



Sources of knowledge and truth related to anabolic/androgenic steroid use among two-spirit, gay, bisexual, queer, and other men who have sex with men

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Abstract

Objectives This study sought to explore how two-spirit, gay, bisexual, and queer cisgender and transgender (2SGBQ+) men engage with information related to non-prescribed anabolic/androgenic steroid (AAS) use, and how discourses of risk surrounding AASs influence their AAS use practices. Two objectives were achieved: (1) Sources of information that 2SGBQ+ men consulted when considering using AASs were identified and (2) the ways in which discourses of risk shaped 2SGBQ+ men's experiences of using AASs were revealed.

Methods Participants were recruited for semi-structured interviews online and through word of mouth. A critical poststructural methodology and theories of risk discourse and biopolitics were used to identify themes and interpret data.

Results Seventeen interviews were conducted with adult 2SGBQ+ cis and trans men. Three themes emerged: (1) Unauthoritative sources of knowledge and truth sought by current and prospective AAS users were inconsistent and difficult to evaluate; (2) Authoritative sources, including health care providers, reacted inconsistently; and (3) 2SGBQ+ men generated and shared lay knowledges as a form of community-led harm reduction.

Conclusion The complexities of seeking and evaluating information highlight the privileged nature of trustworthy, accurate information on the topic. Risk—as a discursive regime—places 2SGBQ+ male AAS users in the position to produce lay knowledge and cultivate their own “truths” on the topic, which can lead to preventable harm. Public health needs to address these biopolitical effects by considering these lay forms of knowledge as an untapped resource and design accessible and judgement-free AAS use harm reduction programs for 2SGBQ+ AAS users.

Résumé

Objectifs Cette étude visait à explorer le rapport des hommes gais, bisexuels, queer, trans, bispirituels et autres hommes cisgenres et transgenres qui aiment les hommes (GBTQ2+) avec les informations sur l'utilisation des stéroïdes anabolisants/androgéniques (SAA) vendus sans ordonnance, et en quoi le discours sur le risque posé par les SAA influence leurs pratiques d'utilisation des SAA. L'étude avait deux objectifs : 1) trouver les sources d'informations consultées par les hommes GBTQ2+ qui songent à utiliser des SAA; et 2) révéler comment le discours du risque modifie l'expérience d'utilisation des SAA par les hommes GBTQ2+.

Méthode Les participants ont été recrutés en ligne et de bouche à oreille pour se prêter à des entretiens semi-directifs. Une méthode critique poststructurale et les théories du discours du risque et de la biopolitique ont servi à repérer les thématiques et à interpréter les données.

Résultats En tout, 17 entretiens ont été menés auprès d'hommes adultes GBTQ2+ cisgenres et transgenres. Trois thèmes en sont ressortis : 1) Les sources de savoir et de vérité non autorisées consultées par les utilisateurs actuels et éventuels des SAA se contredisaient et étaient difficiles à évaluer; 2) Les sources autorisées, dont les professionnels de santé, réagissaient contradictoirement; et 3) Les hommes GBTQ2+ produisaient et partageaient des savoirs non professionnels – une forme de réduction des méfaits d'inspiration communautaire.

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Conclusion La complexité des tâches de recherche et d'évaluation des informations fait ressortir la nature privilégiée des informations fiables et exactes à ce sujet. Le discours du risque met les hommes GBTQ2+ qui font usage de SAA dans la position de devoir produire des savoirs non professionnels et cultiver leurs propres « vérités » à ce sujet, ce qui peut causer des méfaits évitables. La santé publique doit se pencher sur ces effets biopolitiques en considérant ces formes de savoirs non professionnelles comme une ressource non exploitée et en concevant des programmes de réduction des méfaits accessibles et sans jugements pour les personnes GBTQ2+ qui utilisent des SAA.

