Power, Discourse, and Subjectivity: Contextualizing Steroid Use among Two-Spirit Gay, Bi and Queer Men in Manitoba

by

Jared Star

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Department of Community Health Sciences
University of Manitoba
Winnipeg

Land Acknowledgment

This research took place on the traditional territories of the Anishinaabe, Cree, Oji Cree, Dakota and Dené peoples, as well as the homelands of the Métis Nation. I, as the researcher who is also a white settler on this land, acknowledge the harms of the past and the role that I play in perpetuating the impacts of colonial violence both through an institutionally sponsored and governed research process, but also through the advantages I gain as a structurally privileged "knower" on stolen land. I say this to point attention to the true knowers of this land who have passed knowledge down through generations of people who have had their efforts to keep knowledge alive stifled via what Justice Murray Sinclair has deemed a form of state sponsored cultural genocide. I am complicit in that continued genocide by way of my actions and inactions through the colonial state mechanisms that shaped this work and that uphold the hierarchies of that protect the power of white supremacists who still run this world.

That said, the knowledge this study contributes to the world aims to benefit all those who call this place, now called Manitoba, home; and it is with this spirit that I approach the research process. While this research did not intend to work with or impact Indigenous communities, the reality is that we are all related and implicated in the structures that shape and hold systems of power and oppression in place. This includes the University of Manitoba, the Rady Faculty of Health Sciences, and the department of Community Health Sciences, within all of which this research takes place. As such, I accept and center these historical and present implications in order to seek opportunities to resolve, reduce and reconcile colonial harms by naming and placing the experience of Indigenous peoples in this research with the hopes that it will contribute to the true social and cultural transformation that is needed to move forward in a good way. I state my commitment here to strive for balance in this work, not only with the communities who are impacted and represented here, but also with the stolen land on which this research took place. Finally, I state my commitment here to examine the role I play in these processes, for it is the least I can do as a white settler with the privilege to choose how I act, what I say, and to which causes I fight for in my community. This work is ongoing in pursuit of true reconciliation and justice, with an eye towards a future built on better, stronger, and more equitable relationships with Indigenous communities and the land and treaty rights that are rightfully theirs.

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ABSTRACT

Background

Public health research on the topic of Androgenic-Anabolic Steroid (AAS) use has primarily focused on the general male population with an emphasis on risk, pathologies, and the discrete and drug subculture that this practice. The same emphasis exists in AAS research with 2Spirit, Gay, Bisexual and Queer (2SGBQ+) men, however none has explored the "how" and "why" of this practice.

Objectives

This study addressed the following research question: How is Anabolic/Androgenic Steroid (AAS) use implicated in the production of subjectivities among 2SGBQ+ men in Manitoba, and what are health implications that result? This study addressed the following research objectives: 1) Describe the practice of AAS use in general; 2) Identify the intrinsic and extrinsic motivators that drive AAS use; 3) Explore the effects of dominant social discourses in shaping the sociality surrounding AAS use; 4) Understand the sources of information consulted by AAS users; 5) Identify processes of subjectification that relate to AAS use among 2SGBQ+ men; and 6) Articulate the public health implications for supporting the health of 2SGBQ+ men who choose to use AASs.

Methodology

A Foucauldian Discourse Analysis methodology was employed to collect, analyze and interpret data. Semi-structured interviews were conducted with 17 participants. A three-stage analysis technique was employed that involved open, axial and theoretical coding using MAXQDA.

Results

This study revealed the discursive regimes that produce subjectivities in 2SGBQ+ men in response to social and cultural forces that dominate and oppress this community. Sources of information about AASs were predominantly user-generated. Intrinsic motivations for using AAS included a desire to achieve a certain physique, increase social and sexual capital, and mitigate the effects of sexuality-related stigma and racialized violence. Extrinsic motivators included discourses produced through social and sexual media.

Discussion and Recommendations

This study revealed that AASs are used by 2SGBQ+ men as a protective "technology of the self" to mitigate the harms of discursive regimes that privilege white, masculine gay men. Public health systems need to consider a harm reduction approach to in health programs and services, which may create new entry points for 2SGBQ+ men to connect to care.

Introduction

Public health research on the topic of Androgenic-Anabolic Steroid (AAS) use has primarily focused on the general male population with an emphasis on risk, the negative impacts of illicit drug-use, and the discrete subculture that emerges from what are deemed harmful and stigmatized behaviours (Ip et al., 2019). A subset of the literature within the realm of public health research examines AAS use among gay, bisexual, and other men who have sex with men (GBMSM) with findings that connect this behaviour to a significant increase in sexual risk practices including condomless anal intercourse (CAI) and illicit substance use (Ip et al., 2019). However, these studies were conducted in the United States of America (USA) and did not include a qualitative component to expand on or contextualize the findings. Similarly, all published Canadian research on this topic relies on quantitative data only, and fails to account for the specific social and cultural experiences of self-identified sexual and gender diverse individuals/communities (Adlaf et al., 2005; Adlaf & Smart, 1992; Blouin & Goldfield, 1995; Goldfield, 2009; MacNeil & Webster, 1997; Melia et al., 1996; Young, 2012). In Manitoba, recently gathered data from the Manitoba Two-Spirit, Gay, Bi, and Queer (2SGBQ+) Men's Health Study indicates, for the first time ever, a high proportion of survey respondents having engaged in anabolic steroid use (McLeod et al., 2019). This use is particularly concentrated among men of colour and men living in rural communities, which prompted reactions of surprise and interest from the overall research team as well as presentation attendees of the 2019 Gay Men's Health Summit in Vancouver, Canada. With this in mind, this proposed research study aims to address the qualitative gaps in the academic literature around the subjective experience of this population, as well as the public health implications for AAS use among 2SGBQ+ men in general. This research also contributes to the wider field of social sciences in medicine and public health, which is outlined in further detail below.

In order to achieve the general aims above, this study will operate from a critical social sciences stance, which lies within and adjacent to dominant quantitative public health research. Critical approaches to research are focused primarily on challenging, resisting, deconstructing, and contextualizing dominant discourses that shape and frame human experience with the aims of advancing social justice and social transformation (Moosa-Mitha, 2005; O'Reilly & Kiyimba, 2015). Critical social sciences health research therefore aims to challenge and critique dominant power structures within the field of health sciences and health care studies in order to improve

and transform the health care system and health outcomes particularly for minoritized communities. From this standpoint, looking at the issue of AAS use among sexual and gender diverse men opens up space to explore and interrogate how social influences impact the experience of this population while also examining how public health is implicated in shaping and constructing their experiences. More specifically, and using a Foucauldian poststructuralist methodology that focuses on discourse as a means to produce and reproduce social realities, a critical look at the production of subjectivity among 2SGBQ+ men who use AASs in Manitoba may contribute a valuable, albeit marginalized, perspective to the field of health research that inspires insight into how using AASs is connected to the identities and experiences of the users themselves and how public health systems support or inhibit the positive and negative effects this practice. Furthermore, a critical approach calls upon social science researchers in health to actively challenge dominant norms and narratives that are taken for granted. As such, a qualitative focused study within this paradigm enables a process of knowledge co-creation that leads to the potential for emancipatory and transformative counter-discourses to emerge (Macias, 2015). This potential for catalytic change is what formed the inspiration for this study.

With this in mind, with this in mind, there are several threads of inquiry that can be explored. For example, recent data from the above-mentioned CASTRO study suggest a link between AAS use and sexual risk, but fails to explain why (Ip et al., 2019). Moreover, the Canadian (as well as global) research on AAS use amongst men in general categorizes this population as a homogenous group without examining the inherent sexual and gender diversity within. This presents an opportunity for public health research to better understand the sociality surrounding AAS use from the perspective of identities with situated knowledges on the topic; in this case within and among 2SGBQ+ communities. Furthermore, research has yet to reveal the ways in which AAS users negotiate the meanings associated with risk discourse in public health literature, which ultimately directs community-level resources and interventions aimed at keeping people healthy. When considering this in the context of 2SGBQ+ men, there are opportunities to understand and explore how these discourses are produced and reproduced, engaged with and resisted, and even embodied by the people who are most affected by them. These considerations lead to a research opportunity with a sense of opportunistic urgency for Manitoban residents who identify as 2SGBQ+, as well as health policy-makers, program planners, and practitioners who work with this population.

Outside of these concrete public health implications, there are also opportunities to advance the field of social sciences in medicine through qualitative health research grounded in the critical paradigm. This points this line of inquiry towards the goal of also carving out space in dominant medical research for a perspective that challenges the status quo while potentially leading to social justice and emancipation for a community that has historically been minoritized and marginalized within and outside of the health care apparatus.

As such, this program of research aimed to fill these gaps by exploring the experiences of 2SGBQ+ men who use AASs in Manitoba. Grounded in a critical social sciences theoretical framework and using Foucauldian Discourse Analysis methodology, this study originally sought an answer the following research question (also found in Appendix 1): ***How is Anabolic/Androgenic Steroid (AAS) use implicated in the sexual lives of Gay, Bi, and other men-who-have-sex-with-men (2SGBQ+) in Manitoba?*** The original objectives of this study were as follows:

1. Describe how AAS use is connected to the production of sexual subjectivity in 2SGBQ+ men in Manitoba;
2. Understand how 2SGBQ+ men who use AASs engage with and manage risk in their sexual lives; and
3. Critically examine how 2SGBQ+ men who use AASs engage with public health risk discourse surrounding this practice.

However, the research process led to other questions that were explored throughout the data collection and analysis phase. As such, the results of this study are grouped into two ready-to-publish manuscripts each with their own focus. One is tailored more to the social sciences in medicine audience, the other to public health practitioners. Both are written in line with qualitative publication standards and address the original research questions. Preparing the results in this way allows for rapid implementation, which given the novel nature of this study is necessary to promote positive change for the population in focus. Below are the specific questions included in each manuscript. Any results not explored in both manuscripts are addressed in the subsequent discussion section. These questions are also found in Appendix 1.

Manuscript 1: Social Sciences Focus

1. What are the intrinsic and extrinsic motivators associated with AAS use among 2SGBQ+ men in Manitoba?
2. What is the role of dominant social discourses and power in shaping the social context around this practice?

Manuscript 2: Public Health Focus

1. Understand the practice of AAS use in general among 2SGBQ+ men in Canada;
2. Understand how 2SGBQ+ men respond to the risks of using AASs;
3. Understand the sources of information consulted in the consideration of using AASs; and
4. Articulate the implications for public health in addressing this issue at the community level.

Reflexivity, Positionality and Social Location

It is with humility and curiosity that I acknowledge and explore the power differentials inherent in this study that are the direct result of my privilege as a white, able-bodied settler who enjoys and benefits from the social and economic advantages that come with being a cis male, Canadian—and therefore from a wealthy country—and as the recipient of a lucrative scholarship that enabled me to pursue this program of research with relative ease compared to my colleagues who are structurally disadvantaged in this regard. There is no way through this process of inquiry without this acknowledgement, and in fact I have intentionally invited this analysis into every stage of the research process: from initial conceptualizations of the shape and form of this study, to the painstaking review and editing process that polishes the final product for peer and collegial review. There are implications for me and my role in this work that need to be declared, interrogated, resisted, and accounted for if there is any hope in doing this work in harmony with the land it takes place on and the cultures and societies that currently and previously call this place home. This statement is an opening for that critical analysis with the intent that it is woven throughout the entire body of this work. My goal here is to demonstrate the practice of doing "the work" of undoing my own privilege, which is and never will be over.

Throughout this text, and briefly here, I will share that my positionality within the community this research focuses on is as an insider, a member, and a formal/informal leader. I have worked with the 2SGBQ+ men's community, and the wider 2STLGBQ+ community for over 12 years and thisframes my perspective on this work. As such, I have many relationships with the experiences that are reflected here, including as a gay man in Manitoba who has delivered programs, participated in direct research, and who has rallied on the front lines of community-based grass roots advocacy efforts for social change specifically to benefit this community. This is my community, and I care about our collective health, which is primarily why I chose to do this work. I once read that authors often write what they need to read, and this feels true for me now as I write this thesis. That is all I will share for now as the rest of my reflections and comments with respect to power, positionality, and reflexivity will be included throughout the writing below. This is not only part of the methodological design of this study; it aims to enhance the readers ability to appreciate and respect the vital role this plays in research.

Background & Literature Review

Literature relevant to this proposal originates from three specific domains, the first of which pertains to studies that include epidemiological data for AAS use in the general population and GBMSM.[1] The second domain is related to the health of 2SGBQ+ men, including sexual health and substance use trends within and outside of the context of AAS use, and the third domain is related to public health risk discourse. All theoretical literature will be discussed in the subsequent theory section following this literature review.

AAS-Use Epidemiology and Other

Anabolic-Androgenic Steroids (AASs) by definition include testosterone and its synthetic derivatives, which are primarily indicated and used to treat health conditions, such as (but not limited to) reproductive system dysfunction, breast cancer, anemia and wasting, which can result from the outcome of the human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS) (Sagoe et al., 2014). However, in this context AASs are used by individuals motivated by the desire to increase performance or enhance their physical appearance, muscle strength, and/or mass (Ip et al., 2011; Ip et al., 2012). Illicit, or off-label AAS use, is administered either orally or by injection, and the drugs themselves come from a variety of sources including illegal clandestine labs and from web retailers who do not disclose how they create the substances they sell (Sagoe at al., 2014).[2]

In Canada, seven studies to date have looked at AAS use with varying population foci including the general population (Adlaf & Smart, 1992; MacNeil & Webster, 1997), bodybuilders (Blouin & Goldfield, 1995; Goldfield, 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 groups of large sample size high school students were very low and prevalence rates among bodybuilders with smaller sample sizes were much higher (see Table 1

[1] Please note that the various acronyms are reflective of the source study population. All AAS-use studies that focus on non-heterosexual men use gay or bi as their identity markers, whereas some studies also include MSM. This proposal will include the broad range of non-heterosexual, male (cis- or trans-) identifying folks including MSM within the acronym "GBMSM."

[2] It should also be noted that the realm of AAS use includes performance-enhancing drugs (PED), 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 GBMSM. For this reason, PED is not reported here, however if and when PED becomes relevant to the study (for example, in recruitment and analysis), it will be included.

below for a summary). The majority of studies have also focused on men without any indication of whether or not they were biologically or anatomically male at birth (Hildebrandt et al., 2007; Kanayama et al., 2009; Pope et al., 2012). Despite these studies looking at a range of health and quality of life dimensions, including eating disorders and issues related to substance use, there have been no published studies to date that focus specifically on 2SGBQ+ men who use AASs in Canada.

Outside of the Canadian context, several studies have looked specifically at gay and bisexual men, including in London (Bolding et al., 1999; Bolding et al., 2002), Australia and New Zealand (Griffiths et al., 2017), and the USA (Halkitis et al., 2008; Ip et al., 2017; Ip et al., 2019). The 2017 USA study originally reported on AAS use in the context of a number of health criteria, which prompted a deeper dive into how AAS use among GBMSM was connected to sexual risk behaviours and illicit drug use; the findings of which were published recently (Ip et al., 2019). The study by Halkitis et al. (2008) explored the practice among of sample of GBMSM in New York City, and found that the practice was significantly correlated with higher age and HIV-positive status. They 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). Table 1 below summarizes the various prevalence rates and dates at which they were recorded, including a relatively recent 2004 global meta-analysis and meta-regression analysis of all reportable prevalence rates until that time for global comparison.

Table 1: Summary of Prevalence Rates by Region, Author and Population Focus

Country/Region	Authors & Date	Population	Prevalence
Global meta-analysis and meta-regression analysis	Sagoe et al. (2014)	General overall	3.3% (95% confidence interval [CI], 2.8e3.8; I2 ¼ 99.7, P < .001)
		All females	1.6% (95% CI, 1.3e1.9, I2 ¼ 96.8, P < .001)
		All males	6.4% (95% CI, 5.3e7.7, I2 ¼ 99.2, P < .001)

Canada	Adlaf & Smart (1992)	General	0.3% (*n*=13,909)
	Blouin & Goldfield (1995)	Bodybuilders	14.4% (*n*=139)
	Melia et al. (1996)	High School	2.8% (*n*=16,169)
	MacNeil & Webster (1997)	General	0.3% (*n*=12,155)
	Adlaf et al. (2005)	High School	1.1% (*n*=3,892)
	Goldfield (2009)	Female bodybuilders	17.8% (*n*=45)
	Young (2012)	High School	1.4% (*n*=40,630)
London	Bolding et al. (2002)	Gay and bi men	15.2% (*n*=772)
Australia & New Zealand	Griffiths et al. (2017)	Gay and bi men	5.2% (*n*=2,733)
USA	Ip et al. (2019)	Gay and bi men	21.6% (*n*=153)
	Halkitis et al., (2008)	Gay and bi men	33% (*n*=331)

Each of the studies that included 2SGBQ+ men also outlined the health risks associated with using AASs. For example, while the prevalence of AAS use in the Australia and New Zealand study was low, the prevalence of *thinking* about AAS use was high at 25.4%, which was associated with body image and eating disorder psychopathology (Griffiths et al., 2017). The London study also noted similar findings with the addition of commonly reported and researched side effects including testicular atrophy, depression between cycles (the time in between bouts of using AASs), insomnia, hypertension, and suicidal thoughts (controlled for HIV status) (Bolding et al., 2002). In terms of sexual risk and outcomes, which is a focus for this proposed program of research, the CASTRO study in the USA found that AAS use was significantly correlated with sexual risk-taking behaviours, in particular CAI (84.8 vs 60.8%, $p < .01$), which is of relevance

to 2SGBQ+ men given the existing increase in risk for HIV and other sexually-transmitted infections (STIs) (Ip et al., 2019).

Finally, it is relevant to note that AAS users are engaged in illicit substance use either orally or by injection. They are also engaged in a shadow economy of buying such substances, which come with risks unto themselves (Ip et al., 2019). Of note is that the CASTRO study stated that: "Compared to non-users, the gay and bisexual men who used AASs reported a threefold higher rate of methamphetamine and double the rate of ecstasy use," (Ip et al., 2019, p. 107), which is significant because methamphetamine use is correlated with a double-fold increase in HIV risk in the same location. Similarly, "[e]cstasy use among gay and bisexual men has been reported to be associated with having more sexual partners, having more one-night stands, and having male–male condomless anal sex" (Ip et al., 2019, p. 108). These interrelated and compounding effects start to paint a picture of a phenomenon that Merrill Singer (2009), a medical anthropologist, originally coined as "syndemics" in the 1990s, which refers to the notion that various epidemics are intertwined and that to solve one is difficult without solving the others.

To date, only one Danish study exists that alludes to a relationship between AAS use and perceptions of identity. It found that youth perceived AAS use as a risky behaviour connected to morality in a way that stained or marked individuals using them negatively (Ravn & Coffey, 2016). In fact, AAS use was associated with "an identity or lifestyle" that other risk behaviours, such as substance use, were not (Ravn & Coffey, 2016, p. 87). Along these same lines, one study in the USA from 2017 also found a significant relationship between being labeled gay or bisexual and steroid use among heterosexual male teens. In fact, being bullied for that label was the strongest predictor of steroid use, calling into question the role that masculinity and stigma play in this practice for GBMSM in general (Parent & Bradstreet, 2018). These studies are fundamental in contributing to the rationale of exploring this phenomenon with 2SGBQ+ men from a social sciences perspective.

2SGBQ+ Men's Health in Canada

From a public health perspective, the health of this population is often framed within the context of risk—in particular for HIV/AIDS—with other sources highlighting its resiliency and strengths. In Canada, 2SGBQ+ men are at greater risk for: HIV/AIDS and other STIs (PHAC,

2018), alcohol (Dermody et al., 2014) and substance use disorders (Cochran et al., 2007), eating disorders and body image issues (Allensworth-Davies et al., 2008; Davies et al., 2019), mental illness diagnoses, discrimination and violence, suicide (Hottes et al., 2016), and certain forms of anal and oral cancers (Rosser et al., 2019), to name a few. These health concerns are not distributed equally among 2SGBQ+ men; those who are marginalized by a multitude of factors, including the social determinants of health and other intersecting experiences of oppression, deal with negative health outcomes that are unique to their particular situation and social location (Davies et al., 2019; PHAC, 2018). Looking closer at the three prairie provinces of Manitoba, Saskatchewan and Alberta, there are a patchwork of policies and programs that lead to varying degrees of support for this population. For example, Manitoba and Saskatchewan have the highest HIV rates in the country, as well as the largest representation of Indigenous people within their populations (CATIE, 2018; Nine Circles, 2017). Alberta, however, provides universally accessible Pre-exposure Prophylaxis (PrEP) for men at risk of acquiring HIV (Small, 2018), a new and novel prevention method that has contributed to sharp decreases in new HIV infections in both British Columbia (CBC News, 2019) and the UK (Haigh, 2020). This is a small example of the diversity of prairie-specific health factors that 2SGBQ+ men are faced with, as well as the various policies and programs in place to address them. Yet again, there is no literature specific to AAS use among 2SGBQ+ men on the prairies. In fact, there has yet to be a deeper examination of associated issues, such as body image challenges, hegemonic masculinity, and discrimination that are connected to 2SGBQ+ men (Souleymanov et al., 2018) and that may be connected to AAS use for this population in Manitoba.

Risk Discourse in Public Health

Given the literature cited above that examines the health of this population through the lens of poststructuralism, the literature for this topic extends beyond sexual subjectivities to also include discourses that emanate from public health. Foucault suggests that the various public and private conversations that occur in social arenas are constitutive of sociality itself (Foucault, 1990). Therefore, social meaning is rooted in various and all forms of communication, and that these discourses are what regulates our social world (Fairclough, 1992, 1995, 2001, 2003). Power is always present in these social forces in some fashion, therefore some discourses become dominant in social arenas and are maintained in many ways for the benefit of powerful

social actors, despite the intersubjective reality that is created through discourse—that reality is shaped by forces that subjugate certain people, experiences, groups, spaces, and identities over others (Foucault, 1990). This concept, which will be revisited in the Theoretical Framework and Methodology sections below, is relevant now because of the dominance of certain discourses in health and their impact on various communities, including 2SGBQ+ men.

