000 hits. To narrow the search, researchers refined the terms, adding specificity (e.g. "India Steroid Coach") and adjusting the upload date filter to "past month." The search was concluded when results became misleading or were unrelated to the search terms utilized. In total, over 250 screenshots were taken to record and capture data, which were saved in Microsoft Word files. Each screenshot was accompanied by field notes that provided additional detail, understanding, and context.

Though Google and Instagram provided a vast number of leads, the principal data cited is representative of four separate accounts on Instagram and two distinct webpages identified via Google searches, which constituted the most significant sources relevant to our research focus. To organize and maintain the dataset, researchers created six separate Microsoft Word files to store and categorize the evidence. Separate Word files were used for each individual or business that offered, promoted, or advertised the services under investigation. These documents housed and stored relevant information for later analysis by the researchers.

Of the six outlets from which data was primarily collected, the first researcher spent time passively observing them to better understand the unique cultural dynamics of the online fitness space. The first researcher observed interactions in the comments sections and invested time in learning about the different types of information being shared, as well as the various content generation and marketing strategies utilized by these sources. To facilitate this, the researcher followed online communications between various parties in the public domain to understand the demands and requests of individuals within these communities. This involved tracing information and communication between multiple parties, piecing together stories to comprehend the cultural language of the online community. Although the content was primarily marketed toward an Indian clientele (evidenced by the promotion of Indian cities, communication with established Indian bodybuilders, and the use of Indian Rupees as currency), the main communication was conducted in English. This facilitated the research process and allowed the researchers to gain a solid understanding of the data.

#### 2.2. Data analysis

Analysis was derived from screenshots and field notes captured from Instagram and Google (including related web searches), the two selected digital mediums, as researchers attempted to make sense of their meaning. A thematic analysis was conducted (Braun & Clarke, 2021, 2022, 2023), where data collection and analysis occurred simultaneously, following a "bottom-up" approach in which screenshots were manually coded. This approach allowed researchers to

categorize the data within emergent themes: (1) type of supplier; (2) marketing and advertisement techniques; (3) delivery methods; and (4) trust and quality assurance. Data were extracted from each of the original Word files and organized into new Word files under the key themes

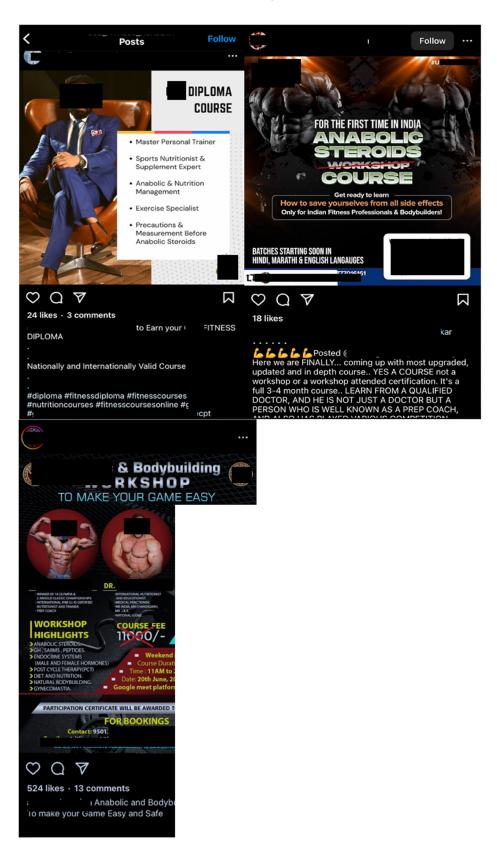


Figure 1. Advertisement of anabolic steroid courses on Instagram via Indian bodybuilders and companies.

mentioned above. In total, four separate Word documents were created to compile the evidence. As researchers deepened their understanding of the data and theory, the themes were refined. Assumptions were challenged, and data were cross-examined to ensure and maintain rigor throughout the research process.

#### 2.3. Ethics

This research was conducted in accordance with the guidance and advice of KU Leuven's Social and Societal Ethics Committee Ethics Committee regarding online research involving open and public material. To protect the individuals identified through data collection, we have anonymized key data such as account names as far as practical to better respect the privacy of the individuals. We also removed the logos of businesses that provide ASC certification, sought to remove any identifiable hashtags, locations or tags, on Instagram posts and protected the identity of people through the concealment of people's faces. This approach aligns with previous research (Enghoff & Aldridge, 2019; Paoli & Cox, 2024), which also utilized online data considered to be in the public domain. Only open and public accounts were included in this study. Given the public nature of these accounts, it is reasonable to concede that individuals may forfeit some degree of informational privacy when posting openly online.

