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## RESEARCH ARTICLE

### Attitudes towards LGBTQ+ Inclusion in Canadian Figure Skating

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#### Abstract:

#### Background:

As part of an examination of the current climate regarding gender and sexual diversity in figure skating, this paper reports on a 2019 pilot study examining the attitudes of athletes, coaches, officials, and administrators at Skate Canada (the national figure skating organization).

#### Objectives:

To describe attitudes towards LGBTQ+ inclusion in figure skating; to assess whether attitudes vary by gender, sexual identity, or level of participation in skating; and to examine the impact of contact with LGBTQ+ people on attitudes towards inclusion.

#### Methods:

We conducted an online survey of 106 Skate Canada members in 2019, including attitudinal, demographic, and inter-group contact questions. We employed factor analysis to summarize the attitudinal questions, and multiple regression analyses to examine the effects of demographic and contact variables on attitudes.

#### Results:

Four main factors emerged, reflecting a continuum of passive to active support for diversity and inclusion in skating. Although all respondents' attitudes toward LGBTQ+ inclusion in figure skating were mostly positive, athletes and coaches were significantly less likely to believe that skating is an inclusive environment than volunteers and officials. Additionally, those who identified as gender and/or sexually diverse scored significantly higher on the personal advocacy factor. In the multiple regression analyses, more frequent contact with LGBTQ+ individuals was associated with significant increases in both passive and active support for inclusion.

#### Conclusion:

Gender and sexually diverse respondents, and those with more frequent contact with LGBTQ+ individuals, demonstrated higher levels of both active and passive support for inclusion in Canadian figure skating. We recommend that sports organizations should conduct ongoing attitudinal surveys of their membership to monitor progress towards LGBTQ+ inclusion, and should remain attuned to the unique experiences of LGBTQ+ athletes and coaches.

**Keywords:** Figure skating, Intergroup contact, LGBTQ+ inclusion, Climate, Gender, Sports.

#### Article History

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## 1. INTRODUCTION AND LITERATURE REVIEW

Over the past 40 years, researchers have turned a critical lens to the experiences of LGBTQ+ (lesbian, gay, bisexual,

transgender, queer) people in sports. In general, the body of research reveals that sport has often been an unwelcoming and unsafe space for lesbian, gay, and bisexual athletes and coaches, through both overt and covert forms of discrimination [1 - 3]. Sport is more complicated, unsafe, and even dangerous for transgender, gender non-conforming, and intersex athletes [4 - 6]. Recent review studies continue to shed light on ongoing

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negative experiences in the context of sports for LGBTQ+ persons, ranging from outright experiences of homophobia [7] to transphobia and the ways that transgender and gender non-conforming persons bump up against exclusionary rules even in the context of recreation and development level sport and physical activity [5].

Although sports organizations have begun realizing that inclusion matters and are beginning to conduct research and implement policies to encourage inclusion [8, 9], sport is often still not safe for LGBTQ+ individuals. Much of the research investigating LGBTQ+ inclusion in sports has focused on the experiences of gay men and lesbians involved in “traditional” and popular “masculine” team sports such as football, basketball, soccer, and/or rugby [1, 10, 11]. Inquiry into the experiences of LGBTQ+ persons involved in sports that have been popularly conceptualized as peripheral for boys/men and more “appropriate” for girls/women, such as figure skating, is sparse. This paper contributes to the sociological literature on equity, diversity and inclusion in sports, focusing on the sport of figure skating.

### 1.1. Figure Skating

Figure skating has undergone historic changes in terms of its gender identity. Popular conceptualizations of figure skating have shifted from it being seen as a masculine sport in the late 1800s to a so-called “girl’s sport” in contemporary times [12 - 14]. In the early 1990s, skating took a “macho turn”, where the heterosexuality of Canadian male skaters such as world champions Kurt Browning and Elvis Stojko was deliberately played up by the media. Concerted efforts were also made by figure skating officials in Canada and internationally to disassociate male participation in figure skating from the real or perceived associations with high rates of homosexuality within the sport during this same time period [12]. Both academic and autobiographical literature on figure skating has drawn attention to the various ways that the sport reproduces rigid and dominant gender norms and the implications such gender policing has on athletes [12 - 17].

### 1.2. Attitudes Towards LGBTQ+ in Sports

Baiocco *et al.* (2020) reviewed the ways in which scholars have attempted to measure attitudes towards LGBTQ+ people in sporting organizations [10]. They argue that much of the work looking at sexual prejudice in sports has used scales which are not specific to the sporting environment. While there is still no agreed-upon measure to operationalize sexual prejudice in sports, which is a multidimensional process, several sports organizations have recently examined attitudes towards inclusion in their sports [9], using various scales. There have also been many other studies looking specifically at the experiences of discrimination faced by athletes [9, 18]. Many authors have commented that although attitudes towards inclusion have improved along with general societal improvements in the acceptance of gender and sexually diverse people, sports organizations still have much work to do to counter prejudicial attitudes [8].

We note that none of these studies has focused on the Canadian sporting context. In 2005, Canada was one of the first

countries to legalize gay marriage, and the rights of gender and sexually diverse individuals are protected by Canadian law. However, research in the Canadian context has elucidated experiences of discrimination and of violence targeting gender diverse, two spirit, and gay, lesbian, and trans women [19] as well as the difficulties trans people encounter in relation to employment [20]. Additionally, national-level survey data indicates that discrimination based on gender and sexual orientation is still common, with gay men reporting particularly high levels of everyday discrimination based on their sexual orientation [21]. These and other studies reveal that while some progress has been made in relation to LGBTQ+ rights in Canada, it is far from perfect.

We wished to characterize attitudes toward LGBTQ+ participation in sports in Canada, and thus we attempted to develop a new scale that would be specific to the Canadian figure skating context. We partnered with the national figure skating organization, Skate Canada, to conduct this study. We distributed an online survey, and gave respondents 28 attitudinal questions, framing the questions to be specific to figure skating in Canada. The questions are listed in Appendix A. We hypothesized that some group differences with regards to attitudes towards LGBTQ+ inclusion in figure skating might be related to respondents’ self-identified gender and sexual orientation.

