

# JUSTIFICATION CRITERIA FOR GENDER/SEX CONSIDERATIONS IN RESEARCH

## INFORMATION FOR APPLICANTS

**This document outlines gender/sex considerations that applicants will need to include in their proposals/applications. It includes links to relevant resources as well as examples of hypothetical justifications for sex and gender-based analyses.**

Applicants must consider how to account for sex (a biological attribute) and/or gender (socially constructed roles, behaviours, expressions, and identities) in their research, keeping in mind that the two are not mutually exclusive. Please describe briefly how gender and/or sex considerations will be integrated into your research.

It is possible that sex and/or gender may not apply to your research question and if not integrated, please explain why. Please describe and provide rationale for your sample eligibility and inclusion/exclusion criteria (or sample characteristics, if archival) with respect to sex and gender (e.g., will participants of any gender, sex or sexual orientation be eligible, or will eligible participants be, for example, women, female at birth, or those with uteruses, and why?) Please also specify any considerations with respect to sexual orientation (e.g., are individuals of all sexual orientations eligible? If not, what are the inclusion criteria for sexual orientation and their rationale?)

Please note that participants who are divergent with respect to sex, gender, or sexual orientation should be included in all data collection unless there is a compelling reason not to. It is not sufficient to simply state that the sample size of sex, gender, or sexual orientation divergent participants would be too small for group comparisons. Some options to consider include, but are not limited to: (1) plan data analyses to allow for testing whether results differ by inclusion or exclusion of gender/sex divergent participants, even with small samples; (2) if there is evidence of expected sex, gender, or sexual orientation differences, collect a large enough sample and make direct comparisons; (3) consider whether participants' data may be aggregated, clustered, or collapsed (based on theory) in order to create groups that are large enough to analyze.

## ACKNOWLEDGEMENTS

This resource was developed by the MSSU Sex and Gender Team for the Maritime SPOR SUPPORT Unit.

## TEAM MEMBERS

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- Justin Dubé, MSSU Doctoral Candidate, Dalhousie University
- Amond McKenna, Patient/Public Partner
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## METHODS AND MEASUREMENT RESEARCH EQUITY TOOLKITS

All applicants are strongly encouraged to review these documents, considering how sex, gender, and sexual orientation may be relevant to their research questions, and consulting relevant literature (e.g., on any evidence of sex/gender effects for key outcomes).

- **Determining and communicating eligibility:**  
<https://cgshe.ca/app/uploads/2022/01/GSMM-Research-Equity-Tool-1.pdf>
- **Effective recruitment strategies:**  
<https://cgshe.ca/app/uploads/2022/06/GSMM-Research-Equity-Tool-2.pdf>
- **Sampling plans and data analyses:**  
<https://cgshe.ca/app/uploads/2022/06/GSMM-Research-Equity-Tool-3.pdf>
- **Asking about and measuring participants' genders and sexes:**  
<https://cgshe.ca/app/uploads/2022/10/GSMM-Research-Equity-Tool-4.pdf>

## ADDITIONAL RESOURCES

- **NSERC guide on integrating equity, diversity and inclusion considerations in research, with examples:**  
[https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Politiques-Politiques/EDI\\_guidance-Conseils\\_EDI\\_eng.asp](https://www.nserc-crsng.gc.ca/NSERC-CRSNG/Politiques-Politiques/EDI_guidance-Conseils_EDI_eng.asp)
- **CIHR for helpful definitions and further information, including detailed examples:**  
<https://cihr-irsc.gc.ca/e/50836.html>
- **Asking About and Measuring Participants' Genders and Sexes:**  
<https://cgshe.ca/app/uploads/2022/10/GSMM-Research-Equity-Tool-4.pdf>
- **Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. PloS one, 12(5), e0178043.**  
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0178043>
- **Beischel, W. J., Schudson, Z. C., Hoskin, R. A., & van Anders, S. M. (2022). The gender/sex 3x3: Measuring and categorizing gender/sex beyond binaries. Psychology of Sexual Orientation and Gender Diversity. Advance online publication. <https://doi.org/10.1037/sgd0000558>**

## EXAMPLES

We have provided some example justification statements below. Some portions of these examples may be relevant to your research, but applicants are expected to have actively engaged with the resources and demonstrated their own understanding of how sex, gender, and sexual orientation applies to their specific research questions. This list of hypothetical justifications for sex and gender-based analyses, are provided for illustrative purposes. The following examples are not based on comprehensive literature reviews, as such, we list fictitious citations as "Researcher, 20XX".