As Lupton described in 1993, the term "risk" in public health is synonymous with danger, and is used so frequently that a "discourse of risk" dominates the arena. For example, epidemiologists calculate "relative risks" or "risk ratios," populations are deemed "at risk" by nature of factors that are in some ways at no fault of embodying, and in many cases, risk is associated with lifestyle choices placing the burden of blame for the negative outcome—whole or in part—on the individual (Lupton, 1993). Risk discourse is also political, which Foucault (19879 described in great detail throughout his work. Leaving risk management up to the subject through stigmatization and exclusion can be seen as a form of victim-blaming, which absolves the State of the responsibility of managing the burden of disease (Lupton, 1993). Funds for prevention and care are then distributed depending on the value system embedded in the government making decisions about everything from how that system is organized, financed, and framed to the public (Marchildon & Di Matteo, 2015). At the micro level, risk discourse induces anxiety and guilt, and this raises ethical concerns for the ways in which the powerful use their power as a means to an end in a public health care system that is responsible for health of many (Lupton, 1993).

Theoretical Framework

Ontology

This study is situated within a Foucauldian poststructuralist ontology that sees reality as socially constructed, and human nature as being produced and reproduced through discourse (Foucault, 1997). Poststructuralism in this context is primarily framed by the work of Foucault (1990, 1980), but also Butler (1999) who was influenced by his work due to its emphasis on the social construction of identity—particularly gender and sexual identity—through discourse. In short, poststructuralism functions by challenging "Western metaphysics," which is a historically and culturally specific system of meaning making rooted in structuralist, scientific ideologies that are responsible for producing grand meta-narratives of what constitutes our social reality (Salih, 2002). Poststructuralism challenges these grand truths through interrogation and critical inquiry in order to de-construct and reveal their weaknesses and vulnerabilities (Derrida, 1968, as cited in Wood & Bernasconi, 1988). Power is a crucial consideration in poststructuralist thinking, and Foucault's (1984) view of power is that it is circular and contested rather than being repressive and exerted from the top down. Power then is productive and enabling: "What makes power hold good, what makes it accepted, is simply the fact that it does not weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms knowledge, produces discourse," (Foucault, 1984, p. 61). Discourse according to Foucault is challenging to define (Macias, 2015), however includes speech, talk, and text, while also accounting for other forms of visual representation (for more on discourses, please see above).

Epistemology

Thus, the epistemological position of this theoretical frame sees the production of knowledge as entrenched in circular power relations: power produces truth, and knowledge is generated through engaging with or resisting power (Foucault, 1984). Foucault questions positivist scientific claims that human nature is essential, and that truths about human nature are taken for granted. Within a poststructuralist theoretical frame, an understanding of human nature cannot be attained through objective research. Rather than looking for truth itself, Foucault points to the subjective and intersubjective nature of knowledge generation through circular power relations and encourages us to look at how truth is produced through discourse including

the history embodied in the meaning of the statements themselves (Foucault, 1981). Put simply, statements are not accepted as truth by nature of their existence; rather, truth is affected by knowledge–power regimes, and we must look at how the statement becomes truth and what this truth accomplishes with respect to its social and function and effects (Macias, 2015). Scientific inquiry then examines the "interrelation of knowledge, power and subjectivity that are at work in the statement," (Macias, 2015, p. 226). Thus, research from this standpoint is a form of inquiry that aims to trace how truth is constructed through discursive practices (Foucault, 1984). Moreover, this form of research and inquiry is what characterizes poststructuralism as critical in nature. Without appreciating the sociocultural, historical, and political context of what constitutes truth itself, we are unable to challenge the power structures that validate its existence in our social world.

Flowing from this ontological and epistemological position, there are four theoretical domains that are relevant to this study design and that influence and assist with data analysis. These include Foucault's theories of governmentality (Foucault, 1991; Foucault et al., 2010), biopolitics (Foucault, 1990, 1979) and technologies of the self (Foucault, 1988). Additional theoretical material is included for context, including queer theories of gender and performativity (Butler, 1999), sexual subjectivity/subject formation and production (Butler, 1999; Foucault, 1980), and theories related to marginalized, subjugated sexual identities (Sedgewick, 1990).

Theoretical Domain 1: Governmentality

Foucault's framework of governmentality (1991) is a combination of the concepts of government and rationality. Government in this sense is not specifically the state, rather it is the functions of power that lead to and direct individual behaviours, in particular the willing participation of the governed in their own ruling. Rationality in this sense means a form of thinking that is logical, systematic, and predictable, which is predicated on requiring having a clear definition of the self in order for a subject to be managed or controlled (Foucault, 1991). When combined, these two terms, in the Foucauldian sense, lead to an approach to the study of power that focuses on the ways in which subjectivities are produced through power relations, which are maintained through discourse. Governmentality provides a framework for challenging and upsetting the taken-for-granted discourses that regulate AAS users. This concept is relevant to understanding how AAS use is implicated in the formation of sexual subjectivities in

2SGBQ+ men who use AASs, by offering a lens through which we can identify the regulating discourses that prompt the need for using illicit substances in the first place. Given the already-identified link between AAS use and sexual practices among 2SGBQ+ men who use it, this framework will deepen our understanding of how power relations are involved in the development of their sense of self as they relate to others in our social world.

Theoretical Domain 2: Biopolitics

Foucault's work in biopolitics emerges first in *The History of Sexuality, Volume 1* where he begins to address the shift from people's lives being regulated by brute force and the law, which he called juridical power, towards discourses of shame, exclusion and morality, institutionalizations, and social relations, which he called biopower (1976, 1979, 1980). Foucault (1991) is concerned with critiquing the way biopower regulates society by sanctioning certain knowledges and practices. There are a number of relevant discourses that structure the lives of GBMSM (Davies et al., 2019), however the discourses in focus for this study are those that frame and regulate AASs as a social practice. Thus, this theory provides a lens to understand the ways in which public health risk discourses regulate AAS use practices in this population through the deployment of certain knowledges—or not, which as will be discussed below is certainly the case. This theory also provides the context necessary to examine the data for counter-discourses, and even discourses of silence, which may be evident given a lack of public health prevention messaging in this area for 2SGBQ+ men despite it being declared a public health problem in countries where AAS use has been studied in this population.

Theoretical Domain 3: Technologies of the Self

Foucault's (1988) "technologies of the self" is focused on the ways in which people transform themselves and make meaning, in particular within the realm of ethical care of the self through expertise. Technologies of the self include a number of practices that are developed through the deployment of specific knowledges that come from specific expertise, which as Foucault posits is bound with subjectivity because of the power inherent in generating truth in society (1988). Examples of technologies of the self that are relevant to this study include those connected to healthism (for example, going to the gym) (Crawford, 1980), self-esteem (for example, engaging in meditation or yoga), and technologies of responsibilisation (for example,

using barriers or other harm reduction methods to reduce risk in sexual practices). This theoretical framework is particularly salient to this study given the higher prevalence of sexual risk practices among AAS users in studies in the USA, Australia, and the UK. It provided an opportunity to deepen our understanding of why CAI is more prevalent among AAS users and it provided a more robust tool for analysis that sought to explore how AAS use was in fact a tool deployed to resist domination and oppression by 2SGBQ+ men. Employing technologies of the self as a form of ethical self-care resists domination and contradicts the public health discourses that frame AAS use as inherently risky or problematic. They do this by creating space for new discourses to emerge that reduce the burden of stigma related to this practice, and ultimately the negative health impacts of stigma for 2SGBQ+ men.

Theoretical Domain 4: Queer Theory

The final theoretical area that is relevant to this ontological and epistemological framework builds on Foucault's works through the 80s and 90s by including perspectives related to how we see sexuality and gender today. I would argue that to see Foucault through a queer theory lens is to continue advancing his work, in particular the work he was not able to finish near the end of his life, including developing technologies of the self. Queer theory, which is a challenging concept to define (Sullivan, 2003) sees sexuality and sexual identity as socially constructed and subjective, and non-essential (Foucault, 1980), while also weaving in the concept that gender is performative (Butler, 1999), and that non-mainstream sexualities and genders are subjugated and marginalized (Sedgwick, 1990), These theorists moved Foucault's (1990) concepts of subject formation and subjectivity even further to account for the social and political development of sexual and gender diversity in contemporary Western society (Sullivan, 2003). While there are many other authors who contribute to the field of queer theory (Browne & Nash, 2016; hooks, 1989; Jagose, 1996; Richardson et al., 2006; Turner, 2000; Warner, 1993), the focus here is not on their body of work, but on their updated concepts of gender and sexuality as they relate to the social sciences. These additional concepts will be relevant in contextualizing the experience of 2SGBQ+ men who use AASs in society given the increasing diversity within these identity categories. For example, Queer Theory brings in notions of intersectionality (Crenshaw, 1991), race and ethnicity (Ahmed, 2006), and of performative masculinity (Connell,

2005). These are all potential components that tie into subject formation and subjectivity as originally put forward by Foucault and may be useful in facilitating analysis that situates discourses affecting the lives of 2SGBQ+ AAS users in contemporary society.

Methodology

In consideration of the theoretical frameworks above, this study employed a Foucauldian Discourse Analysis (FDA) methodology (Foucault, 1971, 1990, 1991; Given, 2008; Mogashoa, 2014). FDA aims to reveal the discourses that are present in statements (speech, talk, and text) that regulate social life through the deployment of certain knowledges (Macias, 2015). According to van Dijk (2003), FDA is a type of discourse analysis that primarily studies the way abuse, dominance, and inequality of social power are enacted, reproduced, and resisted through language in social and political arenas. As Macias (2015) states: "FDA requires us to interrogate how power is at work in the statement in ways that determine what the statement explicitly or implicitly denies, disavows, or excludes, as well as what it accepts, avows, and includes," (p. 225). She builds on this by saying that we must also seek to understand how statements fit within larger ideological systems that produce truth across history (Macias, 2015). Given how FDA is situated within a poststructuralist frame, it also requires us to explore how statements achieve or fail to capture the full range of human experience and why (Macias, 2015). In essence, we are looking for what Foucault called biopolitical effects (as mentioned above) that are at work in the statement (Foucault, 1984, 1990). These include the ways in which, for example, 2SGBQ+ men internalize knowledges of AAS use put forward by dominant power regimes (public health, the media, etc.), embody them in their corporeality (alter their physique or change their sexual practices), or how their subjectivities are produced by AAS use (by, perhaps, belonging to a community that is minoritized or marginalized by dominant, mainstream society). While FDA has been taken up by many poststructuralists as a study design and analysis tool, the key for understanding its applicability to this study is to focus on how FDA enables us to pay attention to the ways that power produces truths over time and how those specific truths are reproduced through discourses that subjugate and oppress marginalized people—in this case, 2SGBQ+ men.

FDA has been used with Canadian 2SGBQ+ men before. Davies et al., (2019) sought to understand the biopolitical effects deployed for Party-N-Play substance users in Toronto. Their analysis revealed that GBMSM used hook-up apps like Grindr to become entrepreneurs of their sexuality in online spaces, which was facilitated through analysing the language used in their dating profiles (Davies et al., 2019). Termed "Homo Economicus," this concept, among others, was one output of their FDA into the context surrounding language used by GBMSM that

pointed to regulating discourses in their sexual lives. FDA was an effective means for accomplishing this goal given the subject positions of the population in focus, and the emphasis on media as discourse. This study, as is highlighted below, relies primarily on discourses generated through interactions between the participant and the researcher. Through appropriate analysis techniques within an FDA framework, these interactions reveal how grand discourses are replicated and upheld, which ultimately help generate a conceptual map related to the objectives of this study (Macias, 2015).

The Research Process

This section will outline the full research process from the point of receiving ethics approval to the completion of data analysis, which spanned approximately one year from April 2020 to April 2021. The goal here is to tell the story of the research process, which is important to qualitative research. The ability to track and map the many complex decisions that are made, and why, is an indicator of quality in qualitative research due to the subjective nature of the process. It also enables others to follow in direction and path for future studies, while simultaneously opening the design and process up to critique and evaluation. In other words, the process is as important as the outcome for there are never finite results in research—in fact, it is the opposite (Spencer et al., 2003). Good research leads to asking even better and more useful questions, and being able to see through the process clearly enables this process.

Recruitment

Recruitment began in April 2020 after receiving ethics approval, which in fact coincided with the onslaught of the COVID-19 pandemic. Reflections on how the pandemic affected the process will be explored in detail later, but for now I will include details that are relevant to this section. This study aimed to recruit between fifteen and twenty 2SGBQ+ adult male-identified (cis and trans included) participants for in-depth, semi-structured interviews (Kvale, 1996). Participants were also required to live or work in Manitoba. A full poster and truncated social media graphic for Instagram and Facebook was developed and used to advertise the study on social media (see Figures 1 and 2 below). The poster was shared throughout a variety of places, including Manitoban university departments that focus on recreation, kinesiology and applied health fields, university sports team associations, local community-based organizations, and through peer-support groups and collectives that provide service to 2SGBQ+ men. Interestingly, all university sports associations, aside from one, declined to promote the study, stating reasons connected to a lack of active readership to their student listservs. In other words, I was told that students would not read the poster or email, so it was not worth the effort to send. I am suspicious of other factors at play here, such as outright homophobia in sports culture in general, or the fact that steroid use is stigmatized and frowned upon from sports leagues; however, that remains a question to be answered. Finally, the language chosen for the poster was specific and

intentional. It included language that invited past AAS users in order to create a sense of safety for those potential participants who were currently using AASs, but were worried about the stigma or risk associated with disclosing this during the interview. The intention here was to allow the participant to choose how they wanted to engage with the study, including how open they wanted to be, which may have provided an extra layer of comfort in framing their experiences as "past" when in fact they may be current. This did not figure into the results as far as I could tell. As will be discussed below, the participants who reached out who were current or past users were what I would call "informed and grounded," meaning they were not afraid of judgment for various reasons. It is impossible to know if participants were being dishonest about their use, and that is not the aim of this project.

Using social media as a means to recruit however was quite effective and aligned with the shift towards online spaces for GBMSM, which Davies et al. (2019) have identified as being a new locale for the development of communities for this population. In fact, it was the only way to recruit given the impacts of the pandemic on closing businesses, including gyms, supplement retailers, gay bars and other queer spaces, and local community-based service organizations that tailored programs for 2SGBQ+ men. I posted quite frequently between April and October 2020 to my own personal social media accounts, which was also effective given my own reach throughout various 2SGBQ+ social networks. Although purposive and snowball sampling supported by word of mouth was intended as a key method for recruitment (O'Reilly & Kiyimba, 2015), both played a very minor role in achieving the full sample size because of the fear and stigma associated with using AASs. While all interview participants were asked to share the study information throughout their communities and specifically to other AAS users, the feedback I received indicated that potential participants were either too worried about being outed as a user, or were not comfortable sharing something that was private. In the end, I was able to recruit nine current or past AAS users to the study, which then formed Sample Group 1 of the study. The feedback I received throughout the interviews led to a change in focus that required a different approach.

Figure 1: Sample Group 1 Recruitment Poster

Figure 2: Social Media Post Graphic

During the initial recruitment for current or past AAS users, one individual reached out to me asking if they could participate in the study without having actually tried using AASs. He shared that he considered starting a steroid cycle for over two years and that it was connected to his sense of self. He disclosed a long history struggling with his body image and shared a general sense of pride for moving past that phase in his life. He wanted to share his story to help others. This reminded me of research that spoke to the psychological effects of thinking about using

steroids for 2SGBQ+ men, which had figured into the interview guide prepared for the study. I had been asking participants about this, and all of them to this point did confirm that there was a lot of thought that went into making the decision and that it was quite stressful (more on this later). As such, I submitted an ethics amendment to adjust the eligibility pool and recruitment materials for the study to include 2SGBQ+ (cis and trans) men who live or work in Manitoba that had considered using AASs, but did not follow through. I used the same recruitment strategies (social media, word of mouth to a limited degree), and rather than creating a new poster, I used amended text for Facebook and Instagram stories, which were shared from my own social media throughout various networks. I also used the text to invite local groups and organizations to create their own posts, which was successful. This led to recruiting eight more participants, who formed "Sample Group 2" of the study. Both groups were relevant to the research question and in fact opened up new lines of questioning/inquiry, which are fully explored in the results section below.

In total, the study recruited seventeen Two-Spirit, gay, and bi men, most of whom were cisgender with the exception of one trans-identified individual, which fell within the fifteen-to-twenty participants goal range. The entire sample was quite diverse in experience, identity, ethnicity, socioeconomic status, and lived experience. Some were early in their career with little or no postsecondary education, while others were quite wealthy. Only one individual was currently unemployed, however this was unusual for them and was ultimately connected to the impacts of the pandemic. Considering wealth and class status, each participant had access to some form of means, and no participant was currently struggling with poverty; in other words, those who considered using AASs could afford to do so if they chose. This is explored further in the results section below. The demographic breakdown of the full sample is found in Table 2 with limited information to protect the confidentiality of participants. Given the range and diversity, the group is far from homogenous and including any more detail could potentially compromise their confidentiality. With this in mind, some variables have been transformed. For example, rather than including the specific ethnicity provided by participants, I have assigned them each to two different groups: white or BIPOC. It is important to note that within BIPOC there were participants who identified as Indigenous, Black, Métis, South Asian and Mixed Race.

Table 2: Demographics

ID	Sample Group	Age	Sexual Orientation	Gender Identity	Ethnicity	Urban / Rural	Employment Status	Average Annual Income
P1	1	30	Gay	Male / Two-Spirit	BIPOC	Urban	Employed	40k
P2	1	42	Gay	Cis Male	White	Urban	Employed	90k
P3	1	33	Gay	Cis Male	White	Urban	Employed	50k
P4	1	29	Bisexual	Cis Male	BIPOC	Urban	Employed	45K
P5	1	26	Straight / Bi-Curious	Trans Male	White	Urban	Employed	32K
P6	1	38	Gay	Cis Male	White	Urban	Employed	650K
P7	1	26	Gay	Cis Male	BIPOC	Urban	Employed	100k
P8	2	28	Gay	Cis Male	White	Urban	Employed	60k
P9	1	35	Gay	Cis Male	BIPOC	Urban	Employed	36k
P10	2	29	Gay	Cis Male	White	Urban	Employed	55k
P11	2	23	Gay	Cis Male	BIPOC	Rural	Employed	80k
P12	2	26	Gay	Cis Male	White	Urban	Employed	85K
P13	2	33	Gay	Cis Male	BIPOC	Urban	Unemployed	N/A
P14	2	42	Gay	Cis Male	White	Urban	Employed	91K
P15	1	39	Straight / MSM	Cis Male	White	Urban	Employed	40K
P16	2	26	Gay	Cis Male	White	Rural	Employed	70K
P17	2	28	Gay	Cis Male	White	Urban	Employed	75K

Despite the impacts of the COVID-19 pandemic, recruitment was successful overall. There may have been more participants had there been an opportunity to go to local gyms, gay bars, etc. with the poster and to talk directly with people involved in the fitness industry who might be able to refer participants my way. Though, this sample is large enough to achieve saturation in the data, while also leaving space for each participant's story to emerge in the analysis.

Data Collection

Data was collected from each participant by way of Semi-structured interviews (Kvale, 1996) conducted via Zoom for nine participants, which has increasingly been used by qualitative researchers as a secure videoconferencing platform (Archibald et al., 2019). However, due to a

regulation change at the University of Manitoba's Human Research Ethics Board (Bannatyne Office), Microsoft Teams for Healthcare was used for the remaining eight participants. All participants were offered a $30.00 CAD cash honorarium for participating and all accepted. Offering compensation is important because minoritized communities often face inequitable access to financial and material resources. Because minoritized communities often face inequitable access to financial and material resources, the offer of compensation was an important step to address the potential barrier to participation (additional budget details including final totals can be found in Appendix 3). The first four interviews were recorded and transcribed by me, followed by a third-party transcription service for the remainder. The transcriptions provided the basis for a coding structure that aligned with the interview guide (see below for more on coding under Data Analysis). All transcripts were shared with each participant as part of the member checking process, which allowed for clarification, redaction, or the addition of new information to the study (O'Reilly & Kiyimba, 2015). All participants accepted the transcripts as presented without additions or changes.

Data collection began in April and ended in November 2020. The interview guides are included in Appendix 2 and served as a roadmap for each conversation. The conversations became shorter and more focused later on in the study. Given the methodology and qualitative nature of this project, interviews, coding, and analysis occurred simultaneously to allow for iterative transformations to the process (O'Reilly & Kiyimba, 2015). The goal was to adjust the data collection process as needed to follow emerging themes and explore evidence of discourses at play in the lives of participants. While there were distinct domains structured into the interview guides that later on helped form an initial deductive coding system, the process led to the emergence of new, unexpected domains that warranted further exploration. Key components of the interview process worth noting here are: all participants were treated respectfully as leaders and experts in their own lives and experiences, and the relationship formed through the encounter was as important as the outcome itself. As much as possible, my goal was to create and hold space for stories to emerge and for my role to be that of a joiner along the storytelling process. Without this stance, the interviews risked becoming transactional, rigid, and uninspired. Curiosity was the tool that unlocked exploration as the goal of the encounter rather than extraction, which reflects the methodological intentions set throughout this study.

