

1 **"It's gym, like g-y-m not J-i-m:" Exploring the role of place in the gendering of physical**
2 **activity**

3

4 **Abstract**

5 Physical activity is a highly gendered health behaviour, with women less likely than men to meet
6 internationally accepted physical activity guidelines. In this article, we take up recent arguments
7 on the potential of indoor spaces to illuminate processes shaping health, together with social
8 theories of gender, to conceptualize the place of the gym as a window into understanding and
9 intervening in wider gender disparities in physical activity. Using a triangulated strategy of
10 qualitative methods, including semi-structured interviews, drawing, and journaling with men and
11 women in a mid-sized Canadian city, we examine how gender influences exercise practices and
12 mobilities in gym environments. Results of our thematic analysis reveal three socio-spatial
13 processes implicated in the gendering of physical activity: 1) embodying gender ideals, 2)
14 policing gender performance, and 3) spatializing gender relations. A fourth theme illustrates the
15 situated agency some individuals enact to disrupt gendered divisions. Although women were
16 unduly disadvantaged, both women and men experienced significant limitations on their gym
17 participation due to the presiding gendered social context of the gym. Gender-transformative
18 interventions that go beyond engaging women to comprehensively contend with the place-based
19 gender relations that sustain gender hegemony are needed. While gyms are potentially sites for
20 health promotion, they are also places where gendered inequities in health opportunities emerge.

21

22 Key words: gender, gyms, health inequities, physical activity, place

23 **1. Introduction**

24 Women in North America are less likely than men to meet guidelines for the minimum levels of
25 physical activity required to attain a measurable health benefit (Colley et al., 2011; Statistics
26 Canada, 2015). This gender disparity holds across muscle strengthening recommendations
27 (Caspersen, Pereira, & Curran, 2000; Centers for Disease Control and Prevention, 2006; Chevan,
28 2008) and moderate to vigorous levels of physical activity (Colley et al., 2011; Grzywacz &
29 Marks, 2001) where the greatest health benefits are accrued (Tremblay et al., 2011). There are
30 also significant differences in the types of leisure-time physical activities practiced by women
31 and men (Coen, Subedi, & Rosenberg, 2016; Gilmour, 2007), leading some to argue that generic
32 or
33 composite measures of physical activity obscure the specificities or magnitude of gender
34 differences (Livingstone et al., 2001; Pascual, Regidor, Martínez, Calle, & Domínguez, 2009).

34 Geographies of physical activity have rarely attended to this gender gap, favouring
35 instead a focus on 'obesogenic environments' and neighbourhood walkability—an emphasis that
36 has drawn recent critique for veering uncomfortably close to environmental determinism
37 (Andrews, Hall, Evans, & Colls, 2012; Blacksher & Lovasi, 2012; Colls & Evans, 2014;
38 Rosenberg, 2016). While some of this work reports empirical differences by sex, it fails to
39 undertake the type of comprehensive gendered analyses that can illuminate processes
40 contributing to gendered health inequities. Moreover, the neighbourhood scale does not tell us
41 about the micro built aspects and social dynamics *within* physical activity places.

42 Here, we take up calls to examine the very sites and facilities where physical activities
43 are undertaken (Andrews, Sudwell, & Sparkes, 2005; Hopkins, 2008). Given the centrality of the
44 indoors in our everyday lives, Biehler and Simon (2010, p. 174) caution that "the pervasive
45 fallacy of enclosure and the privileging of the Great Outdoors" leaves us with an incomplete

46 picture of the spaces and processes implicated in shaping health. Indoor environments hold
47 potential to provide insight into and transform human-environment relations across multiple
48 scales because of their intimate location in the ecology of human health. While indoor places,
49 such as the home or retail locales, may seem bounded or internally coherent, they are permeably
50 linked to what happens beyond, making them potentially fluid environments (Biehler & Simon,
51 2010). Taking this argument onboard, it is possible to imagine how interventions targeting
52 everyday physical activity places have the potential to reshape gendered inequities more broadly.

