

**"Let Them Play...But Not with Me": Exploring Student-Athlete's Attitudes Towards  
Trans\* Participation in Varsity Sport**

by

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## Abstract

The debate on whether transgender athletes should be ‘allowed’ to participate in elite sport, and in which gender category, has been increasing in recent years. Transgender individuals experience discrimination and rejection in physical activity and sport at a higher degree than their lesbian, gay, and bisexual counterparts. The current study identifies and describes the current attitudes of varsity athletes from three schools in Western Canada towards transgender athletes' participation in varsity sport. Participants, varsity athletes, were recruited from three Western Canada universities following preliminary conversations with each university’s athletic director. A total of 86 participants completed measures including a demographic questionnaire, the Attitudes Towards Transgender Men and Transgender Women (ATTMW) Scale, two questions specific to transgender athletes, the Shortened Right-Wing Authoritarianism Scale (RWA-S), the Revised Religious Fundamentalism Scale (R-RFS), and the Self-Compassion Scale – Short Form (SCS-SF). It was hypothesized that individuals who indicate religious fundamentalism, right-wing authoritarianism, lower self-compassion, and a conservative political orientation would express negative attitudes towards transgender individuals and would disagree with the two questions specific to transgender athletes. Results from hierarchical regressions indicate binary gender to be a predictor of attitudes towards trans\* individuals and participation in sport. Cisgender women expressed less favourable attitudes towards trans\* individuals and trans\* participation in sport compared to cisgender male participants. Participants with more favorable attitudes towards trans\* individuals and their participation in sports exhibited lower levels of RWA and RF, indicating an association between traditional values and negative views on trans\* individuals in sports. The study also observed a preference for trans\* men over trans\* women, possibly influenced by perceived athletic advantages and higher perceived threat of trans

women, reflecting underlying sexism and transphobia. Furthermore, the research revealed a nuanced relationship between gender, athletic identity, and attitudes in the context of transgender participation in sports, potentially shaped by perceptions of competition and feminism.

**Preface**

This thesis is an original work by Adriana April Davis. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board,

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### Introduction

The discussion surrounding the inclusion of transgender athletes in elite sports, as well as the determination of their eligible gender category, has been intensifying in recent years. In 2022, many individuals joined the discussion when Ivy League swimmer, Lia Thomas, won the women’s 500-yard freestyle event. Lia started her varsity career in 2017 at the University of Pennsylvania where she competed on the men’s swim team for three years. Following her 2019 season, Lia began gender affirming care. By 2021, she was back in the pool competing on the women’s swim team after meeting the NCAA’s gender-related policies. Upon her remarkable victory, securing her status as the first transgender athlete to win an NCAA Division 1 championship, Lia had garnered global recognition. Despite her success, her place on the podium was quickly questioned, with many wanting to revoke her eligibility in the sport.

Despite facing severe criticism from team members, spectators, media, and political figures, Lia received unbridled support from past and present collegiate swimmers. Several female Olympic swimmers voiced their support for Lia, stating that *all* women belong in sport. Others maintained that her participation threatened the integrity of women’s sports and would take opportunities away from her cisgender counterparts. In March of 2022, Lia was named *Sports Illustrated’s* “most controversial athlete in America.” Following the initial response, the USA saw a slew of proposed anti-transgender bills. Of the 149 discriminatory bills, 80 were attempts to restrict trans\* youth and athletes from competing in sport in a gender category consistent with their identity (Human Rights Campaign, 2023).

## Participation in Sport

Historically, the competitive sporting world has embraced binary gender categories rooted in biological factors such as hormone type and level. These factors are then assessed for their alignment with conventional masculine or feminine standards, determining an athlete's eligibility for participation in one of the two gender categories. However, with the emergence of more athletes who challenge these conventional categories, the sports world is experiencing a growing divide. Consequently, sporting authorities have implemented more stringent regulations at various tiers, including club, collegiate, and professional levels. Individuals who identify as trans\* or intersex, participating at every level of sports, have encountered instances of exclusion, ostracism, and scrutiny.

Participating in sports delivers a unique opportunity to foster a sense of community while reaping the psychological and physiological benefits of physical activity. For many students, engaging in sports or intramurals is a pivotal aspect of their university experience, facilitating their transition into a new life stage. Participation in sports not only diminishes stress but also enhances self-esteem (Hargie et al., 2016; Phipps, 2021). Although many students are afforded the opportunity to participate in a competitive sport, for trans\* individuals this opportunity is thwarted by institutional, political, and social barriers.

Trans\* youth face inherent challenges in their mental well-being and sense of belonging in a society that reinforces a binary understanding of gender. Trans\* individuals experience higher symptoms of depression and suicidality than their cisgender counterparts (Jones et al., 2017). Given the lack of opportunities to safely participate in sport, these symptoms are exacerbated for some trans\* individuals. Students, particularly if they are trans\*, who lack a

sense of community are at a higher risk of developing symptoms of depression and other serious mental health concerns (Jones et al., 2017).

### ***Athletic Advantage***

The varied perspectives on the athletic advantages of transgender athletes are influenced by factors such as hormone therapy, sport-specific considerations, individual differences, the level of competition, and societal attitudes toward inclusivity. Studies on the topic of athletic advantages of trans\* athletes have yielded mixed results (Jones et al., 2017). Some studies suggest that the impact of gender-affirming hormone therapy on physical performance might mitigate any potential advantages (Harper, 2022; Roberts et al., 2021). However, there is no consensus within the scientific community regarding whether transgender individuals, on average, have athletic advantages or disadvantages compared to cisgender individuals. Indeed, a 2017 literature review of studies published in the journal *Sports Medicine* found “no direct or consistent research suggesting transgender female individuals (or male individuals) have an athletic advantage at any stage of their transition” (Jones et al., 2017, p. 701). Further physical abilities vary widely across individuals regardless of gender identity. Variances in performances may be exhibited differently among transgender individuals compared to cisgender individuals in the same sport.

### ***Gender Testing***

Eligibility of some athletes over others is not a new concern; rather, it has been fervently debated since the inception of sport (Wells, 2019). Despite the sentiment that many sport-governing bodies attempt to convey, *sport is for all*, many groups (e.g., older people, ethnic minorities, lower-class individuals) are excluded from participating in sport – particularly at elite levels (Tangen, 2010). Trans\* and intersex individuals are among the groups typically excluded from sport.

In the case of the middle-distance Olympic track athlete Caster Semenya, she has faced barriers that have impeded her ability to compete at the highest level. Her biology and athleticism became a media circus at the age of 18 when she won gold in the 800m at the World Championships in Berlin, setting the fastest time of the year (Khaleeli, 2011). The media first portrayed Caster as a threat to the integrity of sport and competition. Discourse around an intersex woman competing with cisgender women became plagued with misinformation and eventually led to harmful initiatives attempting to regulate these anomalistic athletes. Such initiatives violated the bodily rights of athletes, particularly racialized women, and included varied forms of abusive gender testing including hormone treatment (Ahmed, 2020; Bull, 2016).

While not transgender, Semenya's historic battle with the IOC is representative of the interrogation and backlash that follows any athlete who is perceived as flouting the traditionally binary structure of sport. The regulatory attempts made by sport governing bodies in this case had great impacts on the athletic fate of future trans\* athletes.

### ***Attitudes Towards Trans\* Participation in Sport***

Attitudes toward specific groups of people play a crucial role in shaping social structures, including those within sports. These attitudes influence how individuals are included or excluded, the opportunities they have, and the overall dynamics within sporting communities. Perspectives on the issue of trans\* participation in sport are influenced by societal attitudes towards gender identity and inclusivity. These attitudes can shape the environment in which transgender individuals engage in sports and impact their experiences (Flores et al., 2020; Hargie et al., 2017; Tanimoto & Miwa, 2021). Broadly speaking, societal attitudes are influential in developing policies within sports organizations (Braumüller et al., 2020) and shaping the landscape of transgender participation in sports.

Supportive attitudes can lead to the creation of inclusive policies that address the needs and rights of transgender athletes. On the other hand, resistance or lack of awareness may result in policies that are less accommodating (Braumüller et al., 2020). Attitudes of teammates, coaches, spectators, and the broader sports community can significantly influence the participation of transgender individuals in sports (Goldbach et al., 2022; 1, Sample, 2022; Tanimoto & Miwa, 2021). Positive attitudes that emphasize inclusivity, acceptance, and understanding help to create an environment where transgender athletes can fully engage and thrive (Cranmer & Sollitto, 2015; Elling-Machartzki, 2017; Jones et al., 2017; Pflum et al., 2015). Conversely, negative attitudes can create barriers, discrimination, and exclusion, limiting opportunities for transgender individuals in the realm of sports (Hargie, et al., 2016; Klein et al., 2019; LaRocca et al., 2022; Phipps, 2021).

### **Canadian Perspective**

Currently, there is a proliferation of anti-trans news in the United States. However, transprejudice is equally observable within a Canadian context including limited access to appropriate health care (Bauer et al., 2009), discrimination (Clements-Nolle et al., 2008), bullying or harassment, legal recognition issues (i.e., gender markers), and violent attacks (Testa et al., 2012). In their 2021 report, Statistics Canada documented a 64% increase from 2018 in hate crimes against members of the LGBTQ community (Statistics Canada, 2022). These data only include police-reported hate crimes and lack a crucial category for violence against transgender individuals.

Regarding trans\* participation in sport, the Canadian Centre for Ethics in Sport (CCES) and various sports governing bodies (SGBs) play a role in shaping policies for trans\* athletes. An article by Harmon (2020) outlines two Canadian policy responses. First, the CCES put forth

recommendations for cultivating inclusive environments in sport directed at SGBs. The CCES provided SGBs with a policy template to promote trans\* participation in sport (Harmon, 2020). Second, the national SGB in Canada, USport, has accepted a policy that emphasizes the importance of equity and equality of all persons. Within this policy (Policy 80.80 Equity), there is a section regarding trans\* athletes; trans\* athletes are eligible to compete on their desired team as long as they comply with Canadian Anti-Doping Program rules (Harmon, 2020). These examples paint a hopeful picture for the future of sport in Canada characterised by inclusivity, ethics, and support, whilst underscoring the need for greater support from large SGBs such as the IOC or World Athletics.

Research in psychology on transgender athletes in Canada remains relatively rare. However, it is essential to make contributions to the existing literature to enlarge and disseminate our understanding of trans\* participation in sports. Ongoing efforts to promote education, awareness, and positive representation are critical for fostering inclusive attitudes and environments (Flores et al., 2020; Phipps, 2021). The study of attitudes provides valuable insights into human behavior, decision-making, and social dynamics. It informs a wide range of fields and contributes to the development of more effective strategies, interventions, and societal improvements (Billard, 2018a; Krosnick et al., 2005). This study seeks to contribute to the scarce research on trans\* participation in sports by providing a valuable and overlooked Canadian perspective.

## **Literature Review**

### **Gender and Sex**

*Gender* is widely accepted as a social and cultural construct, referring to the ways in which we categorize ourselves and others based on an arbitrary set of expectations. Gender has



typically been thought to include traditionally masculine or feminine traits (Butler, 1986; Teetzel & Weaving, 2017). *Gender identity* refers to self-categorization or an internal sense of one's gender and differs from *gender expression* which is how an individual chooses to present themselves to others (Cooper, 2010; Teetzel & Weaving, 2017). *Cisgender* describes those who are not transgender; rather, it is used to refer to those who identify with the sex they were assigned at birth. The term *trans\** is used throughout the current paper to signal inclusivity of all gender types beyond the binary, including transgender, genderqueer, non-binary, trans man, trans woman, two-spirit, etc. (Tompkins, 2014). In most scholarly work, *sex* refers to biological attributes (i.e., gonads, sex chromosomes). Despite the overarching narrative that sex is binary, gender and sex scholars regard variation among sexual categories as evidence in support of fluidity (Cooper, 2010; Morgenroth & Ryan, 2021; Teetzel & Weaving, 2017).

There are multiple factors that medical professionals consider when determining sex, including but not limited to: external morphological sex (genitalia), internal morphological sex (e.g., ovaries), hormonal sex, chromosomes, and phenotype (e.g., hair or breasts; Cooper, 2010). Crucially, these factors do not always reflect a binary assignment as is the case with intersex individuals. In cases involving infants with 'ambiguous genitalia', surgeries are performed on the infant ensuring the genitalia fit the traditional binaries of male and female (Ingram, 2018; Newbould, 2017). In recent years, LGBTQ2SIA+ scholars have questioned the psychological impacts of this procedure. Not only do intersex pediatric surgeries lack meaningful consent, they have been found to lead to psychological distress later in life (Ingram, 2018; Newbould, 2017).

### ***Re-imagining Gender and Sex***

Definitions of *sex* and *gender*, like many constructs, are continuously evolving as we gain both a greater understanding of these terms, and build cultural awareness. Schiappa (2021)

describes our understanding of *sex* and *gender* across three stages within the past seven decades which are briefly described in this section. Prior to the 1960s, understandings of *sex* were based in biological determinism (Schiappa, 2021). *Sex* was characterized by simple biological attributes, while *gender* was a rarely used term and often used synonymously with *sex*. Around the 1970's, feminist scholars raised issues of oppression through gender classifications. Scholars critiqued *masculine* and *feminine* traits within the social context, challenging formally held biological essentialist beliefs (Schiappa, 2021). The term *gender* became known, and increasingly accepted, as a cultural or psychological construct. By 2018, these advancements were reflected in the dominant discourse that included terms such as *gender expression* and *gender identity* (Schiappa, 2021).

Currently, the biological foundation upon which *sex* was defined is receiving critical examination (Schiappa, 2021). For instance, the role of chromosomes and genes in identifying binary sex is far more complex than previously believed. Scholars contend that a strict gender binary cannot be supported due to frequent present, and historical, variation in sex-related genes and chromosomes (as is the case with intersex individuals; Goymann et al., 2022; Schiappa, 2021). Likewise, foundational theories of *sex* and *gender* are receiving critical examination. Rather, scientific definitions of *gender* and *sex* are “historically situated social construction[s]” (Schiappa, 2021, p. 25) that no longer reflect contemporary scientific evidence.

