The others are the others: perceptions of male users about the adverse effects of testosterone'

Os outros são os outros: percepções de homens usuários sobre os efeitos adversos da testosterona

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Abstract

This article analyzes the perception of male users of testosterone about the adverse effects of the hormone, aiming to challenge the effectiveness and scope of health actions for this practice. Empirical data were obtained in 2016, mostly in Rio de Janeiro, from life history interviews with 21 male users of testosterone, with or without medical monitoring, from different backgrounds. In the light of gender and masculinity studies, it discusses how men interpret the impacts of testosterone use from a social valuation of certain traits associated with a normalizing manhood ideal. Results indicate an invisibilization or re-signification of potentially negative effects of the hormone, culminating in a widespread perception that it causes little or no harm. The problems associated with testosterone use acquire stereotyped characters, through a process of denying self-responsibility and reaffirming attributes of an ideal type of masculinity. This study is expected to contribute to the development of more adequate and thus more effective health actions to users' daily lives.

Keywords: Testosterone; Sex Hormones; Masculinities.

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Resumo

Este artigo analisa a percepção de homens usuários de testosterona acerca dos efeitos adversos no uso do hormônio, a fim de refletir sobre a eficácia e o alcance de ações em saúde voltadas para essa prática. Os dados empíricos foram obtidos a partir de 21 relatos de história de vida de homens que utilizam a testosterona, com ou sem acompanhamento médico, de perfil variado, coletados em 2016 majoritariamente no Rio de Janeiro. A discussão se apoia nos estudos de gênero e de masculinidades para argumentar como os homens interpretam os impactos do uso da testosterona a partir de uma valorização de características masculinas associadas a um ideal normalizador de masculinidade. Os resultados apontam uma percepção generalizada no campo de que o hormônio causa pouco ou nenhum mal, através de um processo de invisibilização ou ressignificação dos efeitos potencialmente negativos. Além disso, há um movimento de deslocamento dos problemas associados ao uso a personagens estereotipadas, num processo de desresponsabilização de si e reafirmação de atributos de um ideal de masculinidade. Com isso, busca-se contribuir para a construção de ações em saúde mais adequadas ao cotidiano dos usuários e, portanto, mais eficazes.

Palavras-chave: Testosterona; Hormônios Sexuais; Masculinidades.

Introduction

Testosterone is a steroid hormone produced primarily by the gonads in both men and women, and associated with a wide range of effects, ranging from anatomical to behavioral. It is directly associated to the development of secondary sexual traits in men and, unlike other hormones, enjoys a prominent place in people's imagination. Testosterone is still described, even by science, as the male sex hormone par excellence, although this classification has been challenged in many fields - from biochemistry to anthropology - since the early days of scientific research on the molecule (Rohden, 2011; Tramontano, 2017b). Common sense still associates testosterone with masculinity, using one as a synonym for the other.

Among several issues surrounding such a meaning-laden molecule, this article focuses on the perceived undesirable effects in the use of the hormone, either prescribed or otherwise. Testosterone (like the other sex hormones) may be seen as a paradigmatic case in that it is a substance synthesized by the body, yet supplemented or replenished, blurring the boundaries between natural and artificial.

However, it is often used on its own, widely distributed by the illegal market, and often used for aesthetic purposes. Even medical use, such as hormone replacement, is questioned as it is considered by critics and some doctors to be more of a tonic than a medication. Its therapeutic value is many times treated as an enhancement, as shown by Russo, Faro, and Montezuma (2019). Another use involves gender transit. In this specific possibility, the boundaries of body naturalness are further blurred. The concept of what would be natural or not is crossed by political positions in face of conceptions of sex and gender that will be supported by scientific knowledge, and not considered as genuine and irrefutable proof. The very physiological action of the hormone makes its effects multiple, diffuse, and difficult to predict. This characteristic is deepened by the symbolic character, and the generification of sex hormones, as pointed out by Nelly Oudshoorn (1994).

For Nikolas Rose (2013), the 21st century is witnessing a new stage in the process of regulating

bodies. It would be a deepening of Michel Foucault's biopolitics (2006), through the advance of a "technological biomedicine", increasingly dependent on machines and equipment, which sustains and is sustained by a molecular vision of the body and its functioning. Such a technological biomedicine shall favor the pharmacological resource whenever it is available, which is also perceived by Adele Clarke et al. (2003). The intensive production of new diagnoses, packaged by the pharmaceutical industry's need to make its products marketable, leads to a "pharmacologization of the everyday life", which creates a looser and more intimate relationship with the medication (Bell; Figert, 2012; Fox; Ward, 2008).