There were no physical barriers of note to completing each interview, particularly because of the virtual platform. Participants were able to participate from the comfort of their own home, with some choosing to walk outside while we talked. The majority of interviews occurred over the summer, which was a challenging time in Manitoba during first wave of the pandemic. Globally, many governments instituted restrictions in movement, gathering, and in daily activities such as shopping or dining, which ultimately framed the social context within which each interview occurred. While the effects and impacts of conducting graduate-level research during a pandemic are beyond the scope of this study, analysis of the research environment, especially given the methodological underpinnings of this study, will figure into the discussion of both results section manuscripts. For now, with respect to methods, it is fair to state that interviews outside of a bricks and mortar location such as an institutional lab, community-based organization, or even in a coffee shop proved to be more accessible and comfortable for participants.

Each participant received the consent form prior to the interview and time was allotted to review it together before formally beginning the conversation. The majority of participants understood the process and many had participated in studies before. The consent procedure was amended due to the pandemic to allow consent to be captured verbally in the recording. Similarly, when asked whether or not participants could be quoted using their name or a pseudonym, it was not "checked off," but rather each participant was consulted on their preference; all but one individual indicated a desire to remain anonymous. In order to protect the anonymity of all participants, the one individual will also receive a pseudonym due to the risk of stigma associated with using steroids. Both consent forms that were used for each sample group can be found in Appendix 4. Interestingly, one individual interpreted the recruitment materials as an invitation to participate in a trial of steroid use for gay men rather than a study about the experience of considering them. The participant was slightly disappointed with not being able to take steroids as part of the study, however this provided a jumping off point for a discussion about why this was so appealing to them.

Alongside these data collection methods, I kept a journal of my reflections before and after the interviews to facilitate reflexivity throughout the process. These post-interview memos were recorded and transcribed and form additional data points for reference. In total, sixteen memos were recorded post interview and were woven into the coding and analysis process.

These reflections included my thoughts and feelings towards the process, as well as notes about everything from body language to the back-and-forth between the participant and I outside of the interview itself. It is common and useful to record reflections of the conversations that occur when the recorder is turned off, and this proved true for this study. The journal also provided a space to reflect on the power dynamics at play in each encounter. As noted above in my reflexivity statement, it is crucial to engage with a critical exploration of the relationships and dynamics at play within and outside of the interview. This is particularly salient given my own social location as an insider among the culture and community shared with participants. Moreover, a queer theoretical as well as a critical social science framework calls on researchers to specifically examine how issues of power impact the research process, in particular issues of gender, sexuality, race, and other social location categories (Moosa-Mitha, 2005). I felt compelled and also implored by this—and the fact that the researcher is inherently occupying a position of power and authority—to reflect on these dynamics within and outside of the interview. I found this to be very helpful in not only interpreting the interviews, but also in understanding how my participation in this study affected recruitment. This will be explored in greater detail below under Ethical Considerations.

Data Analysis

Data for this study comprised mainly of transcripts of each recorded interview, as well as recorded reflections after each interview and several recorded memos capturing thoughts and reflections throughout the study process. MAXQDA (VERBI, 2018), a modern Computer Assisted Qualitative Data Analysis Software (CAQDAS) was used to process and analyse all data using a three-stage process that involved: 1) open coding using a combination of inductive and deductive coding systems, 2) axial coding to generate linkages between initial codes and to explore theory-level analysis, and 3) a return to the data to facilitate FDA analytical techniques. This three-stage process was employed to identify linkages between data points that reflected the emergence or presence of discourses that framed the social realities of participants, or that were adopted, resisted, or reproduced. Prior to beginning data analysis, a series or precursory steps were taken to prepare the software, including: setting up a series of case-specific variables to track demographic and other information, setting up an initial deductive coding structure based on the interview guide, and setting up a system logbook to track key events and milestones as

well as various methodological decisions that affected the research process. Below are descriptions of these elements.

Setting Up Case-Specific Variables

MAXQDA has basic functions to allow for mixed-methods analysis by way of assigning variables to specific cases (VERBI, 2018). In this instance, a single case comprised of all transcribed data along with post interview reflections associated with a specific participant. As such, there were seventeen participants and therefore seventeen cases. The variable coding function allowed for tracking demographic information shared by each participant as well as other unique variables that arose throughout the study. Below is a table reflecting the variable structure set up to support data analysis.

Table 3: Variable List

Variable	**Variable type**	**To be displayed**	**Source**	**Missing value**	**Categorical**	**Favorite variable**
Age	Integer	1	User		0	0
Urban or Rural	Text	1	User		1	0
Income	Integer	1	User		0	0
Occupation	Text	1	User		1	0
Sexual Orientation	Text	1	User		1	0
Gender Identity	Text	1	User		1	0
Currently Using	Boolean (true/false)	1	User		1	0
Average Cost of Using	Integer	1	User		0	0
Using Oral	Boolean (true/false)	1	User		1	0

Using injectables	Boolean (true/false)	1	User		1	0
On PrEP	Boolean (true/false)	1	User		1	0
Ethnicity	Text	1	User		1	0

MAXQDA provides this functionality to conduct mixed-methods analysis by variable and by case (VERBI, 2018), however this was not used for the purpose of this study beyond simply counting frequencies and tracking basic range values of certain variables, for example, the range in average dollar amount spent on steroids, or whether a participant was taking PrEP, using oral or injectable steroids, or both. Given that the focus of this project is grounded in qualitative social sciences health research, mixed-methods analysis is not warranted; however, this function enabled tracking demographic data by case in MAXQDA easier by eliminating the need for a password protected spreadsheet. In other words, all data were in the same system and secured in the same way reducing the chance for file errors, crashes, or ethical breaches due.

Research Logbook

The software used has a logbook feature that enables users to create a journal of the research process. It is a simple word processing space that auto-saves to prevent data loss. The logbook set up for this study was used specifically to track data analysis and methodological milestones that are relevant to the overall research process. Doing so not only increases trustworthiness, and thus quality of the research, but it also enables readers to track and learn from the steps taken, and perhaps to replicate the same study elements in other studies (Spencer et al., 2003). In pursuit of a qualitatively rigorous study, the logbook was used throughout the entire data analysis process. Note that the logbook is distinct from the memos (theory level, free memos, code memos, etc.), which is discussed below. The logbook was used to track the data analysis and study process at a high level, though it can be used in any way that makes sense for the researcher or research team using the software.

Figure 3: Research Logbook

July 10, 2020
MAXQDA License has been purchased.

Variable were created to reflect demographic data for each participant, as well as common Yes/No questions asked throughout the interview.

I've begun building the "Deductive" Coding System using the Interview Guide, and will also include a "Positive" and "Negative" Assessments. All codes will be colored. Code memos will be created to define the higher code nodes in the hierarchy as they relate to the three domains of the study. Particular attention will be paid to the ways in which discourse connects to each domain.
Note: read refresher on FDA prior to transcription.

July 13, 2020:
Deductive code system completed. The deductive codes are created, and other codes will be placed outside of that coding system (inductive). I've begun transcribing the first interview while coding simultaneously. It's a slow process but feels thorough. Code memos were also clarified at the level of Theory for themes.

October 14, 2020:
13 interview transcripts are prepared for both sample groups. Note: there is a memo that explains the rationale and thinking for opening sample group 2 that needs to be transcribed.

October 17th, 2020:
Deductive coding structure for phase 2 has been established.
Updated variables for mixed methods analysis has been completed, more variables added.
All free memos have been coded.

Open and axial coding will continue until complete.

October 31st, 2020:
All transcripts are back for a total of 17 interviews. Will seek one more, if possible, but won't push it.
I have uploaded all transcripts and the memos/reflections for each and will now move on to coding interview 2 until the end of Phase 1 interviews.

November 5th, 2020:
All coding is complete, in consultation with research committee data collection is now closed with a total of 17 participants.
Memos have been assigned to theory-level code structures in order to link codes together.
Preliminary code maps have been created using the Max Map feature.

December 5th, 2020:
The decision was made to explore two manuscripts - one shorter public health paper and one longer theory paper. The public health paper could, among other things:

- Report the findings, including demographics of users and habit information (where sourced, frequency, duration, side effects) and motivations (body image, status, masculinity and power)
- Could them talk about how a lack of information and misinformation contribute to stigma, poor outcomes, risk, danger, etc. AND sexual risk side issues
- Recommendation: public health approach is needed to prevent and address stigma and the risk of harm to the community.

The theory paper could explore Technologies of the Self further as this figured into the analysis, specifically with respect to how they are used to resist dominant and oppressive discourses, especially around social media and body image. Theory level memos have been created to capture these reflections.

January 10th, 2021:
Begun reading more into TOTS and the various ways it has been taken up.
Initial proposal was reviewed.
Meetings with committee are set to review initial coding structure and themes (discourses).

April 27th, 2021:
Thesis drafting has begun in consultation with Advisor, a plan is in place - no further analysis is needed at this time; however, codes will be transformed for the purpose of preparing code maps for each manuscript. This will be logged.

Coding System and Process – Stage 1: Open Coding

The coding system used to facilitate analysis in this study employed both a deductive and inductive approach to balance the need to track responses to specific questions, with the freedom to explore unexpected themes or trends that arose pertaining to the study objectives. Both deductive and inductive coding are relevant to qualitative analysis, and when combined offer a roadmap to responding to specific research questions while reducing limitations in interpreting what emerges. Given that this study employed a methodology that prescribed a form of data analysis, a concurrent deductive coding structure was warranted. In addition, some elements of the study were exploratory in nature given that this topic had never been researched before and the freedom to code openly and freely throughout was beneficial, in particular in areas that explored detailed practices[3]. This first stage thus mirrored typical open coding procedures in qualitative research to first explore inductive and deductive codes.

To articulate the initial deductive structure, I used a series of questions to guide analysis. These are listed below, and were in line with the initial objectives of this study:

Objective 1: The Production of Sexual Subjectivity

1. What discourses emerge that speak to the formation/production of sexual subjectivities (i.e., do they indicate that their identities have shifted, changed, etc. as a result of AASs).
2. How does AASs influence their lived experiences as 2SGBQ+ men?
3. Are there indications that the participant resisted or complied/adopted the subjectification process? What counter-discourses emerged

[3] See, for example, “Community” theory-level code in Manuscript 2 of the results section

Objective 2: Sexual and Other Risk Practices

1. What discourses are being embodied that result in self-management practices related to risk?
2. How do they perceive their risk management practices while on and off AASs? Has this changed as a result of using AASs?
3. How do they conceptualize caring for themselves?
4. What does ethical self-care look like for them?

Objective 3: Public Health Risk Discourse & Privileged Knowledge

1. How do AAS users interpret the discourse and messaging around a "risk" behaviour? Are they aware of the discourse, or is it absent?
2. What public health or other knowledges are deployed that impact the practices of AAS users?
3. Are there counter-discourses emerging in their statements that deny the messaging of public health institutions?

Throughout the study though, new codes emerged that took the coding and analysis in new directions. This mainly refers to Sample Group 2 and the shift in focus part way through the study. The following questions were considered to guide analysis:

Additional Objective: Exploring AAS Use Practices in general for

1. What are the various AAS use practices employed by 2SGBQ+ men
2. What information is considered by potential AAS users
3. What are the outcomes of AAS use for 2SGBQ+ men
4. What are the outcomes for those who considered AAS use, but did not follow through?

The entire coding table can be found in Appendix 5 shows the final coding system. Note that this table only lists codes and frequencies by layer and does not reflect the results as they would appear in the results section.

Stage 2: Axial Coding

The second stage of coding, termed axial coding, is used to explore linkages and groups among codes. This pattern-seeking exercise reveals the connections between different domains and facilitates elevator codes into categories, which eventually become concepts or theories. In this case, linkages between sexual subjectivities and stigma, for example, were drawn due to the ways in which AAS use was practiced in secret. This is one example of many that will be explored further below. Upon completion of the second stage of the coding process, the following domains emerged: "General Steroid Use Practices;" "Discourses of Subjectivity and the Self;" "Risk (and other) Discourses;" "Sexual Practices;" "Communities Around AAS Practices;" and "Sample Group 2: Never used, but considered," which included codes that explored similar themes from sample group 1 with additional codes related to the effects and experiences related to choosing not to follow through with trying/using AASs. Each of these domain areas were expanded and developed through the coding process. The areas where the majority of discussion took place were in the larger domains connected to subjectivity and risk discourse, but also in the details of general use practices, which served as a means to develop rapport prior to delving into personal topics while also collecting data that has never been published in Canada. Analysis of these results are included in both Manuscripts below as well as the discussion section that completes this body of work.

Other details that are relevant to describing the coding process include using the exact language that participants used as much as possible to create codes that encompassed complete thoughts. In other words, highlighted text that formed a code needed to reflect evidence of answering the analysis questions above using no more or less words than necessary. The approach used here was that codes should stand on their own (ie. complete sentences), but not entire passages of text or complete paragraphs. This is likely a combination of my own style and the methodological intentions of capturing discourses or evidence of discourses at play. I found this to be useful in summarizing codes at the theory level while also being able to identify salient quotes, which are reflected in the code system above for easy finding.

Coding Process – Stages 3: FDA Techniques

The codes and grouped domains listed above at the completion of stage 2 were ready for the application of FDA techniques. This return to the data specifically prompted a search of evidence of discourses that were operating through the deployment of power and knowledge in

the lives of participants. This theory-level analysis revealed a number of grand narratives at play in flow of power through social groups, which is elaborated upon in the results section below. The questions used to guide analysis for this stage included those that interrogate the categories formed through stages 1 and 2. For example, asking "What assumptions and taken-for-granted truths are legitimizing and reinforcing this practice," "What subject positions are 2SGBQ+ men taking in the adoption of knowledge?" and "What dominant discourses are structuring a system of domination and how that system being challenged, resisted and countered?" These illuminating queries are eventually what led to exploring the genealogy of truth. Throughout all stages, my goal was to leave the data as intact as possible. By coding complete thoughts that could stand on their own as quotes, the full expression of human experience is captured. This approach ensured the shortest and most direct path from raw data to final product, in a way reducing the "cleaning process" that often involves methodological decisions, similar to the cleaning process in quantitative analysis. This also aligns with FDA; I prioritized keeping discourses intact and not treating them or altering them to ensure that the full genealogy of the production of each discourse was unfettered and as unaltered as possible. Genealogy, in this sense and as relevant to FDA, denotes the historical roots of discourse that produce meaning and power (Macias, 2015). For example, participants shared their experience with me, however their words and speech were the outcome of a process of subject formation which precedes even their own births as humans. By leaving the data as intact as possible and reflecting that in the analysis, the results are as true to form as possible. More on this process, including the connection to theory, is detailed in Manuscript 1.

Outside of the coding structure, and in line with reflexive research practices, is the establishment of theory-level memos. Each domain listed above represents a parent code with many beneath it. This coding structure, or "tree," represents a high-level grouping of subcodes that are combined conceptually into a series of linkages that form a specific theory related to each domain. In order to capture the meaning of this theory, memos were created during and throughout the data analysis process to capture the development and genealogy of my own knowledge. These memos were integral to processing data iteratively by creating space for the exploration of new ideas. Memoing throughout proved incredibly useful and simplified the writing process.

A fourth stage not currently employed here but that will be considered for future publications, in particular conference presentations and posters, is data visualization by way of visual code and concept mapping. This is an iterative process using MaxMaps (VERBI, 2018) to visualize concepts that articulate the relationships between parent codes and subcodes, and to display the flow or processes associated with those relationships. This stage aids in communicating research data and results to various audiences and increases uptake by way of translating complex knowledge in less complex ways.

Ethical Considerations

As stated in the proposal for this study, people from marginalized sexual and gender minority communities in Canada have experienced a long history of exploitation at the hands of academic researchers and institutions. 2SGBQ+ people have also been the subject of exploitative research practices. In addition, 2SGBQ+ participants who participated in this study were in fact marginalized by intersecting identities and social locations related to age, income, trans identity, ethnicity, race, Indigeneity, immigration, socioeconomic status, as well as involvement in injection drug use. People at the intersection of these marginalized communities, identities, and social locations have also experienced a long history of social and economic exploitation in Canada. In order to wade through the ethical complexities of these factors, I drew upon my background in social work and years of history working in social services with 2STLGBQ+ communities, which proved very useful throughout the process.

In consideration of the historical harms experienced by 2SGBQ+ communities, this study attempted to mitigate exploitation and the continued power differentials that exist between postsecondary academic institutions and marginalized communities of 2SGBQ+ men in a variety of ways. Participants were involved in informed consent procedures that included a detailed description of the limitations of the study to fully protect their confidentiality. Given the relatively small sample of AAS users within a relatively small community of 2SGBQ+ men, the consent form indicated that every effort will be made to conceal their identities through anonymizing practices. These included masking direct and indirect identifiers used in the transcripts as well as anonymizing all other information that may link the participant to their data. Similarly, codes that reflected specific places or locations, as well as demographic data, were transformed or altered in the least intrusive way possible to balance ensuring fidelity and

confidentiality. The consent form also outlined the cases in which confidentiality must be broken, and thankfully this was not necessary throughout the study process. Moreover, due to the potential disclosures of past involvement in illegal activity, participants were ensured that disclosing purchasing or using illicit substances, such as AASs or others, would not be counted as an instance where confidentiality must be broken. Interestingly, not a single participant was worried about this or indicated that they had concerns, which is taken up in the results section of Manuscript 2. That said, there were no ethical implications with respect to breaching confidentiality to note, despite there being an abundance of caution built into the design of this study. Participants were also made aware that they could withdraw from the study at any point, including during the interviews, which did not occur and has not occurred to date.

While some questions may have been uncomfortable for participants to answer given the nature of the study focused on health and risk practices, no participant at any time refused to answer any given question. Regardless, all participants were offered a resource list of local health agencies and programs to support any acute or prolonged discomfort or support needs (see Appendix 6). All participants were invited to opt in to receive copies of any published materials that result from the study, including a link to the thesis itself, and two of the seventeen participants indicated a strong and resounding "yes" to this offer. Finally, all honoraria were supplied by e-transfer; all contact information was subsequently deleted from online banking platforms and two-factor authentication was enabled to ensure that my personal bank records are as secure as possible. All identifying information, including emails with participants and data related to their identity was password protected by fingerprint on my personal laptop, as well as password protected at the file level in the operating system of said laptop, as per the approved ethics protocol for this study. No adverse events occurred, no ethical issues arose, and there were no concerns raised by the thesis committee with respect to ethics at any time throughout the research process.

Outside of the standard ethical procedures for this kind of research, a number of other factors were raised in the proposal that I shall report on here. There were three additional considerations involved in this study, which were related to my own personal identity as a member of the community I am conducting research within. Dwyer & Buckle (2009) discuss this notion of insider status in qualitative research as both a strength and a liability that must be attended to, which reflected my experience throughout the research process. As an active gay-

identified community member with personal and professional ties to 2SGBQ+ communities in Manitoba, I ensured that participants were aware of who I am so they could choose whether or not to discuss their story with me. As such, all recruitment materials included my full name and I talked about my professional work before the interview started. I declared ways in which our paths could cross in a professional capacity, and detailed how I would handle those situations. I drew from the professional code of conduct set forward by the Canadian Association of Social Workers to help inform this process (CASW, 2005), which included the following commitments: 1) I would not identify or engage the participant in public unless they initiate contact first; 2) If contact is initiated, I would not discuss their participation in the study unless they indicate it is acceptable to do so or raise it first; 3) I would consider the role of power in my position as a professional social worker in all interactions with research participants, including accepting responsibility for ensuring that potentials for harm (for example, through discussing potentially traumatic experiences with participants after the interview) are considered at the highest level prior to engaging with past participants who initiate contact; and, 4) in cases where the participant and I had a previous relationship, a discussion would be had around professional boundaries with the caveat that moving into a researcher–participant relationship alters the form and function of that relationship for a minimum of two years. These considerations were in place to ensure that the health and wellbeing of the participant was handled with the highest ethical regard in a way that respected their right to self-determination. There were only two instances where this conversation was relevant, once with a professional contact and another with a personal contact. I did not interview a participant who could be considered a friend, however the personal contact was certainly an acquaintance, which I believe actually led to a much richer and thoughtful discussion.

The second key ethical consideration for this study was related to my identity as a white male of privilege, which inherently affects the power dynamics between me and research participants. Given the fact that the Manitoba 2SGBQ+ Men's Health Study reported a high proportion of AAS users being men of colour, I was prepared to carefully attend to this throughout engaging with participants and in the analysis. There were BIPOC participants who shared their stories with me and, in keeping with the plan, I ensured to reflect on this throughout the process. This is significant to the study because of the study's focus on power and domination. As mentioned above, 2SGBQ+ men have been victimized by research, and people of

colour in Canada, including Black and Indigenous folks, deal with institutionalized, structural forms of violence such as racism and the ongoing effects of colonization (Souleymanov et al., 2018) that are factors in shaping social realities, experiences and interactions. I endeavoured to practice reflexivity throughout, which led to a deeper sense of appreciation for the willingness of some participants to come forward and share their stories with me, and potentially led to rich discussions of BIPOC experiences as they relate to the subject matter of the study. This is factored into the results sections below. I am confident that I did what I could to remain reflexive by journaling, discussing issues of power with my committee, and being critical of the power dynamics at play in the interview process. That said, there is always more I could do or could have done, and my commitment to reflexivity is unwavering and I will continue to examine this throughout my career in research with marginalized communities.

Third, I had indicated in the proposal that given my social location as a member of the community I am working with, there was a potential for me to experience the same harms as participants with respect to them disclosing traumatic experiences related to, for example, body shame or other issues related their identity. This did not occur in any tangible way and I credit training in vicarious trauma and years of community-based clinical work for the skills to not personalize or internalize what I heard. My main strategy involved engaging in personal self-care practices to ensure that I was balanced and well throughout the research process. I recognize that it is a privilege to have been able to access resources to support my wellbeing and that this is not possible for many in my community.

Results: Manuscript 1 (Social Sciences Focus)

"Beauty has Become Something That You Buy" – Anabolic/Androgenic Steroid Use among Gay, Bi, 2Spirit and Queer Men in Manitoba: A Foucauldian Discourse Analysis of the Intrinsic and Extrinsic Motivators for Using Steroids

DECLARATIONS

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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 to publish data from this study was obtained from all individual participants.