Keywords 2SGBQ+ men's health · Anabolic-androgenic steroid use · Thematic analysis · Risk discourse · *LGBTHealth* · Harm reduction

Mots-clés Santé des hommes GBTQ2+ · utilisation des stéroïdes anabolisants/androgéniques · analyse thématique · discours du risque · santé des personnes LGBT · réduction des méfaits

Introduction

Androgenic-anabolic steroid (AAS) use among cisgender two-spirit, gay, bisexual, queer, and other men who have sex with men (2SGBQ+) is more common than among the general male population, with research evidence linking it to various sexual and other illicit substance use risk practices and a range of negative physical and mental health outcomes, including suicidal thoughts and attempts, eating disorder diagnoses, depression, anxiety, aggressive behaviour, and the negative impacts of smoking (Bolding et al., 2002; Griffiths et al., 2017; Ip et al., 2019; Halkitis et al., 2008). Most of this evidence originates outside of Canada and relies on quantitative methods to describe this phenomenon with very few studies exploring the social and cultural context surrounding this practice (Bolding et al., 2002; Griffiths et al., 2017; Halkitis et al., 2008; Ip et al., 2019). Within Canada, AAS use research is limited and has predominantly focused on the non-2SGBQ+ male population, with some examining the practice within the context of postsecondary sports teams, professional athletes, and young adults (Adlaf et al., 2005; Adlaf & Smart, 1992; Blouin & Goldfield, 1995; MacNeil & Webster, 1997; Melia et al., 1996; Young, 2012). To date, only two Canadian studies have explored AAS use among 2SGBQ+ men (Filiault & Drummond, 2010; Star, 2021), despite calls to expand the literature base on this topic due to it being increasingly common, potentially harmful, and linked to the health outcomes mentioned above (Griffiths, et al., 2021).

What is consistent in the literature, including for 2SGBQ+ men, is a predominance of discourses of risk that frame AAS use as unhealthy, shameful, and harmful, with one meta-analysis declaring AAS abuse a global public health problem (Sagoe et al., 2014). As medical sociologist Deborah Lupton (1993) asserts, the term “risk” in public health is synonymous with danger and is used so frequently that “discourses of risk” have saturated public health practices and ideological arenas. Furthermore, 2SGBQ+ men have often been portrayed in the public health literature as a “vulnerable” population due to increases in disease burden. However, such pathologizing

discourses have shifted over time through the organized actions of grassroots community groups that centre the legitimacy and value of human experiences of eroticism and pleasure even when risk-promoting practices are a part of life. While such community-led efforts have helped to reduce stigma and normalize potentially risky practices (e.g., safer sex and safe injection), a similar evolution in the understanding of and sensitivity towards AAS use remains lacking. With so little research on the social and cultural context surrounding AAS use among 2SGBQ+ men in Canada, and in response to the dominance of risk discourse in existing literature, I pose the following research question: “How do 2SGBQ+ men engage with the information they seek related to AAS use and how do discourses of risk impact their daily practices and experiences of using AASs?” With this in mind, I addressed this gap in the literature by employing a qualitative study design with 2SGBQ+ men living in Manitoba, Canada. Specifically, this study identified the sources of information 2SGBQ+ men consulted and used related to their AAS use practices and examined how discourses of risk present within them shaped their individual experiences of engaging in AAS use.

Background

Anabolic-androgenic steroids (AASs) include testosterone and its synthetic derivatives, which are primarily used to treat health conditions (Sagoe et al., 2014). However, individuals who use AASs without a prescription are often motivated by the desire to increase athletic/sexual performance or enhance their physical appearance, muscle strength, and/or mass (Ip et al., 2011; Kanayama et al., 2020).¹ In Canada, a number of studies to date have looked at AAS use with varying population foci (Adlaf & Smart, 1992; MacNeil & Webster, 1997), bodybuilders (Blouin & Goldfield, 1995; Goldfield,

¹ It should also be noted that the realm of AAS use includes performance-enhancing drugs (PEDs), such as human-growth hormone (Sagoe et al., 2014). PED specifically emerges sparingly throughout the recent and relevant research and is not mentioned exclusively in those dealing with 2SGBQ+ men. For this reason, PED is not included here.

2009), and high school students (Adlaf et al., 2005; Melia et al., 1996; Young, 2012). Prevalence rates for the general population involving large sample sizes, as well as large numbers of high school student participants, were very low; conversely, prevalence rates among bodybuilders with smaller sample sizes were much higher. Despite these studies looking at a range of health and quality of life dimensions, at the time of this publication, there were very few qualitative studies focused specifically on 2SGBQ+ men who use AASs in Canada, including one by Filiault and Drummond (2010) that explored perceptions of AAS use among gay male athletes and another (Star, 2021) that explored the intrinsic and extrinsic motivations for AAS use.