#### 3. Results

#### 3.1. Advertisement of anabolic coaching workshops, courses, and lectures

Workshops, courses, seminars, and lectures were advertised on Instagram by (i) influencers and (ii) companies offering these specialized training services. While the training appeared to be predominantly offered within India, evidenced through in-person sessions held in selected Indian cities (e.g. Mumbai, Surat, Bengaluru etc.,), the online component of some services suggests that they can be accessed globally by those willing to pay the stated fee. The influencers promoting these courses were well-known Indian bodybuilders—individuals with sizable online followings—who seem to leverage their sociocultural capital, that is their well-known status within subsections of the population, to attract potential customers, and provide credibility to the services offered. These influencers do not appear to deliver the services on offer, but rather they are used to promote and advertise such services. From this, we reasonably assume that there is some financial incentive for influencers, with these individuals likely receiving some sort of payment for the promotion of various services on their personal platforms. The services were offered in two formats: (1) face-to-face delivery or (2) online (Figure 1).

The duration of face-to-face sessions ranged from one to eight hours, while some online training courses were spread out over several weeks. For example, one course spanned

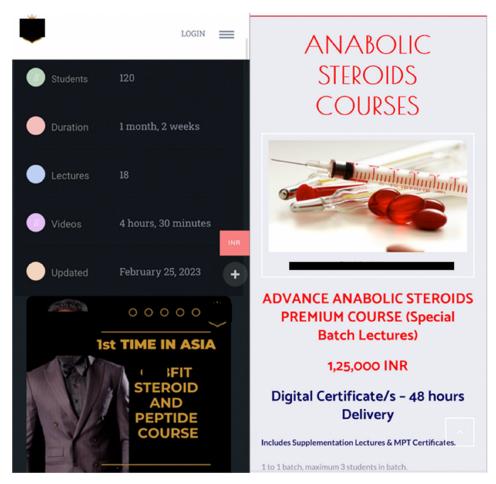


Figure 2. Overview of anabolic steroid courses.

16 weeks (about three and a half months) and included one 2-h session per week, along with reading resources to be completed outside of the formal contact hours. This comprehensive structure resembles a full module, indicating the potential depth and scope of the content provided. Potential customers were encouraged to book their places, with email addresses and phone numbers provided to "secure" their spots. Service costs were typically provided in Indian Rupees and ranged from INR₹7000 to IND₹52550 approx US\$80 to \$600, reflecting the length, duration, and level of content access provided to paying customers.

Though we are unable to ascertain the authenticity or quality of these services in this initial study, there is evidence to suggest that some individuals who appear to reside in India, evidenced through the use of "symbols" (e.g. a "pin" symbol (indicating the location), followed by an Indian flag) displayed within "bio" sections, do engage with them. Further evidence was identified through the process of "tagging," where sucessful clients would upload photographs on their personal Instagram account, demonstarting their apparent involvement and success. The "posted" image would typically also have the "location" attached, further reinforcing that this data was Indian specific. Given the clear focus on an Indian clientele, these costs can be considered substantial, especially considering the lower wages and incomes within the country (Statista, 2025). Baas (2018), however, outlines that Indian bodybuilders invest a large proportion of their income into the use of AAS, indicating a strong level of commitment and demand for such services, reflecting broader sociocultural and temporal changes within the growing market of bodybuilding and AAS use within India (Baas, 2018, 2024).

Importantly, the services offered across these formats appear to span "the spectrum of legality" (Paoli & Cox, 2024), often targeting the bodybuilding market, known for its deep rooted drug-related subculture (Monaghan, 2002). At one end of the spectrum, services pertain to diet and nutritional supplements, typically used to increase muscularity, reduce body fat, and aid recovery. At the other end, services include IPED-related information, such as AAS, peptides, and selective androgen receptor modulators (SARMs), usually focused on bodybuilding competition preparation and blending traditional personal training with drug management. While focus on bodybuilding preparation is reflective of growing sociocultural trends in India (Baas, 2018), the provision of multiple services blurring both legal and ethical boundaries, contributes towards and normalizes the phenomena that ASC represent (Figure 2).

Various sales techniques are evident and were clearly used to market these services. These include discounted or reduced services—typically highlighted with visuals of the price reduction—along with "flash" sales and "introductory" offers, which parallel previous work on the marketing of AAS via social media (Cox et al., 2024), acting as promotion methods. Advertisements often warned potential customers that there were "limited spaces remaining" and encouraged them to "secure their place." This strategy drives an acute awarness into potential customers, drawing upon the notion that these people would effectively miss out should they not engage with the advertised services. Hodkinson (2019)

outlines that marketing based on the "fear of missing out," otherwise known as "FOMO," is a well recognized concept within popular culture which has been sucessfully utilized in commercial advertisment to encourage and promote sales. Such evidence not only offers insight into why potential ASC coaches decide to engage and pay for ASC accreditation, but it also underscores the notion that ASC course providers understand how to market their services, and draw upon evidence-backed strategies to ensure people part ways with their money and sign up for ASC certification. Additionally, the training services were described as "nationally and internationally valid," with certification provided to those who paid for the courses.

Well-known Indian bodybuilders promoted these services on their personal social media accounts, granting course exposure to their followers. Such promotion is better understood through Wacquant's, (1995) account of body capital, whereby the body is used as a form of capital. Indeed, bodybuilders drew upon their body capital, that is their accumulated labour (Bourdieu, 1986), to draw attention and showcase such services to their followers, providing credibility and reassurance. Given the well-known status of these bodybuilders within India, this form of promotion is likely directed and appeals primarily, but not exculsively, to an Indian market, reflecting the recent growth of bodybuilding within India and wider perceptions of the new male ideal Indian body (Baas, 2016, 2018).