Availability of data and material: All data is available upon request.

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Abstract

This study employed a Foucauldian Discourse Analysis to respond to gaps in literature related to Anabolic-Androgenic Steroid (AAS) use among 2SGBQ+ men in Manitoba. Research questions included exploring the motivations for using AASs as well as investigating the role of dominant social discourses in shaping the social context around this practice. Seventeen research participants were recruited for semi-structured interviews. Results show that 2SGBQ+ men are influenced by a range of intrinsic motivators that reflect discourses of what the ideal gay male body looks like with effects that drive 2SGBQ+ men to employ AASs as a "technology of the self" to resist domination. Similarly, extrinsic motivators were identified that were influenced by discourses of sex and power in social media. Recommendations from this study include examining the structures in place that legitimize such discourses as well as honoring the practices that 2SGBQ+ men engage in to live the life they want.

Keywords: Two-Spirit, Gay, Bisexual, Queer and other men who have sex with men (2SGBQ+), Anabolic/Androgenic Steroid, Foucauldian Discourse Analysis, Technologies of the Self

Introduction

Literature across the health and social sciences related to Androgenic-Anabolic Steroid (AAS) use has primarily focused on the general male population with an emphasis on risk, the negative impacts of illicit drug-use (Ip et al., 2019), and the shame-inducing effects of subcultural discretion that emerge and are supported by what is widely considered a stigmatized practice (Griffiths et al., 2017). A subset of the literature within the realm of public health research examines AAS use among gay, bisexual, and other men who have sex with men (GBMSM) with findings that connect this practice to a range of risk factors, including those relate to sexual health and illicit substance use (Ip et al., 2019). However, these studies were conducted in the United States of America (USA) and did not include a qualitative component to expand on or contextualize the findings. Similarly, all published Canadian research on this topic rely on quantitative data, failing to account for the social and cultural experiences of sexual and gender diverse individuals/communities engaged in AAS use practices (Adlaf et al., 2005; Adlaf & Smart, 1992; Blouin & Goldfield, 1995; Goldfield, 2009; MacNeil & Webster, 1997; Melia et al., 1996; Young, 2012) In Manitoba, a central prairie province in Canada, recently gathered data from the Manitoba Two-Spirit, Gay, Bi, and Queer (2SGBQ+) Men's Health Study indicates, for the first time ever, a high proportion of survey respondents having engaged in anabolic steroid use particularly concentrated among men of colour and men living in rural communities (McLeod et al., 2019). This prompted reactions of surprise and interest from the research advisory team on the project as well as attendees of the 2019 Gay Men's Health Summit hosted by the Community-Based Research Centre (CBRC) in Vancouver, Canada where the results were initially presented. And, out of all accessible research conducted in this area, only two studies explored the role that AAS use played in the formation and development of identities, a sense of self, and connection with others among 2SGBQ+ men (Griffiths et al., 2016). This study addresses the qualitative gaps in the literature around the practice of AAS use among 2SGBQ+ men in Manitoba, Canada with a particular emphasis on moving beyond the "what" provided by quantitative data to qualitatively explain the "why" behind this practice for this population.

In order to achieve this goal, and in response to the breadth of evidence focusing on risk and stigmas associated with this practice, this study took a critical stance to challenge and interrogate the knowledge that exists within and throughout authoritative sources to illuminate the individual user's perspective on the issue. Critical approaches within the social sciences

focus primarily on challenging, resisting, deconstructing, and contextualizing dominant discourses that shape and frame human experience with the aims of advancing social justice and social transformation (Moosa-Mitha, 2005; O'Reilly & Kiyimba, 2015). Critical social sciences research in health therefore seeks to challenge and critique dominant power structures within the field of health sciences and health care studies to improve and transform the health care system and health outcomes particularly for communities who have endured inequitable health care access. From this standpoint, looking at the issue of AAS use among this population opens space to investigate how social structures impact and influence the lives of this population in the context of "risk" practices, which leads to deeper understanding of the link between risk factors and health outcomes.

With this in mind, this study was directed towards several specific threads of inquiry that warrant such exploration. First, recent data from the above-mentioned CASTRO study suggest a link between AAS use and sexual risk, but does not explain why (Ip et al., 2019). Second, all Canadian, and much of the global research on AAS use, predominantly focuses on straight, cisgender men, which frames this population as a homogenous group without examining the inherent sexual and gender diversity within and among group members. Furthermore, the ways in which 2SGBQ+ AAS users negotiate the meanings associated with this practice are yet to be recorded, in particular how individuals interact with the stigma that surrounds the use of this illicit substance. And finally, in line with a critical social sciences approach, there are is a need to explore and interrogate the power structures that contour the experience for 2SGBQ+ men, as well as how power operates within the sociality of this practice and how that impacts the individuals in question. Specifically, a critical approach to dominant discourses in health research that emphasize the risks and harms of social practices fail to elaborate on the potential for positive effects and outcomes related to what dominant health sciences deem unhealthy, or what society deems unacceptable. These considerations led to this research opportunity with a sense of opportunistic urgency for Manitoban residents who identify as 2SGBQ or Q+, as well as health policy-makers, program planners, and practitioners who work with this population. As such, this study sought to answer the following research questions: (1) ***What motivates 2SGBQ+ men use to AASs***, and (2) ***What dominant discourses are involved in shaping the social context that surrounds this practice.***

Background

AAS Use Prevalence and Epidemiology

Anabolic-Androgenic Steroids (AASs) include testosterone and its synthetic derivatives, which are primarily prescribed by medical doctors and other health care providers to treat health a range of health conditions (Sagoe et al., 2014). However, in this context AASs are used by individuals motivated by the desire to increase performance or enhance their physical appearance, muscle strength and/or mass (Ip et al., 2011; Ip et al., 2012). In Canada, seven studies to date have looked at AAS use with varying population foci including the general population (Adlaf & Smart, 1992; MacNeil & Webster, 1997), bodybuilders (Blouin & Goldfield, 1995; Goldfield, 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 groups of large sample size high school students, were very low and prevalence rates among bodybuilders with smaller sample sizes were much higher (see Table 1 below for a summary). The majority of studies have also focused on men without any indication of whether they were biologically or anatomically male at birth or not (Hildebrandt et al., 2007; Kanayama et al., 2009; Pope et al., 2012). Despite these studies looking at a range of health and quality of life dimensions, including eating disorders and issues related to substance use, there have been no published studies to date that focus specifically on 2SGBQ+ men who use AASs in Canada.

Outside of Canada, however, several studies have looked specifically at gay and bisexual men, including in London (Bolding et al., 1999; Bolding et al., 2002), Australia and New Zealand (Griffiths et al., 2017), and in the USA (Halkitis et al., 2008; Ip et al., 2017; Ip et al., 2019). Griffiths et al.'s (2017) study reported on AAS use in the context of a number of general health outcomes, which prompted a deeper dive into how AAS use among 2SGBQ+ men was connected to sexual risk behaviours and illicit drug use; the findings of which were recently published in 2019 by Ip et al. Previous to this, the Halkitis et al. (2008) study explored the practice of AAS use among a sample of 2SGBQ+ men in the city of New York and found that the practice was significantly correlated with higher age and HIV-positive status. They 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). Each of these studies

have made connections between AAS use and the lives of 2SGBQ+ men, however have left the mechanics of the causal pathway unexplored.

Each of the studies that included 2SGBQ+ men outlined in detail a myriad of health risks associated with using AASs. For example, while the prevalence of AAS use in the Australia and New Zealand study was low, the prevalence of *thinking* about AAS use was high at 25.4%, which was associated with body image and eating disorder psychopathology (Griffiths et al., 2017). The London study also noted similar findings with the addition of commonly reported and researched side effects including testicular atrophy, depression between cycles (the time in between bouts of using AASs), insomnia, hypertension and suicidal thoughts (controlled for HIV status) (Bolding et al., 2002). In terms of sexual risk and outcomes, which is a focus for this proposed program of research, the CASTRO study in the USA found that AAS use was significantly correlated with sexual risk-taking behaviours, in particular condomless anal intercourse (CAI) (84.8 vs 60.8%, $p < .01$), which is of relevance to 2SGBQ+ men given the existing increase in risk for HIV and other sexually-transmitted infections (STIs) (Ip et al., 2019). That said, not a single study intentionally or even accidentally explored the potentiality for AAS use being a protective factor or one that promotes health in some way.

Finally, because of the way AASs and other performance enhancing drugs are classified and controlled, AAS users who do not have a prescription are technically engaged in illicit substance use. Thus, they are also engaged in an illicit shadow economy not entirely unlike street level drugs, despite the attitudes toward AASs being quite different (Ip et al., 2019), which contributes to the stigma associated with this practice (Griffiths et al., 2016). There are also direct links between the use of AASs and other illicit substances; of note is that the CASTRO study stated that: “Compared to non-users, the gay and bisexual men who used AASs reported a threefold higher rate of methamphetamine and double the rate of ecstasy use,” (Ip et al., 2019, p. 107), which is significant because methamphetamine use is correlated with a double-fold increase in HIV risk in the same location. Similarly, “[e]cstasy use among gay and bisexual men has been reported to be associated with having more sexual partners, having more one-night stands, and having male–male condomless anal sex” (Ip et al., 2019, p. 108). Though, without a clearer picture of AAS use beyond raw statistics, health interventions lack the knowledge needed to explain why and how AAS use becomes so prevalent among 2SGBQ+ men.

To date, only one Danish study exists that alludes to a relationship between AAS use and perceptions or the development of identity. The authors found that youth perceived AAS use as a risky behaviour connected to morality in a way that stained or marked individuals using them negatively (Ravn & Coffey, 2016). In fact, AAS use was associated with "an identity or lifestyle" that other risk behaviours, such as substance use, were not (Ravn & Coffey, 2016, p. 87). Along these same lines, one study in the USA from 2017 also found a significant relationship between being labeled gay or bisexual and steroid use among heterosexual male teens. In fact, being bullied for being perceived as gay (or not heterosexual) was the strongest predictor of steroid use among male teens calling into question the role that masculinity and stigma play in this practice for GBMSM in general (Parent & Bradstreet, 2018). Understanding the relationship between AAS use, stigma, and health is warranted and addressed in this study. This study draws on these two studies in pursuing this phenomenon through a social sciences lens given the slight evidence of a connection between identity and the practice.

2SGBQ+ Men's Health in Canada

The health of 2SGBQ+ men in Canada is often framed within the context of risk—in particular for HIV/AIDS. From this risk-based perspective Canadian 2SGBQ+ men remain at greater risk for: HIV/AIDS and other STIs (PHAC, 2018), alcohol (Dermody et al., 2014) and substance use disorders (Cochran et al., 2007), eating disorders and body image issues (Allensworth-Davies et al., 2008; Davies et al., 2019), mental illness diagnoses, discrimination and violence, suicide (Hottes et al., 2016), and certain forms of anal and oral cancers (Rosser et al., 2019). In fact, suicide has surpassed the leading cause of death for gay men in Canada, driven in part by 1 in 4 gay men reporting poor mental health (Hottes et al., 2016). These health concerns are not distributed equally among gay, bi and other men who have sex with men; those who are marginalized by a multitude of factors including the social determinants of health and other intersecting experiences of oppression deal with negative health outcomes that are unique to their particular context and social location (Davies et al., 2019; PHAC, 2018). With persistent inequities across the health of this population and the diversity of policies and approaches to address them, we see a patchwork of policies and programs throughout Canada that lead to varying degrees of support for this population, including in preventing and treating conditions with the greatest personal and health care system burdens, such as HIV (CATIE, 2018; Nine

Circles, 2017). The disproportionate health outcomes that 2SGBQ+ men are faced with in Canada are an essential query for health researchers, though linkages between AAS use practices and health outcomes here have yet to be made. Pursuing this topic from a qualitative approach leads to data that can be consulted in both the development of policies and programs to support this population, while also leading to research questions that warrant further investigation. Both of these aims were accomplished with this study. Moreover, the use and deployment of risk discourse in public health, which according to Lupton (1993) leads to certain individual and group behaviours becoming synonymous with danger and fear, contributes to the framing of 2SGBQ+ men's lives as dangerous themselves. This study sought to address these discursive regimes by contributing a counter-discourse to dominant public health literature to, as mentioned above, shed light on marginalized perspectives around this practice.

Theoretical Orientation

These literature domains and the research question for this study lead to a clear theoretical paradigm to guide this program of research. The work of Michel Foucault is particularly of interest in this regard, more specifically his work in the realm of subject formation, discourse, and sexuality, which when applied methodologically contribute a valuable, albeit marginalized, perspective to the field of health research. Thus, this study is situated within a Foucauldian poststructuralist ontology that sees reality as socially constructed, and human nature as being produced and reproduced through discourse (Foucault, 1997). Poststructuralism in this context is primarily framed by the work of Foucault (1980, 1990), but also Butler (1999), who was influenced by his work due to its emphasis on the social construction of identity—particularly gender and sexual identity—through discourse. In short, poststructuralism functions by challenging "Western metaphysics," which is a historically and culturally specific system of meaning making rooted in structuralist, scientific ideologies that are responsible for producing grand meta-narratives of what constitutes our social reality (Salih, 2002). Poststructuralism challenges these grand truths through interrogation and critical inquiry in order to de-construct and reveal their weaknesses and vulnerabilities (Derrida, 1968, as cited in Wood & Bernasconi, 1988). Power is a crucial consideration in poststructuralist thinking, and Foucault's (1984) view of power is that it is circular and contested rather than being repressive and exerted from the top down. Power then is productive and enabling: "What makes power hold good, what makes it

accepted, is simply the fact that it does not weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms knowledge, produces discourse," (Foucault, 1984, p. 61).

Thus, the epistemological position of this theoretical frame sees the production of knowledge as entrenched in circular power relations: power produces truth, and knowledge is generated through engaging with or resisting power and domination (Foucault, 1984). Foucault questions positivist scientific claims that human nature is essential, and that truths about human nature are taken for granted. Within a poststructuralist theoretical frame, an understanding of human nature cannot be attained through objective research. Rather than looking for truth itself, Foucault points to the subjective and intersubjective nature of knowledge generation through circular power relations and encourages us to look at how truth is produced through discourse including the history embodied in the meaning of the statements themselves (Foucault, 1981). Put simply, statements are not accepted as truth by nature of their existence; rather, truth is affected by knowledge–power regimes, and we must look at how the statement becomes truth and what this truth accomplishes with respect to its social and function and effects (Macias, 2015). Scientific inquiry then examines the "interrelation of knowledge, power and subjectivity that are at work in the statement," (Macias, 2015, p. 226). Thus, research from this standpoint is a form of inquiry that aims to trace how truth is constructed through discursive practices (Foucault, 1984). Moreover, this form of research and inquiry is what characterizes poststructuralism as critical in nature. Without appreciating the sociocultural, historical and political context of what constitutes truth itself, we are unable to challenge the power structures that validate its existence in our social world.

Foucault and others offer several theoretical dimensions that are relevant to looking at this topic among 2SGBQ+ men, including his work on governmentality, biopower and technologies of the self. Foucault's framework of governmentality (1991) is a combination of the concepts of government and rationality. Government in this sense is not specifically the state, rather it is the functions of power that lead to and direct individual behaviours, in particular the willing participation of the governed in their own ruling. Rationality in this sense means a form of thinking that is logical, systematic and predictable, which is predicated on requiring having a clear definition of the self in order for a subject to be managed or controlled (Foucault, 1991). When combined, these two terms, in the Foucauldian sense, lead to an approach to the study of

power that focuses on the ways in which subjectivities are produced through power relations, which are maintained through discourse. Governmentality provides a framework for challenging and upsetting the taken-for-granted discourses that regulate AAS users. This concept is relevant to understanding how AAS use is implicated in the formation of sexual subjectivities in 2SGBQ+ men who use AASs, by offering a lens through which we can identify the regulating discourses that prompt the need for using illicit substances in the first place. Given the already-identified link between AAS use and sexual practices among 2SGBQ+ men who use it, this framework will deepen our understanding of how power relations are involved in the development of their sense of self as they relate to others in our social world.

Moreover, Foucault's work in biopolitics emerges first in *The History of Sexuality, Volume 1* where he begins to address the shift from people's lives being regulated by brute force and the law, which he called juridical power, towards discourses of shame, exclusion and morality, institutionalizations, and social relations, which he called biopower (1979, 1980, 1990). Foucault (1991) is concerned with critiquing the way biopower regulates society by sanctioning certain knowledges and practices. There are a number of relevant discourses that structure the lives of GBMSM (Davies et al., 2019), however the discourses in focus for this study are those that frame and regulate AASs as a social practice. Thus, this theory provides a lens to understand the ways in which public health risk discourses regulate AAS use practices in this population through the deployment of certain knowledges—or not, which as will be discussed below is certainly the case. This theory also provides the context necessary to examine the data for counter-discourses, and even discourses of silence, which may be evident given a lack of public health prevention messaging in this area for 2SGBQ+ men, despite it being declared a public health problem in countries where AAS use has been studied in this population.

Finally, Foucault's (1988) "technologies of the self" come into play when exploring the second part of the research question in this study related to understanding why AAS use is so common. TOTS is focused on the ways in which people transform themselves and make meaning, in particular within the realm of ethical care of the self through expertise. Technologies of the self include a number of practices that are developed through the deployment of specific knowledges that come from specific expertise, which as Foucault posits is bound with subjectivity because of the power inherent in generating truth in society (1988). Examples of technologies of the self that are relevant to this study include those connected to healthism (for

example, going to the gym) (Crawford, 1980), self-esteem (for example, engaging in meditation or yoga), and technologies of responsibilisation (for example, using barriers or other harm reduction methods to reduce risk in sexual practices). This theoretical framework is particularly salient to this study given the higher prevalence of sexual risk practices among AAS users in studies in the USA, Australia and the UK. It provided an opportunity to deepen our understanding of why CAI is more prevalent among AAS users and it provided a more robust tool for analysis that sought to explore how AAS use was in fact a tool deployed to resist domination and oppression by 2SGBQ+ men. Employing technologies of the self as a form of ethical self-care resists domination and contradicts the public health discourses that frame AAS use as inherently risky or problematic. They do this by creating space for new discourses to emerge that reduce the burden of stigma related to this practice, and ultimately the negative health impacts of stigma for 2SGBQ+ men.

Finally, Foucault's work provided the foundation for many scholars to continue his thinking and work in poststructuralism, particularly in the realm of sexuality and subjectivity; much of which has found its way into feminism and queer theory, which are both relevant here. I would argue that to see Foucault through a queer theory lens is to continue advancing his work, in particular the work he was not able to finish near the end of his life, including developing technologies of the self. Queer theory, which is a challenging concept to define (Sullivan, 2003), sees sexuality and sexual identity as socially constructed and subjective, and non-essential (Foucault, 1980), while also weaving in the concept that gender is performative (Butler, 1999), and that non-mainstream sexualities and genders are subjugated and marginalized (Sedgwick, 1990), These theorists moved Foucault's (1990) concepts of subject formation and subjectivity even further to account for the social and political development of sexual and gender diversity in contemporary Western society (Sullivan, 2003). While there are many other authors who contribute to the field of queer theory (Browne & Nash, 2016; hooks, 1989; Jagose, 1996; Richardson et al., 2006; Turner, 2000; Warner, 1993), the focus here is not on their body of work, but on their updated concepts of gender and sexuality as they relate to the social sciences. These additional concepts will be relevant in contextualizing the experience of 2SGBQ+ men who use AASs in society given the increasing diversity within these identity categories. For example, Queer theory brings in notions of intersectionality (Crenshaw, 1991), race and ethnicity (Ahmed, 2006), and of performative masculinity (Connell, 2005). These are all potential

components that tie into subject formation and subjectivity as originally put forward by Foucault and may be useful in facilitating analysis that situates discourses affecting the lives of 2SGBQ+ men AAS users in contemporary society.

Methodology

In consideration of the theoretical frameworks above, this study employed a Foucauldian Discourse Analysis (FDA) methodology (Foucault, 1971, 1990, 1991; Given, 2008; Mogashoa, 2014). FDA aims to reveal the discourses that are present in the communications that regulate social life through the deployment of certain knowledges (Macias, 2015). According to van Dijk (2003), FDA is a type of discourse analysis that primarily studies the way abuse, dominance, and inequality of social power are enacted, reproduced, and resisted in social and political arenas. As Macias (2015) states: "FDA requires us to interrogate how power is at work in the statement in ways that determine what the statement explicitly or implicitly denies, disavows, or excludes, as well as what it accepts, avows, and includes," (p. 225). She builds on this by saying that we must also seek to understand how statements fit within larger ideological systems that produce truth across history (Macias, 2015). Given how FDA is situated within a poststructuralist frame, it also requires us to explore how statements achieve or fail to capture the full range of human experience and why (Macias, 2015). In essence, we are looking for what Foucault called biopolitical effects that are at work in the statement (Foucault, 1984, 1990). These include the ways in which, for example, 2SGBQ+ men internalize knowledges of AAS use put forward by dominant power regimes (public health, the media, etc.), embody them in their corporeality (alter their physique or change their sexual practices), or how their subjectivities are produced by AAS use (by, perhaps, belonging to a community that is minoritized or marginalized by the dominant mainstream). Similarly, FDA enables us to seek out counter-discourses that substantiate the productive nature of power and domination. While FDA has been taken up by many poststructuralists as a study design and analysis tool, the key for understanding its applicability to this study is to focus on how FDA enables us to pay attention to the ways that power produces truths over time and how those specific truths are reproduced through discourses that subjugate and oppress marginalized people—in this case, 2SGBQ+ men.