### 1.3. Intergroup Contact Theory

Following Allport’s intergroup contact theory [22, 23], we also hypothesized that attitudes towards LGBTQ+ inclusion in figure skating might be influenced by respondents’ experiences with gender and sexually diverse people both within and outside of the skating environment. Therefore, as well as asking respondents to self identify in terms of gender and sexuality, we added questions about intergroup contact to the survey. Intergroup contact theory is a social psychological theory, which posits that known contact amongst members of different social groups can assist in reducing both prejudice and intergroup conflict [22 - 26]. Contact may be viewed as any form of social interaction between persons, including *via* face-to-face, the media, or visualization.

Many researchers have employed Allport’s theory to examine whether prejudicial attitudes towards LGBTQ+ persons are reduced through increased intergroup contact [24, 27]. A review of this literature concludes that while intergroup contact has been shown to reduce prejudice against lesbians and gay men, the evidence for reductions in prejudice against bisexual and transgender people is less conclusive [28]. Following these studies, along with the assertion of other scholars who have argued that intergroup contact may serve to decrease homophobia in sports [29, 30], we sought to explore how intergroup contact theory might be useful in an analysis of current attitudes about LGBTQ+ inclusion amongst Skate Canada’s membership.

### 1.4. Present Study

Skate Canada (the national governing body for figure skating in Canada) agreed to support a research project on LGBTQ+ inclusion in skating, for which funding was obtained

in 2017. As one part of the larger project, the present paper reports on findings from a pilot survey of Skate Canada's membership. The main objective of the survey was to develop measures with which to explore current attitudes toward LGBTQ+ participation in Canadian figure skating and to answer the following research questions:

- What is the range of current attitudes toward LGBTQ+ participation in figure skating in Canada?
- Do these attitudes differ depending on the gender and sexual identity of individuals?
- Do these attitudes differ depending on the role of individuals in the organization (athlete, coach, volunteer, official)?
- Are observed differences in attitudes explained by Allport's (1954) intergroup contact theory?

## 2. MATERIALS AND METHODS

We developed an online survey that was distributed by Skate Canada as a means of gathering information from athletes, coaches, officials, volunteers, and administrators within the Canadian figure skating community. Our survey questions were developed taking into consideration the tenets of queer theory (which was informing the larger project of which this survey was one part) and intergroup contact theory, as well as previous research examining LGBTQ+ inclusion in sports. A total of 38 questions were asked, divided into 10 demographic and 28 Likert-scale attitudinal survey items. Seven open-ended questions were also included to seek further understanding of respondents' ideas.

Demographic information collected from the respondents included: the respondent's age; gender identity; sexual orientation; primary role in Skate Canada; years active in the primary role; Skate Canada program involvement; total years active as Skate Canada member; provincial residence; and the living environment from birth to age 18 (rural to urban living environments). Several of the demographic questions were asked as open-ended questions. The responses were subsequently categorized into groups in order to ensure respondent anonymity and maximize statistical validity. These included: gender identity (open-ended responses were categorized as Male, Female, and Non-binary); sexual orientation (open-ended responses were categorized as Heterosexual, Gay, Lesbian, Bisexual, and Another Identity); primary role (open-ended responses were categorized as Athlete, Coach, Volunteer, and Official). Province was re-categorized as Western Canada, Central Canada, Ontario, and Eastern Canada, and "living environment from birth to age 18" was re-categorized as Only Rural, Only Urban, and Rural/Urban.

A 5-point Likert-scale, ranging from *Strongly Disagree* to *Strongly Agree*, was used to measure responses to 28 attitudinal questions regarding LGBTQ+ inclusion in Skate Canada and more generally (Appendix A).

### 2.1. Data Collection

Approval from the research ethics board at the research team's university was obtained and followed; online implied

consent was collected prior to respondents' participation in the survey. Skate Canada was involved in the promotion, communication, and distribution of the study information through two different electronic newsletters, sent to subscribed members. The survey was available in both English and French. One hundred and six surveys were completed over the two months that the survey was available. The only inclusion criteria for the survey was that individuals be active members of Skate Canada and be 18 years of age and over. Because of the nature of the survey, identities were kept anonymous.

### 2.2. Data Analysis

Initial univariate descriptive analyses were conducted on all relevant variables, including the demographic variables, the variables measuring intergroup contact, and the variables examining attitudes towards inclusion. We then used exploratory factor analysis to summarize the information gathered through the 28 attitudinal questions. Factor analysis examines the covariation among a set of variables and summarizes the relationships among the variables by producing factors [31]. Bivariate analyses were conducted to examine the relationship between respondents' demographic variables and their scores on these factors and between demographic variables and intergroup contact. Using ANOVA, we compared group means on all of the factors, to examine which of the independent variables were significantly related to scores on the individual factors. Next, we ran multiple linear regression models predicting individual scores on each of the factors. After performing regression diagnostics to screen for collinearity, outliers, and non-normality, we ran the models with the demographic predictors first, and then ran the models adding intergroup contact as an additional independent variable. These nested models enabled us to assess whether group differences in attitudes towards inclusion could be explained by intergroup contact. All data analysis was conducted in IBM SPSS Statistics software, version 28.0.

## 3. RESULTS

### 3.1. Sample Composition

Table 1 summarizes the demographic composition of the sample. Of the individuals who responded to the survey, 46.7% were coaches, while athletes, volunteers, and officials accounted for 19.0%, 20.0%, and 14.3%, respectively. The majority of survey respondents were over the age of 35 years, while most individuals had been active Skate Canada members for more than 20 years. In terms of gender identity, the sample was overwhelmingly comprised of women (76.9%), while men accounted for 14.4% and nonbinary persons accounted for 8.7% of respondents. Similarly, most respondents identified themselves as heterosexual (73.5%), with bisexual, gay, lesbian, and those of another identity making up the remaining 26.5%. Finally, with regards to youth living environment and current residence, most survey respondents grew up in urban environments and most were residing in Ontario at the time of the study.