This is the position adopted by the article to locate the users' perception about the negative effects, aiming to problematize the dichotomy between the natural and the artificial in light of testosterone use. The discussion starts with excerpts from interviews with users about adverse effects. Next, it advances on strategies for coping with the problems. In the conclusion, it addresses how characteristics of the ideal of hegemonic masculinity emerge from the reports. It ends with a reflection on the potential for health response in face of the risk caused by indiscriminate use of testosterone.

Hegemonic masculinity is understood as the ideal of masculinity imposed on men by the gender norms. George Mosse (1996) describes how the construction of modern masculinity in the West is reflected in the exaltation of an ideal image of man. This image both shapes and is shaped by the standards of morality and behavior of the European bourgeoisie. It is also marked by attributes such as power, physical strength, courage, competitiveness, willpower, resilience and self-control. For Miguel Vale de Almeida (2000, p. 150), "the culturally exalted form of masculinity only corresponds to the characteristics of a small number of men," turning

hegemonic masculinity into a virtually unattainable ideal. These attributes will not be exhibited by all men at all times, and the resulting contradictions are resolved once they depend on interpretations and negotiations.

Interpretations will depend on other markers of difference such as class, race/ethnicity, age group, and regionality. In other words, the meanings of "being a man" are multiple, but not individual, as advocated by Raewyn Connell (2005). For the author, there is no single model of hegemonic masculinity, and the same man may embody different models in different contexts. Michael Kimmel (1998) agrees and emphasizes how hegemonic masculinity is constituted simultaneously and oppositely to questionable or devalued ways of being a man - as observed in this article - when problems associated with testosterone are solved through an artifice present in the ideal model, i.e., competitiveness. The article shows that men displace the adverse effects of testosterone from themselves to the others, who would be those who truly suffer from the hormone. Both Vale de Almeida (2000) and Mosse (1996) argue how men build their masculinity through the minimization or denial of the other's masculinity, treated as a "countertype", and that reinforces the (own) hegemonic values. Men, therefore, present themselves as "more masculine" through two movements, represented in the two sections of discussion herein: (1) claiming resistance or invulnerability to the damaging effects of testosterone²; and (2) accusing other men of not exhibiting the attributes required for safe use of the hormone.

Method

Data were extracted from the author's doctoral research³, which worked with life history accounts of 21 men, among cisgender (14) and transgender (7). Regarding age, the sample ranged from 26 to

² It is worth noting that a "myth of invulnerability" is often associated with hegemonic masculinity, even underpinning menoriented health policies as, for example, in the Brazilian Ministry of Health's National Policy for Integral Attention to Men's Health (BRAZIL, 2008).

³ The thesis, entitled "Testosterona: as múltiplas faces de uma molécula", was defended in 2017, at the Instituto de Medicina Social of the Universidade do Estado do Rio de Janeiro (IMS-Uerj), under the advice of Jane Araújo Russo.

66 years, converging on the 30-40 age group (9). Regarding race/color, there was a concentration of white men (15) as opposed to black men (4 brown and 2 black), according to self-identification criteria. The marker sexual orientation reported more parity, with 10 heterosexual and 9 homosexual men, besides 1 pansexual, and 1 bisexual. As for location, there was a large concentration in the Rio-São Paulo axis4. The search for interlocutors was based on the snowball scheme, which led to some homogeneity among interviewees: white, middle-class, and with university degree. For the analysis, it is relevant the categorization based on the purposes of use, which may be roughly divide into: professional bodybuilding; amateur bodybuilding; and gender transition. This division, however, is not hermetic, and the same man may be in more than one group at the same time.

The choice for life history accounts was based on the concept of social life of things, by Igor Kopytoff (2008) and Arjun Appadurai (2008), and on the biography of pharmaceuticals, according to Geest, Whyte, and Hardon (1996). The tool aimed not only to listen to the respondents' biographical reconstruction of their use of a chemical substance, but to run a strategy for understanding the intersection between two biographies: that of the men interviewed, and that of testosterone (in their lives). It is, therefore, a double biography, constructed in the relationship between respondents and the hormone. Interviews were conducted by the author during 2016, upon signing of the Informed Consent Form (ICF), and using a tape recorder as a backup, and lasted 1h15 on average. Data analysis followed the discourse analysis method, understanding that the socio-historical and ideological context, as well as nonverbal language enabled by the elections of interview as a data collection tool, are relevant for the broad understanding of the meaning of production, and enunciation of the interviewees' discourse.