FDA has been used with Canadian 2SGBQ+ men in the recent past. Davies et al., (2019) sought to understand the biopolitical effects of Party-N-Play substance users in Toronto. Their

analysis revealed that GBMSM used hook-up apps like Grindr to become entrepreneurs of their sexuality in online spaces, which was facilitated through analysing the language used in their dating profiles (Davies et al., 2019). Termed "Homo Economicus," this concept, among others, was one output of their FDA into the context surrounding language used by GBMSM that pointed to regulating discourses in their sexual lives. FDA was an effective means for accomplishing this goal given the subject positions of the population in focus, and the emphasis on media as discourse. This study, as is highlighted below, relies primarily on discourses generated through interactions between the participant and the researcher. Through appropriate analysis techniques within an FDA framework, these interactions reveal how grand narratives are adopted or resisted within those interactions (Macias, 2015).

Recruitment

Recruitment took place between April and November 2020 using purposive sampling relying primarily on social media platforms such as Facebook and Instagram to promote the opportunity. Local 2SGBQ+ organizations and collectives hosted the paid advertising, which expanded the reach to arts, sport, and recreation groups. The language chosen for the poster for both sample groups was specific and intentional: both included language that invited past AAS users in order to create a sense of safety for those potential participants who were currently using AASs, but were worried about the stigma or risk associated with disclosing this during the interview. Online locations where recruitment was successful included Manitoban university departments that focused on recreation, kinesiology and applied health fields, university sports team associations, local 2STLGBQ+-serving community-based organizations, and through peer-support groups and collectives that provide service to 2SGBQ+ men. Interestingly, all university sports associations, aside from one, declined to promote the study stating reasons connected to a lack of active readership to their student listservs.

Using social media as a means to recruit however was quite effective and aligned with the shift towards online spaces for GBMSM, which Davies et al. (2019) have identified as being a new locale for the development of communities for this population. In fact, it was the only way to recruit given the impacts of the pandemic on closing businesses, including gyms, supplement retailers, gay bars and other queer spaces, and local community-based service organizations that tailored programs for 2SGBQ+ men. I posted quite frequently between April and October 2020

to my own personal social media accounts, which was also effective given my own personal reach throughout various 2SGBQ+ social networks. Although purposive and snowball sampling supported by word of mouth was intended as a key method for recruitment (O'Reilly & Kiyimba, 2015), both played a minor role in achieving the full sample size because of the fear and stigma associated with using AASs. While all interview participants were asked to share the study information throughout their communities and specifically to other AAS users, the feedback I received indicated that potential participants were either too worried about being outed as a user, or were not comfortable sharing something that was a very private matter for them. A total of nine current or past users were ultimately recruited to the study. Throughout the first four months, I made the decision to open up recruitment to a new sample group that emerged from discussions that took place with current and past users. Several participants spoke about the motivations that influenced their decision to start or try AASs and were able to paint a clear picture of the outcome, which responded to objectives of this study. However, throughout recruitment, two individuals reached out indicating that they had considered AAS use extensively and exhaustively and, though they never followed through, dealt with a range of challenges. Thinking of the literature that cited a connection between thinking about AAS use and psychopathology, I submitted an ethics amendment to actively recruit more participants with the similar experiences. As such, the eligibility criteria shifted slightly to include those who "considered using steroids but did not follow through," which ultimately led to a total of eight participants in this category.

Data Collection & Analysis

Data was collected from each participant by way of a single semi-structured interview and subsequent guide (Kvale, 1996) conducted primarily via Zoom, which has increasingly been used by qualitative researchers as a secure videoconferencing platform (Archibald et al., 2019). However, due to a regulation change at the University of Manitoba's Human Research Ethics Board, Microsoft Teams for Healthcare was used for the remaining eight participants. All participants were offered a $30.00 CAD cash honorarium for participating and all accepted. Offering compensation was important because minoritized communities often face inequitable access to financial and material resources, the offer of compensation was an important step to address the potential barrier to participation. The first four interviews were recorded and

transcribed by me, followed by a third-party transcription service for the remainder. The transcriptions provided the basis for a coding structure that aligned with the interview guide (see below for more on coding under Data Analysis). All transcripts were shared with each participant as part of the member checking process, which allowed for clarification, redaction, or the addition of new information to the study (O'Reilly & Kiyimba, 2015). All participants accepted the transcripts as presented without additions or changes.

Semi-structured interview guides were used as a roadmap for each conversation. That said, the conversations became shorter and more focused later on in the study as I reached a point of data saturation. Given the methodology and qualitative nature of this project, interviews, coding and analysis occurred simultaneously to allow for iterative transformations to the process (O'Reilly & Kiyimba, 2015). The goal was to adjust the data collection process as needed to follow emerging themes and explore evidence of discourses at play in the lives of participants. While there were distinct domains structured into the interview guides that later on helped form an initial deductive coding system, the process led to the emergence of new, unexpected domains that warranted further exploration, including the impacts of COVID-19 on AAS use practices for this population. There were no physical barriers of note to completing each interview, particularly because of the virtual platform. Participants were able to participate from the comfort of their own home, with some choosing to walk outside while we talked.

Alongside these data collection methods, I kept a journal of reflections before and after the interviews to facilitate reflexivity throughout the process.These post-interview memos were recorded and transcribed and form additional data points for reference. In total, sixteen memos were recorded post interview and were woven into the coding and analysis process. These reflections included my thoughts and feelings towards the experience, as well as notes about everything from body language to the back-and-forth between the participant and I outside of the interview itself. It is common and useful to record reflections of the conversations that occur when the recorder is turned off, and this proved true for this study. The journal also provided a space to reflect on the power dynamics at play in each encounter. It is crucial to engage with a critical exploration of the relationships and dynamics at play within and outside of the interview. This is particularly salient given my own social location as an insider among the culture and community shared with participants. Moreover, a critical social science framework calls on researchers to specifically examine how issues of power impact the research process, in

particular issues of gender, sexuality, race, and other social location categories (Moosa-Mitha, 2005). I felt compelled and also implored by this—as a researcher who inherently occupies a position of power and authority—to reflect on these dynamics within and outside of the interview. I found this to be very helpful in not only interpreting the interviews, but also in understanding how my participation in this study affected recruitment.

Data for this study comprised mainly of transcripts of each recorded interview, as well as recorded reflections after each interview and several recorded memos capturing thoughts and reflections throughout the study process. MAXQDA (VERBI, 2018), a Computer Assisted Qualitative Data Analysis Software (CAQDAS) was used to process and analyse all data using a three-stage process: open and axial coding followed by a return to the data to facilitate FDA. The coding system used to facilitate open and axial coding employed both a deductive and inductive approach to balance the need to track responses to specific questions with the freedom to explore unexpected themes or trends that arose pertaining to study objectives. Both deductive and inductive coding are relevant to qualitative analysis, and when combined offered a roadmap to responding to specific research questions while reducing limitations in interpreting what emerges. Given that this study employed a methodology that prescribed a form of data analysis, a deductive coding structure supported tracking responses to specific questions. That said, some elements of the study were exploratory in nature given the fact that this had never been researched before. The freedom to code openly and freely throughout was beneficial, in particular in areas that explored detailed practices. The third stage of this analytic technique included exploring data for evidence of discursive technologies present in the interactions with each participant, or that they shared were present in their lives and related to AAS use practices. In particular, I paid attention to instances where discourses emerged and where they were adopted, resisted, or countered, specifically in discussions around subjectification, sexual practices, and stigma.

Findings

The Sample

This study recruited a wide range of experiences across a diverse sample of participants. All seventeen participants identified as male with one individual identifying as trans and another identifying as Two-Spirit. The majority identified as gay with two identifying as straight but

engaged in sex with other men, and one individual identifying as bisexual. Eleven of the participants claimed "white" as their ethnicity with the remaining group identifying as either Black, Indigenous and as a person of colour. Three participants lived in a rural setting while the remaining fourteen lived in an urban setting, in this case Winnipeg, which is the capital city of Manitoba and the only urban setting with a population greater than 50,000 residents. All participants were in their 20s, 30s, or 40s and were employed or in school aside from one individual who was not working at the time of their interview. The income range was vast; the lowest reported average income was $32,000 per year with the highest being over $650,000. When considering the potential for differences between both sample groups, there was no major shifts between them. Both were as diverse as each other. What is notable, however, are the similarities. The majority of men in this study identified were cisgender and identified as gay. The majority also lived in an urban setting, and all earned an average income over the poverty line in Manitoba. While this may be due to the fact that using AASs or considering using AASs is predetermined by a person's ability to afford and subsequently purchase each substance, there is also a dimension of this practice being rooted in some amount of privilege.

All participants spoke as if the costs associated with using AASs were not an issue whatsoever, aside from the one individual who was not employed. He shared that he was in between jobs and reduced the amount he spent, but that it would only be temporary. There are considerations with respect to how the study recruited participants, particularly the fact that social media is predicated on access to a device and an affordable Internet plan. This also calls into question whether 2SGBQ+ men who cannot afford devices would be interested, as well as whether potential participants in locations throughout Manitoba with reduced access to reliable internet service would have participated in the study. The COVID-19 pandemic is a factor in this as mentioned above, however this leads to the question about variations between urban populations and those who are considered remote or northern bound.

Intrinsic Motivations: The Self, the Body, and Power

All participants across both sample groups reported a number of motivations and influences for either using, or considering to use AASs. Among them were three dominant themes: body image and self-perceptions of the body, perceptions of the body from others and the drive for muscularity, and a desire or need to increase personal and social power. These three

areas were discussed by each participant in some way, with a range of variations and nuances that paint a clear picture of what internal desires or needs are met through the use of AASs. Among the three, the most commonly reported desire or intended effect of engaging in AAS use practices were to change the body to become more muscular, desirable by other men, and to do so as fast as possible.

First, the following quotes illustrate the intensity with which 2SGBQ+ men in this study understood their own body image, in particular how they focused on what they perceived to be deficits, including feeling as though they needed to be bigger to be confident, desirable and to appreciate themselves more:

Perceived deficits

> "And I wouldn't say that I was unhappy with how I looked. I was confident, I loved myself, but I was really conscious about wanting to look differently going forward. And as a result of that, I did. I got much bigger, much stronger. I was kind of thin. So, it obviously gave me a sense of confidence in myself." (white, cisgender gay male, age 42, Study Group 1[SG1])

> "I would mainly blame pop culture, how gay men's bodies were shown on magazines and on social media, and how the gay man's body was symbolized in society was having nice big biceps, nice chest, abs and muscles, you know, the perfect, picture-perfect Ken doll of what a gay guy should look like." (BIPOC, cisgender gay male, 26, SG1)

> "It's all about the body image. It's all about the body image. It's just about looking good to be attractive. I think that's there because many gay guys, we are not happy with who we are. We always want to live the experience of the magazine cover and the porn, the gay porn, how the bodies are shown. Even in pop culture, how the bodies are shown, we try to copy those and we try to become those, which is very hard and difficult. Steroids is one of the shortcuts to reach that destination." (BIPOC, cisgender gay male, 26, SG1)

> "I find that body image and I guess like self-confidence and how looks in the gay community can become quite toxic. And I find that I relate to that quite a bit and I find that I struggle with that a lot myself." (white, cisgender gay male, 28, Sample Group 2 [SG2])

> "I just think in the society that we live in, it's impossible to meet certain goals or objectives as far as the way you look, without using something." (White, cisgender gay male, age 42, SG1)"

> "… body image led me to use this, to be better." (BIPOC cisgender male, 26, SG1).

The experiences reflected in these quotes show that there are painstaking reasons why 2SGBQ+ men consider using AASs that reflect the need and capacity to intervene in negative perceptions of the self and the body.

Moreover, each of the seventeen participants spoke of the perceived deficits they held as men who were part of a community where standards were dictated from outside of the self; standards that were then internalized and adopted by each individual. For example, participants shared the following when discussing how they interact with the messages they are exposed to about what the ideal body looks like:

Body Image:

> "Body image—it's huge in gay men. I would work out when I was natty and I would think why don't I look like you? Obviously I'm not huge, like I was always a smaller guy, 5'7" at my normal and like 140 pounds. So, when I take steroids and I take these [social media] stories, show my body on Instagram and Grindr it makes me feel good because people are like "Damn, you're hot!" and I'm like "yup." … "But yah it affects your self-image and yeah, I just feel and look great when I'm on the T. (BIPOC, cisgender Two-Spirit/gay male, age 30, SG1)

> "This is what your body should be. Muscle and fitness magazines, it's just like an overwhelming saturation in North America or Canada of seeing all of that. You're like, okay, cool. Well, if that's what I'm supposed to be, I want to be that, I like that." (white cisgender gay male, 42, SG1).

> "I mean, look at those models. Like, when you see online, that's the figure, that's what's most ... majority of the people are aiming. Like, six pack abs, nice pecs, nice ass, nice legs, good looks and everything like that. I mean, even people goes through extreme just to go surgery for that. (BIPOC bisexual cisgender male, 29).

> "…just realised that to maintain a certain level of attraction within our community, that I just wanted to be bigger. I wanted to be more muscular, I wanted that image rather than the skinny, yoga guy, 40 and thin. So, my sole purpose was to change how I looked. (white, cisgender gay male, age 42, SG1)"

And, when considering the exchange of risk for reward, participants were able to demonstrate that they considered both aspects in choosing to start using AASs. Some shared the following comments about the trade-off involved in making this decision, including the economic value of achieving new standards of beauty:

The trade-off:

> "So, when I do it, I have to really plan it, like, put a schedule on it, open a calendar, how long I'm going to do it, what time, how many times, something like that. So it's a really hassle if you're going to do it. Sometimes you're going to think halfway, like, if you're midway in there, will, kind of, think, is this all worth it, like, just to look good." (white, cisgender gay male, 33, SG1).

> "Beauty has become something that you buy." (white, cisgender gay male, 39, SG2)

Second, many participants discussed how muscularity is a driving factor for either considering to use or using AASs. A range of comments were shared from both sample groups that highlight the perceived personal and social value ascribed to muscular bodies, including the need to achieve it quickly:

Drive for muscularity:

> "I always get the small man syndrome I would say, where I get super intimated because I see all these guys who are a lot more muscular than me and I'm like, how do I get there?" (BIPOC, bisexual cisgender male, 29, SG2).

> "So, you have the people who are already pretty bulked, already pretty muscular or they have the body of a 26-year-old, basically like now. You have those images and you're like, I really wish I were that, and you wish that you could become that." (white, gay cisgender male, 26, SG2).

> "So absolutely for me at least there is a connection between the two in the sense that steroids in some ways help you achieve that sort of physique that I find attractive." (white, gay male, 29, SG2).

> "And plus, just building muscle at a faster rate potentially would be great." (BIPOC, gay cisgender male, 23, SG2).

> "I've had that thought about it too where it's like, oh, if I don't want to work out six days a week I can work out four days a week and just take something, and that'll help me get to where I want to be and I can still do all the things I want to do." (white, gay cisgender male, 38, SG1).

Third, many participants shared comments about the role that increasing personal, social, and sexual power play in their decision to consider and/or use AASs. Among these quotes include themes that tie to skin colour, ethnicity, money, social capital, and of course, masculinity and whiteness. Though they do overlap, BIPOC participants in this study all mentioned the role

that whiteness played in shaping their sense of self and how it connected to their desire to use AASs:

Personal & Sexual Power:

"Yes, because I used to love sex and I used to enjoy a lot of sex, but yes… because what happens is… when you have the power of physical … like, when somebody has that physical power of physical attributes and those aesthetic powers, they can choose whom they want to date. That kind of gave me a sense of power to choose who I want to have sex with, who I want to sleep with. I was more dictating my life, my sexual life, at that time." (BIPOC, gay cisgender male, 26, SG1).

"Yah you kind of have the power, and confidence that no one can really take from you." (BIPOC, gay cisgender male, 30, SG1).

Social Power and Status:

"But yeah, so it's interesting because a lot of people are a lot more fit, so for me, it would be if I was to partake in steroid use, it would be so that I could try and get myself into those groups." (white, gay cisgender male, 33, SG2).

"So, for me, utilising steroids would be a prime example of, okay let's get myself bulked up so I can look pretty or look good to attract people to want to like me, as a way to get in. (white, MSM cisgender male, 39, SG1).

Well, I think it would help socially, because I have done a lot of research on testosterone and I have seen that higher testosterone levels in men, it helps socially, it helps them socially in society. (BIPOC, gay cisgender male, 23, SG1).

"So, the other part of my answer is socially I always saw groups of muscular gay men. I always thought that I wanted to be a part of that." (white, gay cisgender male, 26, SG2)

Masculinity:

"The people who are more physically built tend to be kind of looked up more upon. They're the popular people, they're the hot gays. They kind of walk around like they own the place most of the time. The general consensus is muscular people are more attractive. Not true for everyone, but it's the general consensus in the gay community and so I feel like we tend to idolize them more. And so there is that power that comes with being like a very physically muscular man." (white, gay cisgender male, 26, SG2).

"And for the idea of, if I'm big and strong then everyone knows I'm masculine and it'll hide the higher pitched voice and it will hide the mannerisms and it will hide the whatever, it was where that area came in." (white, gay cisgender male, 26, SG2).

> "And I find, especially in the gay community, it feels like you need to almost come off as straight in order to feel like you're the best person ever. (white, gay cisgender male, 28, SG2).

> "From my perspective, the community that we are part of is very geared toward a certain kind of guy, like a very masculine guy who is physically fit, etcetera." (BIPOC, gay cisgender male, 23, SG2).

Skin colour, whiteness, and racialized power:

> "And seeing you know, it's kind of hard being a black person, brown person, you see a lot of really hot white guys and they're just like, they won't fuck you but then they won't aspire to date you because you're not this fantasy white guy that they're just dreaming of this little marriage thing and it's like you kind of feel like shit because of that white people are … to be a white fit masc gay guy is like the top of the food chain... If I was full white then I would be more desired." (BIPOC, gay cisgender male, 30, SG1).

> "Regardless of how good looking you are, how nice you are, there will always be someone, oh, I don't prefer Asians, I prefer white guys." (BIPOC, bisexual cisgender male, 29, SG1).

> "I always believed that my brown body is an exotic body. I treat myself as an exotic man, an exotic gay man, which did help me a lot in my mental health in my early 20s and my 30s, and even now, because for some, they may say, oh, I want to be more whiter or more fairer or more this or more that, and brown and black bodies are not as good as white bodies. But for me, it was always that, yes, many people want to be with this brown body because it's so exotic, right? For me, that always, always helped… Yes, I love my brown body. This is the best thing that ever happened to me." (BIPOC, cisgender gay male, 35, SG1).

These statements reflect the adoption and internalization of discursive regimes that frame the ideal body for gay men while also demonstrating the trade-off in engaging in practices that are understood to be harmful. In particular, study participants are very aware of the need to engage in AAS use practices despite their inherent risk to level their chances at an even playing field with white, masculine, muscular straight men. Moreover, AAS use is seen by all of the men in this study to be a means of accelerating the process of becoming muscular or achieving standards that Brennan et al., state as being white, muscular with abs.

There were many codes not included in this result due to low frequencies, however it should be noted that they included many aspects of the experience of engaging with intrinsic motivations for using AASs that are relevant to this study. In particular, when considering the role of power in shaping the sense of self, participants spoke about how achieving the body they

wanted faster would enable them to increase sexual partners, to engage in muscle-focused kink and fetish scenes/communities, and two participants noted that an increase in power would protect them from homophobic violence. Interestingly, only two comments were made from both sample groups discussing the role that AAS use plays in increasing sport performance, which is a stark contrast from the vast body of literature exploring this practice within the context of body building, competitions, and athletic performance.

Extrinsic Motivations: Social Media and Porn

A striking and clear theme among the data from all participants was the role that social media, including Instagram and Grindr, played in framing the way that bodies should look, what kind of lives 2SGBQ+ men should live, and how pervasive certain key discourses are among the content that 2SGBQ+ men are exposed to. In fact, every single participant mentioned Instagram specifically, calling into question the discourses that are dominating what for many of the participants describe as their dominant social reality. For example:

Social Media & Porn:

> "It was really that turn of Instagram taking over and like the explore feed really being a thing I think which was the moment that I started to just see more people that clearly had bodies that were enhanced with steroids kind of thing. And so that was the point where I was just like okay, well clearly Instagram is showing me that it's much more common than what I thought it was before." (BIPOC, cisgender gay male, 35. SG2).

> "By and large, television, and movies, and stuff like that have worked really hard over the decades on diversity of people of colour, and sizes, and types, and inner beauty, and all that stuff. Internet has gone in the opposite direction, and people spend more time on Instagram than they do watching television. I follow limited people on Instagram, I don't follow an awful lot of people, but the things that come up in my feed are based on what I look at, not who I follow. Everyone that comes up in my feed is gorgeous, so that's just how that works algorithmically… A lot of it is really connected to like a lot of people now are on Instagram. It's all about Instagram. It's all about your social media presence." (white, cisgender gay male, 42, SG2)

> "Like again, everyone kind of wants to have that kind of muscle hunk body, stuff that you see everywhere and in porn and you see everywhere on Instagram." (white, gay cisgender male, 28, SG2).

> "I think it's comparison. I think it just becomes like, you know, so social media in the sense of like we're always in the … like the idea of comparison… I follow a lot of gay

> male fitness instructors. I follow even gay male influencers if that's what you want to call them. People who use their bodies, use their sexuality to gain a following, using their confidence. And so then, you kind of have that immediate like yeah that's hot, or yeah, I'm into it. But then you're like why am I not that way." (white, cisgender gay male, 28, SG2).

Participants also clearly linked social media to their sexual identities and sexual practices, in part because of the fact that social media reproduces and broadcasts the discourses mentioned above. Some participants demonstrated that in order to achieve the quality of life they see portrayed to them on social media, they need to replicate a similar image, which according to Foucault shows that discourses are embodied and reproduced, ultimately framing our social reality:

> "…if I post a picture of my just plain body, no lighting game, no nothing people don't you know, give me, they're not like "oh my god," as soon as I post, you know, if I'm mid cycle and I'm just looking ripped everyone's fucking messaging me." (BIPOC, gay cisgender male, 30, SG1).