### 3.2. Opinions on LGBTQ+ Inclusion

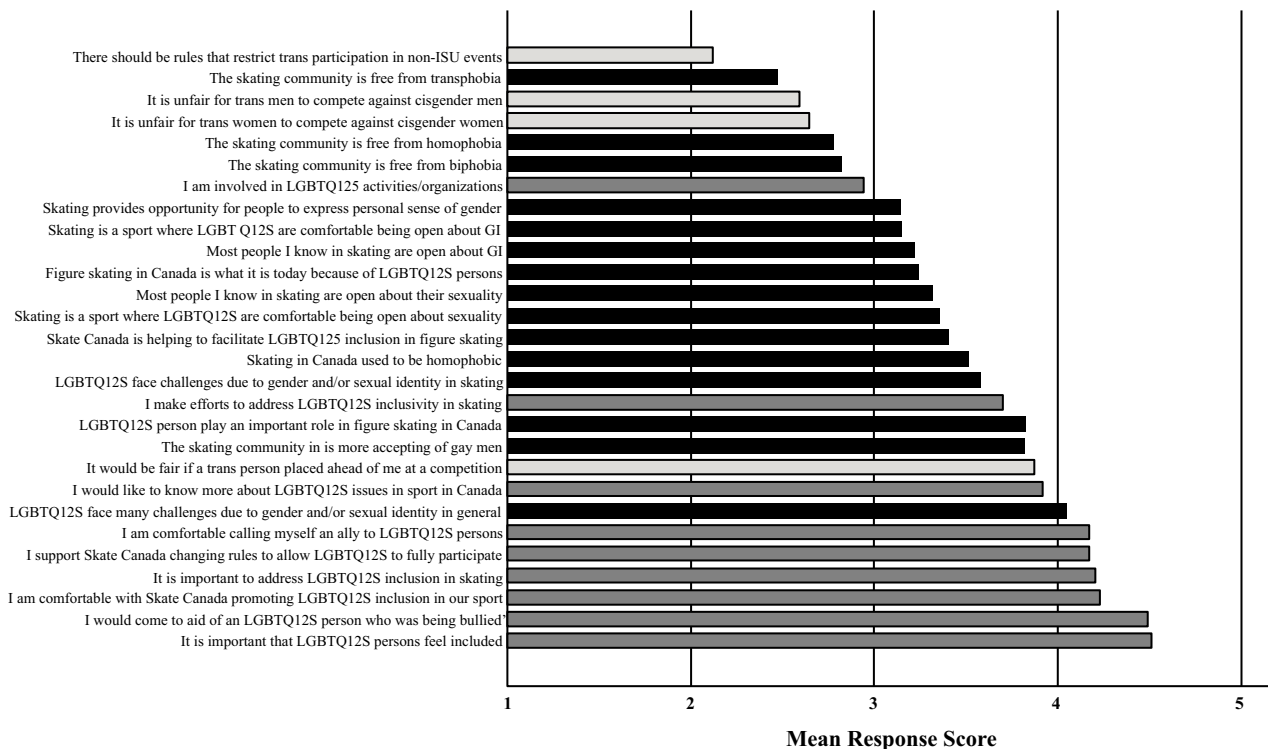
Mean scores were calculated for each of the 28 Likert-scale survey questions specific to LGBTQ+ inclusion in figure skating, which depicted generally positive opinions (Fig. 1). This was somewhat expected given both the way in which the study was promoted as well as the types of people who were most likely willing to respond to the survey. The results for questions pertaining to trans participation were encouraging, as

mean scores on negatively coded questions pertaining to this topic (e.g., “There should be rules that restrict trans participation in non-ISU events”) were amongst the lowest in the entire survey, while mean scores on items that reflected positively on trans participation were generally high. All questions regarding the current status of LGBTQ+ inclusion within figure skating had mean scores over 3.0 (in the “Agree” range).

**Table 1. Sample Demographics (N = 106).**

Variable		N	Percent (%)
Age	< 20 years	12	11.4%
	20 – 25 years	12	11.4%
	26 – 30 years	10	9.5%
	31 – 35 years	15	14.3%
	36 – 40 years	7	6.6%
	41 – 45 years	9	8.6%
	46 – 50 years	11	10.5%
	51 – 55 years	11	10.5%
	56 – 60 years	10	9.5%
	> 60 years	8	7.6%
Missing	1		
Gender Identity	Male	15	14.4%
	Female	80	76.9%
	Nonbinary	9	8.7%
	Missing	2	
Sexual Orientation	Heterosexual	75	73.5%
	Bisexual	7	6.9%
	Gay	5	4.9%
	Lesbian	5	4.9%
	Another identity	10	9.8%
Missing	4		
Primary Role	Athlete	20	19.0%
	Coach	49	46.7%
	Volunteer	21	20.0%
	Official	15	14.3%
	Missing	1	
Years Active in Primary Role	< 10 years	35	33.3%
	10 – 15 years	26	24.8%
	16 – 20 years	16	15.2%
	21 – 25 years	7	6.7%
	26 – 30 years	6	5.7%
	31 – 35 years	5	4.8%
	> 35 years	10	9.5%
Missing	1		
Province Location	Western Canada	30	28.3%
	Central Canada	9	8.5%
	Ontario	43	40.6%
	Eastern Canada	24	22.6%
Missing			
Youth Living Environment	Rural	33	31.1%
	Urban	63	59.4%
	Rural/Urban	10	9.4%
	Missing		
Total Years Active	< 10 years	11	10.4%
	10 – 15 years	23	21.7%
	16 – 20 years	14	13.2%
	21 – 25 years	8	7.5%
	26 – 30 years	15	14.1%
	31 – 35 years	9	8.5%
	> 35 years	26	24.5%
Missing			

Note: Some categories may not sum to 100% due to rounding.