Nevertheless, abandoning the concept of binary sex may not be the solution to alter our perspective. Goymann et al. (2022) and Griffiths (2021) caution that disposing of binary sex across species reflects anthropocentrism and consequentially promotes biological essentialism. Rather, redefining *sex* and *gender* as flexible processes, or “life-history stages,” they argue better

reflects the scientific and cultural evidence of variations in sex and gender while preserving the diversity of all species (Goymann et al., 2022; Griffiths, 2021).

### ***Transitioning and Gender Affirmation***

Trans\* individuals experience greater health disparities and mental health concerns compared to their cisgender peers. Risk of non-suicidal self-injury, suicide attempts and suicide completion, depression and anxiety, and substance use and abuse. are all higher among trans\* individuals (James et al., 2016; Jones et al., 2017; Tebbe & Budge, 2022). The *gender minority stress and resilience (GMSR) model* contextualizes such health inequities through one's gender minority status and minority resilience factors (King & Gamarel, 2021). External stressors in the GMSR model include "gender-based victimization, gender-based rejection, gender-based discrimination, and identity nonaffirmation" (Testa et al., 2016, p. 126). Each of the four external stressors leads to three internal stressors: "negative expectations for future events, internalized transphobia, and non-disclosure of one's identity" (p. 126).

The fourth external stressor in the GMSR model, *identity nonaffirmation*, refers to the lack of support one receives regarding their gender identity, gender expression, and/or gender role in social, psychological, medical, and legal settings (King & Gamarel, 2021). Thus, gender-affirming care protects trans\* individuals from a range of health concerns (Ashely, 2019; Tebbe & Budge, 2022; Tordoff et al., 2022). In recent years however, the gender-affirmative approach has been criticized and accused of internalized and parental homophobia (Ashley, 2019; Littman, 2018). Scholars within this critique suggest that the underlying motivation of gender-affirming care is to eradicate queer sexual orientations and follow a heteronormative structure (Ashley, 2019). A bioethicist and professor of law at the University of Alberta, extensively investigated the foundation for such claims and found no supporting evidence. Ashley (2019) stated, "by

accepting youth at their word, the gender-affirmative approach communicates that there is nothing wrong with being yourself, whoever you may be” (p. 377).

To address the resurgence of violence against trans\* individuals and to provide equal protection to trans\* individuals in Canada, the Canadian government in 2017 passed Bill C-16 (Ashley, 2018; Cossman, 2017). This bill included the words *gender identity or expression* in both the Canadian Human Rights Act and the Criminal Code (Cossman, 2017). Despite this step forward, many Canadians remain both fearful and expectant that anti-trans patterns in the U.S. will nevertheless trickle down. As it stands, trans\* Canadians remain targets of assault and violence (Campbell et al., 2022; Tebbe & Budge, 2022). Additionally, access to gender-affirming care in Canada has become increasingly difficult with many individuals experiencing longer wait times (Scheim et al., 2019). In the U.S., several states have introduced bans on gender-affirming care, preventing access to life-saving health care (Campbell et al., 2022).

Although there is evidence supporting the positive impact of gender-affirmation in reducing mental health disparities (King & Gamarel, 2021), gender-affirmation within the social, psychological, and legal realms is still predominantly overlooked. Medical gender-affirmation has comparatively received far more attention. *Transitioning* is a component of medical gender-affirmation and refers to the process by which an individual aligns their gender identity with their gender expression and presentation (The Trevor Project, 2021). Transitioning may include social, legal, and/or medical components. The transition process for trans\* individuals is varied; for example, some individuals may choose to transition socially and legally, foregoing medical intervention. Conversely, some individuals may desire a medical transition, but are prevented by institutionalized bias and structural barriers (Campbell et al., 2022; Kinitz et al., 2022).

*Social* gender affirmation relates to the recognition an individual receives for their gender identity in both interpersonal and institutional contexts (Fontanari et al., 2020). It contributes to a sense of acceptance, belonging, and validation. Social gender affirmation challenges societal norms and expectations related to gender, fostering a more inclusive and understanding community (Fontanari et al., 2020). Although more accessible than *medical* gender-affirmation, social gender-affirmation is not always possible. In the U.S. and Canada, many attempts have been made by businesses, institutions, and individuals to discriminate against trans\* individuals and prevent affirming social experiences (e.g., using a washroom that aligns with one's gender identity; Fontanari et al., 2020; Hughto et al., 2020). Exploring factors that increase opportunities for social affirmation is critical and may be completed through the assessment of societal and/or individual attitudes towards trans\* individuals.

### **Attitudes Towards Trans\* Individuals**

Early research on *attitudes* defines the construct as potential action towards some other object. Thus, a measure of attitudes examines “whether the potential action will be favorable or unfavorable toward the object” (Thurstone, 1931, p. 255; see Krosnick et al., 2005). Operational definitions of attitudes have undergone multiple reformations. However, scholars agree that attitudes serve as reflections of the social, political, and environmental landscape at the time of data collection within the context of the sample population (Billard, 2018a; Krosnick et al., 2005).

Throughout the years, many trans\* individuals have shared their authentic selves, thus increasing visibility. Unfortunately, this visibility has not always been met with celebration, let alone acceptance. Consequently, many researchers have aimed to understand the attitudes people

hold towards trans\* individuals (Brown et al., 2018; Norton & Herek, 2013; Riggs & Sion, 2017; Winter et al., 2008).

### ***Measuring Attitudes Towards Trans\* Individuals***

Prior to the development of his scale measuring attitudes towards transgender men and women (Billard, 2018b), Billard (2018a) evaluated four commonly used measures of attitudes towards transgender individuals. The first major scale measuring attitudes towards transgender individuals was the *Genderism and Transphobia Scale* (GTS; Hill & Willoughby, 2005). The GTS was developed around three theoretical domains: (1) transphobia, (2) genderism, and (3) gender-bashing. However, upon critical evaluation, the GTS demonstrates questionable content and discriminant validity. Additionally, it is overly inclusive in its definition of *transgender* (i.e., including individuals who do not *appear* to conform to traditional male or female aesthetics; Billard, 2018b). The *Transphobia Scale* (TS; Nagoshi et al., 2008) also has been used in contemporary research to measure attitudes towards transgender individuals. However, the TS lacks strong content validity evidence and may not discriminate attitudes towards trans\* men, trans\* women, and non-binary individuals (Billard, 2018b).

The *Attitudes Toward Transgendered Individuals Scale* (ATTI; Walch et al., 2012) fails to assert itself as a valid measure of attitudes towards transgender individuals. The ATTI's use of the term *transgendered* is inappropriate and incorrect in its reference to transgender individuals (Billard, 2018b). Parallel to the GTS, the ATTI is overly inclusive in its definition of *transgender*. The final scale that Billard (2018a) evaluated is one of the more recent measures of attitudes towards transgender individuals. The *Transgender Attitudes and Beliefs Scale* (TABS; Kanamori et al., 2017) was developed from the understanding that religiosity may predict one's attitudes towards transgender individuals (Nagoshi et al., 2008; Norton & Herek, 2012; Tee &

Hegarty, 2006). However, the TABS struggles to discriminate beyond Christian and evangelical Christian religions (Billard, 2018b; Kanamori et al., 2017). Finally, the *Attitudes Towards Transgender Men and Women Scale* (ATTMW; Billard, 2018b) was developed with the intention of accounting for the shortcomings of previous measures. Arguably, the ATTMW scale provides the best, most recent measure of attitudes towards transgender individuals. However, the ATTMW scale was developed with a younger and more liberal sample compared to the general U.S. population (Billard, 2018b).

### ***Studies Examining Attitudes Towards Trans\* Individuals***

Research examining attitudes towards trans\* individuals, particularly in this time of increased attacks against the trans\* community, is a critical first step to understanding the beliefs that foster discriminatory behaviour (Hackimer et al., 2021). Research in this domain is restricted except for a few studies that endeavor to identify attitudes towards trans\* individuals within specific social groups.

Brown et al. (2017) reported mental health professionals' attitudes towards transgender populations as positive overall. Negative attitudes were posited to be a reflection of harmful societal attitudes (e.g., homophobia, sexism, racism), lack of education of gender and gender identity, and an organizational culture of invisibility (Brown et al., 2018). Positive attitudes were partially attributed to *intergroup contact theory* (Pettigrew & Tropp, 2006). *Intergroup Contact Theory*, also referred to as the *Contact Hypothesis*, suggests that individuals of different groups (i.e., ethnic groups) who are in contact with one another report less prejudice and conflict compared to those who do not have contact with members of the outgroup (Allport, 1954; Pettigrew & Tropp, 2006). Hence, according to intergroup contact theory, the attitudes of

cisgender individuals towards trans\* individuals are ascribed to their exposure and interactions with one or more members of the trans\* community (Pettigrew & Tropp, 2006).

Norton and Herek (2013) examined heterosexual individuals' attitudes towards transgender people and their findings both upheld intergroup contact theory, and reflected an adherence to conservative beliefs (i.e., traditional values). Norton and Herek also found heterosexual men, more than women, held negative attitudes towards transgender people. Likewise, in their study of Hong Kong undergraduate students' attitudes towards transgender people, Winter et al. (2008) reported negative attitudes towards trans\* women in particular.

Also of interest is the foundation upon which individuals and groups of people base their attitudes, specifically what individual differences, ideologies, or attitudes might predict one's attitudes towards trans\* individuals (Kanamori & Xu, 2022; Read et al., 2020; Reimann et al., 2023). A meta-analysis by Hatch et al. (2022) identified 82 studies that explored predictors of transprejudice and acknowledged 14 significant predictors. The predictors were: gender, sexual orientation, single-item political orientation, social dominance orientation, right-wing authoritarianism, religiosity, religious fundamentalism, gender essentialism, gender role beliefs, sexism, aggression, lesbian, gay, bisexual (LGB) attitudes, contact with LGB individuals, and contact with transgender individuals. Of the 14 predictors, LGB attitudes and intergroup contact theory yielded the largest effect sizes. Aggression, described as one's proneness to aggressive behaviour, yielded the smallest effect size (Hatch et al., 2022).

Previous studies have identified predictors for negative attitudes towards transgender people. Specifically, cisgender men reported more negative attitudes when compared to cisgender women (Hill & Willoughby, 2005), lower levels of education, older age, increased religiosity, religious fundamentalism, and authoritarianism (Norton & Herek, 2013). Consistent



with the Hatch et al. (2022) meta-analysis, Norton and Herek (2013) found that negative attitudes towards transgender people were associated with one's sexuality (i.e., heterosexual men), endorsement of gender binary, increased authoritarianism, political conservatism, religiosity, and lack of exposure or contact to sexual minorities (*intergroup contact theory*; Pettigrew & Tropp, 2006).

These studies serve as the foundation for future research investigating attitudes towards transgender individuals across various contexts. Nonetheless, additional research is required to confirm attitudinal influences within social systems where more specific factors may manifest. The current research focuses on one such social system: sports.

### **Transgender Participation in Sport**

In June of 2023, a 9-year-old girl was competing at her elementary school's track-and-field meet in Kelowna, BC. She was preparing for the shot-put event when an older man disrupted the event to question the girl's gender, stating "This is a girls' event – why are boys throwing?" The man then demanded proof of her sex, and his wife began verbally assaulting the parents of the young athlete, alleging them to be 'groomers' and 'genital mutilators' (Michaels, 2023). This event is but one of many in a recent string of attacks against trans\* athletes and represents a history of harmful gender verification practices in sport. In this case, the young girl did not identify as transgender but merely wore a short haircut. Many LBTQ2SIA+ individuals, particularly trans\* individuals, are fearful of this experience and often avoid settings, such as organized sport, where they are likely to be the targets of such anti-LBTQ2SIA+ demonstrations (Hargie et al., 2016).

Transgender individuals are at a disadvantage when it comes to their mental health and a sense of belonging in a world that promotes and upholds a gender binary. Trans\* individuals

experience increased symptoms of depression and suicidality compared to their cisgender counterparts (Jones et al., 2017). Involvement in sports promotes a sense of community among university/college students, mitigates life stress, and promotes better self-esteem (Hargie et al., 2016; Phipps, 2021;). Team sports have also been associated with improved social, psychological, and behavioural health outcomes including better academic performance, decreased risk for depression/anxiety, and lower odds of smoking and drug use (Zuckerman et al., 2021).

Attempts to restrict the rights of LBTQ2SIA+ individuals have become pervasive over the past three years. There has been a steady increase in the number of proposed anti-LBTQ2SIA+ legislation in the states (Human Rights Campaign, 2023). In 2022, American trans\* individuals were the targets of 149 discriminatory bills, 80 of which were attempts to restrict trans\* youth and athletes from competing in sport in a gender category consistent with their identity (Human Rights Campaign, 2023). Many of these bills are targeted towards the participation of trans\* children in organized sport, however trans\* athletes at all levels have been affected. Furthermore, cisgender women athletes are at an increased risk for acts of violence as a result of the relentless monitoring of women's sports.

A recent study examining LGBTQ youth participation in team sports confirmed such mental health benefits (e.g., reduced likelihood of depression and/ or suicidal ideation; LaRocca et al., 2022). However, an inclusive environment predicts positive mental health outcomes in LBTQ2SIA+ participation in team sports (LaRocca et al., 2022). Trans\* individuals are often excluded from sport partly due to the negative repercussions associated with participation (Cranmer & Sollitto, 2015; Elling-Machartzki, 2017; Jones et al., 2017; Pflum et al., 2015;).

Social support, especially from coaches and teammates, may increase the likelihood of participation and foster a sense of authenticity and safety (Klein et al., 2019).