"Nothing, nothing, nothing, nothing!": denial and displacement

The accounts make clear that testosterone may cause problems, even if men tended to discredit or minimize them. There is some hesitancy with the idea of a free, unmediated use of testosterone, which suggests there is something dangerous about the use of the hormone. However, what exactly would be this "harm"? When asked directly, the answer tended to be negative: "Ihad no side effects" (João Pedro); "No, I always had blood tests, followed up and there was no significant change" (Silvio); "No, [...] apparently nothing. Nothing, nothing, nothing, nothing!" (Otávio); "No, I think...not that I can remember [...] nothing that causes a...that displeases" (Flávio)⁵.

Not everyone believes that taking testosterone is so positive. Evandro, very critical, decided to discontinue use because he presented diffuse organic problems, and what he defines as "psychological": "I think it's the imbalance of your hormonal rates and your metabolism, because it messes up so much, even your psychological". Frederico also describes non-physical changes with use, although when asked directly about unpleasant effects, the answer was categorical: "Gee, none!"

I was a more multipurpose person. When I opened the computer to study a certain subject, [...] I would open several windows, [...] and I could handle it [...] Then, from the moment I started taking testosterone, [...] I use to joke, right, I became dumber, because to pay more attention to a certain subject I had to open a single window, read everything, go from beginning to end, [...] I became more dispersed. (Frederico)

Augusto also reports problems that we could call "cognitive":

[...] forgetfulness! [...] Not only words, like me forgetting what I did yesterday. [...] the word is in

⁴ The research was approved in the Research Ethics Committee in 2016, registered in Plataforma Brasil under CAAE number 48725515.8.0000.5260.

⁵ In the interview excerpts, I use italics to differentiate from literature quotations. The interviewees' names are fictitious to ensure anonymity.

my mind, but I can't, I can't remember to speak it. And things also, like, it happened the day before yesterday, sometimes I don't remember, I have to make an effort to remember. Colleagues of mine also, [...] this happens.

Another issue was reported by Samuel, a common complication to the use of injectable drugs, mainly when administered under questionable conditions: local redness and swelling. Similar reports appeared in the field; however, I emphasize this was a problem in the route of administration, and not an effect of the testosterone itself. There were common reports of bruising, and various bodybuilding injuries associated with testosterone. However, this is a consequence of the increase in physical strength, which leads the user to even double the load lifted beyond the limits of the muscle. Therefore it cannot be considered a direct effect of testosterone.

A problem that my interviewees considered more serious involved atrophy, accompanied by a lot of pain, which ended up taking Sérgio to the emergency room: "I had a problem like this...on my balls, I had a problem of incredible pain [...] after I started taking testosterone, [...] I was working out and, like this, I didn't have an erection, I had nothing, and this pain started." Paulo developed the same effect, which he described more graphically: "Istarted feeling pain in my testicle, and when I went to check my testicle had the size of an olive!" When I asked Sergio if he had noticed any reduction, he denied it, saying he only felt pain. Testicular atrophy is an expected effect of testosterone overdose, due to the physiological negative feedback mechanism⁶, which virtually stops testicular production. Claudio explains further:

Your sperm production axis decreases, that's a fact, because your LH, FSH, goes almost to zero! [...] Sometimes I took a break and used a stimulant to get my axis back, [...] I had a positive response, my LH, FSH, went back to normal, but then you use the drugs again, then they go down again, you see?

And the quantity [of sperm] decreases considerably. [There is a reduction in the testicle as well, an atrophy?] Yes, there is atrophy, atrophy, but when you take exogenous HCG, [...] you stimulate the testicle, right, and it returns, not to normal size, but [...] deatrophy.

Atrophy was not a problem only for cis men, trans men also report an atrophy of the vaginal canal, very uncomfortable for those who have in vaginal penetration a sexual practice. For others, the atrophy led to concern about possible health problems, notably cancer. Among the trans men, Leandro and Renato told me about this problem, which they face in very different ways depending on their sexual practices. For Renato, it was a major inconvenience.