Incorporating endorsements from prominent bodybuilders reinforces the role of sociocultural capital in this market (Monaghan 2002; Wacquant, 2006). By aligning the services with esteemed figures in the Indian bodybuilding community, the perceived value and credibility of the courses offered was enhanced. Through their positions as well-known and popular figures within Indian bodybuilding communities, this goes some of the way to legitimize the services on offer, drawing upon the reputations of those promoting such services to underpin reassurance to potential customers. These strategies not only entice prospective participants but also symbolically elevate the status of the training services within the bodybuilding community.

Lastly, those delivering workshops, lectures, and seminars sometimes referred to themselves as "doctors." While the authenticity of such claims is beyond the scope of this paper, such claims appear to be a marketing tactic that leans on a form of "institutional" capital (see Bourdieu, 1986) akin to university degrees, which reinforces a specific type of capital within these communities – offering a form of reassurance to paying customers. This approach grants a layer of credibility to both the services on offer and to the individual(s) who deliver the training. For the latter, institutional capital underscores a form of expertise and prestige, effectively enhancing the social status of the educators and luring aspiring ASCs to part ways with their money and enrol on the advertised courses.

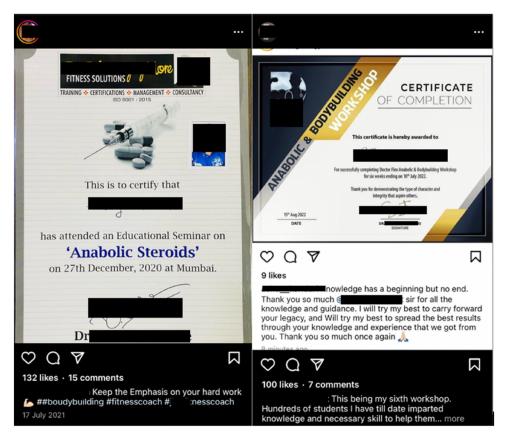


Figure 3. Anabolic steroid course completion certificates posted on Instagram.

#### 3.2. Anabolic coaching certification

Certificates were provided to individuals who completed the courses, workshops, seminars, or lectures offered. In doing so, the certification process reflects a form of "institutional" capital (Bourdieu, 1986), with the awarding body providing recognition to the successful ASCs for their achievements. Images of these certificates were then posted on personal social media accounts to showcase participation, attendance, and to promote newly acquired skill sets. By doing so, successful participants highlighted their recently achieved "chemical" capital, drawing upon their knowledge and reinforcing it through their lived-living experience.

Social media posts were typically uploaded with captions thanking course leaders and accompanied by a range of hashtags (e.g. #personaltrainer, #fitnesscoach, #anabolics, #sideeffects etc.,), with newly certified ASC pinning<sup>2</sup> the location (e.g. India, Mumbai etc.,). This combination of tags clearly highlights the merging of two professions, with traditional personal trainers seemingly offering drug information and advice. While those within gym and IPED communities might view this as a natural extension of the former profession, given the normalization of AAS use within many gym subcultures (Turnock et al., 2023; Turnock & Gibbs, 2023), the implication from these hashtags that these fitness professionals are equally expert in AAS and their side effects, and qualified to advise on their use, may be dubious from a public health perspective. Through this intentional merging of professional domains, these courses tap into the inherent overlap between conventional fitness training and ASC. By leveraging this intersection, they facilitate a transition or "drift" (Matza, 2018) from traditional fitness training roles toward embracing the identity and responsibilities associated with ASC. This shift resembles a form of diversification within the coaching profession, as individuals draw upon lived-living experience to generate and accumulate capital. In "drifting" into the "deviant career" of ASC, these individuals also notably expand the pool of potential ASCs within the community, contributing to the normalization of open IPED discussions in these spaces (Turnock & Gibbs, 2023). Given the increasing demand for personal trainers within India (Baas, 2016, 2018), reinforced through shifting ideals of the new Indian male body and economic growth evident within the country (Baas, 2016), such concerns are only likely to be exacerbated (Figure 3).

Some course participants also uploaded photographs on their personal social media accounts of themselves receiving their course certificates from course leaders on a stage, with an audience observing the formal process. This presentation resembled an awards ceremony, further reinforcing the perceived legitimacy of the accredition process and the subsequent services offered. Similarly, this process reflects a form of institutional captial (Bourdieu, 1986), with the awards ceremony underscoring the importance of the newly acquired captial. With the awarding body publicly acknowledging the achievements of the recently graduated ASCs, this grants these individuals with institutional cultural captial, which is subsequently packaged, advertised and sold to bodybuilders seeking to increase the efficacy of their drug protcols, whilst simultaneously managing and mitigating potential health