### ***Structure of Sport***

Widespread understanding of the LGBTQ2SIA+ population has not been achieved, with the legalization of same-sex marriage occurring as late as 2015 for some U.S. states (Georgetown Law Library, 2021). The realm of sports remains a persistent oversight in acknowledging the LGBTQ2SIA+ experience. Sports kindle passion, with its conventional practices and rituals being both celebrated and anticipated (e.g., the passing and lighting of the torch in the Olympics, playing the national anthem on the podium). Any perceived disruption to the traditional fabric of sports tends to ignite significant controversy among the public (Schneider & Gonsalves, 2019).

Although competitive sports, in particular, predominantly adhere to a binary structure, community-based sports provide an alternative for individuals with diverse gender identities. It is often the case that trans\* individuals participate in physical activities or community sports groups that are outside of their university (Jones et al., 2017). The binary constraints within sports are less pervasive in community sports groups or recreational leagues compared to competitive leagues such as varsity sports. A notable example of this disparity lies in the matter of changing rooms. While some facilities are incorporating gender-neutral changing rooms, the adoption of such practices is not as widespread as necessary to foster a sense of safety among trans\* athletes (Jones et al., 2017).

Gender verification, also referred to as gender testing or sex verification/testing, has long been the chosen method for evaluating the *fairness* of women's sport (Bianchi, 2017; Cooper, 2010; Mangle, 2021; Montañola & Olivesi, 2016; Phipps, 2021; Schultz, 2011; Wackwitz, 2003; Wells, 2019). Such methods have included physical examinations (Cooper, 2010; Karkazis et al.,

2012; Mangle, 2021; Schultz, 2021; Simpson, et al., 2000; Wackwitz, 2003), sex chromatin analysis tests (Cooper, 2010; Schultz, 2021; Simpson, et al., 2000; Wackwitz, 2003), and levels of testosterone tests (Schultz, 2021). Gender verification practices have existed for decades; track and field in particular has a history of scrupulous gender regulation practices (Wells, 2019). While “levelling the playing field” is often the chosen language used to describe goals of current gender verification practices, a historical examination of these practices reveals a different motivation.

Historically, sport governing bodies (SGBs) engaged in gender verification practices to prevent “male intruders” from competing in the women’s category (Henne, 2014). This concern was not extended to cisgender women competing in the men’s category since SGBs did not perceive an athletic advantage (Cooper, 2010). In the 1960’s, 70s, and 80s, all female athletes were required to undergo ‘sex-testing’ before being allowed to compete (Wackwitz, 2003). Women of colour, particularly Black women, who did not fit the Western view of femininity were, and continue to be, disproportionately scrutinized, accused of sexual ambiguity, and subjected to surveillance (Mangle, 2021; Pape, 2019; Schneider & Gonsalves, 2019). This form of testing is based on *accusation*. Accusation-based selection occurs when a member of a SGB identifies an athlete as a potential threat based on their performance and notable changes in performance. More often however, selection is based on *appearance* (Karkazis et al., 2012; Mangle, 2021). Accusation-based selection presents serious concerns for *all* athletes, particularly women. The athlete’s body becomes a spectacle and is examined by media, SGBs, and scientists to determine which gender category the athlete belongs to.

Historically, the manner in which gender verification was conducted violates ethical standards of practice and undermines personal autonomy (Sonksen, et al., 2015; Wiesemann,

2011). Likewise, it has been argued that the harms done by testing do not outweigh the benefits in regards to the information obtained and the lack of predictability for future risks (Wiesemann, 2011). SGBs have a vested interest in ensuring that ambiguity be resolved to uphold the argument of *fairness*. This interest competes with the possible harms done in testing procedures, media coverage, and exclusion from competition (Wiesemann, 2011). Under the argument of fairness, SGBs have made few attempts to cultivate fairness in sport while allowing the participation of trans\* athletes.

In some respects, little has changed in regards to inclusion of trans\* and intersex participation in sport and the relating guidelines. Gender testing is still occurring; IOC and World Athletics require athletes with higher, naturally occurring levels of testosterone to comply with anti-doping regulations (Wells, 2019). Testing is to be done under suspicion of doping rather than on the basis of appearances or interest. However, enforcing this principal presents unique challenges. In cases where hyperandrogenism is ‘detected’, the athlete’s testosterone and tissue sensitivity are analyzed (Sonksen, et al., 2015; Wells, 2019). Testing is done through *systematic hormonal screening* as evidence to classify female athletes as hyperandrogenic (Wells, 2019). These testing efforts are, arguably, performed in the name of fairness.

### ***The Fairness Argument***

The *fairness* argument (Bianchi, 2017) is used to exclude trans\* or intersex people from competing in sport (Jones et al., 2017; Phipps, 2021). Those who rely on the fairness argument are concerned that permitting trans\* and intersex individuals to compete may jeopardize the integrity of the sport, fundamentally affecting the entire structure of sports itself. This fear is especially perceptible when discussing trans\* women in sport (Phipps, 2021; Jones et al., 2017). The argument that trans\* and intersex athletes pose a threat to the integrity of competitive sport

often includes misinformation, and is reproduced in current discourse, governance, media, and policies.

Trans\* athletes who have achieved athletic success are scrutinized and their success, dismissed. Their gender becomes their athletic identity above all achievement (Hargie et al., 2016). Transgender women are disproportionately subjected to the *fairness* argument due to a perceived athletic and genetic advantage over cisgender women in sports (Bianchi, 2017). The International Olympics Committee (IOC), World Athletics, and other SGBs argue that regulations are necessary to keep competition fair and to protect women in sport (Zeigler, 2016). These organizations believe that testosterone levels play a critical role in boosting athletic performance among athletes (IAAF, 2018; Wells, 2019). The IOC and other SGBs have made these conclusions based on particular scientific evidence noting the performance enhancing abilities of testosterone.

Contrary to this belief, evidence to support that higher, naturally occurring levels of testosterone guarantees a better performance is lacking. In 2021, the Canadian Center for Ethics in Sport (CCES) funded and published a comprehensive review of scientific, peer-reviewed literature regarding transgender athletes' participation in sport (E-Alliance, 2022). The report, completed by E-Alliance, found no reliable evidence to support the claim that transgender women who have undergone testosterone suppression hold biological advantages. Additionally, the existing biomedical research on this topic was determined to be extremely limited and methodologically flawed (E-Alliance, 2022). Likewise, Bianchi (2017) notes that higher, naturally occurring levels of testosterone do not guarantee better performance. Rather, performance depends on the accessibility of the testosterone. That is, whether the testosterone can be effectively used by the body or not (Schultz, 2021). Thus, fairness does not appear to be the

primary concern. Rather, scholars submit that the fairness argument upholds patriarchist and white supremacist ideology (Spaaij et al., 2015).

Currently, the IOC is still considering how to preserve fairness while supporting the inclusion of trans\* individuals in sport (IOC, 2021). Presently, testing testosterone levels appears to be the best solution for non-discriminatory sex verification measures. However, it is likely that in future years testing testosterone levels will become obsolete just as physical examinations and sex chromatic tests have become. There is little indication of what could replace testosterone testing, and scholars are still divided in regards to fostering fairness in sport without sacrificing one's right to participate in sport. Sailors (2020) among other scholars, have suggested solutions, however each suggestion comes with a caveat that lends the reader to conclude that the resolution of this problem is far from achieved.

### ***Attempted Inclusion of Trans\* Athletes in Sport***

In November of 2021, the IOC came out with a set of guidelines following two-years of consulting with 250 athletes, medical and legal experts, sport organizations, and stakeholders (IOC, 2021). The six-page document identifies the need for respecting health, safety, and dignity of all athletes. It outlines the IOC's commitment to respecting human rights and promoting gender equality and inclusion, urging SGBs to follow their guidelines when determining eligibility criteria (IOC, 2021). The framework provides SGBs with 10 principles: (1) inclusion, (2) prevention of harm, (3) non-discrimination, (4) fairness, (5) no presumption of advantage, (6) evidence-based approach, (7) primacy of health and bodily autonomy, (8) stakeholder-centered approach, (9) right to privacy, and (10) periodic reviews (IOC, 2021). Under Principle 5, no presumption of advantage, the inclusion of trans\* athletes is to be undisputed and presumptions of advantages are to be withheld unless evidence determines a disproportionate competitive

advantage (IOC, 2021). Principle 7 prohibits SGBs from pressuring athletes to receive unnecessary medical treatments for eligibility. Further, it denounces the use of invasive physical examinations in determining sex, sex variations, or gender (IOC, 2021).

While these guidelines appear to promote inclusivity, upon closer examination, inclusion of trans\* athletes remain contingent on whether the athlete meets medical transition requirements (Goldbach et al., 2022). In a letter to World Athletics by the Human Rights Special Procedures body of the United Nations, the UN discusses the harmful nature of the regulations in regards to human rights (Brown, 2018). In this letter, the UN states that while World Athletics, the CAS, and the IOC argue that the athlete has a choice to undergo medical intervention, this choice is not viable. The athletes must choose between undergoing medical intervention and testing or not competing at all which to an elite athlete is no choice at all (Brown, 2018).

Scholars who advocate for the inclusion of trans\* athletes in competitive sports challenge the current inclusion criteria. Cunningham et al. (2021) argue for transgender inclusion in sport on the basis of five factors: sport as a human right, fairness, gendered notions of athleticism, well-being, and economics. In their article, Cunningham et al. (2021) also outline factors influencing trans\* participation in sport on macro-, meso-, and micro- levels. Macro-level factors include laws, sport governance, community characteristics and pressures for change. Meso-level factors include leader behaviours, allies for inclusion, education, and systemic integration. Finally, micro-level factors include psychological characteristics and intergroup contact (Cunningham et al., 2021).

### ***Attitudes Towards Trans\* Participation in Sport***

In recent years, the volume of studies examining trans\* participation in sport has substantially increased. The vast majority of these studies have been produced by American



researchers within U.S. contexts. While the volume has increased, this area of research is relatively new and lacking in generality. Some studies have attempted to explore attitudes towards trans\* participation in sport and, perhaps more broadly, experiences of trans\* athletes' participation in competitive sport. One such study by Flores et al. (2020) identified public attitudes towards trans\* participation in intercollegiate sport among predominately cisgender and heterosexual adults. Their findings mirrored existing research on general attitudes towards trans\* individuals. Those who identify as a man, adhere to a gender binary and gender role traditionalism, lack prior contact with trans\* people, express anti-egalitarian beliefs, and those who expressed higher levels of sport fandom, demonstrated poorer attitudes towards trans\* athletes' participation in intercollegiate sport (Flores et al., 2020).

Goldbach et al. (2022) also explored attitudes towards transgender inclusion in competitive sport in their study of intercollegiate athletes in the United States. Participants in their study expressed supportive attitudes towards trans\* individuals generally speaking, but were not as supportive towards trans\* involvement in intercollegiate sport. Factors associated with more supportive attitudes included identifying as a woman, not having prior experience on co-ed teams, and having relationships with trans\* individuals (Goldbach et al., 2022). Adherence to religious beliefs was also associated with less supportive attitudes. Interestingly, participants' responses changed depending on context. Specifically, participants expressed greater support on an individual level (i.e., acceptance of a trans\* teammate), but did not express support on an institutional level (i.e., inclusion of trans\* athletes on competitive teams; Goldbach et al., 2022).

Likewise, lack of knowledge and awareness of trans\* issues have been associated with less support for trans\* individuals in general (Flores, 2015; Goldbach et al., 2022). An evaluation of sport staff's competency of trans\* athletes, including athletic trainers and sport medicine

physicians, yielded an overall lack of understanding of transgender individuals, and misconceptions regarding gender affirming care and athletic advantages (Eberman et al., 2022). In their study on factors influencing acceptance of trans\* athletes, Tanimoto and Miwa, 2021 found more supportive attitudes towards trans men in sport than trans women in sport, a result which they posit is related to public misconceptions regarding athletic advantage. Additionally, athletes, particularly trans men, who have accessed gender affirming medical care (i.e., hormone therapy) were more accepted, reflecting institutional guidelines for participation in sport (Tanimoto & Miwa, 2021).

The acceptance of trans\* participation in sports was also shaped by the level of competition. Participants expressed less support for trans\* inclusion in highly competitive, elite sporting competitions when compared to recreational events, such as intramurals or children's events (Tanimoto & Miwa, 2021). The authors suggest that this distinction is linked to the emphasis in elite sports on winning rather than participation. Additionally, the association observed among cisgender female athletes between *athletic identity* and acceptance of trans\* athletes was particularly noteworthy. Despite cisgender women expressing more supportive attitudes towards trans\* individuals, those who identified more strongly with an athletic identity tended to harbor less supportive attitudes (Tanimoto & Miwa, 2021).

### **Right-Wing Authoritarianism & Religious Fundamentalism**

Authoritarianism is most commonly characterized by a “[...] rigid adherence to rules and intolerance for ambiguity” (Norton & Herek, 2013, p. 741), associated with the rejection of outgroup members (Altemeyer, 1996; Norton & Herek, 2013). Right-Wing Authoritarianism (RWA), inherently connected to prejudicial attitudes towards minority groups, consists of three factors: conservatism, authoritarianism, and traditionalism (Altemeyer, 1996; Sibley & Duckitt,

2008; Vilanova et al., 2019). Due to its traditionalist component, RWA is closely associated with religious fundamentalism and has been identified as a predictor of negative attitudes towards transgender individuals (Norton & Herek, 2013; Kanamori et al., 2018). Research on RWA and religious fundamentalism has found that RWA plays a mediating role between prejudice against sexual minorities and religious fundamentalism (Vilanova et al., 2019; Wilkinson, 2004).

Religious fundamentalism is the belief in the absolute authority of a religious text or figure (Makwana et al., 2018; Kanamori et al., 2018) and has been linked to transphobia in several empirical studies (Altemeyer & Hunsberger, 2004; Campbell et al., 2019; Kanamori et al., 2018; Nagoshi et al., 2008; Nagoshi et al., 2019). Religious fundamentalism is associated with greater opposition to transgender civil rights (Tee & Hegarty, 2006), hostile sexism, restrictive views of sexuality and gender, and adherence to traditional gender roles (Nagoshi et al., 2018).