Outside of Canada, several studies have looked specifically at gay and bisexual men² (GBMSM) (Bolding et al., 2002; Griffiths et al., 2017; Halkitis et al., 2008; Ip et al., 2019). Several of these studies found that AAS use among GBMSM was connected to sexual risk behaviours and illicit drug use (Ip et al., 2019), while others found that the practice was significantly correlated with higher age and HIV-positive status (Halkitis et al., 2008). Halkitis et al. stated in their findings that AAS use also “may be intimately linked to health, mental health, and psychosocial states that characterize the gay community at large” (p. 106), including anxiety, depression, loneliness, and active and/or avoidant coping, as well as perceptions of masculinity. Positive statistical associations were found between AAS and each of these, which the authors state is unsurprising given the history of AAS use among sexual minority men originating as far back as the early AIDS epidemic to treat wasting and depression, and due to the more contemporary effects of emphasizing the need to achieve a hypermasculine state (Halkitis et al., 2008). These outcomes are not unlike existing negative health outcomes that disproportionately impact this population group; 2SGBQ+ men in Canada remain disproportionately affected by a range of negative health outcomes, such as substance use disorders (Cochran et al., 2007), HIV/AIDS and other STIs, eating disorders and body image issues (Allensworth-Davies et al., 2008; Davies et al., 2019), and mental illness diagnoses, discrimination, violence, and suicide (Hottes et al., 2016).

As exemplified by this public health literature, the health of 2SGBQ+ men is often framed by risk for a range of physical, mental, and sexual health challenges—particularly the risk of HIV/AIDS. According to Lupton (2006), “Medical and public health discourses have played an integral role in nominating

which individuals are considered to be ‘at risk’ by virtue of belonging to certain socio-demographic groups or engaging in particular ‘lifestyle’ activities” (p. 17); when such discourses become dominant, they fail to explore the ways in which these framings impact how individuals see themselves. In Lupton’s view, “risk” is inseparable from the socio-cultural influences surrounding the community in question, which establish norms based on shared understandings that are influenced by values (2006). Empirical studies/sciences often separate risk from the socio-cultural context, which is contrary to Lupton’s assertion that risk is deeply imbricated in the norms, shared understandings, and socio-cultural values of community. Lupton (1993) also highlights that risk discourse induces anxiety and guilt at the micro level and that this places the blame for community-level negative health outcomes on the individual. Though risk discourse here is painted as an oppressive force, there are counter-discourses that emerge. For example, lay knowledges of risk and risk practices are developed and shared at the community level by individuals seeking to meet their needs; these knowledges are sensitive to local conditions and trends, and they do not lie outside of social and cultural influences. While these lay knowledges interact and contrast with expert knowledges on a topic, they become authoritative in their own right and are used in much the same way as empirical evidence by those who access, consume, and use the knowledge and information they need to mitigate risk (Lupton, 2006). Research to date on the topic of AAS use among 2SGBQ+ men is heavily influenced by the hard sciences and very few studies include lay knowledges from the perspective of those who engage in this practice. Moreover, the impact of risk discourse present in the literature and in the field, according to Lupton, may have an impact on how these men view themselves and their identities, which form the basis for the objectives noted within this study.

Methods

Methodological framework

This study pursued a critical poststructuralist methodology (Strega, 2005) that views social realities as produced and reproduced through discourse, which include the various public and private communications that occur in social arenas (Macias, 2015). According to Foucault (1990), these discourses regulate and structure reality and enact power relations, which is relevant given that some discourses become dominant over others. Despite the intersubjective reality that is created through discourse, the forces that shape it tend to subjugate certain groups (Foucault, 1990). This critical poststructuralist methodology holds the epistemological position that knowledge is generated through circular power relations: power produces knowledge, and knowledge is generated

² The use of different acronyms to reflect groupings of men who have sex with men is intentional and originates from the study or studies being referenced. For example, some studies use “gay, bisexual and other men who have sex with men (GBMSM)” and others simply use MSM. For clarity, this study included at least one participant who identified with each of the represented identities of two-spirit, gay, bisexual, or queer male, with one individual identifying as queer and trans. As such, this study uses 2SGBQ+ to reflect the identities of the participant group; however, readers are cautioned that these acronyms shift over time.