Finally, the demand on 2SGBQ+ men in the study to achieve the goal of reflecting what they see in social media led to the need for AASs, marking what some might call a drastic measure to keeping up with perceived community standards:

> "It [social media] doesn't tell you directly that you have to use, but when you see those pictures, you ask yourself the question, how can I achieve this body? How can I achieve this look? Clothes, of course, you can buy, but for the body, what can I do? Exercise, exercise, exercise. Okay, how can I make it faster and stronger and … so, yes." (BIPOC, cisgender gay male, 35, SG1).

> "It sounds like a cliché, but we're aspiring to something, like, we are aspiring to something that is not achievable by natural means." (BIPOC, cisgender gay male, 26, SG1).

Given the dominance of social media and porn playing into the extrinsic motivators influencing 2SGBQ+ men to use AASs to achieve the standard they see, and to do it quickly, there is no doubt that the risk involved with this practice is considered to worth it. The overall impression shared from each participant within this theme was that there were no other options. That diet and exercise were unrealistic, that noting but perfection was effective or useful, and that the stakes for not at least considering AAS use were high. This leads to the conclusion that

there were in fact many "good" reasons perceived by 2SGBQ+ men to use AASs, and this was consistent across both sample groups.

Discussion and Conclusion

From a Foucauldian perspective, AAS use among 2SGBQ+ men is viewed as a "technology of the self" employed by this population to resist the domination that results from the production of subjugated subjectivities formed by discursive regimes that privilege a minority of 2SGBQ+ bodies and experiences over others. Foucault defines technologies of the self as technologies that

> … permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (Foucault, 1988, p. 18)

He elaborates on this definition to claim that these technologies, along with those of production, sign systems, and power, are associated with a form of domination, and require the adoption and modification of knowledge and attitudes. In this study, the use and consideration of AASs acts as a form of technology that can resist the domination enacted by those who hold power and whose voices, experiences, and images represent the ideal life and lifestyle for this population. According to the men interviewed for this study, these include white, masculine, muscular porn stars and influencers whose posts overwhelmingly flood algorithms that learn their social media behaviours. These discourses subjectify the broader 2SGBQ+ men's community through social media as a discursive practice, and in particular their sexual subjectivity, which requires them to respond in ways that address their needs.

This leads us to the intrinsic motivation aspect of this issue: there is evidence here that the combination of discourses that frame the bodies and lifestyles of 2SGBQ+ men through social media are internalized to the point of affecting the sense of self, and thus the perception of the self from the perspective of others. The comments shared above highlight how external influences, such as social media and porn, lead to a sense of self that is deficit based, which for this community is inherently tied to their sexual and gender identities and expressions. In line with a critical stance to health research, however, this conclusion points in a different direction. Rather than assuming that steroid use among 2SGBQ+ men is yet another illicit substance use

habit tied to a lifestyle grounded in vanity and sex, 2SGBQ+ men who used them in this study considered it a means of survival to reach a bare minimum in life only available to some. Motivations for using substances are vast and differ from person to person, and though AASs are considered illicit and regulated as such, they are not narcotic or as widespread as others used by this community. In response to the CASTRO study and others that connect this practice to sexual risk, increases in illicit substance use, and other elements of what social media and porn portray as the norm, these various practices function as technologies that keep the 2SGBT+ community alive, well, and thriving amidst a sociocultural context that stigmatizes, punishes, controls, and in some cases murders members of this community.

Finally, this study has illuminated the notion that the structures in place that uphold the practice of AAS use are perhaps not the needed focus, in particular from the perspective of health policy and practice. If the link between AAS use and its motivators is explored from the perspective of seeing them as a tool to resist domination, one might rather explore the structural factors that uphold discursive regimes of the body and the self in the first place. In other words, health interventions for this population—those who use AASs—may consider targeted approached to deconstructing and challenging the power inherent in social media and porn, for example, to allow it to frame and reframe social realities. From the perspective of those interviewed in this study, who are attempting to alleviate the burden of what Foucault deems the subjectification process, AAS use not the problem. Rather, the problem is those structures that disadvantage them to the position of requiring various technologies to resist the control of their minds, bodies, and in some cases, souls.

Given that this is but a minor, yet rich, glimpse into a practice that public health has deemed a "problem," and yet this is the sole study to explore it qualitatively, recommendations for future research include a stronger and deeper analysis of this practice among men throughout Canada. The questions that remain from this study include: How is this practice different between regions, and within larger populations of ethno-racially diverse communities? What are the impacts of the stigma associated with this practice for those who use AASs? What are the communities that are formed around this practice? And, most of all, what is an appropriate public health response to this practice among 2SGBQ+ men's communities? Beyond this, there are many avenues to explore theoretically. Foucault was not able to fully elaborate his work on technologies of the self, and despite many authors taking up his work since 1988, I am intrigued

by the advances in science and technology studies that may link poststructural theories of sexuality with this practice. Moreover, what is next in for this subcultural shadow economy? As technology continues to advance, will artificial intelligence factor into the drives and motivations for 2SGBQ+ men to use AASs? And, finally, given the expansion and complexity of sexuality and sexual identity, it is worth exploring AAS use among non-2SGBQ+ men from a qualitative perspective. After all, their images and bodies are an "idolized" standard that so many 2SGBQ+ men are directed to believe in and to achieve. These questions are crucial and necessary to continue advancing social justice and emancipation for this community because, as we have seen through this study, there is more to it than just muscles. Further research will contribute to the field while continuing to tell the story of this poorly understood, and in some cases misunderstood, practice.

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Linking Manuscript 1 and 2

The theoretically grounded form and function of manuscript 1 originated from the theoretical foundations underpinning this study. As mentioned above, it is my intention to continue articulating and elaborating on critical social science approaches in health research. The data collected in this study is rich and multi-faceted with general applicability to public health researchers, practitioners and community members with an interest in this topic. As such, the second manuscript is geared more towards a public health audience. While I have endeavoured to concretely share the results of this study, I have opted to resist the expectation of dominant public health paradigms by neglecting the classic frequencies that quantitative research relies on, where possible. This is evidenced in manuscript 1, and to a lesser degree manuscript 2.

Results: Manuscript 2 (Public Health focus)

Sources of Knowledge and Truth related to Anabolic/Androgenic Steroid Use among 2Spirit, Gay, Bisexual, Queer and Other Men Who Have Sex with Men in Manitoba: Implications for Public Health

DECLARATIONS

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Conflicts of interest/Competing interests: The author declares that they have no conflict of interest.

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.

Availability of data and material: All data is available upon request.

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Abstract

Objectives

Objectives included: 1) understand the practice of Anabolic-Androgenic Steroid use among Two-Spirit, gay, bisexual and queer (2SGBQ+) men in Canada, 2) identify the sources of information consulted in the consideration of using AASs among 2SGBQ+ men, and 3) identify and articulate the public health implications for supporting the health of this population specific to AAS use.

Methods

A Foucauldian Discourse Analysis (FDA) methodology consisting of semi-structured interviews was employed with data collected from two sample groups of 2SGBQ+ adult men (*n*=17).

Results

General AAS use practices were explored and identified. Discourses related to work and achievement and enhancing the body, and those related to privileged knowledge and truths were identified as factors implicated in the practice of AAS use.

Conclusion

This study recommends further research on this topic as well as a harm reduction approach to the development of resources and services for 2SGBQ+ men who use AASs.

Keywords: 2SGBQ+ men's health, anabolic-androgenic steroid use, Foucauldian discourse analysis, risk discourse, LGBT Health, harm reduction.

Introduction

Androgenic-Anabolic Steroid (AAS) use among Two-Spirit, gay, bisexual, queer and other men who have sex with men (2SGBQ+) is more common than among the general male population, and is often cited as being linked to significant increases in various other sexual and other illicit substance use risk practices (Ip et al., 2019). The entirety of this literature originates from outside of Canada, and relies on quantitative data to describe and explain this phenomenon, with very few suggesting public health solutions to address this issue, and none 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, all research has focused primarily on the general male population with some examining the practice within the context of post-secondary sports teams, professional athletes and young adults (Adlaf et al., 2005; Adlaf & Smart, 1992; Blouin & Goldfield, 1995; Goldfield, 2009; MacNeil & Webster, 1997; Melia et al., 1996; Young, 2012). Similarly, prevention methods or interventions are lacking from these reports. Global epidemiological data similarly has relied on quantitative statistics to examine this issue with the exception of one single Danish study that used interviews with non-2SGBQ+ AAS users with findings that suggest a link between this practice and the development of identity (Ravn & Coffey, 2016).

What is consistent among the literature however, including for 2SGBQ+ men, is the dominance of discourses of risk that frame this practice as unhealthy, shameful, and harmful, with one meta-analysis deeming AAS use a global public health issue (Sagoe et al., 2014). 2SGBQ+ men have often been investigated, researched, and portrayed in the literature as a "vulnerable" population due to increases in risk for a variety of health outcomes, though this discourse has shifted more recently to explore the social and cultural influences that promote certain practices over others (Adlaf et al., 2005; Adlaf & Smart, 1992; Blouin & Goldfield, 1995; Goldfield, 2009; MacNeil & Webster, 1997; Melia et al., 1996; Young, 2012). While this is positive, and ultimately helps in reducing the stigma associated with this population, what is lacking is a similar evolution in the understanding and perception of AAS use for this group. Moreover, the dominance of risk discourse in public health literature, and the absence of solutions, leads to a gap in our understanding of the impacts of risk discourse associated with AAS use for 2SGBQ+ who use them.

With this in mind, this study sought to address these gaps using a qualitative approach with 2SGBQ+ men in Manitoba, Canada while also responding to the following research objectives: 1) understand the practice of AAS use in general among 2SGBQ+ men in Canada, 2) to identify what sources of information are consulted in the consideration of using AASs among 2SGBQ+ men, including how risk discourse figures into the decision making process, and 3) to identify and articulate the public health implications for supporting the health of 2SGBQ+ men who choose to use AASs.

Background

Anabolic-Androgenic Steroids (AASs) include testosterone and its synthetic derivatives, which are primarily indicated and used to treat health conditions, such as (but not limited to) reproductive system dysfunction, breast cancer, anemia, and wasting caused by the treatment of HIV/AIDS (Sagoe et al., 2014). However, in this context AASs are used by individuals motivated by the desire to increase performance or enhance their physical appearance, muscle strength and/or mass (Ip et al., 2011, 2012; Kanayama et al., 2020). Illicit and off-label AASs are administered either orally or by injection, and the drugs themselves come from a variety of sources including illegal clandestine labs and web retailers (Sagoe et al., 2014).[4] In Canada, a total of seven studies to date have looked at AAS use with varying population foci including the general population (Adlaf & Smart, 1992; MacNeil & Webster, 1997), bodybuilders (Blouin & Goldfield, 1995; Goldfield, 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 groups of large sample size high school students, were very low; conversely, prevalence rates among bodybuilders with smaller sample sizes were much higher (see Table 1 below for a summary). Despite these studies looking at a range of health and quality of life dimensions, including eating disorders and issues related to substance use, there have been no published studies to date that focus specifically on 2SGBQ+ men who use AASs in Canada.

Outside of the Canadian context, several studies have looked specifically at gay and bisexual men, including in London (Bolding et al., 1999, 2002), Australia and New Zealand

[4] It should also be noted that the realm of AAS use includes performance-enhancing drugs (PED), such as human-growth hormone (Sagoe, 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 reported here.

(Griffiths et al., 2017), and in the USA (Halkitis et al., 2008; Ip et al., 2019). The 2019 USA study originally reported on AAS use in the context of a number of health criteria, which prompted a deeper dive into how AAS use among gay, bisexual, and other men who have sex with men specifically, was connected to sexual risk behaviours and illicit drug use (Ip et al., 2019). And, the Halkitis et al. (2008) study explored the practice among of sample of GBMSM in New York City and found that the practice was significantly correlated with higher age and HIV-positive status. They 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). Table 1 below summarizes the various prevalence rates and dates at which they were recorded.

[Insert Table 1 Here]

Each of the studies that included 2SGBQ+ men outlined the health risks associated with using AASs. For example, while the prevalence of AAS use in the Australia and New Zealand study was low, the prevalence of *thinking* about AAS use was high at 25.4%, which was associated with body image and eating disorder psychopathology (Griffiths et al., 2017). The London study also noted similar findings with the addition of commonly reported and researched side effects including testicular atrophy, depression between cycles (the time in between bouts of using AASs), insomnia, hypertension and suicidal thoughts (controlled for HIV status) (Bolding et al., 2002). In terms of sexual risk and outcomes, which is a focus for this proposed program of research, the CASTRO study in the USA found that AAS use was significantly correlated with sexual risk-taking behaviours, in particular condomless anal intercourse (CAI) (84.8 vs 60.8%, $p < .01$), which is of relevance to 2SGBQ+ men given the existing increase in risk for HIV and other sexually-transmitted infections (STIs) (Ip et al., 2019).

Finally, it is relevant to note that AAS users are engaged in illicit substance use either orally or by injection. They are also engaged in a shadow economy of buying such substances, which come with risks unto themselves (Ip et al., 2019). The CASTRO study stated that: "Compared to non-users, the gay and bisexual men who used AAS reported a threefold higher rate of methamphetamine and double the rate of ecstasy use," which is significant because methamphetamine use is correlated with a double-fold increase in HIV risk in the same location

(Ip et al., 2019, p. 107). Similarly, "[e]cstasy use among gay and bisexual men has been reported to be associated with having more sexual partners, having more one-night stands, and having male–male condomless anal sex" (Ip et al., 2019, p. 108). These interrelated and compounding effects paint a picture of a phenomenon that Merrill Singer (2009), a medical anthropologist, originally coined as "syndemics" in the 1990s, which refers to the notion that various epidemics are intertwined and that to solve one is difficult without solving the others.

From a public health perspective, the health of this population is often framed within the context of risk—in particular for HIV/AIDS—with other sources highlighting the resiliency and strengths. In Canada, 2SGBQ+ men are at greater risk for: HIV/AIDS and other STIs (PHAC, 2018), alcohol (Dermody et al., 2014) and substance use disorders (Cochran et al., 2007), eating disorders and body image issues (Allensworth-Davies et al., 2008; Davies et al., 2019), mental illness diagnoses, discrimination and violence, suicide (Hottes et al., 2016), and certain forms of anal and oral cancers (Rosser et al., 2019), to name a few. Of note as well is that these health concerns are not distributed equally among 2SGBQ+ men; those who are marginalized by a multitude of factors including the social determinants of health and other intersecting experiences of oppression deal with negative health outcomes that are unique to their particular context and social location (Davies et al., 2019; PHAC, 2018). When focusing specifically on the three prairie provinces of Manitoba, Saskatchewan, and Alberta, a patchwork of policies and programs exist that lead to varying degrees of support for this population, which differ from those in larger urban centres around Toronto, Montreal, and Vancouver. For example, Manitoba and Saskatchewan have the highest HIV rates in the country, as well as the largest representation of Indigenous people within their populations (CATIE, 2018). However, both Alberta and Saskatchewan provide universally accessible Pre-exposure Prophylaxis (PrEP) for men at risk of acquiring HIV (Small, 2018), exemplifying the inconsistency in approach despite similar population risk factors. Moreover, there is no literature specific to AAS use among 2SGBQ+ men on the prairies and there has yet to be a deeper examination of associated issues, such as body image challenges, hegemonic masculinity, and discrimination that are connected to 2SGBQ+ men (Souleymanov et al., 2018) and that may be connected to AAS use for this population in Manitoba.

Risk Discourse in Public Health

Given the literature cited above that consistently frames the health of this population through the context of risk, background information for this study also includes the work of poststructural social theorists in the realm of discourse and power. Michel Foucault, a French theorist synonymous with this concept and the development of theories of governmentality and biopolitics, put forward that various public and private conversations that occur in social arenas are constitutive of sociality itself (1990). What results is that social meaning is rooted in various and all forms of communication, and that these discourses are what regulate our social world (Fairclough, 1992, 1995, 2001, 2003). Given their ability to regulate and structure reality, discourses have power; this is a key consideration given that power is finite, leading to some discourses becoming dominant over others. Despite the intersubjective reality that is created through discourse, the forces that shape it tend to subjugate certain people, experiences, groups, spaces, and identities (Foucault, 1976). In the case of 2SGBQ+ men who use AASs, discourses of risk and shame associated with this practice are what shape the realities around it more so than the act itself. As mentioned above, discourses of risk are not unique to this population. As Lupton described in 1993, the term "risk" in public health is synonymous with danger, and is used so frequently that a "discourse of risk" dominates the arena. For example, populations are deemed "at-risk" due to what are deemed lifestyle choices when in fact accessing the freedom to choose is predetermined by social factors. Though, individuals and communities remain responsible for the burden of blame for negative health outcomes which is a phenomenon exasperated by risk discourses of risk (Lupton, 1993). Risk discourse is also political, which Foucault (1980) described in great detail throughout his work. Governing subjects through stigmatization and exclusion can be seen as a form of victim-blaming, which absolves the state of the responsibility of managing the burden of disease (Lupton, 1993). Funds for prevention and care are then distributed depending on the value system embedded in the government making decisions about everything from how that system is organized, financed and framed to the public (Marchildon & Di Matteo, 2015). At the micro level, risk discourse induces anxiety and guilt (Lupton, 1993), and this raises ethical concerns for the ways in which the those with privilege, including health care providers, use their power in a public health care system that strives to serve all individuals equitably.

Methods

This study employed a Foucauldian Discourse Analysis (FDA) methodology, which is rooted in a Foucauldian poststructural ontology that sees social realities produced and reproduced through discourse (Foucault, 1997). Thus, FDA holds the epistemological position that knowledge is generated through circular power relations: power produces truth, and knowledge is generated through engaging with or resisting power (Foucault, 1984). FDA aims to reveal the discourses that regulate social life through the deployment of certain knowledges, particularly through various means of communication (Macias, 2015). According to van Dijk (2003), FDA is a type of discourse analysis that primarily studies the way abuse, dominance, and inequality of social power are enacted, reproduced, and resisted through language in social and political arenas, in this case the arena of public health research. As Macias (2015) states: "FDA requires us to interrogate how power is at work in the statement in ways that determine what the statement explicitly or implicitly denies, disavows, or excludes, as well as what it accepts, avows, and includes," (p. 225). Macias builds on this by saying that we must also seek to understand how statements fit within larger ideological systems that produce truth across history. Given how FDA is situated within a poststructuralist frame, it also requires us to explore how and why statements achieve or fail to capture the full range of human experience why (Macias, 2015). This study sought to look for what Foucault called biopolitical effects that are at work in the statement (Foucault, 1984, 1990). These include the ways in which, for example, 2SGBQ+ men internalize knowledges of AAS use put forward by dominant power regimes (public health, the media, etc.), and share knowledge related to this practice with others, thereby constituting a privileged social reality through the deployment of essentialized truths. While FDA has been taken up by many poststructuralists as a study design and analysis tool, the key for understanding its applicability to this study is to focus on how FDA enables us to uncover how power produces truths over time, and how those specific truths are reproduced through discourses that subjugate and oppress marginalized people—in this case, 2SGBQ+ men. FDA is particularly aligned with Objective 2 of this study, which seeks to understand what sources of information are consulted in the consideration of using AASs for this population. Given the dearth of empirical evidence in Canada, the lack of qualitative literature on the topic, and the dominant risk discourse in the literature that does exist, FDA is a suitable and effective methodology that not only accounts for these factors, but can also highlight opportunities for emancipation (Macias, 2015), which are

welcomed by 2SGBQ+ males communities who remain marginalized and oppressed in society today.

Data was collected from each participant by way of semi-structured interviews (Kvale, 1996) conducted primarily via Zoom, which has increasingly been used by qualitative researchers as a secure videoconferencing platform (Archibald, et al., 2019). All participants provided oral consent, which was captured in the transcript. Oral consent was approved by the Research Ethics Board due to the fact this study collected data during the COVID-19 pandemic, which necessitated a non-contact-based form of informed consent and approval. Each interview 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 to the study (O'Reilly & Kiyimba, 2015). Thus, data for this study comprised mainly of transcripts of each recorded interview, as well as recorded reflections after each interview and several recorded memos capturing thoughts and reflections throughout the study process. MAXQDA (VERBI, 2018) was used to process and analyse all data using a three-stage process that involved open and axial coding using a combination of inductive and deductive coding systems followed by a return to the data to conduct FDA as it related to the objectives of this study. All procedures performed in this study were in accordance with the ethical standards of the [BLINDED] and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

RESULTS:

The Sample

This study recruited a total of seventeen 2SGBQ+ adult men representing a range of ages, identities, and experience that formed two distinct sample groups (see Table 2). Sample Group 1 (SG1) consisted of current or past AAS users and Sample Group 2 (SG2) consisted of 2SGBQ+ men who considered using them but chose not to follow through. Two Sample Groups for this study were advantageous is addressing each objective of this study. The overall sample was quite diverse with ages ranges between 23 and 42, ethnicities that included six Black, Indigenous, and other people of colour, annual incomes ranging between $35,000 and $650,000, and several participants living in rural locations.

Objective 1: AAS Use Practices

SG1 consisting solely of eight current or past users reported a wide range of AAS use habits. Substances mentioned throughout the interviews included: Testosterone, Insulin, Clenbuterol, Human Growth Hormone, Winstrol, Anavar, Trenbolone, Deca-Burabolin, and Equipoise. Among these, Trenbolone was the most commonly cited substance used. When asked where men in this study acquired their AASs, participants indicated that their trainer was the most common source, followed by internet-based stores around the world. Given that AASs can be taken either orally or by injection, participants were asked where they acquired supplies such as unused needles, with responses that vary from them being included in the shipment with AASs from out of country sources, to purchasing them at local pharmacies and supplement stores. Participants indicated a wide range of costs associated with varying timeframes for AAS use practices; several mentioned that they paid between $250.00 and $500.00 per month when taking AASs, and others valued the costs based on a "cycle," which ran upwards of $600.00 for one individual. The frequency with which participants engaged in their individual cycles varied as well, with some opting for periods of abstention in between two-to-three month cycles, and others indicating they preferred to wait a year between cycles to allow the body to restore natural testosterone production. Among those who weren't currently using AASs, five of the eight individuals indicated future plans to use them again, with one individual sharing that that past AAS use led to long-term health complications and so using them again was no longer an option.