**Fig. (1).** Mean Scores for Pilot Attitudinal Items. Mean strength of agreement with 28 Likert-scale questions pertaining to LGBTQ+ inclusion for 106 respondents. Respondents were asked to indicate their level of agreement with each question. Responses were coded in numerical values (Strongly disagree = 1; Disagree = 2; Neither agree nor disagree = 3; Agree = 4; and Strongly agree = 5). Determinants in light grey indicate statements pertaining to trans participation in figure skating. Determinants in black indicate perceptions related to the status of LGBTQ+ inclusion in figure skating. Determinants in dark grey indicate personal opinions toward inclusion.

A factor analysis was performed on the 28 Likert-scale survey questions in order to summarize the range of opinions expressed by the survey respondents. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (KMO = .782) and Bartlett’s Test of Sphericity ( $p < .01$ ) determined that a factor analysis was appropriate to perform on the data obtained. Varimax rotation was used, and coefficients below 0.50 were suppressed. Factors with eigen values greater than one were retained. Four factors emerged from the factor analysis, accounting for 49.35% of the total variation in the responses.

Table 2 shows the results of the factor analysis and the items that loaded on each factor. The four factors are summarized as follows: >Personal Advocacy (16% variance explained; Cronbach’s alpha = 0.88); Figure Skating As An Inclusive Environment (13% variance explained; Cronbach’s alpha = 0.87); Institutional Advocacy (10% variance explained; Cronbach’s alpha = 0.76); and Trans Acceptance (10% variance explained; Cronbach’s alpha = 0.57). Several survey items did not load on any factor and were thus eliminated from the remainder of the analysis.

**3.3. Demographic Differences in Opinions**

To examine whether attitudes differed according to the gender and sexual orientation of respondents, we divided the respondents into two groups based on their responses to both the gender and sexual orientation questions. All respondents who indicated that they were either not heterosexual and/or not

a man or a woman (non binary or other) were in one group which we labeled ‘gender and/or sexually diverse’. We compared this group (N = 35, 33% of the sample) to the ‘non-diverse’ group (N = 71, 67% of the sample). Respondents who identified as gender and/or sexually diverse scored higher than the non-diverse on three individual questions (concerning their knowledge about LGBTQ+ issues, their involvement in LGBTQ+ activities, and their opinion on whether skating in Canada used to be homophobic) and lower on three questions (concerning whether it was unfair for trans people to compete against cis individuals and whether the people they know in skating are open about their gender identity). These questions are listed in Table 3, along with average scores and standard errors for both groups.

Next, a one-way Analysis of Variance (ANOVA) was performed to compare factor means across all of the demographic variables (Table 4). For these analyses, we examined sexual orientation and gender identity separately. While there were no statistically significant differences in any of the average factor scores by age, the general trend was that the younger age groups scored higher on personal advocacy and trans acceptance, and lower on the belief that figure skating was already inclusive than the older age groups. There were also no statistically significant differences in factor scores by gender. However, there was a general pattern that non-binary people scored higher than those who identified as men or women on personal advocacy, institutional advocacy and trans acceptance.

**Table 2. Factor analysis of likert-scale questions.**

Item	Factor Loading			
	I	II	III	IV
In my primary role, I make efforts to address LGBTQ+ inclusivity in Skating	0.684	-	-	-
I would like to know more about LGBTQ+ issues in sport in Canada	0.653	-	-	-
I am comfortable with Skate Canada promoting LGBTQ+ inclusion in our sport	0.664	-	-	-
I am comfortable calling myself an ally to LGBTQ+ persons	0.684	-	-	-
I am involved in LGBTQ+ activities/organizations at one or more of the following levels: community, provincial, national, international	0.635	-	-	-
I believe that LGBTGQI2S persons play an important role in figure skating in Canada	0.603	-	-	-
I believe that figure skating in Canada is what it is today because of LGBTQ+ persons	0.769	-	-	-
I believe the skating community is free from homophobia	-	0.707	-	-
I believe the skating community is free from transphobia	-	0.679	-	-
I believe the skating community is free from biphobia	-	0.686	-	-
Skating is a sport in Canada where LGBTQ+ persons are comfortable being open about their sexuality	-	0.523	-	-
LGBTQ+ persons face many challenges due to their gender and/or sexual identity in Canada in figure skating	-	-0.785	-	-
LGBTQ+ persons face many challenges due to their gender and/or sexual identity in Canada in general	-	-0.686	-	-
It is important that LGBTQ+ persons feel included in my skating community	-	-	0.703	-
It is important to address LGBTQ+ inclusion in skating (i.e., do things or take action to make LGBTQ+ persons feel welcome)	-	-	0.683	-
I support Skate Canada changing rules to allow LGBTQ+ persons to fully participate	-	-	0.589	-
I would come to the aid of a person who was being bullied/harassed as a result of their sexuality and/or gender identity	-	-	0.701	-
It is unfair for trans boys/men to compete against cisgender boys/men in non-ISU events	-	-	-	-0.909
It is unfair for trans girls/women to compete against cisgender girls/women in non-ISU events	-	-	-	-0.927
As an athlete, I would consider it fair if a trans person placed ahead of me at a competition	-	-	-	0.609
Percent of Variance Explained	15.85%	13.41%	10.14%	9.95%
Cronbach's Alpha Coefficient	0.877	0.868	0.763	0.574

Note. Factor loadings less than 0.50 were suppressed. Seven of the original 28 items did not load on any factor. Thus, they were excluded from this table.