## WHERE SEX, GENDER, AND/ OR SEXUAL ORIENTATION WERE CONSIDERED AND DEEMED RELEVANT

### EXAMPLE 1

*This study aims to examine biological factors associated with poor outcomes in patients who received treatment for prostate cancer.*

We will investigate biological risk factors for poor treatment outcomes among individuals who have undergone any treatment for prostate cancer within the previous six months. All individuals with a prostate, or who had a prostate within the last six months, will be invited to participate. Thus, individuals of any gender, sex, or sexual orientation will be eligible, provided they had or have a prostate and received treatment for prostate cancer. In turn, individuals without prostates in the last six months will be excluded because they do not have experiences and/or physiology pertinent to our research question. We will follow best practices for assessing sex, gender, and sexual orientation to characterize our sample by, for example, asking separate questions for each and including open-ended response options for participants to offer their own language and explaining how answers to these questions will be used in the research (Researcher, 20XX). We will also follow guidelines for effective recruitment strategies for inclusive research provided by the Centre for Gender and Sexual Health Equity (e.g., precise language,

adequate compensation). We will assess whether patients' gender, sex, and/or sexual orientation influences the strength of associations between biological risk factors for poor treatment outcomes using moderation analyses, given the known impact of gender, sex, and sexual orientation on health-related behaviours and outcomes more broadly (Researcher, 20XX)

### EXAMPLE 2

*This study aims to examine predictors of treatment-seeking behaviours among individuals with cardiovascular health conditions.*

We will investigate predictors of treatment-seeking behaviours among individuals with a chronic cardiovascular health condition. Our study will be inclusive to individuals of any sex, gender, or sexual orientation. Given that patients who are trans and/or gender divergent have unique experiences and known challenges interacting with the healthcare system including discrimination (Researcher, 20XX) and given the well-established gender differences in cardiovascular symptoms, both of which could affect treatment-seeking behaviours (Researcher, 20XX), we will test whether our results differ by sex and gender diversity and sexual orientation.

We will follow best practices for assessing sex, gender, and sexual orientation to characterize our sample by asking separate questions for each construct and including open-ended response options for participants to offer their own language (Researcher, 20XX). Because gender expression has been linked with treatment access and can differ from gender identity (Researchers, 20XX), we will follow recommendations provided by the Centre for Gender and Sexual Health Equity to also assess participants' gender expression. To achieve our desired sample size to make these comparisons, we will specifically promote this study among gender, sex, and sexual orientation divergent communities following guidelines by the Centre for Gender and Sexual Health Equity for effective recruitment (e.g., clear and inclusive recruitment ads, building relationships with community organizations).

We will reflect on and consider sex, gender, and sexual orientation in the interpretation and discussion of our results, including acknowledging any limitations to the diversity of our sample and discussing any observed differences by sex, gender, or sexual orientation in terms of unique implications for different communities.

### EXAMPLE 3

*This study aims to characterize experiences with using an insulin pump among adults with Type I Diabetes.*

In this qualitative study, we will investigate experiences of using an insulin pump among adults with Type I Diabetes. The study will be inclusive to any individuals with Type I Diabetes who currently uses an insulin pump, including those of any sex, gender, or sexual orientation. To our knowledge, there is no evidence of sex, gender, or sexual orientation differences in use of an insulin pump among those with Type I Diabetes. In fact, preliminary data showed similar rates of use and overall satisfaction with the insulin pump among women and men (Researcher, 20XX).

**WHERE SEX, GENDER, AND/OR  
SEXUAL ORIENTATION WERE  
CONSIDERED AND DEEMED NOT  
RELEVANT OR COULD NOT BE  
THOROUGHLY CONSIDERED DUE  
TO PRACTICAL LIMITATIONS**

There are no prior studies that we are aware of that compared the insulin pump experiences of gender/sex divergent populations to majority populations; however, we do not have a theoretical reason to assume that their experiences will be different. Therefore, we will conduct our primary analyses with our full sample of gender, sex, and sexual orientation diverse individuals included. We will follow best practices for assessing sex, gender, and sexual orientation to characterize our sample by asking separate questions for each and including open-ended response options for participants to offer their own language (Researcher, 20XX). We will aim for at least 10% of our sample to be gender, sex, and sexual orientation diverse individuals by following guidelines for effective recruitment strategies (e.g., precise language and inclusive imagery in recruitment ads) provided by the Centre for Gender and Sexual Health Equity. We will reflect on and consider sex, gender, and sexual orientation in the interpretation and discussion of our results, including acknowledging any limitations to the diversity of our sample.

## EXAMPLE 4

*This study aims to examine quality of life among individuals with thyroid irregularities.*

We will investigate quality of life among individuals with thyroid irregularities, including hypo- or hyperthyroidism. This study will make use of an archival dataset in which participants were asked to indicate their gender and the response options were binary (male or female). Therefore, sex and gender were conflated in their assessment. It is impossible to know whether participants responded to this item based on their sex and/or their gender, to identify whether participants were cisgender or gender/sex divergent, or to consider non-binary sex or gender and additional identities.