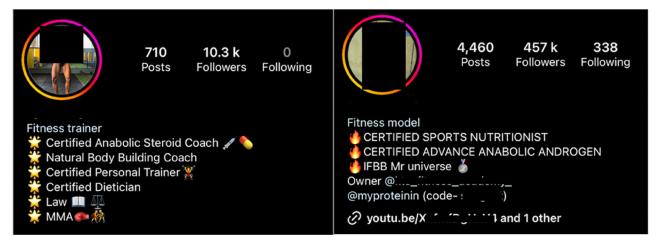


Figure 4. Advertisement of anabolic steroid course certification on personal Instagram bio's.

harms. By uploading these photographs, participants transform a personal achievement into a communal event. This shared display amplifies the collective acknowledgment of the services received, reinforcing group identity and norms (Hogg & Reid, 2006) within the community, which has been found to be an important factor among this cohort (Piatkowski et al., 2023), underscoring trust and credibility within the community. Publicly showcasing these accomplishments communicates individuals' affiliation and sense of belonging to the group, shaping a narrative of shared values, expertise, and pride in their engagement with the course. This can also be considered a form of promotion, which, more broadly, can be associated with the growing subculture of bodybuilding in India (Baas, 2018, 2024), which mirrors Western ideals, where muscularity is associated with masculinity and power (Dutton, 2013; Haq 2024). With deep rooted drug norms intertwined within bodybuilding subcultures (Monaghan, 2002), including those in India (Baas, 2024), it clear to see where the need for ASC have emerged from. The certification process further contributes to the authenticity of the services offered, serving as a form of legitimization that underpins and upholds the professionalization of this emerging and dynamic sector.

#### 3.3. Showcasing skills over instagram

Some individuals who attended courses, workshops, lectures, and seminars and achieved "certified" status added this credential to the "bio" section of their personal social media accounts. We reasonably assume this was done to showcase their skill set and advertise their newly acquired capital as "certified" ASCs. By prominently featuring their certified status in their social media bios, these individuals effectively communicate their authenticity and expertise as ASCs, reinforcing a sense of group identity within the fitness and IPED community. This deliberate display of certification not only serves as an advertising tool but also helps build trust, particularly for those outside the immediate community (out-group members) who may seek credible and certified guidance in the realm of IPEDs. Together, these mechanisms enhance group entitativity (Hamilton & Sherman, 1996) and solidify the evolving ASC "prototype" (Abrams & Hogg, 2006), shaping collective perceptions and expectations surrounding this emerging role (Figure 4).

However, this form of promotion should be critically examined, especially in light of Gibbs' (2023) research into "sponsored athletes." Gibbs highlights how branding among IPED sellers often leads to underhanded tactics, such as paying influencers to promote their AAS brands or using "sockpuppet" accounts to leave fake reviews and comments, shaping narratives about the quality and effectiveness of certain products. While much of the sharing of ASC qualifications in our sample may be organic, it is important to consider the possibility of similar manipulation, where influencers (e.g. well-known bodybuilders) might be paid to promote specific courses or programs. This concern parallels the findings of Cox and Paoli (2023), who discuss how narratives shared by IPED influencers can underpin and potentially contribute to health harms. Paoli and Cox (2024) further review the services offered by these influencers, illustrating the risks inherent in "grey" markets tied to illicit drug use. In such markets, where formal regulation is lacking, there is a significant reliance on cultural capital to determine "legitimacy."

#### 4. Discussion

This exploratory study sought to examine ASCs further, specifically focusing on India, where anecdotal evidence suggests an ASC "boom." While existing research largely points towards ASCs operating in Western countries, the current study addresses this imbalance, specifically focusing on the scarcity of research on ASCs within the Global South.

#### 4.1. The role of capital

This study underscores the vital role of sociocultural (Bourdieu, 1984, 1986) and body (Wacquant, 1995) capital within AAS communities, where status and endorsement by recognized individuals or reputable organizations amplify the authenticity and credibility of the offered services. This is particularly significant in the digital realm, where creative marketing strategies are employed to highlight and promote services by these prominent figures. Broader research (see Cox et al.,

2024; Gibbs, 2023; Paoli & Cox, 2024) examines the various creative methods through which social media platforms have been used to market AAS and other IPEDs, however, such research pertains to a largely Western population and fails to grasp and seek to understand cultural variations likely evident in the Global South.

Within the current investigation, where courses and ASC accreditation are marketed specifically towards people in India, it is clear to see how the status and bodies of influencers were utilized to market and attract custom. Posting on their personal Instagram accounts, influencers would showcase their muscularity and success within bodybuilding competitions, to first garner sociocultural capital, and secondly, to utilize it as a form of currency to promote services offering ASC accreditation. Indeed, it is their elevated status within the Indian bodybuilding community that allows them to leverage their sociocultural capital, to shape, and subsequently curate wider beliefs and behaviors of fitness enthusiasts.