through engaging with and/or resisting power (Foucault, 1990). In the case of 2SGBQ+ men who use AASs, discourses of risk associated with AAS use contribute to shaping the realities surrounding it. This methodology aims to reveal the “biopolitical effects” (Foucault, 1990) of these discourses that regulate and influence our social world, which in this study include the ways 2SGBQ+ men internalize knowledges of AAS use deployed by dominant power regimes (for example, public health and current AAS users) and share knowledge related to this practice with others. The applicability of this methodology to my research question is that it helps to uncover how the exertion of power as an oppressive force, and the resistance to that oppression, generates new knowledges and subjectivities among marginalized groups—in this case, 2SGBQ+ men. As Strega denotes: “Poststructural researchers analyze not only how particular discourses work; they also focus on the all-encompassing nature of discourse, as the constructor and constituter of ‘reality’ but also of our ‘selves’” (2005, p. 135). Not only does this methodological approach generate insight and help to explain or give new perspectives on “reality,” it intentionally seeks emancipation and liberation for the 2SGBQ+ “selves” and their communities in this study (Macias, 2015).

Data collection and analysis

Data were collected from each participant by way of semi-structured interviews (Kvale, 1996) conducted primarily via video-conferencing platforms. All participants provided oral consent, which was captured in the transcript. Interviews took place between April and November 2020 and all participants were offered a \$30.00 CAD cash honorarium for their time. Interviews were recorded and transcribed, and subsequently shared with each participant as part of the member checking process, which allowed for clarification, redaction, or the addition of new information (O’Reilly & Kiyimba, 2015). Thus, data for this study comprised mainly transcripts, recorded reflections after each interview, and memos recorded throughout the study process. MAXQDA (VERBI, 2018) was used to process and analyze all data using open and axial coding for themes that highlight the presence of participants engaging with discourses of risk surrounding AAS use. All procedures performed in this study were in accordance with the ethical standards of the University of Manitoba.

Participants

This study recruited a diverse group of 17 2SGBQ+ adult cisgender and trans men representing a range of ages, identities, and experiences that consisted of both current and past AAS users as well as a group of men who considered using them but chose not to follow through. The group was quite diverse with ages ranging between 23 and 42; ethnicities that included six Black, Indigenous, and people of colour; annual incomes ranging between \$35,000 and \$650,000; and participants living

in rural locations. All participants were recruited online due to the COVID-19 pandemic restricting access to public spaces, such as gyms where 2SGBQ+ men frequent, bodybuilding competitions, bars and social clubs, and queer community resource centres, and to queer-organized sporting events.

Results

The results below highlight the ways in which 2SGBQ+ men in this study engaged with the various sources of knowledge that are available to them and portray how discourses of risk shaped their experience of using AASs. The first theme describes participants’ experiences of seeking and evaluating the trustworthiness of information related to AAS use. The second theme highlights participants’ experiences of consulting authoritative sources of truth, such as doctors, and the effects of those interactions. The third theme demonstrates how the knowledge gathered and integrated by participants is reproduced within and throughout communities of AAS users. These themes are presented in this order to mirror the general flow of interview conversations.

Theme 1: Seeking truth and evaluating trust

All participants were asked about where they sought information about using AASs and why. Participants demonstrated a commitment to seeking out trustworthy information and exerted a great deal of effort consulting multiple sources in response to a general appreciation for the risk involved in using illicit AASs. While many sources were mentioned, the Internet was the most common; however, bodybuilders and trainers were also included:

First it was Google. (South Asian cisgender bisexual male, 35)

I do my referencing on [steroids.com](https://www.steroids.com). (South Asian cisgender gay male, 29)

I did about five years of research [Online] and interviewing of professional bodybuilders before I attempted to start taking steroids. (white cisgender gay male, 33)

Anything I know would be from him [the trainer]...I still would say that I don’t know a lot. I trust my trainer on it. So I just tell him what I want or what I’m looking for and he just tells me what to take. Which is maybe a little naïve, but I feel like it’s my car, I just take it to get fixed. I don’t really know everything about it, I trust him to tell me. (white cisgender gay male, 42)