The desired intended effects discussed by participants paint a picture of the goals each individual set to achieve in using AASs. These included improving physique, gaining or losing weight, feeling stronger or becoming stronger, attracting partners, gaining social power, becoming more masculine, and avoiding the effects of homophobia. The most common among these was to improve the look of the body. A key area of discussion throughout interviews also included talking about side effects, and there were many, which have been documented before. These included impacts to sex drive and sexual function, mood swings and disorders, symptoms of depression and anxiety, and, for one individual, suicidal thoughts between cycles. One individual shared the following comment: "You kind of do get addicted to it. You know the rush of it, not the rush, but you're in that high place and you just feel ripped and you feel great. It's

addicting" (BIPOC, cisgender gay male, 30). Despite this, four out of the eight current or past users perceived AAS use as healthy:

> "Because it showed the physical manifestation of what we were injecting, it really felt, at that time, that this thing is good, it's healthy, because I am not losing weight. I am not getting sick, but this is making me bigger, stronger and faster, you know?" (BIPOC, cisgender gay male, 26).

When asked how participants managed risk, they often cited typical harm reduction practices such as trusting their sources and using clean needles for every poke. Each interview revealed a complex set of practices and issues for each individual, ranging from: psychosocial challenges to practical barriers with managing the need to train the body while taking steroids, eating enough food to keep up with calorie burn rates increasing, and dealing with overseas that are unreliable. That said, the resourcefulness with which each individual approached the use of AASs highlights that it was worth it enough to manage through the challenges and the risks to acquire the intended results.

With this in mind, and in considering the presence of discourses that operate within this area of the study, one clear theme emerged. There appeared to be a consistent discourse of work and effort throughout the interviews. All participants described the ways in which effort, dedication, and commitment were needed to achieve results. They shared comments such as:

> "I had set weight goals for myself and I've surpassed them. And I always said that I would stop then, and I have never. I always set a new goal. So, no, I don't think that I have an end. And I think probably when I started, I was a little more shy of how long you take it for. But now that I've been on it, I don't think that I would stop taking them any time soon. Yeah. I have no end game." (white, cisgender gay male, 42).

> "Oh my god, it's so much work. So that's why I do it every other year now. It's like, okay, I'll try it again next year." (BIPOC, cisgender bisexual male, 29)

These reflect what Foucault calls an ethic of self-care, where the state uses stigma and other regulatory means to police subjects into regulating themselves (Markula, 2004). These regulatory discourses are embodied through processes of subjectification that produce truths, which are evident in the discussions with participants around the need to succeed, achieve, and grow with the use of steroids. Though a variety of motivations were discussed, some connected to the sense

of self and others are related to discourses in the media that frame the ideal individual. In this case, what Crawford (1980) calls "healthism" is at play in that participants have internalized the sense of duty to change their body to reach a prescribed status quo.

Objective 2: Sources of Knowledge & Truth

Each participant across both sample groups were asked about where they sought information about AAS use practices in order to understand what sources of information were consulted and which were deemed trustworthy. All seventeen participants consulted the Internet for the majority of the information they acquired. The majority of sources are not considered authoritative by academic standards, with only three participants seeking information from medical journals. The remainder cited YouTube videos, online forums, pages hosted by personal trainers, and other message boards. That said, no participants indicated a challenge with finding information; rather, several indicated having to sift through content that provided inconsistent info on all topics, including how to use AASs, where to acquire it, how to use it safely, and which substances to use simultaneously (known as stacking). Other sources of information included personal trainers, family, and friends.

Some of the participants who used AASs were open with their health care providers who responded in a variety of ways. In five of the eight cases, health care providers were supportive in the sense that they respected the participants right to choose. In others, the health care provider managed the issue with caution. In the remainder of cases, 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 that encounter:

> "I'm currently not open with them about it, I'll explain that why. But I am open with them about it because I feel like I should be and have to be, and why would I not 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 rather than the other way. 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 this about the response they received:

> "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," (BIPOC, cisgender bisexual male, 29)

> "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, just because, and rightfully so, they said there's not enough knowledge on it" (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 overall health in the context of using AASs. One participant shared the following:

> "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).

These comments show that there are great inconsistencies between approaches and responses from health care providers. Similarly, the sources of information that 2SGBQ+ men who use AASs consider and consult are predominantly non-authoritative and untrustworthy. It is also evident that seeking out information is a primary risk reduction practice for 2SGBQ+ men who use AASs despite the absence of authoritative sources on this topic. All participants from both sample groups were asked to share advice for others who are considering using AASs and each of them said "Do your research." If research is a key method to engage in this "risky" practice, where should 2SGBQ+ men turn if health care providers send mixed signals? All participants in this study were very adept to the information they accessed about this topic, partially because

they could not easily ascertain real truth from fiction and this, for some, led to actual harmful outcomes from using AASs. The participant mentioned above who still deals with long term effects of using AASs found that the lack of knowledge on how to use them safely was a far more severe outcome than those he read about online.

From the perspective of FDA, health care providers are powerful social actors who have a great deal of influence over the health of the public. In these cases, health care providers used a variety of tactics to respond to this practice, including shame, sending mixed signals that it is acceptable but immoral to use AASs, and in some cases failed to create a safe and supportive environment to discuss safer AAS use. Moreover, this forces AAS users to engage with non-trustworthy 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. According to Foucault, tracing the genealogy of truth to the source (1988), which in this case primarily other users, reveals that risk discourse replicated and reproduced by health care providers privileges accurate information that, if deployed in accessible ways, could lead to safer AAS use for this population. Furthermore, it is evident that AAS users are producing and reproducing certain discourses about using AASs that are consulted and adopted by individuals who are left without accurate, value-free information. In fact, throughout the interviews, a discourse of risk emerged specifically from the fact that information was not trustworthy, which helps characterize the circular power relations identified by Foucault: truth produces power, and power produces truth. In this case, public health produces truths through the deployment of risk discourse, through research, and through health care providers, which then leads to individuals with their own knowledge on the topic gaining power over others—for example, those who write the content for internet sites. The outcome of this is a privileging of knowledges held by powerful actors that contribute to the subjectification of less powerful groups, and in this study 2SGBQ+ AAS users who face a variety of stigmas based on their identity and their choice to use AASs.

Discussion & Conclusion

This study has revealed information not previously recorded about the practice of AAS use among 2SGBQ+ men in Manitoba, Canada. This evidence can and should be consulted by those who are considering to use AASs, and those who are responsible for supporting the health

of this community. This study also examined, through a Foucauldian poststructural methodology, the systems of power produced and replicated through discursive regimes related to AAS use. What is clear from this study is that the sources of knowledge and information on this topic should be considered a risk alongside the potential negative health outcomes that public health literature tends to focus on. Health care providers need to consider their role in this as they are, as mentioned above, powerful social actors who have the means to influence the culture and sociality surrounding AAS use, which are important dimensions of life and health for all.

Public Health Implications

First, public health researchers need to examine this practice further outside of the context of risk to help establish a contextualized knowledge-base that reflects the experiences of those who use AASs. Second, authoritative sources of information on health practices need to develop accurate, non-judgmental, and accessible information on AAS use for this population. A harm reduction approach, which is linked to improved sexual and reproductive health outcomes (Sansone et al., 2021), may address multiple issues associated with this practice, including sexual and substance-use related risk. Third, health care providers need to examine their role in supporting the stigma surrounding AAS use. As evidenced by the participants in this study, there is fear around approaching the subject, evidently due to the responses current and past users have received that send mixed messages about what users can expect from their provider, in particular the risk of being shamed. As evidenced by the participants in this study, there is fear around approaching the subject, simultaneously due to the responses current and past users have received that send mixed messages about what users can expect from their provider, and to the risk of being shamed. Finally, as existing literature suggests a stable trend of higher prevalence rates for this population and associated risks, further research is needed on this topic because this form of illicit substance use is unlike others; this warrants a focused, rather than general, study.The culture around AAS use, evidenced by the results above that tie it to performance, strength, and ability differ greatly from the stigmatized associations of crystal meth use, for example. This presents an opportunity and unexpected entry point into supporting the health of 2SGBQ+ men from a vantage point not yet explored. For example, harm reduction programs focused on AAS use for this population may be easier to engage with for users, who are statistically more likely to engage in higher risk sexual and substance use habits. Once a

connection to a supportive health promotion program is established, 2SGBQ+ men could potentially access other forms of support that would traditionally pose barriers due the stigma associated with substance use in general. Furthermore, accessing a steroid resource or support group could open the door for support with mental health and substance use. In summary, without a better understanding of AAS use among 2SGBQ+ men in Canada, we lack the tools needed to appropriately manage the risks that public health is tends to focus on, which leaves the system at risk of failing a population that already faces inequitable access to the conditions and resources needed to lead a healthy life.

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Table 1: Summary of Prevalence Rates by Region, Author and Population Focus

Country/Region	Authors & Date	Population	Prevalence
Global meta-analysis and meta-regression analysis	Sagoe et al. (2014)	General overall	3.3% (95% confidence interval [CI], 2.8e3.8; I2 ¼ 99.7, P < .001)
		All females	1.6% (95% CI, 1.3e1.9, I2 ¼ 96.8, P < .001)
		All males	6.4% (95% CI, 5.3e7.7, I2 ¼ 99.2, P < .001)
Canada	Adlaf & Smart (1992)	General	0.3% (*n*=13,909)
	Blouin & Goldfield (1995)	Bodybuilders	14.4% (*n*=139)
	Melia et al. (1996)	High School	2.8% (*n*=16,169)
	MacNeil & Webster, (1997)	General	0.3% (*n*=12,155)
	Adlaf et al. (2005)	High School	1.1% (*n*=3,892)
	Goldfield (2009)	Female bodybuilders	17.8% (*n*=45)
	Young (2012)	High School	1.4% (*n*=40,630)
London	Bolding et al. (2002)	Gay and bi men	15.2% (*n*=772)
Australia & New Zealand	Griffiths et al. (2017)	Gay and bi men	5.2% (*n*=2,733)
USA	Ip et al. (2019)	Gay and bi men	21.6% (*n*=153)
	Halkitis et al. (2008)	Gay and bi men	33% (*n*=331)

Conclusion

This study, including the process of moving from theory to practice and back to theory, was effective at developing the literature on this topic further, while also contributing a critical response to the dominance of risk discourse in public health. There are, however, a number of themes and issues not yet presented that figured into the data analysis of this project. This section will walk through a summary of written results, present new results not included above, and summarize the discussion and recommendations that have emerged throughout this study. A short personal reflection of the process concludes this work.

Summary of Results

Both manuscripts above present two different, yet complementary perspectives on AAS use practices among 2SGBQ+ men. The first is rooted in a social sciences approach to health sciences research. It strives to approach this practice theoretically in order to provide a deeper, more nuanced understanding of this health impacting practice. Findings from this perspective included the exploration of two major thematic domains that spanned intrinsic and extrinsic motivations, and several discourses were revealed through FDA that shaped the social realities of subjects within this study. Those included: the internalized stigmas associated with idealized bodies, bodies with power, bodies that reflect the minority of human experience, and the majority of gay male representations in throughout the socio-subcultural world of 2SGBQ+ men. Results also shed light on major influences and motivators that operated at the level of discourse to structure the need for this practice, including social media and porn. By approaching this theoretically, it became clear that the knowledge/power loop that Foucault uses to demonstrate power's productive nature applies in this instance. For example, 2SGBQ+ men use AASs as a means to relinquish themselves from the domination of pervasive discourses in social media that idealize the male body (white, toned, muscular, and sexualized). This particular aspect of the study raises interesting questions for further exploration: what is the role of the influencer in this process? In other words: what is the role of the human attached to the body in the images that represent this reality? If discourses in the media are created by individuals, did they adopt and internalize discourses from that same media? In other words, social media influencers may have been influenced by this media. What follows is the question of how they exist in that space, and

from a health perspective: what impacts do they experience as a result of that social and power location?

The second manuscript deals almost exclusively with immediate public health applications and implications. What was presented around the notion that health care providers hold power and knowledge, yet are not accurately reflecting their knowledge around the practice of AASs, paints a clear line between contradictions in theory and practice for these practitioners. Moreover, the need to consider a harm reduction approach as an opportunity to support 2SGBQ+ men in their pursuit of self-identified goals in ways that are healthy, also presents the opportunity to intervene (where needed) into other illicit substance practices that are framed entirely differently by users themselves. The goal for this manuscript is to achieve rapid implementation while setting forth an agenda for further elaboration. Ultimately, with very little research in this area in Canada to date, the opportunities abound.

Outside of these two pieces of writing exist other themes that figure into the data analysis process. For example, many participants spoke of the stigma associated with AAS use. They gave examples of what they understood other perceptions of this practice to be and also shared stories of managing secrecy. Some shared examples that link this practice to issues of morality, including that a connection to doping in sports and how this is considered cheating. Additionally, a lot was said by participants with respect to sexuality and the impacts to practices and sexual identities. There were definite changes in participant libido, sex drive, levels of desire, interest in certain partners, and one individual even framed testosterone use as the gateway to bisexuality from his static heterosexual state. Another individual spoke at length about the link between muscle and kink for him, and how access to this community through steroid use enabled him to express himself freely, achieving a level of sexual liberation not otherwise available to him. And, of course, the health implications of all of these were explored, including harm reduction practices. While this particular area was an initial goal for the study, the priorities I set for publishing differed from this goal. While these are areas that I will write about and aim to publish in the future, my goal in this program was to work diligently at a theoretical level. The methodology for this study positioned me to explore and detail the powerful effects of discursive regimes. The trade-off for this is a lack of depth and nuance in areas connected to masculinity, racialized bodies, and theories of the body itself. Given the overwhelming frequency with which

social media arose throughout discussions, a deeper dive into the world of technology is warranted.

It is with all of this in mind that I propose the following research themes and topics or future work in this area. First, understanding the stigmatic effects of steroid use is required to address the various social barriers for all those involved to articulate and support what healthy steroid use looks like. Second, an understanding and exploration of the role that technology plays in the sexual and general subjectification process for 2SGBQ+ men is needed. Third, exploring the virtual body and the physical self, in particular the version of selves who are portrayed through what participants in this study called "influencers" is important to truly understanding and how their influence actually works. There are many implications for these topics, and they reach beyond public health to the realm of economics, sexual citizenship, and media studies. Fourth, this study presents an opportunity to scale up throughout Canada, which would allow for regional and local differences to be factored into analysis; for example, are these results unique to Manitoba, or has the internet removed those barriers entirely?

Finally, in pursuit of advancing critical social sciences research in health, the work of Michel Foucault is not complete and further development of his work on technologies of power and the self are needed. While many theorists have continued to pursue this mode of inquiry, there is potential to link this to actual technology. Technologies of the self was one of Foucault's last theories to develop prior to his passing, which occurred before the inception of social media in the early 2000s. There have been studies that explored this in the context of sport (for example, see Markula [2004] for this work from a feminist perspective), however a critique of the history of this theory is due. As mentioned above, queer epistemologies continue to be developed and these are influenced by Foucault and many others. This ongoing development presents opportunities to explore technologies of the self outside of the bounds of structured identity categories. What does it mean to explore technologies used to resist domination outside of the "Self," and into communities, institutions, and societies? It is my opinion that we are now in a social world where categories of people and groups are harder to define due in part to the resistance to the process of definition that has evolved over time. Research, from a contemporary queer methodology, could take up this work and reimagine post structuralism as a way to articulate a future body of thought. Is this post-poststructuralism in the works? What does that look like? Can we even know it, see it, and understand it? These are the questions that will

advance a critical social sciences agenda within the realm of health research, and they are what I will focus on throughout my career in academic research.

Reflections from the Field: Research during the COVID-19 Pandemic

This work would not be complete without a summary of the experience of researching during a global event that hypothetically happens once in a lifetime. The COVID-19 pandemic emerged in Manitoba on March 13th, 2020, while I was waiting for the Heath Research Ethics Board to approve my study. I had extensive plans to attend gyms, meet people, advertise in physical locations, travel to conduct interviews, and most importantly develop relationships with those who participated in this study; that all changed. There was no in-person anything, no physical recruitment, and certainly no relationships formed in traditional ways. This completely altered the research process, and challenged me as a student researcher. For one, the focus on research immediately changed to a focus on COVID-19. Anyone connected to a research agenda began asking the question: "What can I publish about COVID-19?" I did consider this and there were only a few links between the practice of AAS use and the pandemic for the participants in my study. What was more pronounced for me was the personal impacts of dealing with stress and anxiety while collecting and analysing data. It is too soon to understand how this has impacted the research process, including the findings, because it is still happening today (written May 24th, 2021 in the midst of the "third wave" in Manitoba). That said, many questions arose for me that are eventually worth exploring. Speaking practically, and as noted in the methods chapter of this thesis, the pandemic did simplify some things. There are some aspects to the changes to everyday life that might stay. From my perspective, videoconferencing interviews are much easier to coordinate and facilitate. They provide ease and comfort for interviewees. Some participants in this study were able to show me the space in which they used AASs, some showed me the magazines they read about body building, and most importantly, all participants chose where the interview took place. This level of choice and autonomy certainly contributed to a comfortable encounter that may have reduced or mitigated the power differential between myself, the researcher, and the participant. I look forward to "looking back" so to speak on COVID-19 and the effect it had on this research. That said, there are some parts that I believe really should stay.

Final Reflection – Insider Status

This process was hard, messy, and incredibly complex; however, I am reminded of the quote "Write what you need … to read" by Brené Brown and this is exactly what happened throughout this program. I say this because in articulating the power dynamics at play for 2SGBQ+ men in Manitoba, I have simultaneously explored my own self in this context. I have felt shifts within me related to how I interpret discourse and power in society, and I feel—though second to the gravity of the experience of my participants—a sense of liberty and freedom not previously understood. I am exposed to the same influences, in fact, and it's quite personal. In many ways, I am no different than the participants in this study. We are connected by cultural and social ties that bind our experiences, and so too is our liberation from domination bound together. It has been an honour to share this process with my own community and this reflects what was mentioned above about being an "insider." Not only was able to relate quickly with participants, I could decode their language, empathize with their struggles, and confidently and ethically reflect their experience in this writing. The work presented here certainly is, and was, what I needed to read, and this leads me to think that I am not alone, and that many of my fellow community members may benefit from this work as I have. It reaffirms my commitment to critical, emancipatory approaches; it validates my worldview; and most importantly, it honours my experience. This was not expected at the outset of this study. In fact, I spent a great deal of time anticipating challenges with being part of the community I researched. At the end of this study, it only contributed positively to the work and the outcomes, and I am pleased with the result. These are my final thoughts, and while this marks the end of this work, it also signifies a new beginning as I now move forward as a researcher in this field.

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Appendix 1: Final Research Questions & Objectives

As Proposed

How is Anabolic-Androgenic Steroid (AAS) use implicated in the sexual lives of gay, bi, and other men who have sex with men (GBMSM) in Manitoba?

The objectives of this study are as follows:

1. Describe how AAS use is connected to the production of sexual subjectivity in GBMSM in Manitoba;
2. Understand how GBMSM who use AASs engage with and manage risk in their sexual lives; and
3. Critically examine how GBMSM who use AASs engage with public health risk discourse surrounding this practice.

Manuscript 1: Social Sciences Focus

3. How is Anabolic-Androgenic Steroid (AAS) use implicated in the production of sexual subjectivities among GBMSM who use them?
4. How do GBMSM utilize steroids as a technology of the self to reconceptualize agency and resist sexuality-related stigma, oppression, and domination?

Manuscript 2: Public Health Focus

1. To understand the practice of steroid use among GBMSM, including the motivators
2. To understand what information potential users consult in their decision to use steroids
3. To understand the outcomes for those who use steroids, and for those who ultimately decided not to use steroids
4. To consider implications for public health in supporting the health of GBMSM

Appendix 2: Semi-Structured Interview Guides

These interview questions are semi-structured to provide a general pathway for the conversation, however in keeping with the theoretical framework of this study participants will be guiding where the interview goes.

Group 1

First Interview:

Section 1-A: Demographics

- I'd like to start with some demographic questions.
    - Can you tell me your age,
    - what you do for work,
    - how you identify your sexual orientation and gender identity,
    - and if you live in an urban or rural location?
    - Income range
- Tell me a little bit about what interested you to participate in this study.
- Do you have any questions about the study?

Section 1-B: Rapport building and Steroid use habits

- Tell me a bit about your steroid use habits – How long have you used AAS? How frequent? Are you using them now or when was your last cycle? Why did you choose to start?
- Where do you usually acquire AAS? You don't need to mention any names or identifiable details.
- How much do you spend on it monthly?

Section 4: Objective 3 – Risk Discourse

- Where did you learn about AAS use? What did you learn?
- What is one thing you wish you would have known before starting them?
- What do you think about how healthy it is for you?
- What are some of the benefits to using AAS for you? Some of the drawbacks?
- If you inject them, where do you get supplies, have you ever shared supplies with someone else?

- What do you think doctors and other health care practitioners think about AAS use? Are you open with them about it?
- Do you have any worries with it?
- What advice might you give someone trying to start it?