Our work on capital builds on that of van de Ven and Mulrooney (2017), who term the phrase "bodybuilding capital," where individuals draw upon their cultural knowledge, physique and success in bodybuilding competitions, in exchange of economic capital. Indeed, physical appearance appears to be a central feature within these communities, to attain and accumulate sociocultural capital via the "body" (Wacquant, 1995). Kraska et al. (2010) further underscores this point, outlining that being muscular was associated with being "knowledgeable" within bodybuilding communities. Though such beliefs ought to be challenged, this understanding reiterates the importance of capital within bodybuilding communities and further underscores why well-known bodybuilders are utilized as a means of marketing for ASC accreditation within the current investigation.

While the accreditation of ASC in India appears to be primarily aimed towards coaches who provide competition preparation advice to bodybuilders, there is clearly scope and attempts to attract a broader market, reflective of new body ideals which have increasingly focused on muscularity. These new ideals are shaped (in part) by movie stars within the country (Baas, 2016, 2018; Haq, 2024), where Western ideals have diffused throughout India, underscoring the notion that muscularity is associated to success. Thus, the fundamental importance of sociocultural capital is evident.

Related to personal trainers in India, Baas (2016) outlines that these individuals showcase their muscularity in gyms, to get themselves noticed, attract potential clients, and earn economic capital. Indeed, it is their sculpted bodies which earns them respect, reinforces perceptions that they ought to be trusted and underscores the fundamental importance of their services. Rather uniquely, through the development of lean muscular physiques, Baas (2018) suggests personal trainers can move up through social-class, shifting from low-middle (formally working), to the middle class. This highlights how sociocultural capital, embodied through physical appearance, serves as a key resource for social mobility within this community, enabling individuals to transcend economic constraints and establish greater professional and financial stability. In the West, this phenomenon has been observed in

working-class men's participation in gym cultures, where bodybuilding often serves as a means of acquiring masculine capital and status in the context of declining blue-collar work and employment opportunities (Gibbs et al., 2022). Given the economic situation of working-class men in India, such pressures are likely to be magnified, increasing the relative value of such alternative channels for success (Baas, 2018).

Further parallels exist within the context of human enhancement drugs, such as nootropics (Cox and Piatkowski, 2024), more commonly known as "smart drugs," where influencers are said to leverage their "social power" (see French & Raven, 1959) to influence followers' behaviors. The theory of social power holds relevance within the current study, with well-known Indian bodybuilders drawing upon various aspects of power to leverage and promote ASC certification amongst their followers. For example, Indian bodybuilders would sometimes upload short (<30s) videos on their Instagram accounts, highlighting the importance of the courses and services on offer. As Cox and Piatkowski, (2024) have suggested previously, influencers draw upon various aspects of power to influence and shape behavior change. Influencers drew on "reward power," that is their ability to offer positive incentives, and "referent power," that is charisma and admiration (see French & Raven, 1959), to shape follower beliefs and behaviors. Thus, influencers are highly influential members of society who can shape wider group norms and values. Similar patterns are evident within the current study, with bodybuilders offering endorsements and discounts, sharing such details through personal communications.

#### 4.2. Limitations

The data presented in this paper is limited to digital ethnographic observations collected over a 12-month period. Therefore, it should be considered a snapshot, and we make no claims of generalization. Moreover, due to the online nature of this research study design, we cannot determine the authenticity of the data. Consequently, the findings should be considered with these caveats in mind.

#### 5. Conclusion

This research examined ASCs in India where the accreditation of ASC is offered. Not only is this evidence distinct from existing research on ASC in Western countries, but it also begins to address the scarcity of evidence on ASC in the Global South. Sociocultural and body capital play a fundamental role within the advertisement of ASC certification, with well-known bodybuilders promoting certification on their Instagram accounts. A form of institutional capital is leveraged to reinforce the ASC accreditation process, providing a layer of legitimacy to the services offered. Collectively, this contributes towards and underpins chemical capital for ASC. Recognizing the health harms associated with AAS and other IPEDs, the role of the ASC is ambiguous and warrants further investigation to determine their position and influence within bodybuilding and IPED communities. Future research should aim to review the materials and courses offered in ASC

accreditation to ensure they are reliable and accurate. This would better ensure the health of people who use AAS while also supporting their autonomy. Moving beyond this and recognizing the fundamental importance of lived-living experience within this community, approaches could made to partner with ASC and to embed their cultural knowledge within formal healthcare responses. Drawing upon various aspects of capital (sociocultural, body, institutional, chemical) such partnerships could help address current inequalities within formal healthcare settings, where the IPED community has faced unjust stigma and marginalization.

#### **Notes**

- Tagging refers to the process where an individual connects and links their profile to another. Once an account is tagged, individuals can easily switch between the associated accounts.
- Pinning refers to the process of adding a location to the uploaded image on social media. Pinning facilitates greater social media connectivity, allowing users to search for specific locations to find relevant content within a specific region.

#### **Ethics statement**

This research was conducted in line with KU Leuven's Social and Societal Ethics Committee. We have anonymized the data (e.g., websites, names, faces and social media accounts) to respect privacy. All information used within this research project is 'public' and accessible information.

#### **Disclosure statement**

No potential conflict of interest was reported by the authors.

#### **Funding**

The authors reported there is no funding associated with the work featured in this article.

