The Overrepresentation of Cisgender Men in Esports Research

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Abstract

Aim: This perspective article aimed to explore the balance in gender diversity of participants in empirical esports research.

Methods and results: Publications listed in the Esports Research Network academic research database were examined, and the number and characteristics of participants utilized within the research were recorded. 120 publications and 85,765 participants were included in the analysis. Analysis revealed that 65 studies (54.17%) included cisgender (i.e., a person whose gender identity corresponds to their sex assigned at birth) men and cisgender women, 20 studies (16.67%) included cisgender men only, and 2 studies (1.67%) included cisgender women only. Fourteen studies (11.67%) included cisgender men, cisgender women and transgender (i.e., a person whose gender identity differs to their sex assigned at birth) participants, and 0 studies included only transgender people. The remaining 19 studies (15.83%) only provided the number of either cisgender men or cisgender women, with no other details regarding the sex or gender of other participants. Out of the 85,765 participants, 69,698 cisgender men (81.27%), 13,907 cisgender women (16.22%), 94 transgender participants (0.11%), and 2,066 participants of unknown gender or sex (2.41%) were included.

Conclusions: Cisgender men inclusion in esports research appears to be notably higher than cisgender women and transgender folks, and future research should address this disparity.

Keywords: Gender Bias, Gender Data Gap, Research Design, Transgender, Cisgender

Highlights:
- Cisgender men are overrepresented in esports empirical research.
- Participants' details about the sex assigned at birth and gender are often unclear within esports research studies.
- Differences between cisgender and transgender persons must be acknowledged where relevant in esports research.
- Results obtained from cisgender men within esports research might not be applicable to other populations.

Introduction

Esports is a fast-growing field that is attracting researchers from many different fields (Reitman et al., 2020). Despite this growth, empirical research on esports players often lacks gender-balanced participation. Though men account for 95% of professional esports players (Hilbert, 2019), women's participation in amateur competitive gaming is nearly equal to men's (Madden et al., 2021). Despite this similar participation, sex and gender biases are still present within the men-dominated environment of esports (Madden et al., 2021). Often praised as a 'sex-integrated' sport (e.g., Andrews & Crawford, 2021), professional videogame playing is technically equally accessible to any sex or gender. However, the impact of sex and gender differences in esports players remains understudied, and the overrepresentation of cisgender men appears to be considerable.

It is important to take sex and gender differences into consideration when designing research as results obtained from studying cisgender men may not always be applicable to cisgender women, transgender or gender nonconforming (i.e., a person whose gender identity does not conform to societal expectations) participants, and vice versa. Consideration must be made for how potential sex and gender differences may affect the transferability of the results. When it comes to research that may delve into aspects impacted by sex or gender differences, a gender and/or sex-specific recruitment approach should be applied rather than a one-size-fits-all approach. The following list offers some operational definition of terms in this area:

- **Cisgender**: describes a person whose gender identity corresponds to their sex assigned at birth.
- **Transgender**: describes a person whose gender identity differs to their sex assigned at birth.
- **Gender nonconforming**: describe a person whose gender identity does not conform to societal expectations.
- **Non-binary**: describes a person whose gender identity does not fit exclusively into the categories of man or woman.

Furthermore, for research areas where data is not affected by sex or gender differences, researchers should endeavour to achieve a balance between men, women, and gender nonconforming participants (Cowley et al., 2021). No literature could be found by the authors which addresses this area within esports research. Thus, this perspective piece aims to discuss the current state and merits of participant inclusion in esports research, including an analysis of the current sex and gender representation in published work.

Methods

This perspective piece analysed publications listed on the Esports Research Network (ERN; https://esportsresearch.net/literature) database dated from June 2005 to November 2022, investigating whether there is a disparity in participant sex and gender within esports empirical research. The scope of this exploratory investigation was limited to analysing works in the ERN database. Articles were included if they focused on esports and were written in English. Articles were excluded if they were not primary research articles (i.e., no participants were included, such as literature reviews). Using Google Sheets for organisation (i.e., tracking included, excluded, and duplicate articles), the authors screened all titles and abstracts for inclusion and exclusion criteria and retrieved information about the number, sex, and gender of participants from the full articles.