It's very uncomfortable, [...] I even went to the doctor to give me an ointment and so on to see if it helps [...] in this sense of atrophy, decrease, and less production [of lubrication]. Yes, but I don't know, it's very complicated, because I've also talked about it with others there, so they will say that it's the opposite, because depending on the excitement, as there is more excitement, there will also be more of this type of production and so on, so I don't know, right? Because I think that maybe... also these relations with the body don't depend only on a physiological thing, right? [...] Let's say that there's a part that's kind of dead there, you know, but more [...] for my own reasons, you know, to kill that part.

This idea of "killing the vagina" is repeated among trans men, and seems to be associated with a perception of the genital organ as eminently (and exclusively) female. Let's look at it from Leandro's perspective:

Well, there was a process of gradually killing my vagina. At first, for affirmation of gender expression, then it became more and more painful, because it experiences atrophy, so it becomes an unpleasant

^{6 &}quot;The negative feedback is among the most common mechanisms of control in animal physiology. In lay words, it would be as follows: when identifying the excess of a certain substance, a metabolic loop is activated in order to inhibit the production pathway of such substance. Similarly, one can also stimulate the production of another substance that inactivates or degrades the substance in excess, and both processes constantly occur simultaneously." (Tramontano, 2017a, p.181).

experience. I already had a deviation in the vaginal canal. That got considerably worse.

It is worth noting that one of the historical criteria for the diagnosis of transsexuality (in its many nomenclatures) would be the repulsion for genitals. Nowadays, however, with the visibility that different expressions of gender gained in society, more plural discourses arise regarding the use or not of genitals by trans people7. That is what Ivan, the oldest man in the field, who is 66 years old, observes with excitement: "there's everything! There are trans people that use the vagina now, they don't mind being passive, there's everything!"

Regarding possible other bad effects, Leandro mentions many things, but all have another explanation. I emphasize how the issues mentioned are somewhat typical to aging, not necessarily related to testosterone, and are relatively common in people in Leandro's age group (43 years old).

I had changes on my glycaemia levels. That was the pre-diabetic thing [...] I also think it has to do with pharmaceutical lobbying, there are other issues here. But like, [...] your liver is no longer the same as it once was, right? Sometimes you feel changes in the liver, but mine is still fine [...]. I also had stenosis in that period, which is under control, but it also happens to other people. [...] Bone. I undergo densitometry exams regularly. [...] There is a deficit of vitamin D, which also has to be corrected because we have loss, but mine are under control.

It was a common habit to attribute the perceived adverse effects to an issue other than the hormone directly, which takes the sting out of testosterone (and its user). The argument involves the notion of "correct use" which, according to them, only the man who already has experience with testosterone would be able to use it properly. Claudio is one of them:

I see absolutely no negative effect. Even because the human being is moved by hormones, hormones determine everything in you. What we are doing is giving an extra load. So, [...] it is not something strange, [the body] knows, you know, testosterone, even if it is exogenous, it knows! You are just increasing the levels of it. [...] It is obvious that, while you are using the medication, you have to have control [...] if there is any alteration, you have to, obviously, take care of your health, stop using it and fix what is bad. But, if you do it continuously with follow-up, and if you use the drugs correctly, nothing can go wrong! Theoretically. Obviously, if the person has a genetic predisposition, there is no way. But... can it happen? Yes, but...

It is interesting how Claudio claims the "naturalness" of testosterone. This claim also appears in a less explicit way in other accounts. Another relevant point in this speech is that the assertiveness he conveys that "nothing can go wrong" is softened by "theoretically". This is an ambiguity of testosterone: it is natural and does no harm, but only "theoretically". There will always be some other factor that will justify the cases that go wrong. This posture is explicit in the speech of Antônio, who says he does not have any side effects; however, he describes several side effects, but quickly justifies them in another way.