53 We conceptualize the *place* of the gym as an under-explored potential window into
54 understanding and intervening in the processes underlying wider gender disparities in physical
55 activity. Gyms are common places to engage in physical activity, but they may also potentially
56 reinforce and routinize gender differences. Evidence points to the significance of gendered
57 factors in shaping gym-related behaviour and opportunities. Motivations for gym attendance
58 have been tied to weight loss for women and enhancing muscularity for men (McCabe & James,
59 2009) and cardiovascular exercise and weight training spaces can be typecasted as feminine and
60 masculine, respectively (Brace-Govan, 2004; Dworkin 2001, 2003; Johansson, 1996; Johansson
61 & Andreasson, 2016; Johnston, 1996; Salvatore & Marecek, 2010; Sassatelli, 2010). Johnston
62 (1996), for example, although focusing on how elite women bodybuilders negotiate gendered
63 bodily boundaries, conceives of the gym as an environment that re-figures bodies within a
64 feminine/masculine binary. Gendered body ideals have been linked to women's limited
65 engagement with weightlifting (Brace-Govan, 2004; Dworkin, 2001, 2003; Salvatore &
66 Marecek, 2010)—what Dworkin (2001) has called a glass ceiling on women's strength. The gym
67 itself can be perceived as a hyper-masculine institution (Craig & Liberti, 2007; Johansson, 1996;
68 Pridgeon & Grogan, 2012), which can be a barrier to exercise adherence for both women and

69 men (Pridgeon & Grogan, 2012). Still, little is known about the socio-spatial processes in gyms
70 that might contribute to the inclusion or exclusion of people from various workout spaces and
71 practices. In this study, we examine how gender disparities and differences in physical activity
72 participation are (re)reproduced, reinforced, and challenged within gym environments by
73 focusing on how gender influences women's and men's gym-based exercise practices and
74 mobilities; that is, what people do and how they move through and inhabit gym spaces. In doing
75 so, we aim to advance a more critical geography of physical activity that contends with the
76 micro-level socio-spatial processes implicated in gendering physical activity participation and
77 thus, health

79 **2. Gender, health, and place**

80 Theories of gender and health posit that “‘doing gender’ is, in effect, ‘doing health’” (Dyck,
81 2003, p. 366; Saltonstall, 1993). Saltonstall (1993), Courtenay (2000), and others have argued
82 that everyday health-related behaviours—be it eating, drinking, accessing health services—are
83 social practices that take on meanings as power-laden signifiers of masculinity and femininity
84 (Connell, 2012; Galdas, Cheater, & Marshall, 2005; Lyons, 2009). Connell's (1987) concept of
85 *hegemonic masculinity*, a culturally ascendant form of masculinity that subordinates femininities
86 and other masculinities, has been especially important to understanding how gender operates as a
87 structural influence on health (Bottorff, Oliffe, Robinson, Carey, 2011; Connell, 2012). For
88 example, hegemonic masculine ideals have been shown to encourage men to adopt health-
89 damaging or risky behaviours. Although typically ‘bad’ for men's health, this form of
90 masculinity still rewards men's privileged social status because it is predicated on rejecting
91 feminine ideals—ideals conventionally tied to health-promoting and protecting behaviours, such

92 as care-taking and asking for help (Courtenay, 2000). From this perspective, although this
93 relationship is inverted when it comes to physical activity, men's overall greater uptake of
94 physical activity can be understood in light of masculine ideals linked to physical strength. Much
95 of this work has been influenced by what Connell (2012) refers to as relational gender theory—
96 to which we subscribe in this article—that “gives a central place to the patterned relations
97 between women and men (and among women and among men) that constitute gender as a social
98 structure” (p. 1677).