Figure 1 displays the flow of the article selection process. From the initial 1,220 article results, 398 original research articles in English met the initial selection criteria. Six of these articles were excluded as a full text was not retrievable, and 251 were excluded because they had no participants. Among the 141 remaining articles, 21 were excluded because they did not provide sufficient details about the participants (i.e., numbers and/or sex or gender). Where details around sex and gender were unclear, the authors presumed that the participants were cisgender. This only happened for articles that did not clearly state they were referring to the gender identity of the participants, but the sex assigned at birth. When the screening was complete, 120 articles remained and were included in the analysis.

Figure 1 - Flow diagram of the article selection process.
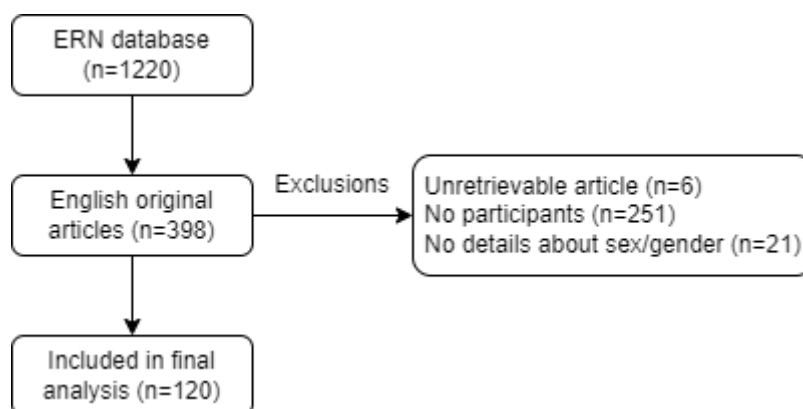
Results

As seen in Table 1, of the remaining 120 articles, 65 included men and women, 20 included men only, and 2 included women only. Fourteen articles included cisgender men, cisgender women and transgender participants, and 0 articles included only transgender people. The remaining 19 articles only provided the number of either cisgender men or cisgender women, with no other details regarding the other participants.

Table 1 – Article data (n = 120)

Total articles	120 (100%)
Cisgender men and women	65 (54.17%)
Cisgender men only	20 (16.67%)
Cisgender women only	2 (1.67%)
*Cisgender men, women, and transgender people	14 (11.67%)
*Transgender people only	0 (0%)
Incomplete sex/gender details	19 (15.83%)

*Articles that categorized participants as "others", "non-binary" (i.e., a person whose gender identity does not fit exclusively into the categories of man or woman), and "transgender" were included in this category.

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In total, 85,765 participants were included in the esports research articles that met the inclusion criteria (n = 120 articles). Of note, the numbers in Table 2 are based on the data available in the analysed articles, which were often reported solely as a percentage, and therefore might be imprecise.

Table 2 – Participant data

Total participants	85,765 (100%)
Total cisgender men	69,698 (81.27%)
Total cisgender women	13,907 (16.22%)
*Total transgender people	94 (0.11%)
Unknown sex/gender participants	2,066 (2.41%)

*Participants categorized as "others", "non-binary", and "transgender" were included in this category.

Discussion

Overrepresentation of Cisgender Men and Gender Disparities

The results showed cisgender men are overrepresented in esports research. This disparity is present in both the number of single-gender studies (cisgender men only (16.67%), cisgender women only (1.67%), transgender participants only (0%) and in the total number of participants for each gender (cisgender men (81.27%), cisgender women (16.22%), transgender people (0.11%). Sex and gender disparity is problematic as results obtained from participants of a specific gender are not always transferable to others, and the assumption that the results would be the same could lead to inappropriate applications. This would, for instance, ignore the many documented barriers women face in gaming spaces such as gender-based harassment (Nakandala et al., 2016), unfair scrutiny of their playing skills (Cullen, 2018), and the presence of a 'glass monitor' (i.e., glass ceiling) that blocks career progress (Darvin et al., 2021).