The only side effect I feel is that I can't sleep. I get insomnia straight up when I'm taking it. [...] Impatient almost everybody gets, but aggressive... I hardly become aggressive [...] a lot of people say it, but it varies according to the person's temperament. That person who already has a short temper, with anabolic steroids, they get even more! [...] The person knows it is bad for them, the negative things about it, and they don't prevent; for example, they can't have alcohol, they can't eat fatty food, they can't do this, they can't do that,

⁷ In their latest editions, both the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) and the International Classification of Diseases (ICD-11) have undergone reformulations in their approach to transsexuality and transvestility. The current diagnosis in the DSM-5 is "gender dysphoria", focusing on the aspect of suffering resulting from the incongruence between identity and body (and not on the incongruence itself). In ICD-11, on the other hand, "gender incongruence" appears in the chapter on health-related, non-pathological conditions, such as pregnancy. The actual effectiveness of these transformations in health practices is something that will only be observed over the next few years. For a specific discussion on the Brazilian reality, see Almeida and Murta (2013).

and they keep doing. Like, you took something, you know it's bad for you, you know that if you take other things it will get worse, so you go and do it. [You said you heard that you'll become impotent] I've heard about it, I've heard that some have become. Sometimes hair loss. [Have you had it?] No. [And acne?] When I was younger, I used to take anabolic steroids, especially testosterone, and I ate a lot of junk food, and I would get a lot of acne, full of pimples. Then, after a while, I changed my diet... it disappeared, everything disappeared! (Antonio)

So, aggressiveness is not aggressiveness, but everyone gets impatient; erectile dysfunction, he has heard, but has not had; liver damage, blamed on the wrong diet, as well as acne. However, he claims that he "knows it is bad for him." Therefore, the hormone is definitely harmful. Jorge, very cautious and responsible during the whole interview, also believes that "if you do it right, there is no problem".

I don't even know if I am prone to gynecomastia, which, generally, who take it, the first week, it already starts to have an effect, right? I don't even know, because before any effect appeared, I've already taken precautions. Ah, it overloads [the liver] a little bit! It overloads, but, if you have a good diet, make use of a [liver protector], I myself use it constantly. (Jorge).

In this speech, Jorge claims his "good genetic" protects him from the risk of gynecomastia. Claudio also makes several references to alleged predispositions, either to develop health conditions (notably cancer), or to favor testosterone gains. This argument irritates Otávio a lot, who accuses people of repeating it just "to say that they are Super Man, so, that they are Mega, Top, Blaster and that, you know, mega good genetics". Unfortunately, Roberto doesn't seem to be as lucky: "I think I felt I had gynecomastia, yeah". However, his gynecomastia was not exactly an effect of testosterone either; it was because he took testosterone along with DHEA8, intensifying the effects. Upon noticing the

difference in his breast, he sought a doctor and asked to discontinue the DHEA, keeping the testosterone and stating that the symptoms of gynecomastia "are reversing".

Analyzing all the speeches, one notices a tendency to excuse testosterone for its disorders, sometimes claiming greater knowledge about the hormone, sometimes of an organic advantage that protects the user from adverse effects. The ideal of hegemonic masculinity comprises a superiority to cope with adversity, whether innate or acquired. Except for atrophies, which are hard to ignore, other negative effects are relativized, melt in factors unrelated to testosterone. However, no one ignores the fact that there are cases of people who experienced serious, even fatal issues, as a result of steroid use. How to deal with this apparent contradiction and not give margin for a vulnerability of the self?

"That's too much!": others and male competitiveness

The interlocutors shift the adverse effects of testosterone to an "other" who will concentrate all problems related to the use; this other will be the target of all the stigmas they described as unfair and hypocritical when applied on themselves. Even when they perceive (or it becomes impossible to disguise) negative consequences of the use, men organized some justification that differentiated them from other users. I observe, therefore, the same as Azize and Araújo (2003, p. 144) about Viagra users: "When it comes to the construction of masculinity in the discursive field, the use of comparisons with other men is recurrent. There is an 'other' that appears in the discourse of the interviewees, sometimes as a positive reference [...] sometimes as a negative reference."

Three major "others" may be outlined: the athlete, professional bodybuilder; the amateur bodybuilder; and the macho trans man. The first two "types" are reciprocal accusations: the anabolic user is the "other" of the professional bodybuilder, while the bodybuilding athlete is the "other" of strength trainers. There is a clear displacement of the insults

received to someone who is close in the eyes of society, but is described as diametrically opposed. I often had the feeling that the other was actually a hyperbole of the self: there was a fear of becoming the other, which would require vigilance, surveillance of the self. Pointing out the mistakes of other users would serve as a reminder of what not to do. In some cases, these men do not consider the body of the bodybuilder athlete something so repulsive, and have even thought, at some point in their lives, about the possibility of becoming an equal. This is very clear in the story of Mateus, who grew up fascinated with bodybuilding, but for whom today's bodybuilders do not have the glamor he used to admire:

In my view, the ideal body is very close, of course, not of a competition bodybuilder as we see today, [...] guys have lost track... so, visually the very swollen bellies, big liver, that fat inside, frog belly, so, you see the giant guy with the swollen belly, but this is not what I want!