## **Rationale**

Trans\* health disparities are well researched in the field of psychology. It is widely accepted that trans\* individuals are at a higher risk for symptoms of depression, suicide, and substance use/abuse (James et al., 2016; Jones et al., 2017; Tebbe & Budge, 2022). However, identifying attitudes towards trans\* individuals across settings remains an area in need of development. Of the available research on attitudes towards trans\* individuals, many studies cite intergroup contact theory (Pettigrew & Thropp, 2016) as a strong predictor for positive attitudes (Brown et al., 2018; Hatch et al., 2022; Norton & Herek, 2013). Negative attitudes are associated with a lack of education regarding gender/ gender identity, identifying as a cisgender male (Brown et al., 2018; Hatch et al., 2022; Norton & Herek, 2013), religious fundamentalism,

increased authoritarianism, and political conservatism (Hatch et al., 2022; Norton & Herek, 2013).

Attitudes and research on attitudes are foundational to the field of social psychology. Both conscious and unconscious attitudes influence individual behaviour (Wicker, 1969) and impact one's capacity to adapt to social situations (LaPiere, 1934). Thus, identifying attitudes towards marginalized groups of people is an important step in understanding the dominating values, beliefs, and narratives contributing to oppression. Since involvement in sport promotes wellbeing among LGBTQ2SIA+ individuals (Hargie, et al., 2016; LaRocca et al., 2022; Phipps, 2021; Zuckerman et al., 2021), it is necessary to assess common attitudes within a sporting context that may result in the exclusion of trans\* athletes. Additionally, many attitudinal studies identify predictors of positive or negative attitudes. Research suggests that knowledge of predictive factors plays a key role in effective implementation of interventions to reduce transprejudice (Flores et al., 2018; Perez-Arche & Miller, 2021).

Research in this domain is expanding, yet it primarily exists within an American context. Qualitative studies on transgender athletes have found that transprejudice, lack of social support, and outward violence prevent trans\* participation in team sport (Cranmer & Sollitto, 2015; Elling-Machartzki, 2017; Jones et al., 2017; Pflum et al., 2015). Additionally, in highly competitive settings, trans\* athletes face severe infringements on their autonomy (i.e., gender verification practices), which dissuade many from participating (Wiesemann, 2011). Consequently, obtaining sufficient quantitative data on involvement in sport with trans\* participants is often challenging. Likewise, quantitative methods to assess attitudes towards trans\* individuals are continually advancing as our collective understanding of transgender individuals, sex, and gender change.

The ATTMW scale, one of the most recent measures of attitudes towards trans\* individuals, was created in response to previous attitudinal measures that harboured methodological limitations (Billard, 2018a). However, attitudinal research using the ATTMW scale is limited. Hence, the present study seeks to overcome this constraint by employing the ATTMW scale. This study endeavors to contribute additional contextual data through a Western-Canada perspective. Moreover, previous investigations into trans\* participation in sports have predominantly been qualitative, delving into the individual experiences of trans\* athletes. Therefore, this research fills another void in the literature by providing quantitative data.

Finally, the current research introduces an uncommon variable in the literature examining attitudes towards trans\* athletes: self-compassion. The three elements of self-compassion include self-kindness, common humanity, and mindfulness (Neff, 2003). A recent study on self-compassion and negative outgroup attitudes found that “individuals who view their inadequacies and sufferings as common experiences of humanity are not motivated to express negative outgroup attitudes” (Vu & Rivera, 2023, p. 480). The authors suggest that common humanity is the only element of self-compassion that is beneficial to intergroup relations. This finding was consistent for women and men (Vu & Rivera, 2023). Therefore, self-compassion provides a promising lens through which to examine attitudes towards trans\* athletes.

## Methods

### Participants

Participants, all varsity athletes, were recruited from three Western Canada universities following preliminary conversations with athletic directors. The majority of responses were from the University of Manitoba ( $n = 67$ ). Participant ages ranged from 17 to 30 years of age ( $M = 20.7$ ,  $SD = 2.27$ ). Participants mostly identified within the gender binary (54.2% female; 43.2% male) and were predominately White ( $n = 89$ ; 75.4%). Participants were asked to indicate their political orientation, as well as their perception of their parents' political orientation, on a Likert scale from 1 (extremely conservative) to 7 (extremely liberal). Participants' political orientation leaned toward liberal ( $M = 4.14$ ,  $SD = 1.64$ ) and they reported their parents as somewhat conservative ( $M = 3.68$ ,  $SD = 1.56$ ). A description of participant demographics for participants who answered the demographic questions is presented in Table 1.

**Table 1***Sample Demographics*

Variable		Frequency	Percentage
Age	17-30	118	-
Gender Identity	Woman	64	54.2%
	Man	51	43.2%
	Non-binary	1	<1.00%
	Other	2	1.7%
Sexual Orientation	Asexual	4	3.4%
	Bisexual	11	9.3%
	Gay	2	1.7%
	Heterosexual	90	76.3%
	Lesbian	4	3.4%
	Queer	1	<1.00%
	Other	2	1.7%
Race/Ethnicity	Black/African Canadian	10	8.5%
	East Asian/Asian Canadian	4	3.4%
	Indigenous Canadian	4	3.4%
	South Asian/Asian Canadian	2	1.7%
	White/European Canadian	89	75.4%

	Other	5	4.2%
Political Orientation	1 (Extremely Conservative)	8	5.9%
	2	15	12.7%
	3	17	14.4%
	4	25	21.2%
	5	25	21.2%
	6	22	18.6%
	7 (Extremely Liberal)	6	5.0%
Parent's Political Orientation	1 (Extremely Conservative)	11	9.2%
	2	16	13.6%
	3	28	23.7%
	4	30	22.2%
	5	15	12.7%
	6	14	11.9%
	7 (Extremely Liberal)	4	3.3%
Year of Eligibility	1 <sup>st</sup> year	31	23%
	2 <sup>nd</sup> year	30	22.2%
	3 <sup>rd</sup> year	19	14.1%
	4 <sup>th</sup> year	20	14.8%



	5 <sup>th</sup> year	8	5.9%
	Red-shirt	12	8.9%
Sport	Track	43	35.8%
	Hockey	13	10.8%
	Soccer	11	9.2%
	Football	10	8.3%
	Volleyball	9	7.5%
	Golf	7	5.8%
	Swimming	6	5.0%
	Wrestling	4	3.3%
	Rugby	4	3.3%
	Curling	2	1.7%
	Basketball	2	1.7%
	Other	7	5.8%
Year of Study	1 <sup>st</sup> year	23	19.5%
	2 <sup>nd</sup> year	22	18.6%
	3 <sup>rd</sup> year	29	24.6%
	4 <sup>th</sup> year	25	21.2%
	5 <sup>th</sup> year	12	8.9%
	6 <sup>th</sup> year	7	5.8%

Area of Study	Agriculture	3	2.5%
	Arts	24	11.9%
	Business Administration	20	14.8%
	Education	4	3.3%
	Engineering	7	5.8%
	Kinesiology & Health		
	Sciences	30	22.2%
	Nursing	2	1.7%
	Sciences	24	20.3%
	Other	4	3.3%
Know Someone	Yes	50	42.4%
Trans	No	68	57.6%

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## Measures

### *Demographic Questionnaire*

Participants were asked to respond to several items regarding their age, gender, race/ethnicity, sexuality, sport, current year of eligibility, political orientation, parent's political orientation, level of education, year of study, and faculty of study. Students who did not identify as trans\* were also asked whether they personally knew somebody transgender.

### *ATTMW Scale*

The Attitude Towards Trans Men and Women (ATTMW; Billard, 2018b) is a 24-item measure of anti-transgender prejudice separated into two, 12-item subscales: Attitudes towards Trans Men (ATTM) and Attitudes towards Trans Women (ATTW). Responders rated their agreement with each statement via a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Higher scores indicate greater anti-transgender prejudice. Billard (2018b) developed the ATTMW in response to multiple measures of attitudes towards transgender individuals that yielded unsatisfactory content validity among other critiques.

Three studies were conducted with U.S. samples to generate, develop, and validate the ATTMW. In the first study, items were generated and piloted using rigorous, data-backed methods which ensured content validity of the scale (Billard, 2018b). The second study established the factor structure of the scale items. An exploratory factor analysis was conducted for both the ATTM and ATTW subscales. Both the ATTM ( $\alpha = .97$ ,  $\omega_h = .93$ ) and ATTW ( $\alpha = .98$ ,  $\omega_h = .93$ ) yielded high reliability, as well as the combined ATTMW,  $\alpha = .99$ ,  $\omega_h = .93$ . These results indicate high reliability and internal consistency of the subscales and of the complete 24-item scale (Billard, 2018b). The third study sought to establish the convergent, discriminate, predictive, and concurrent validity of the ATTMW. Evidence for each form of validity was

confirmed via a sample of 150 undergraduate students. Specifically, predictive validity was established through three models of an ordinary least squares (OLS) regression. The ATTMW and its respective subscales were predictors of support for pro-transgender policy ( $-0.17 \leq \beta \leq -0.18$ ). In the present study, both subscales of the ATTMW scale were found to have high reliability (ATTM:  $\alpha = .981$ ; ATTW:  $\alpha = .979$ ).

### ***Trans Participation in Sport Questions***

To measure participants' attitudes towards trans\* participation in varsity sport, participants were asked to indicate the degree to which they agreed or disagreed with two statements on a 7-point Likert scale. These statements were created for the purpose of this study and were loosely based on Tanimoto and Miwa's (2021) measure of acceptance of transgender athlete's participation.

### ***Right-Wing Authoritarianism – Short Form***

The short form of the Right-Wing Authoritarianism (RWA-S) measure (Zakrisson, 2005) is a 15-item version of Altemeyer's (1981) measure of authoritarian personality. Altemeyer (1988) provides decades of evidence for the validity and the reliability of the RWA as a measure of submissiveness, aggression, and conventionalism. RWA-S correlates with measures of prejudice and measures of right-wing political orientation. Zakrisson (2005) reported the reliability of this measure as ranging from  $\alpha = .72$  to  $\alpha = .86$ . In the present study, the RWA-S was found to be reliable ( $\alpha = .85$ ).

### ***Self-Compassion – Short Form***

The short form of Neff's Self-Compassion Scale (SCS-SF) was developed by Raes et al. (2011). Consisting of 12 items from the original 26 SCS items, it contains two items from each self-compassion subscale (self-kindness, self-judgment, common humanity, isolation,

mindfulness, and over-identification). The SCS-SF was developed using three samples to first construct the scale, validate the factor structure, and to validate the scale. Internal consistency was reported at  $\alpha \geq .86$  for all samples and was highly correlated to the long form SCS at  $r \geq .97$  across samples. In the present study, the SCS-SF was found to be a reliable measure of self-compassion ( $\alpha = .84$ ).

### ***Revised Religious Fundamentalism Scale***

The Revised Religious Fundamentalism Scale (R-RFS) is a 12-item scale that is more diverse in its measuring of fundamentalism and maintains or exceeds the empirical validity of the original 20-item version (Altemeyer & Hunsberger, 2004). The R-RFS contains four statements taken from the original RFS, five revised statements, and three new statements. It was constructed to better represent all aspects of fundamentalism and to increase construct validity. Reliability ranged from  $\alpha = .91$  to  $\alpha = .92$ . In the present study, the R-RFS was found to be of high reliability,  $\alpha = .95$ .

### **Procedure**

The present study was conducted online using Qualtrics survey software and included all of the questionnaires previously described in the *measures* section. Athletic directors at the Universities of Manitoba (Winnipeg, MB), Alberta (Edmonton, AB), and Regina (Regina, SK) were contacted via phone call or voice mail and asked to schedule a brief meeting to discuss the proposed research and confirm their willingness to participate prior to obtaining ethics approval. Once participation confirmation was received, ethics applications were submitted to the University of Alberta's Research Ethics Board (REB). The University of Regina required the submission of an additional ethics application to the University of Regina's REB. Approval by both REBs was obtained (see Appendices A and B).

Participants were recruited from athletic teams at the University of Manitoba, University of Alberta, and University of Regina by contacting the athletic directors at these universities. A handout given to the directors appears in Appendix D. A description of the study was posted on their student websites via the student-athlete portal at the University of Alberta and the University of Regina, while at the University of Manitoba the study was posted to an electronic billboard for student-athletes. That description (see Appendix C) provided a link to the survey where informed consent, the questionnaire, and a debriefing were made available. In an email, one participant requested more information regarding the selection of measures and the purpose of the research.

Prior to beginning the survey, participants were also made aware of an opportunity to enter to win a draw for \$50.00. One prize of \$50.00 was available for one student at each university. Following the completion of the survey, participants who chose to enter the draw were directed to a separate Qualtrics survey link where they were asked to provide their email address. Participants were informed that the separate link ensured anonymity and that their email address could not be traced back to their data. A list of emails for each school was created via Microsoft Excel; each email had a corresponding numerical value. The RAND-function was utilized to randomly select a winner from each school. Once the winners were identified, an email notifying them of their win and confirming their email address for e-transfer was sent. All three recipients received and accepted the e-transfers.

Following the consent page, participants were presented with a list of key terms referenced throughout the study and their definitions. This provided context and understanding for those who may not be familiar with the terminology. Key terms and definitions were sourced from Perez-Arche and Miller's (2021) study on predictors of attitudes towards transgender and

nonbinary people. A list of the key terms and the definitions presented to participants is included in Table 2.

**Table 2***Key Terms and Definitions*


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Transgender	An adjective that is an umbrella term used to describe the full range of people whose gender identity and/or gender role do not conform to what is typically associated with their sex assigned at birth.
Trans woman	People who were assigned male at birth, but identify and live as female and may or may not alter their bodies through surgical and hormonal intervention to more closely resemble their gender identity as a woman.
Trans man	People who were assigned female at birth, but identify and live as male and may or may not alter their bodies through surgical and hormonal intervention to more closely resemble their gender identity as a man.
Nonbinary	A term for people who do not feel “male” or “female” regardless of their assigned sex at birth. They may define their gender as falling somewhere between male and female, or they may define it as wholly different from these terms. They may also request that pronouns be used to refer to them that are neither masculine nor feminine, such as “zie” instead of “he” or “she,” or “hir” instead of “his” or “her.” Some nonbinary people do not identify as transgender.