**Table 3. Significant group differences on individual attitudinal questions.**

Item	Gender/Sexually Diverse Non- diverse			
	Mean	SE	Mean	SE
I am involved in LGBTQ+ activities/organizations at one or more of the following levels: community, provincial, national, international.	3.44	(.233)	2.68	(.128)
I am knowledgeable about LGBTQ+ issues in Canada	4.00	(.174)	3.73	(.090)
Most people I know in skating are open about their gender identity.	3.00	(.162)	3.37	(.103)
I believe that skating in Canada used to be homophobic.	3.79	(.173)	3.31	(.131)
It is unfair for trans boys/men to compete against cisgender boys/men in non-ISU events	2.36	(.178)	2.68	(.132)
It is unfair for trans girls/women to compete against cisgender girls/women in non-ISU events	2.33	(.183)	2.78	(.138)

Note: Differences significant at p<.05 shown.

Gender/Sexually Diverse, N = 35; Non-Diverse, N = 71

**Table 4. Mean factor scores by demographic variables.**

Variable	Category	N	Mean Factor Scores			
			Personal Advocacy	Figure Skating as Inclusive	Institutional Advocacy	Trans Acceptance
Age	<20	8	.532 ± .267	.091 ± .415	.264 ± .106	-.460 ± .344
	20-30	18	.145 ± .206	-.303 ± .175	-.012 ± .368	.446 ± .274
	30-40	20	.309 ± .208	.175 ± .284	.053 ± .217	.044 ± .240
	40-50	17	-.120 ± .259	.048 ± .280	-.177 ± .229	-.272 ± .246
	50-60	19	-.299 ± .237	.160 ± .165	.140 ± .178	-.051 ± .194
	>60	8	-.476 ± .390	-.122 ± .317	-.340 ± .216	.042 ± .217

(Table 4) contd....

Variable	Category	N	Mean Factor Scores			
			Personal Advocacy	Figure Skating as Inclusive	Institutional Advocacy	Trans Acceptance
Gender	Male	13	-.110 ± .265	.019 ± .276	.093 ± .151	-.090 ± .151
	Female	69	.033 ± .124	-.014 ± .123	-.050 ± .127	-.028 ± .116
	Nonbinary	7	.187 ± .303	.228 ± .377	.333 ± .475	.464 ± .425
Sexual	Bisexual (Ref)	5	1.24 ± .392	-.309 ± .288	-.283 ± .461	.235 ± .551
Orientation	Heterosexual	63	-.071 ± .119*	-.087 ± .121	.052 ± .106	-.123 ± .129
	Gay	5	.342 ± .149	.081 ± .566	-.094 ± .347	.236 ± .246
	Lesbian	5	.366 ± .264	.764 ± .532	-.475 ± 1.29	.931 ± .334
	Another identity	9	-.285 ± .108*	.171 ± .413	.342 ± .135	-.013 ± .355
Primary Role	Volunteer (Ref)	18	-.365 ± .216	.541 ± .222	.178 ± .163	.144 ± .230
	Athlete	14	-.034 ± .307	-.589 ± .237*	.006 ± .296	-.293 ± .271
	Coach	43	.226 ± .143	-.107 ± .150*	-.139 ± .176	-.022 ± .166
	Official	15	-.075 ± .263	.210 ± .251*	-.186 ± .203	.161 ± .201
Residence	Eastern Canada (Ref)	19	.509 ± .208	-.051 ± .260	-.103 ± .343	.018 ± .261
	Western Canada	26	-.233 ± .237*	.336 ± .191	-.042 ± .156	.014 ± .175
	Central Canada	8	-.735 ± .303*	-.168 ± .292	.202 ± .288	-.466 ± .474
	Ontario	38	.060 ± .127*	-.169 ± .156	.038 ± .143	.080 ± .152
Youth Living	Only Rural	29	-.008 ± .178	.016 ± .183	-.166 ± .245	.025 ± .180
Environment	Only Urban	52	-.054 ± .149	-.006 ± .141	.078 ± .117	-.060 ± .142
	Rural/Urban	10	.306 ± .204	-.015 ± .337	.077 ± .215	.239 ± .331

Note: Mean factor scores reported as: Mean ± Standard Error.

\*p < 0.05 (two-tailed tests).

Ref = Reference Group.

Table 5. Personal Advocacy Regression Demographic Variables (Model 1); Demographic Variables and Contact Inside/Outside Skating Community (Model 2).

		Model 1	Model 2
<b>Age</b>		<b>-.013(.008)*</b>	<b>-.008(.008)</b>
<b>Gender</b> (Ref = Female)	Male	-.297(.359)	-.125(.371)
	Nonbinary	-.215(.425)	-.211(.408)
<b>Sexual Orientation</b> (Ref = Heterosexual)	Bisexual	.925(.469)*	.817(.450)*
	Gay	.433(.597)	.110(.519)
	Lesbian	.013(.452)	.120(.448)
	Another identity	-.337(.359)	-.232(.354)
<b>Primary Role</b> (Ref = Coach)	Athlete	-.337(.307)	-.178(.300)
	Volunteer	-.495(.269)*	-.449(.266)*
	Official	-.255(.323)	-.159(.312)
<b>Residence</b> (Ref = Ontario)	Western Canada	-.153(.251)	-.104(.243)
	Central Canada	-.912(.392)*	-.511(.416)
	Eastern Canada	.353(.292)	.430(.282)
<b>Youth Living Environment</b> (Ref = Only Urban)	Only Rural	.050(.225)	-.039(.220)
	Rural/Urban	.591(.353)*	.499(.341)
<b>Known Contact Inside Skating Community</b>	-	-	.026(.060)
<b>Known Contact Outside Skating Community</b>	-	-	.175(.072)**
<b>Adjusted R<sup>2</sup></b>	-	.181	.235

Note: N = 106. Reported as b (Standard Error), where b = unstandardized regression coefficient. \*p < 0.1; \*\*p < .05 (two-tailed tests).

Ref = Reference Group.

We found significant differences in the Personal Advocacy factor with regard to sexual orientation. Results indicated that bisexuals (1.24 ± S.E. = .392) scored significantly higher than both heterosexuals (-0.07 ± S.E. = .119) and persons identifying with ‘another identity’ (-0.28 ± S.E. = .108) on this factor. Gays and lesbians also scored higher than other groups on this factor, but those differences were not statistically significant. Gays, lesbians and bisexuals also had the highest levels of trans acceptance.