The rhetoric of excess is also triggered by Fernando, for whom the main victims of testosterone would be those who take it on their own. "who have gone too far", and with no medical follow-up, the opposite of their choices. For Sérgio, "it is usually bodybuilders who die because of it", despite the fact that, among the interviewees, bodybuilders do not report serious adverse effects.

Evidencing the reciprocity of accusation, for the athletes the ones who will suffer with the adverse effects are those who "don't know how to take it". "They don't know the right dosage; they don't know when to stop" (Antonio). Following a difference that marked these two groups, athletes will expose the "mistakes" of amateurs with a wealth of detail, proving their vast knowledge on the use, while disqualifying the knowledge of others. Jorge even gets aggressive in pointing out the mistakes of these "laymen":

I have a friend who [...] from taking so many anabolic steroids, he zeroed out his testosterone! He went to a doctor, and the doctor prescribed for him, if I am not mistaken, it was cypionate, for hormone replacement. On the first day that the guy applied it,

he was already saying that he was already different, this and that, and I said, "crazy, this stuff is not even in your bloodstream yet!" [...] He said it to the doctor, and the doctor said the same thing. I said, "of course, idiot, do you think it's on the same day?" Usually you start feeling a difference in two, three weeks from the first application. [...] It's not magic!

The criticism that testosterone does not work magically has less to do with actual effects of testosterone than with an assumption that transformation would be easy and quick. There is a contradiction here with a perception of the effects considered positive, which are described as quick and incisive, molecularly reproducing characteristics of masculinity in a process of hormonal generification (Oudshoorn, 1994). However, the denial of a rapid action of testosterone in this specific context is useful in two interconnected respects: (1) it values the effort and dedication these men have with testosterone; and (2) it serves to denounce the forums and websites that give the impression that one only has to want (and take testosterone) to grow.

However, even if criticism is made keenly, it may be completely ignored by those who use it "wrongly," who may exhibit total indifference, or even debauchery, regarding the risks. Let's see how Paul responds to this:

 $I\,think\,that\,first\,of\,all\,it'\!s\,not\,the\,use\,of\,the\,anabolic$ steroid [...] that kills anybody. [...] what screwed up Igor's life was the use of the diuretic [But doesn't he start taking the diuretic as a result of the anabolic steroid?]. Yes, to eliminate the liquid, because it retains [Wouldn't this retention be a consequence of the anabolic steroid?] So, it is a consequence, but it was not the anabolic steroid that killed him! [Did you ever have any problems with fluid retention?] We always do, but I have my diuretic!

This disdain would certainly make Jorge furious, but it is well illustrative of his arguments, since, for him, the problem is that there are

a lot of lay people there, who don't even know what they're doing...95% are Broscience supporters! [...] Sometimes I get on these blogs to have a little laugh, then the person: "I've never taken anything, what do you recommend?" Then some people come along and put a list of things for people to take that I have never taken in my life! "Beginners have to take this, this, this, this, and this," and then I say, "guys, that's absurd! I'm old hands in this, I don't take all that stuff!

The adverse effects become consequences of three situations: (1) resorting to *broscience*, the jocular way in which the athlete refers to the prescriptions and explanations about the use in Internet forums, a kind of parallel science "of the brothers"; (2) a medical error, since it is common among users the argument that medicine is hypocritical and biased with the use, repeating incomplete or even false information; and (3) the lack of discipline, a requirement for obtaining favorable results. Thus, Jorge deconstructs effect by effect. Acne? "backyard-made drugs"; "bum supplement"; "eat crap". Excessive hair growth? "the guy chose to shave it, it started growing. That's because he shaved". Baldness? "Then you have to see if it is the diet, or if it is the bad drugs that people are using, or if they are taking too many of them". Erection problems, libido, testicular atrophy? "It is the misuse! People take them for a year, a year and a half. [...] Then, when he stops taking it, his testosterone production was zeroed out". Liver problems? "the quy takes it uncontrolled, and that is so ignorant! [...] And that overloads the liver [...] it is the whole, it is the anabolic steroid, it is the bad diet". Gynecomastia? "a doctor [...] told him to take HCG [...] you are taking three Durateston a week, you are already having aromatization. The excess is already turning into estrogen. So you go and take more estrogen?"