99 Yet, gender and health has as much to do with places as with people. Places of work or
100 leisure, provide localized resources that people draw upon to ‘do’ gender in contextually
101 ‘appropriate’ ways (West & Zimmerman, 1987). This view of gender is particularly relevant to
102 considering the gym as a place with its own stock of resources for doing gender and norms for
103 what is gender-appropriate or transgressive. Not only is gender ‘done’ or ‘performative’ (Butler,
104 1990) contextually, but these enactments iteratively feed back into place (Bondi & Davidson,
105 2005; Massey, 1994). Gender is thus both social category and social structure—a social product
106 of the interactions and activities in particular places and spaces that, at the same time, shapes
107 those very places and spaces (Bondi & Davidson, 2005; Connell & Messerschmidt, 2005;
108 Schippers, 2007). Places are also not isolated gender islands, but are rather composed of the
109 overlap of wider scales of gender and social relations in space and time—what Massey calls
110 power-geometries (Massey, 1994, p. 265; see also Connell & Messerschmidt, 2005; Connell,
111 2012). This scalar concept is important to conceiving how gendered processes within indoor
112 places, as per Biehler and Simon (2010), are connected to the wider ecology of human health.
113 Institutions, organizations, and places may have particular *gender regimes* (institutional-level

114 gender structure) (Connell, 1987) that operate locally, yet relate to and draw from the broader
115 gender orders in which they are situated (Connell, 2012; Massey, 1994).

116 Using this relational approach to gender and place, it is possible to conceive of the gym
117 as a type of place with a particular gender regime. Despite localized differences in specific
118 facilities, ethnographic research suggests there are striking similarities across sites that
119 characterize the gym as a “specialized place” (Sassatelli, 1999, p. 230; Sassatelli, 2010).
120 Sassatelli (1999), in her work on Italian gyms, attributes this to a shared “spatio-temporal
121 organization which works at the work of the body” through which “the gym is thus constructed
122 as a world in itself, a domain of action which has its own rules and meanings” (p. 233). Socio-
123 cultural studies have shown that gyms can function as hierarchical and informally (and formally)
124 regulated social environments with particular norms, etiquette, and systems of informal
125 surveillance (Andrews et al., 2005; Crossley, 2006; Frew & McGillivray, 2005; Markula &
126 Pringle, 2006; Pridgeon & Grogan, 2012; Sassatelli, 1999; Sassatelli, 2010). More recent work in
127 Australia (Johansson & Andreasson, 2016) and Japan (Andreasson & Johansson, 2017) supports
128 the notion that gyms—even in very diverse settings—are subject to an increasing
129 ‘McDonaldization’ (standardization) process, while at the same time exhibiting distinct local
130 cultural adaptations. Moreover, even cost, one potential differentiator of gyms, may not always
131 be significant (Sassatelli, 2010). McLaren and co-authors (2012), in their study of 45 gyms in
132 Calgary, Canada, found that most exhibited low levels of exclusivity according to three measures
133 (economic, symbolic, appearance). They also found, however, that several gyms considered
134 economically inclusive ranked high on symbolic and appearance dimensions of exclusivity. As
135 such, while low-cost facilities may ease access, they can also simultaneously reinforce other
136 aspects of social difference (McLaren, Rock, & McElgunn, 2012). This suggests there is nothing

137 inherently more in/exclusive about any specific gym based on cost alone. In this way, we
138 position the gym as a particular type of place for physical activity with shared institutional
139 features, despite any site-specific distinctions.

140 Following the work of Kath Browne, we conceptualize how seemingly unremarkable
141 places in our daily lives, such as the gym, play an important role in how gender is (re)produced
142 and becomes 'common-sense.' Browne's work on microlevel 'othering' processes and
143 encounters in public toilets (2004) and restaurants (2007) has illuminated how mundane
144 institutions are implicated in naturalizing dichotomous differences in gender and sexuality. She
145 uses the term 'genderism' to refer to "(often unnamed) discriminations that are based on not
146 conforming to the rigid categorisation of man/woman, male/female" (p. 343). By policing gender
147 transgressions, 'genderist' processes demarcate who is in/out of place, including, we suggest, in
148 ways that may constrain health and health opportunities. This is important because intervening in
149 gender relations and regimes can be a way to improve health (Connell, 2012) and, by extension,
150 health equity.