Primary role was related to scores on the *Figure Skating as Inclusive* factor. Volunteers (0.54 ± S.E. = .222) scored significantly higher than both coaches (-0.11 ± S.E. = .150) and athletes (-0.59 ± S.E. = .237), and officials (0.21 ± S.E. = .251) scored significantly higher than athletes on this factor. Athletes had the lowest perception of skating’s current level of inclusivity. Athletes and coaches also had the lowest levels of trans acceptance, with volunteers and officials scoring higher on this factor.

### 3.4. The Relationship between Contact and Attitudes

We asked about the frequency of contact with LGBTQ+ persons both inside and outside the skating community. The questions were worded as follows: “On average within/outside of the skating community, the amount of contact I have with LGBTQ+ persons is best described as: no interaction; less than once per month; one to three times per month; weekly; several times per week; daily.” Responses were coded so that higher numbers indicate more frequent contact. For the whole sample, known contact outside the skating community averaged between weekly and several times per week, while known contact within the skating community averaged at weekly.

Bivariate analyses were performed on the mean contact scores within and outside the skating community across the demographic variables (Table 4). Significant differences for Known Contact Outside the Skating Community occurred such

that individuals aged 20-30 years ( $5.26 \pm S.E. = .349$ ) scored significantly higher than those over the age of 50 (50-60 years:  $4.20 \pm S.E. = .412$ ; >60:  $3.25 \pm S.E. = .648$ ) on this variable, and persons aged 30-40 years scored significantly higher than those over the age of 60. Furthermore, bisexuals ( $5.83 \pm S.E. = .167$ ) and gay people ( $5.80 \pm S.E. = .490$ ) reported significantly more contact with LGBTQ+ persons outside the skating community than did those with another identity sexual orientations ( $3.50 \pm S.E. = .439$ ).

Interestingly, no significant differences occurred for Known Contact Inside the Skating Community for any of the demographic variables. Along with the fact that average contact inside the skating community was less frequent than average contact outside the skating community, this may be indicative of the fact that gender and sexually diverse individuals are not comfortable disclosing their gender and/or sexual identity in the context of the world of figure skating.

**Table 6. Figure Skating as Inclusive Regression Demographic Variables (Model 1); Demographic Variables and Contact Inside/Outside Skating Community (Model 2).**

		Model 1	Model 2
Age		<b>-.006(.427)</b>	<b>-.007(.008)</b>
Gender (Ref = Female)	Male	.111(.379)	.109(.405)
	Nonbinary	-.257(.448)	-.217(.445)
Sexual Orientation (Ref = Heterosexual)	Bisexual	-.178(.494)	-.115(.492)
	Gay	.168(.630)	.126(.645)
	Lesbian	.914(.476)*	.689(.489)
	Another identity	.620(.379)	.666(.386)*
Primary Role (Ref = Coach)	Athlete	-.697(.324)**	-.819(.328)**
	Volunteer	.719(.284)**	.588(.290)**
	Official	.188(.340)	.115(.340)
Residence (Ref = Ontario)	Western Canada	.338(.265)	.284(.265)
	Central Canada	-.144(.413)	-.308(.454)
	Eastern Canada	.039(.308)	-.005(.308)
Youth Living Environment (Ref = Only Urban)	Only Rural	-.063(.237)	.002(.241)
	Rural/Urban	-.428(.372)	-.420(.372)
Known Contact Inside Skating Community	-	-	-.105(.065)
Known Contact Outside Skating Community	-	-	-.031(.079)
Adjusted R <sup>2</sup>	-	.089	.113

Note: N = 106. Reported as *b* (Standard Error), where *b* = unstandardized regression coefficient. \**p* < 0.1; \*\**p* < .05 (two-tailed tests). Ref = Reference Group.

As the bivariate analysis of the factor means yielded no significant relationships between the demographic variables and scores on either the Institutional Advocacy or the Trans Acceptance factors (*p* < .05), we focus the rest of the paper on the remaining two factors (Personal Advocacy and Figure Skating as Inclusive). We ran two multivariate regression models. The first model individually regressed the factor scores on the demographic variables of age, gender, sexual orientation, primary role, residence, and youth living environment. The second model added known contact with LGBTQ+ persons outside of the skating community and known contact with LGBTQ+ persons inside the skating community as the fifth and sixth independent variables, respectively. Tables 5 and 6 show the multiple regression results for the two factors tested.

Table 5 shows the multiple regression results for the Personal Advocacy factor. Model 1 indicates that, when other demographic variables were controlled, older individuals

tended to score lower on the Personal Advocacy factor than younger persons (*b* = -.013; *S.E.* = .405). Additionally, bisexual persons (*b* = .925; *S.E.* = .469) still scored significantly higher than heterosexuals on this factor, controlling for all other demographic variables. Volunteers (*b* = -.495; *S.E.* = .269) scored lower than coaches, controlling for all other demographic variables.

With the addition of the known contact variables to the regression (Model 2), older individuals no longer demonstrated significantly lower scores than younger persons on the Personal Advocacy factor (*b* = -.008; *S.E.* = .008), but those identifying as bisexual still scored higher than people with other sexual and gender identities. Known contact outside the skating community had a significant independent effect on this factor (*b* = .175; *S.E.* = .072), controlling for all the demographic variables in the model. Known contact with LGBTQ+ persons inside the skating community did not have a significant effect on this factor.