Other men present the difference in relation to the "other" in the form of a moral or intellectual advantage, like Silvio:

You'll find people who really do an excessive body cult, and get completely sucked into it, and other people who were, like in my case, it was more of a self-esteem thing, of overcoming oneself, even more for self-acceptance, [...] but you also have those who, in fact, are there for other reasons.

That is, for Silvio, the people who are there for these "other reasons" are the problem. Silvio claims the discourse of "overcoming the self", the others do it for the "excessive body cult", which is negatively appraised. In fact, it seems that men find different ways to dispute masculinity. Among trans men, for example, something that was repeated in all the interviews was the report of the uncritical reproduction of a stereotype of masculinity, considered negative.

I think they are wanting to be cis men, really. They want to use other things from the masculine universe [...] to show that they are the bad guy, the alpha male, you know? [...] there are also guys who say that he only starts to be a man after he takes testosterone, because then he will be a man because he has testosterone in his body (Augusto).

By presenting themselves as "alpha males," these men would not only be reproducing a sexist masculinity, but also making a "misuse" of it. He adds:

It turns out that you have the guys who use testosterone irregularly, and not every organism is ready to that. [...] What happens is that people don't always use it the way the doctor tells them to, they take it in a different way and end up causing problems [...] then they have strokes, they have a lot of things.

So, also among trans people, the one who dies is the one who "doesn't know how to take it". The most interesting thing in this comparison is to notice how this trans "other" is who reproduces the hegemonic masculinity represented, in Flavio's words, by the "atraight white cis man". Regardless of occasional differences, the conclusion that we can draw is that the "other" is usually a hypermasculine figure, in the sense that some of the attributes of masculinity are hyperbolized in this experience. The "other" represents the excess, the exaggeration, what is over the top. In short, the "other" lacks the most essential characteristic of the modern man pointed out by Mosse (1996): self-control.

Final Remarks

It is interesting to note how the description of this other (exaggerated, inexperienced and/or undisciplined) stems from a relative position of men in front of different images of masculinity. George Mosse (1996) describes how, in order to establish itself as a norm, masculinity depends on comparison with countertypes that concentrate those characteristics considered negative. Following Raewyn Connell (2005), attributes will be considered hegemonic or subordinate based on the relative location of men at an intersection between different social markers of difference. Features that were noted as very positive in one context, for a certain type of man, were precisely those described as undesired by others. What did not meet the desired was what belonged to the "other".

The discussion proposed herein is a contribution to health promotion, and prevention of health conditions regarding the use of testosterone. In line with Farias, Cecchetto, and Silva (2014), a taboo on frankly addressing this use, based on a fear of "apologia for drug use", leads to a difficulty of dialogue with users, and a weakness in the formulation of health policies and actions. "If ANVISA has banned it, it's good," said a meme that circulated among some users. This explains the distance between the official discourse of science and health and the user's daily life. Therefore, an effective response should consider the lived experience of users who consider themselves able to manage the health risk of their practices. It is possible to design health actions that seem less stereotyped and biased, as the speeches of health professionals were many times qualified during the research.

References

ALMEIDA, G.; MURTA, D. Reflexões sobre a possibilidade da despatologização da transexualidade e a necessidade da assistência integral à saúde de transexuais no Brasil. *Sexualidad, Salud y Sociedad*, Rio de Janeiro, n. 14, p. 380-407, 2013. DOI: 10.1590/S1984-64872013000200017

APPADURAI, A. Introdução: mercadorias e a política de valor. In: APPADURAI, A. (Ed.). *A vida social das coisas*: as mercadorias sob uma perspectiva cultural. Niterói: EdUFF, 2008. p. 15-88.

AZIZE, R.; ARAÚJO, E. A pílula azul: uma análise de representações sobre masculinidade em face do Viagra. *Antropolítica*, Niterói, n. 14, p.133-151, 2003.