The dataset also does not contain data on sexual orientation. Given some evidence of biologically-influenced differences in thyroid disease among males and females (Researcher, 20XX), we will test moderation by binary sex/gender in our sample. We will discuss our results in the context of any existing literature examining gender, sex, or sexual orientation differences for our key construct of quality of life in terms of unique implications for different communities. However, we will acknowledge in all publications of this work the limitations of the assessment of gender/sex and resultant implications for the interpretation of the findings. We will also acknowledge our inability to fully characterize our sample in terms of in terms of sex, gender, and sexual orientation.



# RUBRIC TO GUIDE THE EVALUATION OF JUSTIFICATIONS FOR GENDER/SEX-BASED ANALYSES

This rubric will be used by MSSU staff and selection committee members to evaluate justifications for gender/sex-based considerations, as required in data request proposals and trainee support applications.

CRITERIA	1 (LIMITED)	2	3	4	5 (HIGH)	CRITERIA LEVEL
Sex/Gender Considerations	<p>Applicant fails to demonstrate an understanding that sex is a biological attribute and gender is a social construct AND that biological and sociocultural factors have a mutual influence on the experience and expression of sex/gender.</p> <p>Applicant fails to mention whether gender/sex is relevant to the proposed</p>	<p>Applicant shows an understanding that sex is a biological attribute, and that gender is a social construct, but does not discuss the relevance (or irrelevance) of gender/sex to the proposed research.</p>	<p>Applicant shows an understanding that sex is a biological attribute and that gender is a social construct.</p> <p>Gender/sex are noted as either relevant or not relevant to the research, without clear explanation or rationale.</p> <p>If gender/sex are noted as relevant, no further details are provided for how gender/sex will be accounted for in the study methods or analyses.</p>	<p>Applicant shows an understanding that sex is a biological attribute and that gender is a social construct.</p> <p>Applicant provides a good explanation of why gender/sex are relevant OR not relevant to the current research.</p> <p>If relevant, the applicant provides some detail for how gender/sex will be accounted for in the study methods or analyses.</p>	<p>Applicant shows an understanding that sex is a biological attribute and that gender is a social construct.</p> <p>Applicant provides a nuanced explanation of how the biological attribute of sex and/or the social construct of gender overlap and relate to their research, or a thorough and convincing explanation of why gender/sex are not relevant.</p> <p>If relevant, the</p>	



CRITERIA	1 (LIMITED)	2	3	4	5 (HIGH)	CRITERIA LEVEL
	research.				applicant clearly explains how gender/sex will be accounted for in study methods and/or analyses.	
<b>Sexual Orientation Considerations</b>	Applicant fails to mention whether sexual orientation is relevant to the proposed research.	Applicant shows an understanding that sexual orientation is an individual difference variable but does not discuss its relevance (or irrelevance) to the proposed research.	Sexual orientation is noted as either relevant or not relevant to the research, without clear explanation or rationale.  If sexual orientation is noted as relevant, no further details are provided for how sexual orientation will be accounted for in the study methods or analyses.	Applicant provides a good explanation of why sexual orientation is relevant OR not relevant to the current research.  If relevant, the applicant provides some detail for how sexual orientation will be accounted for in the study methods or analyses.	Applicant provides a nuanced explanation of how sexual orientation relates to their research, or a thorough and convincing explanation of why it is not relevant.  If relevant, the applicant clearly explains how sexual orientation will be accounted for in study methods and/or analyses.	
<b>Eligibility and Inclusion/Exclusion Criteria</b>	No mention of sample characteristics (if archival) or inclusion criteria (if proposing new data collection) with respect to sex, gender, or	Sample characteristics or inclusion/exclusion criteria with respect to sex, gender, and sexual orientation are mentioned, but sex and gender are conflated (e.g., men	Sample characteristics or inclusion/exclusion criteria with respect to sex, gender, and sexual orientation are mentioned and applicant shows some understanding	Sample characteristics or inclusion/exclusion criteria with respect to sex, gender, and sexual orientation are described demonstrating an understanding of the	Sample characteristics or inclusion/exclusion criteria with respect to sex, gender, and sexual orientation are clearly described demonstrating an understanding of the	



CRITERIA	1 (LIMITED)	2	3	4	5 (HIGH)	CRITERIA LEVEL
	sexual orientation.	are assumed to have penises or male biological attributes).	of the distinction between these concepts.  However, no clear rationale is provided for their inclusion/exclusion criteria with respect to sex, gender, and sexual orientation.	distinction between these concepts.  Applicant provides some rationale for their inclusion/exclusion criteria with respect to sex, gender, and sexual orientation.	distinction between these concepts.  Applicant provides a thorough and nuanced rationale for study inclusion/exclusion criteria with respect to sex, gender, and sexual orientation.	

### ACKNOWLEDGEMENTS

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