151

152 **3. Methods**

153 ***3.1 Data collection***

154 This study was carried out in a mid-sized Canadian city that, at the time of data collection, was
155 home to 11 gyms. Participants ($n=52$) were recruited using print flyers and a paid Facebook
156 advertisement over a 4-week period in January/February 2015. Eligibility criteria included: (1)
157 identifying as a regular gym user, (2) holding a current co-ed gym membership, (3) engaging in
158 exercise routines that included use of the weight and/or cardiovascular ('cardio') training areas,
159 and (4) being between ages 25 to 64. This age bracket was selected to focus on the working age

160 population while accounting for the local city context with a large undergraduate university and
161 college population, a group with arguably distinct social circumstances.

162 Our research design incorporated three forms of qualitative data. First, semi-structured
163 interviews, averaging 51 minutes in length, focused on participants' relationships with the gym,
164 their gym environments, their experiences in the weight and cardio areas, and their own views on
165 gender in the gym. Second, at the conclusion of each interview, participants were invited to draw
166 in response to the question "how do you feel in the gym?" and then to orally describe their
167 drawing as a continuation of the interview. Only one participant declined to draw, instead
168 verbalizing her response. As a method that breaks the question-response dynamic of interviews
169 and offers a stepping stone for talk (the finished drawing), we employed drawing to facilitate
170 critical reflection about aspects of the gym that might be perceived as commonplace and thus not
171 immediately raised by interviewees (Coen, 2016; Guillemin, 2004). We treated
172 participants' descriptions of their drawings as textual data rather than performing a separate
173 compositional or visual analysis of the images, consistent with auteur theory which holds the
174 maker's intention as the authoritative interpretation (Rose, 2001). Third, all participants were
175 invited to complete one-week 'gym journals' documenting their thoughts before using the gym,
176 activities in the gym, and negative and positive aspects of their gym experiences. This method
177 aimed to capture more immediate observations and reflections on the micro-geographies of
178 exercise experiences not necessarily possible in interview recall (Filep et al., 2015). Forty-nine
179 interviewees expressed interest and accepted journals; thirty-seven journals were returned.
180 Journal excerpts are presented as written, including any typographical errors and shorthand. All
181 participants also completed a brief questionnaire to provide socio-economic details. In
182 recognition of sharing their time and experience, interviewees received a \$20 CDN gift card to a

183 local shopping centre and those completing journals received an additional \$30 CDN gift card.

184 This study was granted clearance according to the recommended principles of Canadian ethics

185 guidelines and Queen's University policies by the University's General Research Ethics Board.

186

187 *3.2 Analysis*

188 Interviews, drawing descriptions, and journals were inter-linked in a triangulated strategy for

189 rigour in which we interrogated areas of commonality and contrast across data types and within

190 participant responses (Baxter & Eyles, 1997). In line with our critical approach, we

191 conceptualized this technique, not as a form of independent validation, but as a robust way to

192 gain additional insights about the data (Smith & McGannon, 2017). We used thematic analysis to

193 systematically identify patterns and meanings in a three stage coding process (Braun & Clarke,

194 2006). Informed by Connell's (1987, 2012) relational theory of gender, we inductively identified

195 the aspects of gender that mattered for gym practices and mobilities through our analysis of

196 participants' experiences. First, we formed broad categories of data corresponding with the

197 research questions from the larger project of which this study is a part to create the dataset for

198 this analysis. We separated men's and women's responses, recognizing that in order to

199 interrogate dominant gender structures we needed to account for their possibility and engage

200 with them in our analysis. Second, within this dataset, we iteratively performed fine-grained

201 open coding to identify micro-level repeating ideas (Auerbach & Silverstein, 2003). Third, we

202 purposefully drew our gender-specific codes into conversation with each other to identify

203 similarities and differences between and among women and men, in line with a relational

204 approach. Here, we identified relationships among our repeating ideas to form meta-level

205 concepts (Auerbach & Silverstein, 2003) identifying the socio-spatial gendering processes of the

206 gym. We acknowledge that there is a methodological tension between a fluid conception of
gender
207 and our use of dichotomous terms, like men and women. We accept the limitations of this
208 language, with the same concession as Browne (2004, p. 334), that “in order to make sense of
209 [participants’] narratives and to stress the problems associated with not fitting dichotomous
210 sexes, it is necessary to use these sexed terms.””