Table 6 shows the multiple regression results for the Figure Skating As Inclusive factor. Model 1 indicates that, when other demographic variables were controlled, lesbians ( $b = .914$ ;  $S.E. = .476$ ) scored significantly higher than heterosexuals on this factor. This difference disappeared in Model 2, when the known contact variables were added to the analysis. However, another identity individuals ( $b = .666$ ;  $S.E. = .386$ ) tended to score higher than heterosexuals on the Figure Skating as Inclusive factor when both demographic and the known contact variables were considered. The effects of primary roles varied for Model 1 such that volunteers and athletes scored significantly higher and lower than coaches on the Figure Skating as Inclusive factor, respectively, controlling for other demographic variables. These results did not change once known contact was added to the model (Model 2). Volunteers continued to score higher and athletes continued to score lower than coaches on the factor, even when both the demographic and the known contact variables were considered.

## 4. DISCUSSION

### 4.1. Overall Outlook

Current attitudes toward LGBTQ+ participation and inclusion in Canadian figure skating amongst Skate Canada members who responded to the online survey were mostly positive. The results indicate, mean scores on each of the survey questions showed that participants were generally in favour of inclusion and opposed to discrimination, particularly relating to transgender persons that have been excluded from the sport. Given the previous research on LGBTQ+ inclusion in sports and specific literature regarding homophobia and marginalization in figure skating [12, 32, 33], these results were at least somewhat encouraging. However, it is important to remember that those who identified as gender and/or sexually diverse felt a little less positive about the inclusivity offered by skating. In particular, respondents who identified as gender and/or sexually diverse were more likely to believe that skating in Canada used to be homophobic and were less likely to report that the people they know in skating are open about their gender identity.

Although there were no large demographic differences in reports of contact with gender and/or sexually diverse people, the finding that all respondents typically report having less contact with LGBTQ+ individuals within the skating community than outside the skating community is potentially concerning. This result could be interpreted as meaning that there are fewer people who identify as LGBTQ+ people in skating than in the general public, or that LGBTQ+ people in skating are not comfortable disclosing their gender and/or sexual identity to others in the skating community.

### 4.2. Attitudes Towards Inclusion

The factor analysis revealed that attitudes toward LGBTQ+ inclusion clustered around four major themes: Figure Skating as Inclusive, Personal Advocacy, Institutional Advocacy, and Trans Acceptance. These themes reflect theoretical work on diversity and inclusion in organizations, which argues that attitudes towards diversity lie on a continuum from passive to active both at the individual and the organizational level [34].

We note that while there were almost no demographic differences in scores for Institutional Advocacy, sexual and gender identity affected scores on Personal Advocacy and Trans Acceptance. Respondents who identified as gender and/or sexually diverse scored higher on both personal advocacy and trans acceptance. These findings support Worthen's (2013) assertions that research on inclusion should look at attitudes held by equity deserving groups separately, even if they constitute a small portion of the sample [35].

Significant differences were found in scores on the Figure Skating as Inclusive factor amongst varying sexual orientations and primary roles, when controlling for other demographic variables. Regarding sexual orientation, lesbians scored significantly higher than heterosexuals on the Figure Skating as Inclusive factor. In terms of primary roles, athletes and volunteers scored significantly lower and higher than coaches on Figure Skating as Inclusive, respectively. The results for athletes could be due to more personal experiences in skating, or an increased awareness amongst these persons of LGBTQ+ issues in the greater society, which as a "carryover effect" has influenced their perceptions of inclusion in figure skating similar to what scholars have suggested about sport more generally [36]. However, these findings are more likely the result of athletes witnessing events that other individuals in the sport simply do not have access to; that is, homonegative incidents that occur during practice or in the locker room. According to Martens and Mobley (2005), most homonegative taunts and slurs take place in these times and spaces, often when athletes are beyond the scope of direct adult supervision (and thus may not be witnessed by coaches or volunteers) [37].

Contact appears to mitigate the effects of sexual orientation on the feeling that skating is already inclusive. Once contact is accounted for, persons who identified as another identity did tend to score significantly higher than heterosexuals, believing that skating is more inclusive. By contrast, while lesbians tended to score significantly higher than heterosexuals on the Figure Skating as Inclusive factor when only demographic variables were controlled for, this finding disappeared when contact with LGBTQ+ persons inside/outside the skating community was taken into consideration. Individuals who experienced greater amounts of contact with LGBTQ+ persons outside of figure skating were also significantly more likely to score higher on the Personal Advocacy factor than those who experienced less contact. This result is directly in line with the central premise of Allport's (1954) intergroup contact theory.

This finding implies that lesbians and persons of another identity may have different "baselines" of attitudes toward the Figure Skating as Inclusive factor, when other variables (specifically, known contact inside the skating community) are controlled. The baseline for lesbians is high because they reported little known contact with LGBTQ+ persons in figure skating; the baseline for persons of another identity is low because they reported high known contact with LGBTQ+ persons in the sport. These differences might be explained by how each population experienced or conceptualized "known contact" and thus answered the questions pertaining to it.

### 4.3. Limitations

As noted previously, the analysis did not employ random sampling methods. The title of the survey, the manner through which it was distributed and promoted, and the nature of the project all could have influenced the types of people who were most willing to participate in the study. As such, results pertaining to overall attitudes concerning LGBTQ+ inclusion in figure skating are almost certainly not representative of the entire figure skating community. The results may be biased in favour of inclusivity. The results of this particular survey may under-estimate the extent to which varying forms of exclusion occur in the sport.

We acknowledge that for intergroup contact to be “realized” in terms of gender identity and/or sexuality, individuals must first feel comfortable disclosing their gender identity and/or sexuality. Therefore, it is possible that more tolerant attitudes lead to more “known” contact or disclosure of gender identity and sexuality, rather than the reverse (Harrison & Michelson, 2019).

Our questions about contact concerned contact with “LGBTQ+ individuals,” treating gender and/or sexually diverse individuals as one group. However, recent literature suggests that inter-group contact has less effect on reducing bias against bisexual and transgender individuals than it does on reducing bias against lesbians and gay men (Harrison & Michelson, 2019). In the context of sports, in particular, there tends to be increased prejudice against transgender persons than other LGBTQ+ individuals. Analysis of the attitudinal variables in our data demonstrated that *Transgender Acceptance* emerges as a separate factor from the other attitudinal factors relating to advocacy and inclusivity in skating in general. Therefore, in the future, we suggest that researchers ask about contact with transgender persons separately.