#### References

- Abrams, D., & Hogg, M. A. (2006). Social identifications: A social psychology of intergroup relations and group processes. Routledge. https://doi.org/10.4324/9780203135457
- Akrigg, K., Cox, L., Turnock, L. A., Richardson, A., & Piatkowski, T. (2025). If you find me on the floor, stick some sugar in my mouth: The social production (and protection) of insulin risk among IPED communities. *Drugs: Education, Prevention and Policy*, 1–12. https://doi.org/10.10 80/09687637.2025.2481292
- Baas, M. (2024). The muscular capital of an Indian bodybuilder: Local competitions, transnational expectations, and postcolonial realities.
  In *The postcolonial sporting body: Contemporary Indian investigations* (pp. 145–164). Emerald Publishing Limited.
- Baas, M. (2018). Challenging the spatial and temporal constraints of the body: The online/offline presence of bodybuilders in India. *East Asian Science, Technology and Society: An International Journal*, 12(4), 417–438. https://doi.org/10.1215/18752160-7218532
- Baas, M. (2016). Muscles, masculinity and middle classness. *Routledge handbook of contemporary India* (p. 444). Routledge.
- Bilgrei, O, & Sandy, T. A. (2015). Should the use of anabolic androgenic steroids be considered a major public health problem in the Nordic countries? *Nordic Studies on Alcohol and Drugs*, 32(1), 25–26. https://doi.org/10.1515/nsad-2015-0004

- Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste.*Mass. Harvard University Press.
- Bourdieu, P. (1986). The forms of capital. In Szeman, I & Kaposy (Eds.), Cultural Theory: An Anthology. (pp 81–93). Wiley.
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, *9*(1), 3–26. https://doi.org/10.1037/qup0000196
- Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and be (com) ing a knowing researcher. *International Journal of Transgender Health*, 24(1), 1–6. https://doi.org/10.1080/26895269.2022.2129597
- Braun, V., & Clarke, V. (2021). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238
- Brennan, R., Wells, J. S., & Van Hout, M. C. (2018). "Raw juicing"—an online study of the home manufacture of anabolic androgenic steroids (AAS) for injection in contemporary performance and image enhancement (PIED) culture. *Performance Enhancement & Health*, 6(1), 21–27. https://doi.org/10.1016/j.peh.2017.11.001
- Cox, L., Piatkowski, T., & McVeigh, J. (2024). I would never go to the doctor and speak about steroids": Anabolic androgenic steroids, stigma and harm. *Drugs: Education, Prevention and Policy*, 1–13. https://doi.org/10.1080/09687637.2024.2373056
- Cox, L. T. J., & Paoli, L. (2023). Social media influencers, YouTube & performance and image enhancing drugs: A narrative-typology. *Performance Enhancement & Health*, 11(4), 100266. https://doi.org/10.1016/j.peh.2023.100266
- Cox, L., & Piatkowski, T. (2024). Influencers and 'brain building' smart drugs: A content analysis of services and market activities of nootropic influencers over social media. *Performance Enhancement & Health*, *12*(4), 100289 https://doi.org/10.1016/j.peh.2024.100289
- Cox, L., Gibbs, N., & Turnock, L. (2023). Emerging anabolic androgenic steroid markets; the prominence of social media. *Drugs: Education, Prevention and Policy, 31*(2), 257–270. https://doi.org/10.1080/09687637. 2023.2176286
- Christiansen, A. V. (2020). Gym culture, identity and performance-enhancing drugs: Tracing a typology of steroid use. Routledge.
- Dutton, K. R. (2013). The self contained body: The heroic and aesthetic/ erotic modes of representing the muscular body. In Critical readings in bodybuilding (pp. 151-165). Routledge.
- Enghoff, O., & Aldridge, J. (2019). The value of unsolicited online data in drug policy research. *The International Journal on Drug Policy, 73*, 210–218. https://doi.org/10.1016/j.drugpo.2019.01.023
- Fink, J., Schoenfeld, B. J., Hackney, A. C., Matsumoto, M., Maekawa, T., Nakazato, K., & Horie, S. (2019). Anabolic-androgenic steroids: Procurement and administration practices of doping athletes. *The Physician and Sportsmedicine*, 47(1), 10–14. https://doi.org/10.1080/009 13847.2018.1526626
- French, J. R., & Raven, B. (1959). The bases of social power. Studies in social power, 150, 167.
- Gibbs, N., Cox, L., & Turnock, L. (2022). Anabolics coaching: Emic harm reduction or a public health concern? *Performance Enhancement & Health*, 10(3), 100227. https://doi.org/10.1016/j.peh.2022.100227
- Gibbs, N., Salinas, M., & Turnock, L. (2022). Post-industrial masculinities and gym culture: Graft, craft, and fraternity. *The British Journal of Sociology*, 73(1), 220–236. https://doi.org/10.1111/1468-4446.12921
- Gibbs, N., & Hall, A. (2021). Digital ethnography in cybercrime research: Some notes from the virtual field. *Researching cybercrimes: Methodologies, ethics, and critical approaches* (pp. 283–299). https://doi.org/10.1007/978-3-030-74837-1\_14
- Gibbs, N. (2023). # Sponseredathlete: The marketing of image and performance enhancing drugs on Facebook and Instagram. *Trends in Organized Crime*, 1–40. https://doi.org/10.1007/s12117-023-09491-4
- Hall, A., & Antonopoulos, G. A. (2016). Fake meds online: The internet and the transnational market in illicit pharmaceuticals. Springer.