It is the researchers' duty to be informed about potential sex and gender differences and how these can affect their study that might lead to less transferrable results. However, we recognise the difficulties around a more diverse recruitment of participants, and the barriers that researchers might face when trying to do so. The examples mentioned above are only some of the potential implications for research that relates to sex and gender differences in esports. Other factors that can differ between genders include, but are not limited to, cognition (Gaillard et al., 2020), and sleeping patterns (Mong & Cusmano, 2016). Authors should consider which sex and gender-related factors could play a role in their specific esports research area and design sampling accordingly. Therefore, to reduce the gender data gap and obtain valid and reliable empirical results that can be generalised, not only does the field need to increase the number of studies focused on women and gender nonconforming folks to understand what impacts their performance in esports, but it needs to conduct them appropriately.

Participant Details and Language

During the literature review, the authors noticed that discerning between sex and gender in the participants' details section was challenging and often not possible. Despite having a clear

and separate meaning, the words "sex" and "gender" were sometimes used interchangeably in the same article, or not mentioned at all. Many articles refer to males/females, men/women or boys/girls providing no further clarification, leaving the reader without a clear understanding of the participants' details. Sex should refer to the biological characteristics such as reproductive organs and chromosomes, while gender should refer to socially constructed characteristics such as roles, behaviours and expressions. Sex is assigned at birth, whilst gender is based on self-identification.

Furthermore, several studies only provided details for part of the sample (i.e., indicating the number of men, but not the number of women or gender nonconforming participants). Information about the sex or gender of only a portion of the participants is not enough, because it assumes that only two sexes and/or two genders exist, which is inaccurate (Rich-Edwards et al., 2018). It is possible that authors assumed every participant to be cisgender and used the words sex and gender interchangeably. Word count limitations in academic journals may promote this practice, but it is vital for researchers to list all genders of participants when outlining participant demographic information. A complete and detailed breakdown of the sex and/or gender of the participants is required to avoid misunderstandings and allow the reader to correctly interpret the results of the study.

Practical Recommendations

To attain more diverse and representative samples within populations, researchers should engage in a comprehensive recruitment strategy and contact various demographic groups. This could be done online, utilizing platforms and forums where individuals of diverse gender identities are known to engage, or offline, reaching out to organizations and non-profits that work with and promote gender diversity. The approach should be made with care and consideration and should explain the significance of achieving diversity in representation and the potential benefits for their community. Furthermore, the recruitment material should be created with inclusivity in mind, utilizing the appropriate language. For example, a survey that does not include the correct gender options might cause the participant to drop out of the study due to feeling unwelcome.

When collecting gender demographics, the best option may be to use a single open-ended question that allows participants to define their gender themselves with any terminology (Cameron & Stinson, 2019). After the collection, researchers must then code the open answers in the best way that fits the purpose of the study, as it may not be appropriate to employ universal categories that would work for every research project (and participant). For example, in certain cases it might be relevant to have a distinction between cisgender and transgender men or women, whilst in other cases it might not be relevant and collecting this information might even be a deterrent to participation. Specific guidelines and best practice recommendations in this area requires further evidence-based empirical research.

Limitations

Future work should aim to replicate the findings by expanding to multiple journal search engines with a larger sample of esports research studies beyond the ERN research database. In addition, this exploratory investigation may have also been limited by several studies not clearly delineating the difference between esports and recreational video gaming samples, thus impacting applicability to solely "esports" research.

Conclusion

Future research should include participants of multiple gender identities to lessen the overrepresentation of cisgender men, which can generate research that has greater applicability to women and gender nonconforming people within esports. Future esports research should also ensure an appropriate inclusion and representation of every gender identity and the correct use of gender and sex terminology within research reports.

Women already have a strong presence in the non-professional esports scene, which means researchers need to support them with high quality informed studies to reduce the gender data gap. Exploring and understanding how differences affect participants of every gender within esports could have an equalising effect on representation at elite levels as well as empowerment for women and gender nonconforming folks within esports spaces.

The authors recognize that the number of transgender people within potential participant pools are likely small, thus posing a challenge for recruitment. The authors also acknowledge the difficulties surrounding this topic and understand that esports is a relatively new research field, but strongly believe that researchers must tackle this gender data gap now. In order to do so, studies that carefully consider potential sex and gender differences are required.

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Conflict of Interest

The authors confirm that there are no conflicts of interest to declare.

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