211 The quotes presented in our results section are selected as examples of specific codes
212 included in our themes. We use language such as “for example” and “for instance” to indicate
213 that quotes are illustrative of our codes and concepts. We discuss the quotes in terms of the
214 meaning of the code and the nuance of each particular quote in ways that are commonly used in
215 qualitative research.

216

217 ***3.3 Sample characteristics***

218 Thirty-four participants self-identified as women and eighteen as men. Reflective of the study
219 location, our sample was relatively ethnically homogenous with most identifying as white
220 Canadians, five identifying with visible minority groups, and three self-describing as being of
221 mixed ethnic heritages. Participants were overwhelmingly heterosexual; one man identified as
222 gay and five women as lesbian or pansexual. Our sample was more socio-economically diverse,
223 with participants employed in a range of occupations including: managerial or supervisory
224 positions (13%); professional or skilled occupations (33%); clerical or technical jobs (13%); and
225 students (20%). Three individuals were receiving social assistance (public disability or
226 unemployment insurance), two of whom were accessing free gym memberships through a
227 municipal program. In terms of education, 35 percent had a graduate degree, 33 percent had
228 undergraduate degrees, 23 percent had earned a college diploma, and 10 percent had completed

229 high school. Of the 11 gyms in the area, participants were members of 10, including two gyms
230 associated with major educational institutions (21%), two municipal gyms run by the city (27%),
231 three YMCAs (international non-profit community centres with fitness facilities) (21%), and
232 three locations of a national commercial chain gym (31%). Participants averaged 40 years old,
233 spanning the full 25 to 64 age range. All names used are pseudonyms.

234

235 **4. Results**

236 *4.1 Embodying gender ideals*

237 Participants made direct connections between their desires to attain particular gendered ideals
238 and their chosen gym activities. For instance, Gary, a 58-year-old man attending one of the
239 municipal gyms, linked his preference for heavy weightlifting to his sense of strength as a
240 masculine trait: "We like to be able to pick up heavy objects, you know [laughs]. It's a manly
241 kind of thing I suppose, you know. So, yeah, I think that, that, uh, yeah, my gender, you know,
242 predisposes me to wanting to do more of the heavy lifting kind of stuff." Similarly, Leah, a 30-
243 year-old woman, described how she specifically designed her weightlifting routine in a way that
244 she believed would yield her preferred physique, explaining that "because I don't wanna build
245 too much muscle, I just wanna tone, I kind of stick to the lower weights." Even when men and
246 women distanced themselves to varying degrees from the influence of dominant masculine and
247 feminine ideals, many were nonetheless affected by them in determining their exercise practices.
248 Helen (age 48), for instance, was quite adamant that gender did not affect her exercise practices,
249 yet contemplated in her journal how she used a piece of equipment because it was "good" for a
250 body part associated with feminized aesthetics:

251 I began with the side glide machine (still don't know what it's called.) I did this for 5
252 min. and asked myself 'why do I pick this machine' because I really don't like it. Then it
253 dawned on me—someone told me it was good for my inner thighs. (Feb. 18, 2015)

254 This illustrates the scalar dimension of how gender in the gym operates, connecting individual-
255 level practices in specific places with wider socially constructed images of desirable masculinity
256 and femininity.