- Hamilton, D. L., & Sherman, S. J. (1996). Perceiving persons and groups. Psychological Review, 103(2), 336-355. https://doi.org/10.1037/0033-295x.
- Harvey, O., Keen, S., Parrish, M., & van Teijlingen, E. (2019). Support for people who use Anabolic Androgenic Steroids: A Systematic Scoping Review into what they want and what they access. BMC Public Health, 19(1), 1024. https://doi.org/10.1186/s12889-019-7288-x
- Hag, S. (2024). Of muscles and men: The making of a 'fit' India. Psychoanalysis, Culture & Society, 29(4), 571-587. https://doi.org/10.1057/ s41282-023-00383-8
- Hearne, E., Atkinson, A., Boardley, I., McVeigh, J., & Van Hout, M. C. (2022). 'Sustaining masculinity': A scoping review of anabolic androgenic steroid use by older males. Drugs: Education, Prevention and Policy, 31(1), 27-53. https://doi.org/10.1080/09687637.2022.2132135
- Hine, C. (2007). Connective ethnography for the exploration of e-science. Journal of Computer-Mediated Communication, 12(2), 618-634. https:// doi.org/10.1111/j.1083-6101.2007.00341.x
- Hodkinson, C. (2019). 'Fear of missing out' (FOMO) marketing appeals: A conceptual model. Journal of Marketing Communications, 25(1), 65-88. https://doi.org/10.1080/13527266.2016.1234504
- Hogg, M. A., & Reid, S. A. (2006). Social Identity, Self-Categorization, and the Communication of Group Norms. Communication Theory, 16(1), 7–30. https://doi.org/10.1111/j.1468-2885.2006.00003.x
- Kozinets, R. V. (2010). Netnography: Doing ethnographic research online.
- Kraska, P. B., Bussard, C. R., & Brent, J. J. (2010). Trafficking in bodily perfection: Examining the late-modern steroid marketplace and its criminalisation. Justice Quarterly, 27(2), 159-185. https://doi.org/10.1080/ 07418820902814013
- Llewellyn, W., & Tober, R. (2010). Underground anabolics. Molecular Nutrition LLC.
- Matza, D. (2018). Delinquency and drift. Routledge.
- McVeigh, J. (2020). Health and social responses to problems associated with the use of performance-and image-enhancing drugs. European Monitoring Centre for Drugs and Drug Addiction (EMCDDA).
- McVeigh, J., & Begley, E. (2017). Anabolic steroids in the UK: An increasing issue for public health. Drugs: Education, Prevention and Policy, 24(3), 278-285. https://doi.org/10.1080/09687637.2016.1245713
- Monaghan, L. F. (2002). Vocabularies of motive for illicit steroid use among bodybuilders. Social Science & Medicine (1982), 55(5), 695-708. https://doi.org/10.1016/s0277-9536(01)00195-2
- Pany, S., Panigrahi, S. K., Rao, E. V., Patnaik, L., & Sahu, T. (2019). Anabolic androgenic steroid abuse and their health impacts: A cross-sectional study among body builders in a city of Eastern India. International Journal of Preventive Medicine, 10, 178. https://doi.org/10.4103/ijpvm. IJPVM\_524\_17
- Paoli, L., & Cox, L. T. J. (2024). Across the spectrum of legality: The market activities of influencers specialized in steroids and other performance and image enhancing drugs. The International Journal on Drug Policy, 123, 104246. https://doi.org/10.1016/j.drugpo.2023.104246
- Piatkowski, T., Cox, L., van de Ven, K., & McVeigh, J. (2025). The material practices and social dimensions of community care among people who use, produce, and supply image and performance enhancing drugs. Addiction Research & Theory, 1-8. https://doi.org/10.1080/1606 6359.2025.2471803
- Piatkowski, T., Akrigg, K., Cox, L., Bradshaw, A., & Vigorous, S. (2025). Anything but androgens: How image and performance enhancing drug consumers manage body composition and health through off-label use of medicines. Performance Enhancement & Health, 13(2), 100329 https://doi.org/10.1016/j.peh.2025.100329
- Piatkowski, T., Gibbs, N., & Dunn, M. (2023). "I feel like I'm walking the line: One side it's manageable, the other side it's f\*\*king prison": Exploring the dual nature of user-manufacturers of image and performance enhancing drugs. Deviant Behaviour, 45(7), 929-946. https://doi. org/10.1080/01639625.2023.2250896
- Piatkowski, T., Robertson, J., Whiteside, B., Henning, A., Lau, E., & Dunn, M. (2024). Women's use of anabolic-androgenic steroids: A systematic review. Addiction, 1-10. https://doi.org/10.1111/add.16643