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## Results

### Demographics

A total of 135 participants from across the three universities agreed to participate in the survey. Of those participants, 17 did not start the survey and were removed ( $n = 118$ ), 15 did not exceed the demographic questions ( $n = 103$ ), and 17 had incomplete responses ( $n = 86$ ). The total number of participants from each university who completed the entire survey is  $n = 29$  at the University of Alberta,  $n = 44$  for the University of Manitoba, and  $n = 13$  for the University of Regina.

Comparisons within genders beyond the binary (i.e., nonbinary), ethnicity, and sexuality were limited due to the lack of diversity within the sample. However, the variables of age and binary gender (i.e., man or woman), were included. Results from ANOVAs indicated that neither age, gender, or political orientation varied by university. When asked if they knew someone who identifies as transgender, 50 participants said yes, 68 said no. Proportionately more male-identifying participants (18 of 28 males, 64.3%) knew someone trans than did female-identifying participants (32 of 90 females, 35.5%),  $\chi^2(1) = 7.22, p < .007$ .

### Measures

Reversed items from self-report measures were re-coded and transformed. Normality was examined for each scale and no concerns were raised. The ATTM ( $n = 103, M = 37.52, SD = 23.66$ ) and ATTW ( $n = 103, M = 38.74, SD = 23.94$ ) subscales were found to be slightly positively skewed, with no outliers, and were highly correlated,  $r(101) = .98, p < .001$ . The RWA-S ( $n = 96, M = 42.5, SD = 13.38$ ) was found to be normally distributed with no outliers. The SCS-SF ( $n = 93, M = 38.32, SD = 8.15$ ) was found to be normally distributed with no outliers. Finally, the R-RFS ( $n = 86, M = 36.05, SD = 23.38$ ) was found to be positively skewed

and included a few outliers with high scores. Correlations between measures are presented in Table 3.

**Table 3***Correlations Between Variables*

	1	2	3	4	5	6	7	8
1. Trans Participation								
2. Trans Gender	.50**							
3. ATTM	-.52**	-.67**						
4. ATTW	-.53**	-.68**	.98**					
5. RWA-S	-.52**	-.55**	.73**	.72**				
6. SCS-SF	.03	.05	.08	.06	-.13			
7. R-RFS	-.49**	-.35**	.57**	.56**	.76**	-.07		
8. Political Orientation	.38**	.66**	-.72**	-.71**	-.71**	.02	-.54**	
9. Parents' Orientation	.13	.22*	-.18	-.19	-.27**	.04	-.31**	.55**

\*  $p < .05$ , \*\*  $p < .01$

Attitudes towards trans\* participation in varsity sport was comprised of two statements. The first statement was “transgender athletes should be allowed to participate in varsity-level sport” ( $M = 4.53, SD = 2.25$ ), and the second statement was “transgender athletes should be allowed to participate in the gender category that they identify with” ( $M = 3.09, SD = 2.16$ ). Scores from the two statements were correlated,  $r(99) = .50, p < .001$ . Responses to these statements did not vary by province.

To identify differences across binary gender categories, multiple t-tests were conducted. Means are reported in Table 4 and *t*-test results are reported in Table 5. Gender differences were found for all variables except parents’ political orientation and self-compassion. Female identifying participants described themselves as less liberal overall, less accepting of trans\* people, less positive in their attitudes towards trans\* men and trans\* women, more right-wing authoritarian, and more fundamental in their religiously compared to male-identifying participants.

**Table 4***Means for Binary Gender Differences Across Variables*

	Male		Female	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Political Orientation	5.04	1.56	3.86	1.56
Parents' Orientation	3.36	1.44	3.78	1.59
Trans Participation	5.88	1.56	4.09	2.29
Trans Gender Category	4.84	20.32	2.51	1.78
Attitudes Trans Men	21.19	17.64	43.02	22.96
Attitudes Trans Women	22.57	18.29	44.19	23.22
RWA	36.21	11.85	48.26	12.52
SCS	38.79	7.23	38.15	8.49
RFS	26.36	13.89	39.97	25.08

**Table 5***Results of t-tests for Binary Gender Differences Across Variables*

	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Political Orientation	3.48	116	.001	.754
Parents' Orientation	1.25	116	.215	.270
Trans Participation	3.64	99	.001	.840
Trans Gender Category	5.25	99	.001	1.210
Attitudes Trans Men	4.42	101	.001	1.003
Attitudes Trans Women	4.31	101	.001	.978
RWA	4.14	94	.001	.975
SCS	.33	91	.740	.079
RFS	2.31	84	.023	.570

Participants were asked for their political orientation and the political orientation of their parents. Participant and parent political orientation were correlated with each other,  $r(116) = .55$ ,  $p < .001$ . Participants' political orientation was correlated with attitudes towards trans men,  $r(101) = -.71$ ,  $p < .001$ , attitudes towards trans women,  $r(101) = -.71$ ,  $p < .001$ , RWA-S,  $r(94) = -.71$ ,  $p < .001$ , religious fundamentalism,  $r(84) = -.54$ ,  $p < .001$ , trans participation statement,  $r(99) = .38$ ,  $p < .001$ , and trans gender category statement,  $r(99) = .66$ ,  $p < .001$ . Parents' political orientation was not correlated with attitudes towards trans men,  $r(101) = -.18$ ,  $p > .065$ , not correlated with attitudes towards trans women,  $r(101) = -.19$ ,  $p > .051$ , was correlated with RWA-S,  $r(94) = -.27$ ,  $p < .007$ , was correlated with religious fundamentalism,  $r(84) = -.305$ ,  $p < .004$ , not correlated with trans participation statement,  $r(99) = .13$ ,  $p > .21$ , but correlated with trans gender category statement,  $r(99) = .22$ ,  $p < .026$ .

Participants who did not identify as trans were asked if they knew someone who was trans. Fifty (42.4% of those who answered the question) said no, 68 (57.6%) said yes. Point-biserial correlations were run with yes equal to one and no equal to two. Knowing someone who is trans is correlated with attitudes towards trans men,  $r(101) = -.18$ ,  $p > .065$ , not correlated with attitudes towards trans women,  $r(101) = .31$ ,  $p < .001$  (negative attitudes is correlated with not knowing someone who is trans), attitudes towards trans women,  $r(101) = .32$ ,  $p < .001$ , not correlated with RWA-S,  $r(94) = .20$ ,  $p > .053$ , correlated with religious fundamentalism,  $r(84) = .22$ ,  $p < .05$ , not correlated with trans participation statement,  $r(99) = -.17$ ,  $p > .09$ , but correlated with trans gender category statement,  $r(99) = -.25$ ,  $p < .012$ .

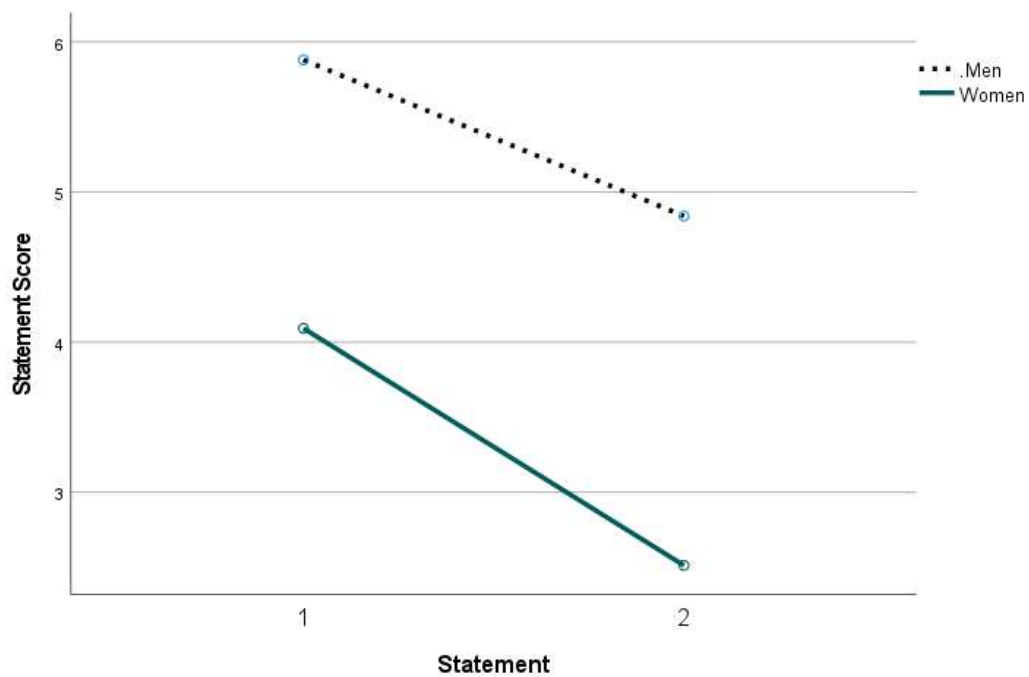
A mixed model ANOVA was conducted to identify whether those participants who indicated agreement with the statement that trans\* people should be able to participate in varsity sport, would differ from the statement that trans\* people should be able to participate in their

chosen gender category. This difference was assessed for females and males. The results indicated a statistically significant main effect for the two statements,  $F(1,99) = 26.4, p < .001, \eta^2_p = .211$ . The first statement pertaining to participating in varsity sport ( $M = 4.53, SD = 2.26$ ) was endorsed more than the second statement pertaining to participating in their chosen gender category ( $M = 3.09, SD = 2.16$ ). Females for the first statement ( $M = 4.09, SD = 2.29$ ) and the second statement ( $M = 2.51, SD = 1.79$ ) scored lower than males for the first statement ( $M = 5.88, SD = 1.51$ ) and the second statement ( $M = 4.84, SD = 2.32$ ). The difference between the two statements was statistically significant,  $F(1,99) = 27.48, p < .001, \eta^2_p = .217$ , although the interaction between statement and gender was not statistically significant,  $F(1,99) = 1.12, p < .29, \eta^2_p = .011$ . See Figure 1.



**Figure 1**

*Gender by Participation in Sport*



## Hypothesis Testing

### *Religious Fundamentalism & Right-Wing Authoritarianism*

The first hypothesis was that higher scores on the RWA-S and R-RFS would predict expressed disagreement with trans\* participation in sport and negative attitudes towards trans folks. The two participation in sport questions were correlated,  $r(99) = .50, p < .001$ . The first of two questions asked whether transgender athletes should be allowed to participate in varsity sports. The answer to that first question correlated with RWA-S,  $r(94) = -.52, p < .001$ , and R-RFS,  $r(84) = -.49, p < .001$ . Thus, the first hypothesis was supported, in so far as being lower in right-wing authoritarianism and low in religious fundamentalism was associated with participants feeling that trans folks should be allowed to participate in varsity sports.

The answer to that first question of whether trans folks should be allowed to participate in varsity sports also correlated with negative attitudes towards trans folks, specifically trans\* men,  $r(99) = -.52, p < .001$ , and trans\* women,  $r(99) = -.53, p < .001$ . Those with negative attitudes towards trans\* women and men (those who scored higher on the attitudes measure) thought that trans\* folks should not be allowed to participate in varsity sports. Whether trans folks should be allowed to participate in varsity sports did not correlate with the SCS,  $r(91) = .03, p < .80$ .

The second of two questions asked whether transgender athletes should be allowed to participate in the gender category they identify with. The answer to the second of two questions correlated with the RWA-S,  $r(94) = -.55, p < .001$ , and R-RFS,  $r(84) = -.35, p < .001$ . In other words, those who thought transgender athletes should be allowed to participate in their gender category scored lower on right-wing authoritarianism and religious fundamentalism.

The answer to the second of two questions also correlated with negative attitudes towards trans men,  $r(99) = -.67, p < .001$ , and trans women,  $r(99) = -.68, p < .001$ , but not SCS,  $r(91) = .05, p < .64$ .

### ***Self-Compassion***

It was hypothesized that higher scores on the measure of self-compassion, the SCS-SF, would predict positive attitudes towards trans folks and participation in sport. The first question that asked whether trans folks should be allowed to participate in varsity sports was not correlated to self-compassion,  $r(91) = .03, p < .80$ . The second question that asked whether trans folk should be allowed to participate in the gender category identify with was also not correlated to self-compassion,  $r(91) = .05, p < .64$ . Thus, self-compassion was not related to participation in sports. Attitudes toward trans men was also not related to self-compassion,  $r(91) = .08, p < .46$ , nor was attitudes toward trans women,  $r(91) = .06, p < .57$ .

### ***Test of Models***

A hierarchical multiple regression was run on the question of whether trans\* athletes should be allowed to participate in varsity sports. Assumptions of multiple regression were met. Residuals were distributed normally and an examination of plots of the residuals revealed no evidence of nonlinearity or heteroscedasticity. In the first block, predictors included whether participants knew someone who was transgender, their age, and binary gender identity (male/female). In the second block, predictors included RFS, SCS, and RWA. The first block was statistically significant,  $F(3, 82) = 5.51, p < .001, r^2 = .168$ . The only statistically significant predictor was binary gender ( $\beta = -.413, p < .001$ ). The second block was statistically significant,  $F(6, 79) = 6.76, p < .001, r^2 = .339$ , and the improvement from the first to second block was statistically significant,  $\Delta F(3, 79) = 6.83, p < .001, \Delta r^2 = .172$ . Aside from binary gender ( $\beta = -$

.287,  $p < .008$ ), the other statistically significant predictor was RFS ( $\beta = -.344, p < .02$ ). However, the zero order correlations indicate both RFS and RWA were related to responses to the question of whether trans athletes should be allowed to participate in varsity sports, suggesting RFS suppressed RWA given their substantial correlation. See Table 6 for the results from Step 2.