Beyond the non-authoritative sources outlined above, the remainder cited YouTube videos, online forums, pages hosted by personal trainers, and other message boards. No participants indicated a challenge with finding information; rather, the majority indicated having to sift through content that provided inconsistent information related to how to use AASs, where to acquire it, and how to use it safely. What is consistent among all interviews in this study is the commitment participants made to learning what they could about using AASs safely even though this proved to be challenging. The following statement reflects this common sentiment:

The internet is awash and full of information. The trick is, taking it all in, filtering it, figuring out what's good and using your own judgement. I am not a medical professional. (white cisgender gay male, 42)

Though, seeking information was only the first step; they were then tasked with assessing the trustworthiness. The following quotes highlight the need for such an emphasis on finding the right information:

I cycled, because the Coach said if you overdo it, there is danger. (South Asian cisgender bisexual male, 35)

But because you post just anything and this isn't a widely researched or a widely well-known thing, I had to take my time and make sure that I was proceeding at a good rate and I wasn't leaving anything out. (white cisgender gay male, 33)

These comments show that participants in this study knew there were limitations to their own ability to assess for truth or trustworthiness in the information they sought. That said, they did still follow through on using these substances with an appreciation for the risks they were taking and their understanding of those risks.

Theme 2: Engaging with authoritative truth

Several participants who used AASs were open with their health care providers who responded in a variety of ways. For five of the participants, health care providers were supportive in the sense that they respected their right to self-determination. In other cases, the health care provider approached the topic with caution. The remaining participants were worried that bringing it up would lead to judgement or a breakdown in the relationship with their provider. For example, those who were current or past users and who were open with their provider shared the complexity of their encounters:

...I am open with them about it because I feel like I should be and have to be... I'm pretty sure he still

knows. Obviously, he's still going to know, but I think it's just the whole, we'll side-table that for a while and carry on. (white cisgender gay male, 42)

I probably taught him more about steroids. Like we have conversations and I always leave him with stuff to think about ... We have a very good relationship. He gives me the like "you know you shouldn't but you're not going to stop so let's be honest with each other" kind of thing. (white cisgender MSM, 39)

Some participants also shared direct examples of responses that led to feelings of concern and confusion:

So, he'll give me the information on it, and he'll say, I'm giving you my fatherly concern that you shouldn't be doing this. But he's also said, your tests are fine and you're healthy, so I can't tell you not to. It's kind of a mixed message, saying, you shouldn't be injecting yourself with anything, obviously that's a given. But he's like, as your medical provider, it's not having any side effects on you. (white cisgender gay male, 42)

[He said:] Okay, I don't really mind, but don't abuse yourself and whatever. (south Asian cisgender bisexual male, 29)

[After attempting to speak with two other physicians] The third physician, who is my current physician, when I let them know, the first thing they said was they thanked me for letting them know. They expressed that they weren't happy that I was doing this... (white cisgender gay male, 33)

This prompted more involved conversations with participants about how they perceived the role of the health care provider in supporting their health in the context of using AAS. Participants shared a range of experiences with a consistent theme of expecting their health care providers to care or react in a caring way:

She doesn't get it, she doesn't get it... "Oh it's sad that you need to do this because everyone wants that image..." and I'm like oh no, I weightlifted for several years before I chose to do steroids. (white cisgender MSM, 39)

Like do you even know what happens? Are you going to make sure I'm okay? And I just don't fully trust that she agrees with my choices and that she is there to like, I guess support my choices in a healthy way. So yeah... it is a problem because these doctors don't really know. They look at me like maybe "Oh

he's just high risk and damaging his body..." (Mixed race two-spirit male, 30)

These last quotes highlight that expectations from AAS users were not met, pointing to a lack of clarity related to what service users can expect when approaching their health care provider. As mentioned above, no participants mentioned accessing community-based programming related to safer AAS positioning health care providers as a front-line defence against the AAS use-related harms.