257 The consequence of gender ideals crystallized when participants were asked to imagine
258 whether they would do things differently in the gym if they were of a different gender. Many
259 women pointed to the stereotype of adopting a more exclusive focus on strength training, in
260 particular heavy lifting; whereas men pointed to the likelihood of aligning their activities with
261 stereotypically feminine practices, such as stretching. Vivian, a 52-year-old woman with a gym
262 history spanning more than 30 years, conceded that "I might feel if I was male, I might feel like I
263 had to, like I wouldn't feel good doing light weights." Some women also spoke of *how* they
264 would perform exercises differently if they were men, such as increasing levels of intensity or
265 vocalizing effort (the spatiality of sound is a point we return to in section 4.3). Thirty-eight-year
266 old Sabrina, for instance, pointedly reflected on how gender is embodied in an oppositional
267 fashion in the gym, remarking on her own self-realization of the pervasive and performative
268 effect of gender as she spoke hypothetically about the strength that a masculine body might
269 confer: "I'd probably work out—so funny that I can't even believe it would come out of my
270 mouth—I'd probably work out harder. Which is ridiculous as soon as it comes out, because what
271 is, what is—a penis won't make me work harder."

272 Even men and women who did not identify as subscribing to traditional gender norms in
273 their own practices envisioned conforming to conventional gender stereotypes when asked to

274 imagine embodying another gender in the gym. Nathan, a man in his 20s who worked as a fitness
275 professional and prided himself in engaging with the full spectrum of gym activities in conscious
276 defiance of gendered patterns, reflected that “hypothetically from a female perspective, I think I
277 would probably fall into that exact same... just doing cardio.” When asked why he might feel
278 more susceptible to gendered pressures if he were to imagine himself as a woman, he was not
279 exactly sure why but mused on the point: “Come to think of it, yeah absolutely. No, it’s true, I
280 think I would. That is interesting, yeah, the more I think of it.” The acceptance on the part of
281 many participants that they would simply do things differently if they were of a different gender
282 highlights how pervasive and incipient body ideals and gender norms are in the gym for
283 regulating exercise behaviour in place.

284

285 *4.2 Policing gender performance*

286 Many participants experienced perceived—and sometimes overt—social sanction by others for
287 crossing what one woman called “the gendered lines”—the social and material boundaries
288 separating men’s and women’s activities and spatialities in the gym. Participants
289 overwhelmingly confirmed these gendered lines are known and experienced; several even used
290 unprompted gendered language to refer to different areas, such as “feminine sections” or the
291 “male area.” Joel, a 56-year-old gym-goer for over 25 years simply put it: “you’ve got all the
292 guys on the weight side and the girls are on the cardio side.” Women and men understood these
293 gendered lines to delineate “a separation where women are supposed to be and where men are
294 supposed to be” (Marie, woman, age 27).

295 Men and women responded to pressures to conform to more normatively gendered
296 behaviours in the gym by limiting the range of activities and spaces they were prepared to

297 engage in. These participants engaged in self-policing by circumscribing their gym practices to
298 conform to more normative expressions of masculinity and femininity. Tom, for example, a 26-
299 year-old man who began using the gym as a teenager, was keenly aware of the limits of his
300 masculinity in the gym:

301 Gender definitely defines the stereotypes of what people do at the gym. Um, you could
302 even go as far as to say what people are *allowed* to do at the gym, depending on what the
303 norm is. I try not to constrain myself to those things, but there are, you know, typical
304 female exercises or activities that I don't—I don't want to do. But it's not because I don't
305 want to do them. I wouldn't mind doing them. But, uh, it's just because I feel like I can't.
306 (his emphasis)

307 Tom expressly chose not to partake in seemingly feminized activities, despite any potential
308 interest in doing so, citing his identity as a man and the socially inscribed boundaries on his
309 behaviour. Dev, the only gay-identified man in this study, echoed the notion that there is “an
310 accepted form of working out” (his words) for men when he described a stark instance of overt
311 policing when his activities seemingly contravened hegemonic masculine gym practices: [These
312 guys] made some sort of snide remark about like a group of three gay guys doing circuit training.
313 [...] I guess what we were doing was kind of out of the ordinary.” Likewise, Annie, a 33-year-
314 old woman who self-described as “pretty confident” in the gym, was attuned to how the
315 limitations of femininity affected her engagement with particular exercises:

316 I think of the, like, the pull up machines that, I would say that I don't try that very often
317 because, uh, because I, I feel like that's not something women are good at, or I feel like a
318 woman trying to do that would draw attention because you never see women, or very
319 rarely, see women doing those types of things.