**Table 6***Variables Predicting Agreement for Trans\* Athlete**Participation in Varsity Sport*

Variable	<i>b</i>	<i>SE b</i>	$\beta$	<i>r</i>
Constant	6.947	2.258		
Age	.033	.096	.034	.055
Gender	-1.446	.530	-.287**	-.399
Know Trans	.347	.428	.079	-.083
RWA	-.020	.025	-.123	-.491
SCS	-.008	.027	-.029	.033
RFS	-.033	.014	-.344*	-.493

\*  $p < .05$ , \*\*  $p < .01$

A hierarchical multiple regression was also run on the question of whether trans athletes should be allowed to participate in the gender category they identify with. Assumptions of multiple regression were met. Residuals were distributed normally and examination of plots of the residuals revealed no evidence of nonlinearity or heteroscedasticity. Again, in the first block, predictors included whether participants knew someone who was transgender, their age, and binary gender identity (male/female). In the second block, predictors included RFS, SCS, and RWA. The first block was statistically significant,  $F(3,82) = 12.25, p < .001, r^2 = .309$ . The only statistically significant predictor was binary gender ( $\beta = -.523, p < .001$ ). The second block was statistically significant,  $F(6, 79) = 10.31, p < .001, r^2 = .439$ . The improvement from the first to second block was statistically significant,  $\Delta F(3, 79) = 6.09, p < .001, \Delta r^2 = .130$ . Aside from binary gender ( $\beta = -.345, p < .001$ ), the other statistically significant predictor was RWA ( $\beta = -.465, p < .001$ ). However, looking at the zero order correlations, both RFS and RWA were related to responses to the question of whether trans athletes should be allowed to participate in varsity sports, suggesting RWA suppressed RFS given their substantial correlation. See Table 7 for the results from Step 2.

**Table 7***Variables Predicting Agreement for Trans\* Athlete**Participation in Varsity Sport in Chosen Gender**Category*

Variable	<i>b</i>	<i>SE b</i>	$\beta$	<i>r</i>
Constant	10.359	2.090		
Age	-.103	.089	-.107	-.084
Gender	-1.745	.491	-.345**	-.548
Know Trans	-.423	.397	-.096	-.206
RWA	-.078	.024	-.465**	-.543
SCS	.004	.025	.013	.059
RFS	.009	.013	.092	-.349

\*  $p < .05$ , \*\*  $p < .01$

## Discussion

The inclusion of trans\* athletes in traditionally binary sports is currently a topic receiving much public attention. For years, sport has been categorizing athletes into a gender binary and excluding those who do not meet the socially constructed criteria for man or woman. Trans\* individuals experience discrimination and rejection in physical activity and sport at a higher degree than their lesbian, gay, and bisexual counterparts (Cunningham & Pickett, 2017; Hargie et al., 2016). The enduring challenges experienced by both past and present trans\* athletes can be profoundly traumatic, potentially resulting in adverse mental health outcomes such as heightened body dissatisfaction and self-consciousness (Klein et al., 2019). Previous research, while still relatively new, is comprehensive in describing the *experiences* of transgender individuals in sport (Klein et al., 2019; Pereira-García et al., 2021) but does not contain much research on *attitudes* towards transgender athletes specifically. There is also a gap in the literature for studies on transgender athletes in Western Canada - particularly at the post-secondary level.

### ***Research Aims & Hypotheses***

Attitudes impact the social structures of sport by influencing the inclusion and exclusion of particular groups (Lakhani et al., 2016). Further, attitudes shape the larger system of sport including: representation of diverse identities, leadership opportunities, resource allocation and policies and regulations (Lakhani et al., 2016). In summary, the study of attitudes provides valuable insights into human behavior, decision-making, and social dynamics. The aim of the current research is to understand the attitudes of current student-athletes from three universities in Western Canada towards transgender student-athlete's participation in varsity sport. This study contributes to – and expands upon – the current research on trans-inclusivity in a Canadian sporting context. Several demographic variables (age, gender, type of sport, religiosity, etc.) that



might influence a person's attitudes are examined, as well as previously identified predictors of negative attitudes (RWA, RF). Lastly, this study introduces a variable that hasn't been extensively explored in the context of trans\* athletes: the influence of self-compassion on shaping attitudes.

Religious fundamentalism is the belief in the absolute authority of a religious text or figure (Makwana et al., 2018; Kanamori et al., 2018) and has been linked to transphobia in several empirical studies (Altemeyer & Hunsberger, 2004; Campbell et al., 2019; Kanamori et al., 2018; Nagoshi et al., 2008; Nagoshi et al., 2019). Thus, it was hypothesized that individuals who indicated religious fundamentalism would have negative attitudes towards transgender athletes. Religious fundamentalism has also been linked to authoritarian personality styles (Kanamori et al., 2018; Norton & Herek, 2013). Similarly, in the current study, it was hypothesized that participants who scored higher in RWA would show less favourable attitudes towards trans\* individuals and trans\* participation in varsity sport. RWA has been inextricably linked to prejudicial attitudes towards minority groups (Altemeyer, 1996; Sibley & Duckitt, 2008; Vilanova et al., 2019) and indicates negative attitudes towards transgender individuals (Kanamori et al., 2018; Norton & Herek, 2013;). Finally, self-compassion, specifically common humanity, may be associated with more positive attitudes towards outgroups (Vu & Rivera, 2023). Therefore, it was hypothesized that higher self-compassion would indicate more positive attitudes towards trans\* individuals and trans\* participation in varsity sport.

To test the above hypotheses, student-athletes at the University of Alberta, University of Manitoba, and the University of Regina completed a brief online survey where their attitudes towards transgender individuals were assessed via Likert scales. Participants also indicated their beliefs regarding the inclusion of trans\* individuals in varsity sports, both in a general sense and within the trans\* athlete's self-identified gender category. Lastly, participants provided details

about their levels of Right-Wing Authoritarianism (RWA), Religious Fundamentalism (RF), and self-compassion via Likert scales.

### ***Key Findings***

#### ***RWA, RF, and Self-Compassion***

The data analyses revealed asymmetry in the distribution, attributed to higher reports of RF. Alternatively stated, the data set contained several participants who reported extremely high scores of RF, resulting in a positively skewed distribution. Hence, the current sample included more individuals with fundamentalist values than typically observed in a given sample.

Consistent with previous research (Goldbach et al., 2022), participants who expressed more favourable attitudes of trans\* participation in sport indicated lower levels of RWA and RFS. Consequently, the relationship between RWA and RF levels and attitudes towards trans\* participation in sport was observable in this study. Individuals who report higher levels of RWA and RF tended to hold conservative values and expressed adherence to traditional gender roles (Altemeyer & Hunsberger, 2004; Campbell et al., 2019; Kanamori et al., 2018; Nagoshi et al., 2008; Nagoshi et al., 2019). As a result, these individuals likely view trans\* individuals as oppositional to such values and threats to their understanding of the world. This view of trans\* individuals is held across contexts, including sport, whereby trans\* athletes are seen as gender imposters, and is the foundation upon which the fairness argument rests.

Participants of the current study also expressed more favourable attitudes towards trans\* men than trans\* women both in general, and within the context of sport. This disparity is likely attributable to the perceived athletic and genetic advantage over cisgender women in sports (Bianchi, 2017). Additionally, it has been posited that trans\* men are viewed as less threatening by individuals who express higher levels of RWA and/or RF. Authors suggest that sexism, as well

as transphobia, influences the belief that individuals assigned female at birth are biologically inferior (Bianchi, 2017; Cooper, 2010; Hargie et al., 2016). In the current data set, extreme scores of RF may be an indication for such beliefs.

The data from the current study oppose the speculation that increased levels of self-compassion would predict more positive attitudes towards trans\* individuals and trans\* participation in sport. Although self-compassion has previously been linked to more favourable attitudes towards members of an outgroup (Vu & Rivera, 2023), it is possible that self-compassion is not strong enough to influence attitudes towards particular marginalized groups. Moreover, in contrast to the impactful variables of RWA, RF, and ATTMW, self-compassion might not have generated a sufficiently robust response to supersede or shape the values reflected in the RWA, RF, and ATTMW scales. There is a potential scenario where, if participants had filled out the SCS-SF before being exposed to the RWA-SF, R-RFS, and ATTMW scales, the reported impact of self-compassion may have been clearer. Emotional detachment may be an additional explanation for the limited influence of self-compassion. Alternatively, integrating an emotion-evoking element (such as a vignette) might have stimulated the participants' self-reported self-compassion.

### ***Binary Gender***

Perhaps the most notable discovery was that cisgender women, when compared to their cisgender male counterparts, reported less favorable attitudes. This finding is inconsistent with the majority of previous research conducted on attitudes towards trans\* individuals whereby cisgender men expressed less favourable attitudes than cisgender women (Eberman et al., 2022; Flores et al., 2020; Goldbach et al., 2022; Tanimoto & Miwa, 2021). Goldbach et al. (2022) found that female athletes reported more favourable general attitudes (via the TABS) towards

transgender individuals than male athletes. However, the researchers did not include attitudinal measures for trans\* participation in sport. Prior research on attitudes towards trans\* participation in sport is extremely limited in its examination of student-athletes. Tanimoto and Miwa (2021) identified a stronger athletic identity in women as a predictor for less favourable attitudes towards trans\* individuals. In the current study, it is possible that adherence to athletic identity influenced the relationship between binary gender and attitudes towards trans\* individuals.

Additionally, more cisgender male participants reported knowing somebody trans\* than did cisgender female participants. Intergroup contact theory may be a plausible explanation for the more favourable attitudes observed among cisgender male participants than female participants (Cunningham et al., 2021; Flores, 2015; Goldbach et al., 2022). Thus, cisgender men reported knowing someone trans\* and expressed more favourable attitudes towards trans\* individuals both generally, and within the context of sport. However, knowing someone trans\* was not identified as a predictor for attitudes towards trans\* individuals and trans\* participation in sport. A formal measurement of intergroup contact theory might have produced different results.

The results of this study prompt a nuanced discussion on inclusive feminism. The rationale frequently employed to deprive trans\* individuals, especially trans women, of their rights is cloaked in the guise of *feminism* (Bassi & LaFleur, 2022). However, feminism that excludes trans\* women from the same rights as cis women falls under the veil of *white feminism*. White feminism “fails to recognize how multiple axes of power including white supremacy, racial capitalism, and heteropatriarchy form intersecting oppressions and thus varying levels of dispossession for non-white, queer, trans, and differently abled women” (Fischer, 2023, p. 405).

Historically, white feminism disregards intersectionality and is exclusionary towards trans\* women and women of colour.

Trans exclusionary feminism (TERF) has emerged as a contemporary expression of oppression towards trans\* women. This version of feminism implies that trans women pose a threat to the concept of an 'authentic woman' by perpetuating patriarchy and encroaching on cis-women's spaces (Sailors, 2020). Arguments employed by TERFs in the context of sport uphold previously dismantled biological essentialist definitions of gender and sex, thus promoting gender segregation (Fischer, 2023; Sailors, 2020). Fearmongering is characteristic of TERF ideology through false accusations of cismen 'masquerading' as trans women by means of gaining athletic advantages. It is plausible that, in the current study, participants identifying as cisgender women perceived trans\* women as threatening their 'right' to winning and to superiority. Participants identifying as cisgender men did not identify with this threat of anticipated domination.

White feminism has roots in white supremacist ideology often tied to biological essentialism. According to Sailors (2020), the features of competition and comparison in sports play a crucial role in comprehending the inclination to 'protect' the women's category. However, it is necessary to consider who is demanding protection, and from whom. The attitudes reflected in the current study are void of racial and ethnic diversity. White women, particularly TERFs, believe that transwomen threaten opportunities for ciswomen's athletic success (Fischer, 2023). Additionally, Black women are historically viewed as threats to athletic success due to the "myth of Black athletic superiority, which often views Black athletes as superior – physically but not intellectually" (Fischer, 2023, p. 407; Mangle, 2021). Gender verification practices frequently

target women of colour, particularly Black women, due to colonial conceptions of femininity grounded in whiteness (Mangle, 2021).

### **Implications for Counselling Psychology**

Psychologists can play a crucial role in supporting trans\* athletes by employing and promoting affirmative and inclusive practices. Research in this area is typically related to trans\* athletes' experiences, mental health, and societal attitudes. The findings can be used to advocate for policy changes, challenge discriminatory practices, and contribute to the advancement of inclusive sports environments. In the field of counselling, studying attitudes towards transgender athletes in counseling psychology is crucial for providing affirming and supportive care, addressing mental health challenges, advocating for inclusivity, and contributing to the overall well-being of transgender individuals involved in sports (Schofield et al., 2023). Armed with an understanding of these attitudes, counselling psychologists can address the potential stressors and discrimination faced by transgender athletes, promoting mental health and resilience.

Expansive knowledge of the unique challenges faced by trans\* individuals is crucial for providing effective support to transgender clients both generally, and within the context of sport (Eberman et al., 2022). Counselors can play an educational and advocacy role by challenging negative attitudes and stereotypes related to transgender athletes. Counselors can contribute to raising awareness, promoting inclusivity, and fostering a more accepting environment within sports communities (Schofield et al., 2023). By understanding and addressing negative attitudes within sports and counseling settings, counsellors can advocate for a more inclusive and affirming environment for transgender individuals in athletics. Additionally, attitudes towards transgender athletes intersect with other aspects of identity such as race, ethnicity, and socio-

economic status (Eberman et al., 2022). Counselling psychologists need to understand these intersecting factors to provide culturally competent and holistic care to transgender athletes.

Finally, these data contribute to the advancement of knowledge in counseling psychology. Research in this area informs evidence-based practices and helps counselors stay informed about the evolving landscape of transgender rights and inclusivity in sports (Eberman et al., 2022; Schofield et al., 2023).