- Piatkowski, T., Cox, L., Gibbs, N., Turnock, L., & Dunn, M. (2024). "The general concept is a safer use approach": How image and performance enhancing drug coaches negotiate safety through community care. Drugs: Education, Prevention, Policy, 1-9. https://doi.org/10.1080/096876 37.2024.2352442
- Piatkowski, T., & Cox, L. T. J. (2024). 'Insulin is super dangerous if you don't know what you're doing': Situating the risks of insulin within the image and performance enhancing drug community. Drug and Alcohol Review, 43(7), 1976-1984. https://doi.org/10.1111/dar.13857
- Piatkowski, T. M., Cox, L., & Collins, R. (2024). The ethics of enhancement among image and performance enhancing drug coaches. Health Sociology Review: The Journal of the Health Section of the Australian Sociological Association, 1-15. https://doi.org/10.1080/14461242.2024.2388528
- Pope, H. G., Jr, 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
- Pope, H. G.& Kanayama, G. (2012). Anabolic-androgenic steroids. In Drug abuse and addiction in medical illness: Causes, consequences and treatment (pp. 251–264). Springer New York. https://doi.org/10.1007/ 978-1-4614-3375-0\_19
- Sagoe, D., & Pallesen, S. (2018). Androgen abuse epidemiology. Current Opinion in Endocrinology, Diabetes, and Obesity, 25(3), 185-194. https:// doi.org/10.1097/MED.0000000000000403
- Sagoe, D., Molde, H., Andreassen, C. S., Torsheim, T., & Pallesen, S. (2014). The global epidemiology of anabolic-androgenic steroid use: A meta-analysis and meta-regression analysis. Annals of Epidemiology, 24(5), 383-398. https://doi.org/10.1016/j.annepidem.2014.01.009
- Sidoti, C. (2023). Smart researching in criminology: Virtual ethnography at the edge. R. Faria, M. Dodge (Eds.), Qualitative research in criminology. Springer. https://doi.org/10.1007/978-3-031-18401-7\_4
- Statista. (2024). Demographics of India statistics & facts. https://www. statista.com/topics/10801/demographics-of-india/
- Statista. (2024a). Instagram Statistics and facts. Retrieved from https:// www.statista.com/topics/1882/instagram/
- Statista. (2024b). Leading countries based on Instagram audience size as of January 2024. Retrieved from https://www.statista.com/statistics/ 578364/countries-with-most-instagram-users/
- Statista. (2025). Wages and salaries in India statistics and fact. Retrieved https://www.statista.com/topics/11981/wages-and-salaries-inindia/#topicOverview accessed on 22.04.25
- Tighe, B., Dunn, M., McKay, F. H., & 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), 48. https://doi.org/10.1186/s12954-017-0176-8
- Turnock, L. A., & Gibbs, N. (2023). Exploring the normalisation of image and performance enhancing drugs (IPEDs) in British gyms and its connectivity with social media. In Morgan, J., Søgaard, T. F., and Uhl, A. (Eds). Normalisation re-visited: Drugs in Europe in the 21st Century., (pp. 40-59). Pabst Science.
- Turnock, L., Gibbs, N., Cox, L., & Piatkowski, T. (2023). Big business: The private sector market for image and performance enhancing drug harm reduction in the UK. The International Journal on Drug Policy, 122, 104254. https://doi.org/10.1016/j.drugpo.2023.104254
- Turnock, L. A., & Mulrooney, K. J. (2023). Exploring the Impacts of Rurality on Service Access and Harm Among Image and Performance Enhancing Drug (IPED) Users in a Remote English Region. Contemporary Drug Problems, 50(2), 232-253. https://doi.org/10.1177/009145092311 55487
- Underwood, M. (2019). The unintended consequences of emphasizing blood-borne virus in research on, and services for, people who inject image and performance enhancing drugs: A commentary based on enhanced bodybuilder perspectives. The International Journal on Drug Policy, 67, 19-23. https://doi.org/10.1016/j.drugpo.2018.11.005
- Uddin, Z., Iqbal, Q., Haider, S., & Saleem, F. (2019). Usage and perceptions of anabolic-androgenic steroids among male gym attendees in Quetta

city, Pakistan-a descriptive analysis. Research in Pharmacy and Health Sciences, 05(02), 152-157. https://doi.org/10.32463/rphs.2019.v05i02.06

Van de Ven, K., & Mulrooney, K. J. (2017). Social suppliers: Exploring the cultural contours of the performance and image enhancing drug (PIED) market among bodybuilders in the Netherlands and Belgium. The International Journal on Drug Policy, 40, 6-15. https://doi.org/10.1016/j. drugpo.2016.07.009

VICE. (2022). Why Pakistan's bodybuilders are dying. https://www.youtube. com/watch?v=G-v0vzeZCoc

Wacquant, L. J. (1995). Pugs at Work: Bodily Capital and Bodily Labour among Professional Boxers. Body & Society, 1(1), 65-93. https://doi.org /10.1177/1357034X95001001005

Wacquant, L. J. (2006). Body & soul: Notebooks of an apprentice boxer. Oxford University Press.