Theme 3: Producing and sharing lay knowledge

Participants were all asked the question: "What advice do you have for others considering AAS use?" Interviewees shared the following responses that characterize a broad theme of encouraging others to research the topic first:

You gotta be informed, you gotta know what the risks are, what you're doing to your body. (Mixed race two-spirit male, 30)

Do your research. If there's any one thing I'm going to espouse to people even considering doing steroids, don't half-ass it, it's an investment. Growing muscle takes time and it's an expensive investment. If you do it, do it right. (white cisgender gay male, 33)

The second most common response from participants to this question included advice to speak to a doctor, despite the risk of judgement that some experienced. The following comment summarizes what eight others spoke of:

If you're going to start injecting or taking foreign substances into your body, make sure you have a medical professional somewhere that you can actually trust to have those conversations with. (Mixed race two-spirit male, 30)

Asking participants to offer advice for other 2SGBQ+ men who were considering using AASs was intentional and related to the methodology of this study. First, asking this question honoured the knowledge each participant had gained through their AAS use journey, which for most was rife with uncertainty and confusion. Second, the responses reflect the mechanics of the reproduction of discourses in social interactions, including communications between and among individuals. And third, the reporting on these responses offers readers the opportunity to consider this form of lay knowledge as valid as expert knowledges on this topic.

Discussion

The themes that emerged throughout the data analysis process illuminate a number of key considerations that respond to the research question and objectives of this study, as well as contribute to the knowledge base on the topic of AAS use among Canadian 2SGBQ+ men. Beginning with the ways in which 2SGBQ+ men engage with sources of information on the topic of using AASs, there are contradictions in how participants respond to the information they encounter. While the comments shared above show that the sources of information 2SGBQ+ men who use AASs consult are predominantly non-authoritative and untrustworthy, they encourage others considering the use of AASs to do the same. The same is true for those who consult health care providers; despite receiving mixed reactions, many encouraged others to consult and include them regardless because of the perception that they are tasked with helping anyway. The health care providers discussed in this study, who are powerful social actors, used a variety of tactics to respond to AAS use, including using language that led to feelings of rejection, and sending mixed signals that AASs are acceptable but immoral to use, and in some cases failed to create a safe and supportive environment to discuss safer AAS use. This reinforced the need for AAS users to engage with non-authoritative information, primarily online, that is then reproduced in conversations with others (friends, trainers) and vice versa, creating a sort of shadow economy of knowledge around this practice. In other words, accessing real and valid expertise on using AASs is difficult and comes with risks whereas accessing user-generated, potentially misleading and harmful information is easy. Therefore, the discourses of risk that are present in the health care establishment and put forward by empirical research on the topic combined with the reality that health care providers hold their own judgements and values towards AAS use generate the need for 2SGBQ+ men to find their own way, despite placing themselves at risk for the harmful outcomes outlined above.

This provides evidence of the circular power relations and biopolitical effects put forward by Foucault (1990). In this instance, discourses of risk that are produced by powerful social actors (health care providers, researchers, etc.) create and sustain a form of value-based oppression towards AAS users, who then respond by seeking information from sources that are not trustworthy and sharing what they have learned with others. From the perspective of Foucault (1990) and his notion of discourse, this value-based oppression is evidence of the subjugation of marginalized people that results from the intersubjective reality created and sustained through the interactions between doctors and their patients. The issue here is that access to accurate, non-judgemental information on a potentially risky practice is an important part of reducing the harms for individuals choosing to engage in them. One

potential solution would be an interruption to this cycle that reverses the order of power relations thus producing counter discourses that challenge the status quo (Macias, 2015). Drawing from Lupton's work aids in operationalizing this reversal. Her work on risk discourse from the sociological perspective (2006) posits that lay knowledges are developed between and among users in response to the exerting forces of such powerful gatekeepers that includes the social and cultural context surrounding the group in question, in this case 2SGBQ+ men. Lupton states that:

Being categorized as 'at risk' from a medical problem means that one is placed in a liminal category of wellness: neither actually ill (yet) nor fully well. Such people may feel the need for constant reassurance that nothing is wrong, and indeed often actively seek out medical testing or other interventions to protect themselves from the imputed risk and gain some measure of certainty about what the future may hold. (2006, p. 17)

The 2SGBQ+ men in this study did just that—sought out reassurance to know and understand the risks of their decisions—and were met with reactions that led to feelings of rejection, confusion, and concern. This process contributes to a view of the self as being vulnerable and ultimately “at-risk,” which again can be traced back to the discursive regime of risk outlined above.