320 This form of self-gender policing was a mechanism through which gender operated as a
321 constraint, leading men and women to avoid or refrain from attempting certain activities. At the
322 same time, this avoidance reinforced normative masculinities and femininities in the gym by
323 reifying the divide between what men and women were observed doing.

324 Femininities also presented a double liability in the gym whereby women were policed
325 both for breaking with and conforming to normative gendered practices. With regards to the
326 former, several women talked about social repercussions for challenging traditional feminine
327 practices in the gym. Most women were not overtly sanctioned—although this did happen—but
328 rather this policing was experienced as perceived judgements by others. For example, Emily (age
329 27) spoke of how if she were enact a masculine display of confidence in navigating the gym or
330 show authority by correcting breaches in gym etiquette, she would be negatively categorized in
331 gendered terms:

332 I watch even my male friends walk into the gym and their shoulders are back and their
333 heads tall and they walk up to a rack—and if they're unhappy with how things are going,
334 if people are being like disorganized, they'll go and call them out... But if I were to do
335 this, I would be a bitch.

336 Despite being one of the few women who lifted heavy weights, Emily disclosed how these
337 potentially punitive consequences qualitatively affected the way she moved through the gym,
338 often in a manner that emphasized conventional feminine characteristics: "I find myself like tip
339 toeing around and like almost apologizing." This comportment strategy to minimize potential
340 gender transgression contrasts with Emily's more characteristically masculine exercise practice
341 (heavy weightlifting). This underscores the gender-precarious position of femininities in the gym

342 because engaging in a seemingly more masculine practice does not confer other privileges, like
343 ease of mobility or access to equipment.

344 The other prong of this double feminine liability was that women were also subject to
345 sanction *by other women* for conforming seemingly too closely to normative feminine activities
346 or stereotypes in the gym. Women could be highly critical of other women whom they perceived
347 to be participating in the gym for aesthetic reasons alone or not visibly exerting effort, as Leah
348 put it, "I don't wanna say princess, but I guess that's the best way to describe it. Just to get the
349 look." Highlighting the incipency of this form of intra-gender policing, Vanessa (age 25)
350 realized when describing her drawing for this study that she was essentially policing herself
351 within a negative feminine stereotype (Figure 1): "As I was drawing it I was like, 'I look like a
352 cardio bunny.' And then I thought, 'Oh, that's a totally a gendered thing.' Men aren't really
353 called cardio bunnies if they go on the cardio'." 'Cardio bunny' connotes a woman more
354 concerned with appearance than physical effort, typically performing 'excessive' cardiovascular
355 exercise. Although Vanessa is happy doing what she is doing on her "side," she feels her
356 legitimacy in the gym is "a bit judged" by the man in her drawing "for not being as involved as
357 he is," as well as by herself in the moment when she approximates herself to a hyper-feminine
358 stereotype. These dual forms of gender sanctioning indicate how the boundaries of femininity in
359 the gym can be narrow and rigidly policed.

360

361 [Figure 1 approximately here – see page 34]

362

363 ***4.3 Spatializing gender relations***

364 Collectively, men and women engaged in a constellation of spatial practices that reinforced a
365 gendered hierarchy in favour of a hegemonic form of masculinity. Men described avoiding or

366 leaving spaces where hegemonic masculinity was at play, while women described experiences of
367 being crowded out of spaces by masculine performances as well as actions they undertook to
368 minimize their consumption of time and space in the gym. The net effect of these spatial
369 practices was to cede spatial privilege to hegemonic masculinity in a way that had an
370 exclusionary effect on some gym users.