### **Limitations and Future Directions**

The current study is not without limitations. Responses among the three universities in Western Canada were not distributed equally. The University of Manitoba constituted over half of the final sample size, while the participation from the Universities of Alberta and Regina was comparatively less abundant. Additionally, the quantitative nature of the study does not allow for further insight into potentially rich data areas. Namely, due to the small sample size, conclusions regarding gender and sexuality diverse participants as well as ethnically diverse participations were not possible beyond speculation. Likewise, the variance across sports was not large enough to draw meaningful conclusions from. Future research with increased capacities may consider investigating differences across sports and within marginalized groups. Further exploration regarding the role of oppressive ideologies (i.e., racism or heteropatriarchy) in shaping attitudes towards trans\* athletes' participation in competitive sport would also be an area of development in future studies. The current sample is representative of white, cisgender, straight athletes' attitudes. Future research should work to increase generalizability by obtaining samples of increased diversity.

This research is also limited by the current cultural climate. Specifically, with the increase in discussion surrounding trans\* athletes in recent years, it is possible that public

discourse may change. Attitudinal research provides a snapshot of the current cultural climate (Billard, 2018; Krosnick et al., 2005) and requires ongoing research to match the changing political and cultural environment. Additionally, this research did not include an evaluation of attitudes held by coaches or athletic staff members which may impact the attitudes reflected by student-athletes.

From a methodological standpoint, the present study incorporated robust measures for key variables such as religious fundamentalism, right-wing authoritarianism, self-compassion, and attitudes toward transgender men and women. Nevertheless, there is currently a lack of a well-established measure for attitudes specifically directed at trans\* athletes. Future research should work to develop a measure of attitudes towards trans\* athletes given the growing academic interest. Likewise, further exploration is needed into the role of athletic identity and attitudes towards trans\* individuals and trans\* participation in sport among student-athlete populations. Furthermore, future research may wish to examine the role of sociological or theoretical variables, such as *feminist orientation*, on attitudes towards transgender individuals within – and outside of – sport.

### **Conclusions**

The current attention on including trans\* athletes in binary sports highlights long-standing gender categorization issues, leading to discrimination against trans\* individuals at higher rates than their LGBTQ+ counterparts (Cunningham & Pickett, 2017; Hargie et al., 2016; Klein et al., 2019). This exclusion poses enduring challenges, potentially causing severe mental health issues, yet there is limited research on attitudes towards transgender athletes, particularly in Western Canada and at the post-secondary level.



The study aimed to identify and understand attitudes of varsity athletes towards trans\* participation in sport and to promote a thoughtful discussion surrounding this widely debated topic. Focused on current student-athletes in Western Canada, the research explores attitudes towards transgender student-athletes, considering demographic variables and introducing self-compassion as a novel factor influencing attitudes in the context of trans\* athletes. In line with previous research, participants with more favorable attitudes towards trans\* individuals and trans\* participation in sports showed lower levels of RWA and RF, suggesting a clear association between traditional values and negative views on trans\* individuals in sports (Altemeyer & Hunsberger, 2004; Campbell et al., 2019; Kanamori et al., 2018; Nagoshi et al., 2008; Nagoshi et al., 2019). The study also found a preference for trans\* men over trans\* women, possibly influenced by perceived athletic advantages of and higher perceived threat of trans women, reflecting underlying sexism and transphobia. Self-compassion was not found to influence participants' attitudes. This could be attributed to the sequence of survey administration or the absence of emotionally evocative elements in the self-compassion measurement.

Finally, this study identified a nuanced relationship between gender, athletic identity, and attitudes in the context of transgender participation in sports, potentially influenced by perceptions of competition and feminism (Eberman et al., 2022; Schofield et al., 2023). Psychologists, particularly in counselling psychology, play a crucial role in supporting trans\* athletes by studying and addressing attitudes, advocating for policy changes, challenging stereotypes, and promoting inclusivity, contributing to the overall well-being of transgender individuals involved in sports, and advancing knowledge in the field.

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## Appendices

### Appendix A

#### *University of Alberta Ethics Approval*

11/2/22, 1:52 PM

<https://arise.ualberta.ca/ARISE/sd/Doc/0/5PKD21QMPO8UR7L9AM9A4LIG00/fromString.html>

#### Notification of Approval

Date: October 28, 2022

Study ID: Pro00118577

Principal Investigator: Adriana Davis

Study Supervisor: William Whelton

Study Title: Identifying Student-Athlete Attitudes Toward Trans\* Athletes' Participation In Varsity Sport: A Western Canada Perspective.

Approval Expiry Date: October 27, 2023

Thank you for submitting the above study to the Research Ethics Board 2. Your application has been reviewed and approved on behalf of the committee.

#### Approved Documents:

##### **Recruitment Materials**

[Recruitment Document](#)

##### **Consent Forms**

[Consent Form - U of A.docx](#)

[Consent Form - U of M.docx](#)

[Consent Form - U of R.docx](#)

##### **Questionnaires, Cover Letters, Surveys, Tests, Interview Scripts, etc.**

[Self-Compassion Scale - Short Form](#)

[Transgender Athletes Questions.docx](#)

[Demographics Questionnaire.docx](#)

[Attitudes Towards Transgender Men and Women Scale.docx](#)

[Revised Religious Fundamentalism Scale.docx](#)

[Shortened Right-Wing Authoritarianism Scale.docx](#)

##### **Other Documents**

[Key Terms and Definitions.docx](#)

Any proposed changes to the study must be submitted to the REB for approval prior to implementation. A renewal report must be submitted next year prior to the expiry of this approval if your study still requires ethics approval. If you do not renew on or before the renewal expiry date, you will have to re-submit an ethics application.

Approval by the REB does not constitute authorization to initiate the conduct of this research. The Principal Investigator is responsible for ensuring required approvals from other involved organizations (e.g., Alberta Health Services, Covenant Health, community organizations, school boards) are obtained, before the research begins.

Sincerely,

Dr. Ubaka Ogbogu, LLB, BL, LLM, SJD  
Chair, Research Ethics Board 2

*Note: This correspondence includes an electronic signature (validation and approval via an online system).*

Appendix B  
*University of Regina Ethics Approval*

**Research Ethics Board  
 Certificate of Approval**

PRINCIPAL INVESTIGATOR  
 Dr. Adriana Davis

DEPARTMENT  
 Education  
 University of Alberta

REB#  
 2022-151

TITLE  
 Attitudes Towards Transgender Athletes In Varsity Sport

APPROVED ON  
 November 22, 2022

RENEWAL DATE  
 November 22, 2023

APPROVAL OF

Application for Behavioural Research Ethics Review  
 Recruitment Document  
 U of R, U of A and U of M Consent Forms  
 Qualtrics Survey Link  
 Self-Compassion Scale  
 Transgender Athletes Questions  
 Demographics Questionnaire

Attitudes Towards Transgender Men and Women Scale  
 Revised Religious Fundamentalism  
 Shortened Right-wing Authoritarianism Scale  
 Acknowledged  
 U of A Application  
 U of A REB Approval dated October 28, 2022

Full Board Meeting

Delegated Review

The University of Regina Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol, or related documents.

Any significant changes to your proposed method, procedures or related documents should be reported to the Chair for Research Ethics Board consideration in advance of implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration one month in advance of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for the renewal and closure forms:

<https://www.uregina.ca/research/for-faculty-staff/ethics-compliance/human/ethicsforms.html>



Kim Dorsch PhD  
 REB Co-Chair  
 University of Regina

Please send all correspondence to:

Research Office  
 University of Regina  
 Centre for Kinesiology Building 227  
 Regina, SK S4S 0A2  
 Telephone: (306) 585-4775 Fax: (306) 585-4893  
 research.ethics@uregina.ca

Appendix C  
*University of Regina Recruitment Document*

### **Identifying Student-Athlete Attitudes Toward Trans\* Athletes' Participation in Varsity Sport: A Western Canada Perspective.**

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**Principal Investigator:** Adriana Davis (she/her)

**E-mail:** [Aadavis1@ualberta.ca](mailto:Aadavis1@ualberta.ca)

**Phone:** [\(780\) 492-7979](tel:(780)492-7979)

**U of A Ethics ID:** Pro00118577

**The Current Study:** You are invited to participate in an online research study via Qualtrics Survey Software. You will be asked to complete a series of questionnaires as well as report demographic information. The entire survey is about 61 items in length and should take ~10-15 minutes to complete. You can choose to enter to win a draw for a \$50.00 VISA gift card by clicking the link at the end of the survey. This link will direct you towards a separate survey via Qualtrics where you can enter your e-mail. This e-mail cannot be traced back to your data.

**Background:** The debate surrounding the inclusion of trans\* and intersex athletes in traditionally binary sports is continuously gaining the attention of the public. Previous research, while still relatively new, is comprehensive in describing the experience of transgender individuals in sport, but does not contain much research on attitudes towards transgender *athletes* specifically. There is also a gap in the literature for studies on transgender athletes in Western Canada - particularly at the post-secondary level.

**Purpose:** This study aims to understand the current attitudes of varsity athletes from three schools in Western Canada towards transgender athletes' participation in varsity sport.

**Impact:** This research will contribute to the small body of research in Canada on attitudes towards transgender individuals - particularly attitudes towards transgender *athletes*. This research may be used as a stepping stone to further research exploring the subject matter and developing strategies on providing an inclusive environment for future gender-diverse athletes.

**Link to participate:**

## Appendix D

### *Athletic Director Handout*

**About Me:** My name is Adriana Davis (she/her). I am a former student-athlete from the University of Regina and a current graduate student at the University of Alberta studying Counselling Psychology. I trained and competed with the track team for 6 years and had great success in 2016 when I had a record-breaking performance in the 1,000m which, until recently, had remained intact. I am still connected to the U of R track team as my dad, Dr. Stephen Davis, coaches the middle-distance group.

**Present Research:** As a queer researcher, I am blending my passion for LGBTQ2SIA+ research and sport with this study. I hope to examine the attitudes of student-athletes from three schools in CanWest towards trans\* and intersex participation in varsity sport. This topic has been widely debated in recent years and continues to be a source for passionate discussion. Understanding how the issues involved are viewed by athletes and others currently involved in varsity sport is a pivotal first step in unearthing solutions to the challenges that trans\* athletes face in sport and how universities can better support these athletes.

**Benefits of Participating:** This study will consist of standard demographic questions and a couple of online scales relating to personality and attitudes that I am in the process of finalizing. It will be a brief study not exceeding 15 minutes of the participant's time. I intend to take an objective, informative stance no matter the findings. By participating in this research, you are showing that your university embraces discussions of human rights and equity. Particularly in the world of sport, and as these conversations gain more and more traction, your university will be ahead of most by already having more deeply considered these issues.

**How You Can Help:** My ask of you as a staff member of athletics, is simple. I am hoping to gain your trust and permission to conduct this study at your university. In order to reach all of the sports teams, I hope to obtain a listserv of email addresses for student-athletes which I will use to provide a brief introduction of myself and my research, and to administer the link to the online survey. Of course, participation will be optional, completely anonymous, and greatly appreciated.

## Appendix E

### *University of Alberta Consent Page*



## PARTICIPANT CONSENT FORM

**Title of Study:** Attitudes Towards Transgender Athletes in Varsity Sport

Principal Investigator:

Adriana Davis

Faculty of Education: Counselling Psychology

University of Alberta

[aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)

Supervisor:

Dr. William Whelton

6-123G Education Centre - North

8730 - 112 St NW

Edmonton, AB

T6G 2G5

[\(780\) 492-7979](tel:(780)492-7979)

[wwhelton@ualberta.ca](mailto:wwhelton@ualberta.ca)

---

You are being invited to take part in a research study. Before you take part, you are able to refer any questions or concerns regarding the study to the principal investigator, or their supervisor. You may print off this page or screen shot it for your records.

**Purpose of the Study:** The purpose of this study is to identify the current attitudes of student-athletes in Western Canada towards transgender participation in varsity sport.

**Explanation of Procedures:** You will be asked to complete several questionnaires beginning with a short demographic questionnaire. You will be given a list of terminology that will be a key component of the study. Following this, there will be measures assessing your attitudes towards trans\* men and women, authoritarianism, self-compassion, and religious fundamentalism. The survey is likely to take 10-15 minutes.

**Confidentiality of Data:** You do not need to provide any identifying information. If you choose to enter to win the gift card, your e-mail address will not be traceable to your data. Your responses will be stored electronically and will be password protected. Participant's data will be downloaded from Qualtrics and converted to a Microsoft Excel file that will be password protected. This file will be stored on a password protected USB stick even after the study is done for a minimum of 5 years.

**Potential Risks and Discomforts:** This study is *minimal risk* such that the probability and magnitude of possible harms is no greater than those encountered in everyday life. If you feel uncomfortable at any point during the study, you are free to withdraw participation. The University of Alberta offers free Counselling & Clinical Services located in SUB 2-600. You

may book an appointment by calling reception at 780-492-5205. It is not possible to know all of the risks that may happen in a study, but we have taken all reasonable safeguards to minimize any known risks to you.

**Benefits to You:** While there may not be any direct benefit to you, results from this study may help us learn more about attitudes towards transgender athlete's participation in varsity sport in Western Canada and may benefit others in the future.

**Withdrawal from the Study:** Participating in this study is voluntary. If you decide to participate in this study, you are free to withdraw your consent at any time and exit from the survey. In this case, your data will not be recorded and there will be no penalty to you. Due to the anonymous nature of participation, you can withdraw your data up until the time of submission. Simply close your browser/do not submit your data and nothing will be recorded. Once you have submitted your data it is not possible for it to be removed.

**Incentives:** There will be an opportunity to enter to win a \$50 VISA gift card at the end of the survey. You will be asked to follow a link to another "survey" where you will provide your preferred e-mail address separate from your data. THIS IS OPTIONAL AND CANNOT BE TRACED TO YOUR DATA. The approximate odds of being selected for the gift card are 1 in 100.

**Offer to Answer Questions:** If you have questions about the research now or later, please contact Adriana Davis ([aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)).

If you have questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at [reoffice@ualberta.ca](mailto:reoffice@ualberta.ca) and quote Ethics ID Pro00118577. This office is independent of the study investigators.

This project has been approved on ethical grounds by the University of Alberta Research Ethics Board.