The nature of this study as a cross-sectional, exploratory analysis limited the extent to which contact could be said to directly influence attitudes toward LGBTQ+ inclusion in figure skating. While increased known contact may have led to improvements in personal advocacy of LGBTQ+ persons, already inclusive individuals may have been more willing to interact with LGBTQ+ persons, thus increasing the awareness of contact. It is also possible that already inclusive individuals were more welcoming and accommodating to the divulgence of sexual and/or gender identity from LGBTQ+ persons, which would have further improved the awareness of contact. Because the study was only able to analyse the relationship between known contact and attitudes at a single point in time, contact could not be proclaimed to cause improvements in attitudes concerning LGBTQ+ inclusion.

### CONCLUSION

In this paper, we analysed contemporary attitudes of athletes, coaches, volunteers, and officials toward LGBTQ+ inclusion within Canadian figure skating. Overall, we find positive attitudes towards inclusion, and we find that volunteers and officials, in particular, feel that skating is already inclusive. Athletes and coaches are less likely to report that skating is already inclusive, though, and are also more

wary of trans inclusion. We find that some of the attitudinal differences between groups based on gender and sexual orientation are explained by intergroup contact outside of skating, but intergroup contact within skating does not appear to vary much between groups. Although the findings of this research do point toward increased/improved known intergroup contact as a possible means of reducing prejudicial attitudes toward LGBTQ+ persons, they also suggest that a cultural shift is needed within skating, especially with regard to the acceptance of transgender athletes, for true inclusivity to be reached.

This pilot survey indicated that gender and sexually diverse respondents and those with more frequent contact with LGBTQ+ individuals demonstrated higher levels of both active and passive support for inclusion in Canadian figure skating. As Skate Canada and other national sports organizations implement new equity, diversity, and inclusion policies, we urge all sports organizations to conduct ongoing surveys of attitudes towards inclusion among their members to examine progress towards inclusion goals. Most importantly, organizations should monitor whether those who identify as gender and/or sexually diverse feel more included over time.

### ETHICAL STATEMENT

This study was conducted in accordance with the Tri-council Policy statement on Ethical conduct for Research involving human.

### CONSENT FOR PUBLICATION

Online implied consent was collected prior to respondents' participation in the survey.

### AVAILABILITY OF DATA AND MATERIALS

The de-identified data that support the findings of this study are available from the corresponding author [J.G] on special request.

### FUNDING

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### CONFLICT OF INTEREST

The authors report there are no competing interests to declare.

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Declared none.

### APPENDIX A:

#### SURVEY QUESTIONS

ATTITUDINAL QUESTIONS (response categories: SD / D / Neither / A / SA)

1. It is important to me that LGBTQ+ persons feel included in my skating community.
2. I believe that the skating community is free from

homophobia. (**Homophobia**: dislike or prejudice against gay and/or lesbian persons)

3. I believe that the skating community is free from transphobia. (**Transphobia**: dislike or prejudice against trans persons)

4. I believe that the skating community is free from biphobia. (**Biphobia**: dislike or prejudice against bisexual persons).

5. In my primary role in skating (as indicated earlier in the survey), I make efforts to specifically address LGBTQ+ inclusivity in skating (*i.e.*, do things or take actions to make LGBTQ+ persons feel welcome).

6. I believe that it is important to address LGBTQ+ inclusion in figure skating (*i.e.*, do things or take actions to make LGBTQ+ persons feel welcome).

7. I support Skate Canada changing rules and regulations to allow LGBTQ+ persons to fully participate in our sport.

8. I believe it is unfair for trans boys and trans men to be allowed to compete against cisgender boys and cisgender men in non-ISU (International Skating Union) events.

9. I believe it is unfair for trans girls and trans women to be allowed to compete against cisgender girls and cisgender women in non-ISU (International Skating Union) events.

10. I believe there should be regulations that restrict trans participation in non-ISU (International Skating Union) events.

11. I believe that skating is a sport in Canada where LGBTQ+ persons are comfortable being open about their sexuality.

12. I believe that skating is a sport in Canada where LGBTQ+ persons are comfortable being open about their gender identity.

13. Most people I know in the skating community are open about their sexuality.

14. Most people I know in the skating community are open about their gender identity.

15. I think that LGBTQ+ persons face many challenges due to their gender and/or sexual identity in skating.

16. I think that LGBTQ+ persons face many challenges due to their gender and/or sexual identity in Canada in general.

17. I would come to the aid of a person who was experiencing bullying or harassment as a result of their sexuality and/or gender identity.

18. I would like to know more about LGBTQ+ issues in sport in Canada.

19. I am comfortable with Skate Canada promoting LGBTQ+ inclusion in our sport.

20. I believe that skating used to be homophobic.

21. I am comfortable calling myself an ally to LGBTQ+ persons.

22. I am involved in LGBTQ+ activities and/or organizations at one or more of the following levels:

community, provincial, national, international.

23. As an athlete, I would consider it fair if a trans person placed ahead of me at a competition.

24. I believe that LGBTQ+ persons play an important role in figure skating in Canada.

25. I believe that figure skating in Canada is what it is today because of LGBTQ+ persons.

26. I believe that Skate Canada is helping to facilitate LGBTQ+ inclusion in figure skating.

27. I think the skating community in Canada is more accepting of gay men than other LGBTQ+ persons (please expand if you would like).

28. Skating in Canada provides opportunity for people to express their personal sense of gender.

## CONTACT QUESTIONS

1. Outside of the skating community, the amount of contact I have with LGBTQ+ persons is best described as:

2. Within the skating community, the amount of contact I have with LGBTQ+ persons is best described as:

(response categories: no interaction, less than once per month, one to three times per month, weekly,

several times per week, daily)

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