However, many strengths and opportunities emerged. First, it was evident that participants were eager to reduce the harms associated with engaging in AAS use, so much so that they developed the critical capacity to evaluate their sources. Second, in offering advice for others, they encouraged prospective users to be open with medical professionals even though the potential reactions could be negative. Third, when considering the dominance of risk discourse surrounding this topic and the mirroring effects of being framed as “at-risk,” 2SGBQ+ men in this study expressed a sense of confidence in their choice to use AASs. They felt that they had mitigated the risks on their own by navigating a great deal of uncertainty. This shows resilience and perseverance in the face of a lack of formal supports, which is unsurprising given the history of this community needing to resist domination in society through acts of resistance that counter dominant discourses that still stigmatize this group today (i.e., pride and alternative pride parades; grassroots advocacy and organizing; efforts to advance the rights of queer and trans Black, Indigenous, and people of colour; etc.).

Emerging from the results of this study, which are rooted in the stories and experiences of 2SGBQ+ men, is a recommendation for public health audiences to consider. The lay knowledges developed by 2SGBQ+ men are an untapped resource that, if deployed at the community level, could help to reduce the harms associated with this practice alongside other harm

reduction strategies. At this time, there are many prevention and treatment programs for the associated harms of AAS use, including those targeting substance use and sexually transmitted and blood-borne infections (Sansone et al., 2021). There is an opportunity here to apply the learning and success of harm reduction programs to the practice of AAS use, or to incorporate AAS use into these programs and services. This may alleviate the need for complex knowledge-seeking on this topic, while also potentially opening up novel pathways to support the associated harms as well. Finally, AAS use among 2SGBQ+ men is an area that needs to be explored further. The results of this research have contributed new evidence to the literature on AAS use by making explicit the complex process of engaging with health information in the public domain and highlighting an opportunity for intervention that may improve the health of 2SGBQ+ men. Furthermore, this study has augmented the work of Filiault and Drummond (2010) by highlighting the perspective of 2SGBQ+ male AAS users who are not athletes, and therefore are influenced less by sport or performance and more by the culture and social norms that are present within this community. The results of this study are also aligned with Griffiths et al. (2021) in confirming that beyond the need to prevent illness and promote personal and public health, AAS use among 2SGBQ+ men is linked to the development of identity and the social and cultural norms within the community (Griffiths et al., 2021). In all, without a more nuanced understanding of the sociality of this practice within 2SGBQ+ men's communities, mainstream interventions may overlook the unique experiences and needs of 2SGBQ+ men.

Conclusion

In summary, 2SGBQ+ men sought and shared information related to AAS use from unauthoritative sources due in part to a lack of accessible trustworthy information on the topic. Health care providers played a complicated role in this process by not offering a consistent and judgement-free response when consulted despite being in positions of power and having the ability to do so. This resulted in the need for 2SGBQ+ men who participated in this study to develop and share a form of lay knowledge on this topic, reinforcing a discursive regime of risk that contributes to the stigma of 2SGBQ+ men being vulnerable or “at-risk.” Despite the reproduction of risk discourse that results from this circular power relation, one key strength emerged from this study: the act of seeking information is a harm reduction practice in and of itself. Participants in this study found the resources they needed to promote the best possible outcome, which leads to the recommendation that public health systems need to consider developing harm reduction-focused programs for 2SGBQ+ men who use AASs similar to others related to sexual health and substance

use-related harms. This proposed solution would honour the lay knowledge developed at the community level while working to prevent the associated harms of this practice.

Contributions to knowledge

What does this study add to existing knowledge?

- A qualitative understanding of how 2SGBQ+ men engage with information they seek related to AAS use in Canada.
- A description of the effects of risk discourse in authoritative and nonauthoritative information on AAS use that 2SGBQ+ men access.

What are the key implications for public health interventions, practice or policy?

- Public health and harm reduction programs focused on AAS use among 2SGBQ+ men may benefit from incorporating lay knowledges from the community in their development and deployment.
- Harm reduction programs would contribute to the development of public health policy on AAS use.

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Data availability All data are available upon request.

Code availability MAXQDA by Verbi was used to code and analyze data; as such, all codes are available in MAXQDA format.

Declarations

Ethics approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the University of Manitoba Human Research Ethics Board at the Bannatyne Campus, reference number: HS23744; HB2020:140; and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Consent to participate Informed consent was obtained from all individual participants included in the study.

Consent for publication Informed consent was obtained from all individual participants included in the study.

Conflict of interest The author declares no competing interests.

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