**By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study. You can print and save this consent form for future reference.**

Appendix F  
*University of Regina Consent Page*

## **PARTICIPANT CONSENT FORM**

**Title of Study:** Attitudes Towards Transgender Athletes in Varsity Sport

Principal Investigator:  
Adriana Davis  
Faculty of Education: Counselling Psychology  
University of Alberta  
[aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)

Supervisor:  
Dr. William Whelton  
6-123G Education Centre - North  
8730 - 112 St NW  
Edmonton, AB  
T6G 2G5  
[\(780\) 492-7979](tel:(780)492-7979)  
[wwhelton@ualberta.ca](mailto:wwhelton@ualberta.ca)

---

You are being invited to take part in a research study. Before you take part, you are able to refer any questions or concerns regarding the study to the principal investigator, or their supervisor. You may print off this page or screen shot it for your records.

**Purpose of the Study:** The purpose of this study is to identify the current attitudes of student-athletes in Western Canada towards transgender participation in varsity sport.

**Explanation of Procedures:** You will be asked to complete several questionnaires beginning with a short demographic questionnaire. You will be given a list of terminology that will be a key component of the study. Following this, there will be measures assessing your attitudes towards trans\* men and women, authoritarianism, self-compassion, and religious fundamentalism. The survey is likely to take 10-15 minutes.

**Confidentiality of Data:** You do not need to provide any identifying information. If you choose to enter to win the gift card, your e-mail address will not be traceable to your data. Your responses will be stored electronically and will be password protected. Participant's data will be downloaded from Qualtrics and converted to a Microsoft Excel file that will be password protected. This file will be stored on a password protected USB stick even after the study is done for a minimum of 5 years.

**Potential Risks and Discomforts:** This study is *minimal risk* such that the probability and magnitude of possible harms is no greater than those encountered in everyday life. If you feel uncomfortable at any point during the study, you are free to withdraw participation. The University of Regina offers Counselling & Clinical Services located in the Student Wellness Centre, 119 Paskwāw Tower. You may book an appointment by calling reception at 306-337-2200 or online using the [Contact Us form](#). It is not possible to know all of the risks that may happen in a study, but we have taken all reasonable safeguards to minimize any known risks to you.

**Benefits to You:** While there may not be any direct benefit to you, results from this study may help us learn more about attitudes towards transgender athlete's participation in varsity sport in Western Canada and may benefit others in the future.

**Withdrawal from the Study:** Participating in this study is voluntary. If you decide to participate in this study, you are free to withdraw your consent at any time and exit from the survey. In this case, your data will not be recorded and there will be no penalty to you. Due to the anonymous nature of participation, you can withdraw your data up until the time of submission. Simply close your browser/do not submit your data and nothing will be recorded. Once you have submitted your data it is not possible for it to be removed.

**Incentives:** There will be an opportunity to enter to win a \$50 VISA gift card at the end of the survey. You will be asked to follow a link to another "survey" where you will provide your preferred e-mail address separate from your data. THIS IS OPTIONAL AND CANNOT BE TRACED TO YOUR DATA. The approximate odds of being selected for the gift card are 1 in 100.

**Offer to Answer Questions:** If you have questions about the research now or later, please contact Adriana Davis ([aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)).

This project has been approved on ethical grounds by the University of Alberta Research Ethics Board. If you have questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at [reoffice@ualberta.ca](mailto:reoffice@ualberta.ca) and quote Ethics ID Pro00118577. This office is independent of the study investigators.

This project has also been approved on ethical grounds by the University of Regina Research Ethics Board on November 22, 2022. Any questions regarding your rights as a participant may be addressed to the committee at 306-585-4775 or [research.ethics@uregina.ca](mailto:research.ethics@uregina.ca). Out of town participants may call collect.

**By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study. You can print and save this consent form for future reference.**

Appendix G  
*University of Manitoba Consent Page*

## PARTICIPANT CONSENT FORM

**Title of Study:** Attitudes Towards Transgender Athletes in Varsity Sport

Principal Investigator:  
Adriana Davis  
Faculty of Education: Counselling Psychology  
University of Alberta  
[aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)

Supervisor:  
Dr. William Whelton  
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[\(780\) 492-7979](tel:(780)492-7979)  
[wwhelton@ualberta.ca](mailto:wwhelton@ualberta.ca)

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You are being invited to take part in a research study. Before you take part, you are able to refer any questions or concerns regarding the study to the principal investigator, or their supervisor. You may print off this page or screen shot it for your records.

**Purpose of the Study:** The purpose of this study is to identify the current attitudes of student-athletes in Western Canada towards transgender participation in varsity sport.

**Explanation of Procedures:** You will be asked to complete several questionnaires beginning with a short demographic questionnaire. You will be given a list of terminology that will be a key component of the study. Following this, there will be measures assessing your attitudes towards trans\* men and women, authoritarianism, self-compassion, and religious fundamentalism. The survey is likely to take 10-15 minutes.

**Confidentiality of Data:** You do not need to provide any identifying information. If you choose to enter to win the gift card, your e-mail address will not be traceable to your data. Your responses will be stored electronically and will be password protected. Participant's data will be downloaded from Qualtrics and converted to a Microsoft Excel file that will be password protected. This file will be stored on a password protected USB stick even after the study is done for a minimum of 5 years.

**Potential Risks and Discomforts:** This study is *minimal risk* such that the probability and magnitude of possible harms is no greater than those encountered in everyday life. If you feel uncomfortable at any point during the study, you are free to withdraw participation. The University of Manitoba offers free Counselling & Clinical Services located in the main office of the Student Counselling Centre (SCC 474 University Centre) and the Indigenous Student Centre. You may book an appointment by calling reception at 204-474-8592. It is not possible to know all of the risks that may happen in a study, but we have taken all reasonable safeguards to minimize any known risks to you.

**Benefits to You:** While there may not be any direct benefit to you, results from this study may help us learn more about attitudes towards transgender athlete's participation in varsity sport in Western Canada and may benefit others in the future.

**Withdrawal from the Study:** Participating in this study is voluntary. If you decide to participate in this study, you are free to withdraw your consent at any time and exit from the survey. In this case, your data will not be recorded and there will be no penalty to you. Due to the anonymous nature of participation, you can withdraw your data up until the time of submission. Simply close your browser/do not submit your data and nothing will be recorded. Once you have submitted your data it is not possible for it to be removed.

**Incentives:** There will be an opportunity to enter to win a \$50 VISA gift card at the end of the survey. You will be asked to follow a link to another "survey" where you will provide your preferred e-mail address separate from your data. **THIS IS OPTIONAL AND CANNOT BE TRACED TO YOUR DATA.** The approximate odds of being selected for the gift card are 1 in 100.

**Offer to Answer Questions:** If you have questions about the research now or later, please contact Adriana Davis ([aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca)).

If you have questions regarding your rights as a research participant, you may contact the University of Alberta Research Ethics Office at [reoffice@ualberta.ca](mailto:reoffice@ualberta.ca) and quote Ethics ID Pro00118577. This office is independent of the study investigators.

This project has been approved on ethical grounds by the University of Alberta Research Ethics Board.

**By completing and submitting the questionnaire, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study. You can print and save this consent form for future reference.**

## Appendix H

*Attitudes Towards Trans Men and Women Scale (ATTMW)***Attitudes Towards Transgender Men & Women (ATTMW) Scale**

Billard (2018)

The following statements concern transgender men. The term “**transgender man**” is used to describe people who were assigned female at birth but who currently live their daily lives as men. Be sure to read the prompts carefully and to answer honestly.

Please rate your agreement with the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

1. Transgender men will never really be men
2. Transgender men are not really men.
3. Transgender men are only able to look like men, but not be men.
4. Transgender men are unable to accept who they really are.
5. Transgender men are trying to be someone they are not.
6. Transgender men seem absolutely normal to me.
7. Transgender men are denying their DNA.
8. Transgender men cannot just “identify” as men.
9. Transgender men are misguided.
10. Transgender men are unnatural
11. Transgender men don’t really understand what it means to be a man.
12. Transgender men are emotionally unstable.

The following statements concern transgender women. The term “**transgender woman**” is used to describe people who were assigned male at birth but who currently live their daily lives as women. Be sure to read the prompts carefully and to answer honestly.

Please rate your agreement with the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

1. Transgender women will never really be women.
2. Transgender women are only able to look like women, but not be women.
3. Transgender women are not really women.
4. Transgender women are trying to be someone they are not.
5. Transgender women are unnatural
6. Transgender women don’t really understand what it means to be a woman.
7. Transgender women cannot just “identify” as women.
8. Transgender women are unable to accept who they really are.
9. Transgender women only think they are women.
10. Transgender women are defying nature.
11. Transgender women are denying their DNA.

12. There is something unique about being a woman that transgender women can never experience.



Appendix I  
*Transgender Participation in Sport Questions*

**Transgender Athletes' Participation in Sport Questions**

Please read and rate your agreement to the following statement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*):

1. Transgender athletes should be allowed to participate in varsity-level sport.
2. Transgender athletes should be allowed to participate in the gender category that they identify with.

## Appendix J

*Shortened Right-Wing Authoritarianism Scale (RWA-S)***Shortened Right-Wing Authoritarianism (RWA-S) Scale**

Zakrisson (2005)

Please read each statement and rate your agreement with the following statements on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*):

1. Our country needs a powerful leader, in order to destroy the radical and immoral currents prevailing in society today.
2. Our country needs free thinkers, who will have the courage to stand up against traditional ways, even if this upsets many people.
3. The “old-fashioned ways” and “old-fashioned values” still show the best way to live.
4. Our society would be better off if we showed tolerance and understanding for untraditional values and opinions.
5. God’s laws about abortion, pornography and marriage must be strictly followed before it is too late, violations must be punished.
6. The society needs to show openness towards people thinking differently, rather than a strong leader, the world is not particularly evil or dangerous.
7. It would be best if newspapers were censored so that people would not be able to get hold of destructive and disgusting material.
8. Many good people challenge the state, criticize the church, and ignore “the normal way of living”.
9. Our forefathers ought to be honored more for the way they have built our society, at the same time we ought to put an end to those forces destroying it.
10. People ought to put less attention to the Bible and religion, instead they ought to develop their own moral standards.
11. There are many radical, immoral people trying to ruin things; the society ought to stop them.
12. It is better to accept bad literature than to censor it.
13. Facts show that we have to be harder against crime and sexual immorality, in order to uphold law and order.
14. The situation in the society of today would be improved if troublemakers were treated with reason and humanity.
15. If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within.

Appendix K  
*Self-Compassion Scale – Short Form (SCS-SF)*

**Self-Compassion Scale Short Form (SCS-SF)**

**HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES**

Please read each statement carefully before answering. Indicate how often you behave in the stated manner, using the following scale:

<b>Almost never</b>					<b>Almost always</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	

1. When I fail at something important to me, I become consumed by feelings of inadequacy.
2. I try to be understanding and patient towards those aspects of my personality I don't like.
3. When something painful happens I try to take a balanced view of the situation.
4. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
5. I try to see my failings as part of the human condition.
6. When I'm going through a very hard time, I give myself the caring and tenderness I need.
7. When something upsets me, I try to keep my emotions in balance.
8. When I fail at something that's important to me, I tend to feel alone in my failure
9. When I'm feeling down, I tend to obsess and fixate on everything that's wrong.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm disapproving and judgmental about my own flaws and inadequacies.
12. I'm intolerant and impatient towards those aspects of my personality I don't like.

## Appendix L

*Revised Religious Fundamentalism Scale (R-RFS)***Revised Religious Fundamentalism Scale (R-RFS)**

Altemeyer &amp; Hunsberger, 2004

Please read each statement and rate your agreement with the following statements on a scale from 1 (*very strongly disagree*) to 9 (*very strongly agree*):

1. God has given humanity, a complete unfailing guide to happiness and salvation, which must be totally followed.
2. No single book of religious teachings contains all the intrinsic, fundamental truths about life.
3. The basic cause of evil in this world is Satan, who is still constantly and ferociously fighting against God.
4. It is more important to be a good person than to believe in God and the right religion.
5. There is a particular set of religious teachings in this world that are so true, you can't go any "deeper" because they are the basic, bedrock message God has given humanity.
6. When you get right down to it, there are basically two kinds of people in the world: the righteous who will be rewarded by God; and the rest who will not.
7. Scriptures may contain general truths, but they should NOT be considered completely, literally true from beginning to end.
8. To lead the best, most meaningful life, one must belong to the one, fundamentally true religion.
9. "Satan" is just the name people give to their own bad impulses. There is really no such thing as a diabolical "Prince of Darkness" who tempts us.
10. Whenever science and sacred scripture conflict, science is probably right.
11. The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs.
12. All of the religions in the world have flaws and wrong teachings. There is no perfectly true and right religion.

Appendix M  
*Survey Completion Notification*

**You did it!**

Thank you for completing all portions of the survey. The purpose of this study was to identify attitudes of student-athletes from 3 universities in Western Canada, towards transgender individual's participation in varsity sport. Thank you for contributing to this critical research and expressing your valued beliefs.

If you are in need of further mental health resources the University of Manitoba offers free Counselling & Clinical Services located in the main office of the Student Counselling Centre (SCC 474 University Centre) and the Indigenous Student Centre. You may book an appointment by calling reception at 204-474-8592. Please contact the principal investigator with any questions regarding the research, or if you would like to be notified of the results. You can reach me by e-mail at [aadavis1@ualberta.ca](mailto:aadavis1@ualberta.ca) or you can reach my supervisor, Dr. William Whelton, at [wwhelton@ualberta.ca](mailto:wwhelton@ualberta.ca).

## Appendix N

*Option to Enter to Win Gift Card Draw*

If you would like to enter to win the \$50 VISA Gift Card, you may select "YES" and copy the link to your browser. This link will prompt you for your e-mail address so that you may be notified if you are selected as the winner. This link is separate from your data and cannot be traced back to you. **Please be sure to come back and end the survey.** If you would not like to enter, you may select "NO" and continue to ending the survey.

- Yes
- No