BELL, S.; FIGERT, A. Medicalization and pharmaceuticalization at the intersections: looking backward, sideways and forward. *Social Science & Medicine*, [S.l.], v. 75, n. 5, p. 775-783, 2012. DOI: 10.1016/j.socscimed.2012.04.002

BRASIL. Ministério da Saúde. *Política Nacional de Atenção Integral à Saúde do Homem (Princípios e Diretrizes)*. Brasília: Ministério da Saúde, 2008. Disponível em: https://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_atencao_homem.pdf>. Acesso em: 13 set. 2021.

CLARKE, A. *et al.* Biomedicalization: technoscientific transformations of health, illness and US biomedicine. *American Sociological Review*, [*S.l.*], v. 68, n. 2, p. 161-194, 2003. DOI: 10.2307/1519765

CONNELL, R. *Masculinities*: second edition.
Berkeley and Los Angeles: University of California
Press, 2005.

FARIAS, P. S.; CECCHETTO, F.; SILVA, P. R. P. Homens e mulheres com H(GH): gênero, masculinidades e anabolizantes em jornais e revistas de 2010. *Cadernos Pagu*, Campinas, n. 42, p. 417-446, jan./jun. 2014. Disponível em: https://periodicos.sbu.unicamp.br/ojs/index.php/cadpagu/article/view/8645128>. Acesso em: 13 set. 2021.

FOUCAULT, M. *O nascimento da clínica*. Rio de Janeiro: Forense Universitária, 2006.

FOX, N.; WARD, K. Pharma in the bedroom... and the kitchen...The pharmaceuticalisation of daily life. *Sociology of Health & Illness*, [*S.l.*], v. 30, n. 6, p. 856-868, 2008. DOI: 10.1111/j.1467-9566.2008.01114.x

GEEST, S. van der; WHYTE, S. R.; HARDON, A. The anthropology of pharmaceuticals: a biographical approach. *Annual Review of Anthropology*, [S.l.],

v. 25, p. 153-178, out. 1996. DOI: 10.1146/annurev. anthro.25.1.153

KIMMEL, M. A produção simultânea de masculinidades hegemônicas e subalternas. *Horizontes Antropológicos*, Porto Alegre, v. 4, n. 9, p. 103-117, out. 1998. DOI: 10.1590/S0104-71831998000200007

KOPYTOFF, I. A biografia cultural das coisas: a mercantilização como processo. In: APPADURAI, A. (Ed.). *A vida social das coisas*: as mercadorias sob uma perspectiva cultural. Niterói: EdUFF, 2008. p. 89-121.

OUDSHOORN, N. *Beyond the natural body*: an archeology of sex hormones. Londres e New York: Routlegde, 1994.

MOSSE, G. L. *The image of man*: the creation of modern masculinity. Nova York: Oxford University Press, 1996.

ROHDEN, F. "O homem é mesmo a sua testosterona": promoção da andropausa e representações sobre sexualidade e envelhecimento no cenário brasileiro. *Horizontes Antropológicos*, [S.l.], v. 17, n. 35, p. 161-196, 2011. DOI: 10.1590/S0104-71832011000100006

ROSE, N. *A política da própria vida*: biomedicina, poder e subjetividade no século XXI. São Paulo: Paulus, 2013.

RUSSO, J. A.; FARO, L. F. T.; MONTEZUMA, A. Controvérsias em torno do "hipogonadismo tardio" e seu tratamento: um estudo das discussões médicas sobre o envelhecimento masculino. In: CONGRESSO BRASILEIRO DE CIÊNCIAS SOCIAIS E HUMANAS EM SAÚDE, 8., 2019, João Pessoa. *Anais eletrônicos* [...]. Campinas, Galoá, 2019.

TRAMONTANO, L. A fixação e a transitoriedade do gênero molecular. *Horizontes Antropológicos*, Porto Alegre, v. 23, n. 47, p. 163-189, jan./abr. 2017a. DOI: 10.1590/S0104-71832017000100006

TRAMONTANO, L. *Testosterona*: as múltiplas faces de uma molécula. 2017. Tese (Doutorado em Saúde Coletiva) - Instituto de Medicina Social da Universidade do Estado do Rio de Janeiro, Rio de Janeiro, 2017b.

VALE DE ALMEIDA, M. Senhores de si: uma interpretação antropológica da masculinidade. Lisboa: Fim de Século, 2000.

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