Section 2: Objective 1 - AAS use and Subjectivity / The Self

- How does AAS use affect how you see yourself, relate to others? For example, does using AAS make you feel better about yourself? What motivates you to use them?
- Does it change how you see yourself at all?
- Does AAS affect your relationships? What are the differences between you on AAS and off?
- What does it feel like when you are coming off a cycle? What has withdrawal felt like?
- Where did you learn about AAS, what did you learn?
- Do you plan to use them again, or plan to continue?
- Do you have friends or people that you talk to about it? What kind of community are you a part of that uses AAS, if any?
- Do you have advice for anyone considering starting AAS?

Section 3: Objective 2 – Sexual practices

- If it's okay with, I'd like to ask you questions about your sexuality and sex life?
- Are you currently in a relationship? Single and loving it, single and looking, or partnered open/closed etc.?
- Do you use any barriers or harm reduction methods? If yes, how often? What kind?
- Are these habits different when on or off AAS? Why or why not?
- How else has AAS impacted your sexuality? Have you noticed this at all?
- Do you talk about this with your health care provider? What do you both talk about?
- How does AAS use help or hinder your sex life?
- Can you tell me a story about how using AAS has been a part of your sexual life?

Section 5: Closing

- Thanks for sharing this information. If you want to get together again to talk, please let me know.
- Is there anything else you want to tell me?

Group 2 (Post ethics amendment):

Section 1-A: Demographics

- I'd like to start with some demographic questions.
    - Can you tell me your age,
    - what you do for work,
    - how you identify your sexual orientation and gender identity,
    - and if you live in an urban or rural location?
    - Income range
- Tell me a little bit about what interested you to participate in this study.
- Do you have any questions about the study?

Section 1-B: Rapport

- Tell me a bit about your views on steroid use.
- When did you start thinking about using them, how much time do you spend thinking about them and why did you start thinking about them?
- How does it make you feel to think about them?
- What do you notice that is different when you think about them versus when you are not thinking about them?

Section 2: Objective 1 - AAS use and Sexual Subjectivity

- Would using AAS change how you see yourself? Why or why not?
- What motivates you to considering using them?
- How would using them interact with your sex life in any way? How would using AAS affect your sexual relationships?
- What would you want to achieve by using them?
- Have you conducted any research about AAS use? What sources have you consulted, including people in your life?
- Do you plan to use them in the future?
- Why did you decide not to use them after all?
- Do you have friends or people that you talk to about it? Have you noticed a community of people surrounding the use of AAS?
- Do you have advice for anyone considering starting AAS?

Section 3: Objective 2 – Sexual practices

- If it's okay with, I'd like to ask you questions about your sexuality and sex life?
- Are you currently in a relationship? Single and loving it, single and looking, or partnered open/closed etc.?
- Do you use any barriers or harm reduction methods? If yes, how often? What kind?
- Would using AAS impact your ability to seek partners, acquire partners?
- If you woke up tomorrow and you had achieved your goal with AAS, what would be different about your sex life?

Section 4: Objective 3 – Risk Discourse

- What has your research taught you about AAS use, if applicable?
- What is one thing you think is very important to know about AAS?
- What do you think about how healthy it is for you?
- What would be some of the benefits to using AAS for you? Some of the drawbacks?
- If you injected them, where would you get supplies?
- What do you think doctors and other health care practitioners think about AAS use? Are you open your health care provider about this consideration?
- Do you have any worries with it?
- What advice might you give someone trying to start it?

Section 5: Closing

- Thanks for sharing this information. If you want to get together again to talk, please let me know.
- Is there anything else you want to tell me?

Appendix 3: Budget

Proposed Budget

Revenue	
SSHRC CGS-M Award	**$5,500**
Expenses	
Participant Honoraria @ $30.00 x max 12-20 participants x 1-2 interviews	$360 - $1,200
Transcription @ $100.00/recorded hour x 12-40 sessions	$1,200 - $4,000
Facebook Post Boosting	$100
Poster Printing	$50.00
MAXQDA Subscription for Students	$75.00
Recorder	$75.00
TOTAL RANGE:	**$1,860 - $5,500**
Surplus / Deficit:	**$0.00**

Final Budget

Revenue	
SSHRC CGS-M Award	**$2,835**
Expenses	
Participant Honoraria @ $30.00 x 17	$510.00
Transcription @ $100.00/recorded hour x 12-40 sessions	$2,000
Facebook Post Boosting	$100
Poster Printing	N/A
MAXQDA Subscription for Students	$150
Recorder	$75.00
TOTAL RANGE:	**$2,835.00**
Surplus / Deficit:	**$0.00**

Appendix 4: Consent Form Text

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM
INDIVIDUAL INTERVIEW (Version 1)

Title of Study: "*Sexual Risk, Subjectivity and Discourse in GBMSM Anabolic Steroid Use in Manitoba***"**

Principal Investigator: [redacted], Department of Community Health Sciences; Room S113 - 750 Bannatyne Avenue, University of Manitoba, Winnipeg, MB R3E 0W3

You are being asked to participate in a research study involving individual interviews. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends, family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of this Study

This research study is being conducted to study how Anabolic/Androgenic Steroid (AAS) use is implicated in the sexual lives of Gay, Bi and other men who have sex with men in Manitoba. This study has three objectives:

4. Describe how AAS use is connected to the production of sexual subjectivity in GBMSM in Manitoba;
5. Understand how GBMSM who use AAS engage with and manage risk in their sexual lives; and
6. Critically examine how GBMSM who use AAS engage with public health risk discourse surrounding this practice.

Participants Selection

You are being asked to participate in this study because you meet the following criteria:

1. You currently use or have used AAS in the past
2. You identify as gay or bisexual (including queer, and other non-heterosexual identities), **OR** you identify as straight and you have had sex with men
3. You are 18 years old, or older
4. You live or work in Manitoba.

A total of 12-20 participants are being recruited from

Study procedures

- The method of data collection for this study will be individual interviews, which will be conducted solely by the principal investigator
- You will be invited to complete one to two interviews depending on how much you want to share.
- You will be asked to share personal information about your life as it related to your sexuality and using AAS. These sessions will be recorded using an audio data recorder and will be transcribed by a third-party transcription service bound by a confidentiality agreement not to sure or distribute the information.
- Transcribers will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.

- No one's name will be asked or revealed during the individual interviews. However, should a name be disclosed, including the names of places, locations, businesses, or other people, they will be anonymized during the transcription process.
- You will have the opportunity to review the transcripts to make amendments or to add information up until the data is aggregated for analysis. This means that when the data is combined with other data, it will be impossible to remove your contributions.
- All audio recordings, documents and the like will be stored on a secure, password-protected drive. All paper copies of any data will be stored in a secure office at the address mentioned above.
- All study data, print or digital, will be destroyed after 7 years.

Risks and Discomforts
There are no anticipated physical risks to participants.

There are some other potential risks to you by participating in this research. It is possible that talking about sexuality and AAS use might be emotional, embarrassing or stressful for you. You can stop the interview at any time and will be offered a resource list after the interview should you be interested in mental and social supports in the community.

Benefits
Providing your perspective on sexuality and AAS use may contribute to the social, physical and mental health and wellbeing of community members in the future. This study aims to contribute to academic literature while also providing insight to how public health systems can better address the needs of this population.

Costs
There is no cost to you to participate in this study.

Payment for participation
You will be given a cash honorarium of $30.00 after signing the consent form and before the interview begins. You are entitled to keep the honorarium even if you stop the interview and withdraw from the study.

You will receive no payment or reimbursement for any expenses related to taking part in this study.

Confidentiality
We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records. A list of names and addresses of participants will be kept in a secure file so we can send you a summary of the results of the study. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point. The collection and access to personal information will follow provincial and federal privacy legislations.

Only the principal investigator and his Thesis Advisor (Dr. Deborah McPhail) and Committee (Dr. Rob Lorway and Dr. Rusty Souleymanov) will have access to the audio and digital files generated in the study. They have access to the data to support and facilitate research training for the PI. These will not be shared with anyone else without your expressed and written

consent unless they are part of the Health Research Ethics Board at the University of Manitoba who may wish to check study records or verify that all information is correct.

We may wish to quote your words directly in reports and publications resulting from this. With regards to being quoted, please check yes or no for each of the following statements:

Researcher may publish documents that contain quotations by me under the following conditions:	
☐ Yes ☐ No	I agree to be quoted directly (my name is used).
☐ Yes ☐ No	I agree to be quoted directly if my name is not published (I remain anonymous).
☐ Yes ☐ No	I agree to be quoted directly if a made-up name (pseudonym) is used.

Voluntary Participation/Withdrawal from the Study

Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study up until data has been aggregated together for analysis, which is anticipated to occur **by June 15st.**

Questions

If any questions come up during or after the study contact the principal investigator by email or by phone at:

[BLINDED]

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389

Consent Signatures:

1. I have read all 4 pages of the consent form.
2. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
3. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
4. I understand that my records, which may include identifying information, may be reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.
5. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
6. I understand I will be provided with a copy of the consent form for my records.
7. I agree to participate in the study.

Participant signature_____ **Date** _____
(day/month/year)

Participant printed name: _____

RESEARCH PARTICIPANT INFORMATION AND CONSENT FORM
INDIVIDUAL INTERVIEW (Version 2)

Title of Study: "*Sexual Risk, Subjectivity and Discourse in GBMSM Anabolic Steroid Use in Manitoba***"**

Principal Investigator: [BLINDED], Department of Community Health Sciences; Room S113 - 750 Bannatyne Avenue, University of Manitoba, Winnipeg, MB R3E 0W3

You are being asked to participate in a research study involving individual interviews. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends, family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of this Study

This research study is being conducted to study how Anabolic/Androgenic Steroid (AAS) use is implicated in the sexual lives of Gay, Bi and other men who have sex with men in Manitoba. This study has three objectives:

7. Describe how AAS use is connected to the production of sexual subjectivity in GBMSM in Manitoba;
8. Understand how GBMSM who use AAS engage with and manage risk in their sexual lives; and
9. Critically examine how GBMSM who use AAS engage with public health risk discourse surrounding this practice.

Participants Selection

You are being asked to participate in this study because you meet the following criteria:

5. You currently use or have used AAS in the past **OR** you are considering or have considered using AAS in the past but have not followed through or used them ever,
6. You identify as gay or bisexual (including queer, and other non-heterosexual identities), **OR** you identify as straight and you have had sex with men
7. You are 18 years old, or older
8. You live or work in Manitoba.

A total of 12-20 participants are being recruited from

Study procedures

- The method of data collection for this study will be individual interviews, which will be conducted solely by the principal investigator
- At this time, due to COVID-19, all interviews are being conducted virtually using Microsoft Teams. Information on how to participate using this platform will be shared with you prior to the interview time and extra time will be allotted to troubleshoot connection issues.
- You will be invited to complete one to two interviews depending on how much you want to share.
- You will be asked to share personal information about your life as it relates to your sexuality and using AAS. These sessions will be recorded using an audio data recorder and will be transcribed by a third-party transcription service bound by a confidentiality

agreement not to share or distribute the information.
- Transcribers will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.
- No one's name will be asked or revealed during the individual interviews. However, should a name be disclosed, including the names of places, locations, businesses, or other people, they will be anonymized during the transcription process.
- You will have the opportunity to review the transcripts to make amendments or to add information up until the data is aggregated for analysis. This means that when the data is combined with other data, it will be impossible to remove your contributions.
- All audio recordings, documents and the like will be stored on a secure, password-protected drive. All paper copies of any data will be stored in a secure office at the address mentioned above.
- All study data, print or digital, will be destroyed after 7 years.

Risks and Discomforts
There are no anticipated physical risks to participants.

There are some other potential risks to you by participating in this research. It is possible that talking about sexuality and AAS use might be emotional, embarrassing or stressful for you. You can stop the interview at any time and will be offered a resource list after the interview should you be interested in mental and social supports in the community.

Benefits
Providing your perspective on sexuality and AAS use may contribute to the social, physical and mental health and wellbeing of community members in the future. This study aims to contribute to academic literature while also providing insight to how public health systems can better address the needs of this population.

Costs
There is no cost to you to participate in this study.

Payment for participation
You will be given a cash honorarium of $30.00 after signing the consent form and before the interview begins. You are entitled to keep the honorarium even if you stop the interview and withdraw from the study.

You will receive no payment or reimbursement for any expenses related to taking part in this study.

Confidentiality
We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records. A list of names and addresses of participants will be kept in a secure file so we can send you a summary of the results of the study. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point. The collection and access to personal information will follow provincial and federal privacy legislations.

There are specific circumstances where confidentiality must be broken. These include instances where you disclose information related to threats of harm to the yourself, to others, or

information that indicates a threat of harm to a child or a vulnerable person under the care of a legitimate or illegitimate authority figure (for example, a child under the care of their own parent, or of a daycare attendant who is not their parent but is still responsible for their care).

Only the principal investigator and his Thesis Advisor (Dr. Deborah McPhail) and Committee (Dr. Rob Lorway and Dr. Rusty Souleymanov) will have access to the audio and digital files generated in the study. They have access to the data to support and facilitate research training for the PI. These will not be shared with anyone else without your expressed and written consent unless they are part of the Health Research Ethics Board at the University of Manitoba who may review study records for quality assurance reasons.

We may wish to quote your words directly in reports and publications resulting from this. With regards to being quoted, please check yes or no for each of the following statements:

Researcher may publish documents that contain quotations by me under the following conditions:	
☐ Yes ☐ No	I agree to be quoted directly (my name is used).
☐ Yes ☐ No	I agree to be quoted directly if my name is not published (I remain anonymous).
☐ Yes ☐ No	I agree to be quoted directly if a made-up name (pseudonym) is used.

Voluntary Participation/Withdrawal from the Study

Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study up until data has been aggregated together for analysis, which is anticipated to occur **by June 15st.**

Questions

If any questions come up during or after the study contact the principal investigator by email or by phone at:

[BLINDED]

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389

Consent Signatures:

8. I have read all 5 pages of the consent form.
9. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
10. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
11. I understand that my records, which may include identifying information, may be reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.
12. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
13. I understand I will be provided with a copy of the consent form for my records.
14. I agree to participate in the study.

Participant signature_____ **Date** _____
(day/month/year)

Participant printed name: _____

-OR-

In the case of an interview conducted by distance through phone or video conferencing software:

Participant has verbally consented?

YES NO

This consent has been captured in the audio recording for transcription?

YES NO

Participant printed name: _____

Principle Investigator signature: _____

Date _____
(day/month/year)

Appendix 5: Code System

Code System
Code System
Salient Quotes
DOMAIN 1: General Steroid Use Practices
Types of Steroids
HCG
Insulin
Clen / Thryoid
“The hormone one”
HGH
Equipoise
Deca / Decaduraboline
D-Bol
Winstrol
Anavar
Test / Testosterone
Tren / Trenbolone
Managing Risk
Do not share needles
Issues with quality / efficacy
First cycle is small then increasing

- Withdrawal symptoms / experiences
- Intended effects of steroid use
- Side effects of steroid use
  - Steroids are addicting
  - Negative Side Effects
  - Positive Side Effects
- Source of steroids/PEDs
  - Trainer / Drug dealer
  - Internet
    - Issues with ordering
  - Family
  - Friends
- Source of needles/supplies
  - Trainer
  - Sourced online
  - Pharmacy
  - [LOCAL SUPPLIER - Anonymized]
  - Stigma from supply sources
- Supplies hard to get
- Steroid cost
- Reason for choosing to start
- Steroid Use Frequency

Steroid use length
Future plans to use
DOMAIN 2: Discourses of Subjectivity and the Self
Sense of guilt from cheating
Health Responsibiliation
Saw HCP to check for damage
Conducted Research on steroids
Power
Steroids game me power
Taking back power
Motivations for using steroids “Who or what...”
Mentally Addicted
Faster results
To compete as a body builder
Trying to impress people
Peer pressure
Better body image
Medical motivations
Less homophobia
Kink/Fetish
Masculinity
Racism

Instagram
Social Media as it relates to steroid use
Grindr
Instagram
Perceptions of the body from others
Perceptions of the body from self
Openness with friends/others
Stigma
Stigma from a lack of information
Steroid Use is stigmatized
Secret or not
Not secret
Is Secret
Perceptions in the local GBQ community
Difference between on- and off-cycle
Steroids effect on relationships with others
Negative effect on relationships
Positive effect on relationships
Steroids effect on sense of self
Steroid use affects self-perception
Body Image
DOMAIN 3: Risk (and other) Discourses

Health Care Providers
Openness with HCPs about use
Perceptions of HCPs from users
Risk discourse from HCPs
Accepting the risk / risk is worth it
Advice for others
moderation
Don’t be scared
Connect to support networks
Don’t ignore food
Be open with your HCP
Start for the right reasons
You’re not healthy enough
You’re too young
Go natural first
Know the risks
Do your research
Worries about using
Worries about stopping
Drawbacks of using AAS
Benefits of using AAS
Regrets of using AAS

Perceptions of how healthy AAS use is
Steroid use perceived as unhealthy
Steroid use perceived as healthy
What do you wish you would have known?
Physical side effects
How to use equipment
Info on cycling
Emotional side effects
Sex drive increases
Information learned about AAS
Check your levels
learned though using
Source of information
Source is trustworthy
Source not trustworthy
Very little information
Information sourced from Bodybuilders or Users
Information sourced from trainer
Information sourced from family / friends
Information sourced online
DOMAIN 4: Sexual Practices
Impact to harm reduction practices

Does not affect HR practices
Does affect HR practices
On PrEP
Impacts to sexuality
Enabled exploring same sex attraction
Erectile Dysfunction or similar
Increased sex partners
Better/more satisfying sex life
Increased Confidence
Increased Sex Drive
Gets more attention
Steroid use affects sexual risk practices
No
Yes
Steroids impact on relationships with partner
DOMAIN 5: Community Around AAS Practices
Community of users
Community of gay users
Fitness people and gym communities
Body as income
Relationships around steroid use
relationship with trainer

Shared struggles relates to body building culture
Increased bonds with other men
Group of friends
Partners use it together
Closeness with stranger
Closeness with trainer
DOMAIN 6: Sample Group 2: Never used, but considered
Anticipated Sexual Risk Outcome
Increased sexual risk
Phase 2 zingers
General views of steroid use
Fine, under HCP care
A drug/illicit substance
A form of cheating
Necessary to achieve muscle/body goals
Details of considering
Time dimension
Influences for considering steroids
Seen others have success
Being in, going to the gym more
Trainer suggested it
Celebrities using

COVID
Social Media / Porn as influence
Effects of considering
Bad
Personal reasons for considering
Not masculine enough
To fill a void
Loneliness
Dissatisfaction with body image
Desired or anticipated outcome
Increase social power / access “in” crowds
Increased confidence
Increased ability to play sports
Increase masculinity
Ability to protect self from homophobia
Improve sex life / Increase prospects/opportunities
Find a partner/partners
Change body
Become more muscular
Get quicker results
Change self-perception
Reasons for not following through

Wanted to try natural first
Avoiding needles
Worried about addiction
No doctor to talk to about it
Stigma
Averse to using substances
Worried about side effects
Morals - Cheating
Public Education
Money
Not able to put in the gym time
DOMAIN 7: COVID-19
COVID Guilt
COVID impacting steroid use
Assessments
Positive assessments
Neutral Assessments
Negative Assessments

Appendix 6: Post-Interview Resources

For immediate support related to mental health or suicide, contact the Klinic Crisis Lines at:

Phone: (204) 786-8686

Toll free: 1-888-322-3019

GENERAL HEALTH

- Our Own Health Centre – www.ourownhealth.ca
- Doctor Finder - https://www.gov.mb.ca/health/familydoctorfinder/
- Health Links - http://www.wrha.mb.ca/healthinfo/healthlinks/ / 204-788-8200

SEXUAL HEALTH (Testing and Resources)

- Nine Circles Community Health Centre – www.ninecirlces.ca
- Our Own Health Centre – www.ourownhealth.ca
- Klinic Community Health – www.klinic.mb.ca
- SERC (Sexuality Education Resource Centre) – www.serc.mb.ca

MENTAL HEALTH & ADDICTIONS

- Klinic Community Health – www.klinic.mb.ca
- Aurora Counselling - http://www.aurorafamilytherapy.com
- LGBT2SQ+ Program at Sexuality Education Resource Centre Brandon - www.serc.mb.ca
- Crisis Response Centre - https://www.wrha.mb.ca/facilities/crisis-response-centre.php Mobile Crisis Unit - 204-940-1781
- RAAM Rapid Access to Addictions Medicine - https://www.wrha.mb.ca/prog/mentalhealth/raam.php
- Our Own Health Centre (counselling services) – www.ourownhealth.ca
- Rainbow Resource Centre (counselling) www.rainbowresourcecentre.org
- Main Street Project – shelter and detox services - https://www.mainstreetproject.ca

GENDER IDENTITY & TRANS HEALTH

- Klinic Community Health Trans Health Klinic (16+) – www.klinic.mb.ca
- GDAAY Clinic, Gender Dysphoria Action and Assessment for Youth at the Health Sciences Centre (0-16) – www.gdaay.ca

- Support groups at Rainbow Resource Centre – www.rainbowresourcecentre.org

COMMUNITY AND SOCIAL SUPPORT

- Rainbow Resource Centre Support Groups – www.rainbowresourcecentre.org
    - Blink (12 and under)
    - Transmasculine group/gender alliance
    - New Pride of Wpg (newcomers)
    - Over the Rainbow group (55+)
    - PFFOTI: Parents, family, friends of trans individuals
    - Rainbow Alliance for Men
    - SOSA (Society of out-standing artists)
    - Wpg Transgender support group
    - Youth drop-in program (13-21)
- PRISM program (as part of Big Brothers/Sisters, LGBTQ pairings for social supports) - https://winnipeg.bigbrothersbigsisters.ca/what-we-do/our-programs/print/
- University of Winnipeg Rainbow Lounge – www.uwsa.ca
- University of Manitoba Rainbow Pride Mosaic (RPM) – www.umsu.ca
- Red River College - Spectrum centre - https://www.rrcsa.ca/thespectrum/