371 Men and women described how gym space became hyper-masculinized in ways that
372 made it unappealing to use and sometimes inaccessible. Men often spoke of a type of amplified
373 masculinity emerging among groups of men that gave the space an intense quality that, for some,
374 triggered an urge to abandon their workout or "get it done as quick as possible and then leave"
375 (Eric, age 30) or altogether avoid "where the big guys generally hang out at" (Frank, age 57).
376 Brad, a self-described "burly man who's 6'1 and 240" explained how this quality was an affront
377 to his workout experience:

378 Nice guys. But they're strong and it's intense. So it kind of changes the mentality in there
379 and I'm a little, ok, well, I'm not intimidated, but I'm kind of, it's busy and there's a lot
380 of energy...It kind of makes me want to turn around and leave, to be honest. I kind of just
381 want to get out of there. I don't want to deal with it, to be, yeah, to be completely honest.

382 The fact that a man who might be perceived by others to embody hegemonic masculinity himself
383 was negatively affected underscores both the power of this form of masculinity and its capacity
384 to exert exclusionary effects among a diversity of people.

385 Relatedly, women often perceived that men were disproportionately "taking up space"
386 (Lillian, age 57). In particular, women spoke of how men consumed more space than women
387 materially in terms of the exercises performed (bigger exercises with bigger weights) and
388 sonically in terms of exerting sounds of effort or noises from the weights themselves (hitting the

389 floor or stack). Amy (age 49) summated this as, “when you go in there and there’s a bunch of
390 guys standing around, you know, or grunting and groaning, it’s, you know, [laugh] it’s not as—I
391 don’t necessarily want to stick around there as long.” This, along with the perception that men
392 tended to “hog a piece of equipment” (Shawna, age 50), left many women feeling crowded out.

393 In counterpoint to men’s consumption of space, many women undertook strategies to
394 take up less time and space in the gym, particularly in the presence of men and individuals
395 perceived to possess greater expertise. A number of women echoed Linda’s (age 55) sentiment
396 that “my attitude is stay over out of their way and then I don’t feel like I’m a nuisance.” Janine
397 (age 41), whose tight schedule working three jobs was already a time constraint, reflected in her
398 journal how she felt obliged to compromise the pace of her own workout in deference to others:
399 “It is intimidating, particularly when you are the only women there and you are lifting some
400 weights compared to everyone else there. It makes me feel like I need to rush cause I don’t want
401 to be holding up equipment others may want to use and makes my workout feel rushed.” (Feb.
402 12, 2015). This shrinking of women in space and time works to maintain power imbalances in
403 the gym. Paradoxically, women engaged in these strategies in response to men’s consumption of
404 space, yet these very practices permit men’s consumption of space to go unchecked.

405 Women additionally described what amounted to a series of micro-aggressions on the
406 part of men that could literally crowd or rush them out. One type of micro-aggression was refusal
407 or reluctance to share equipment or space, at times resulting in women abandoning activities or
408 spaces. In a stark example, Paula (age 52), a gym-goer for all of her adult life, recounted in her
409 journal how she felt compelled to relocate when a man in the gym directly obstructed her access
410 to equipment:

411 [...] male moved my weights & workout bench to the side & arranged the area for
412 himself. I approached & stated I was partway thru a circuit—his response was he was on
413 a time limit & his workout was more important than mine could possibly be—to find
414 another area of the gym to do my girl exercises in. Yes—no kidding. Rather than have a
415 huge scene—I moved to a different area. (Feb. 11, 2015)

416 It is noteworthy that this individual feminizes Paula's workout in a pejorative way to
417 delegitimize her right to the equipment. In a second form of micro-aggression, women perceived
418 that men seeking access to equipment approached women prior to approaching men in the same
419 space. This resulted in some women feeling pressured to complete their exercises quickly, as
420 Emily did frequently: "I will have just gotten on to a squat rack or the bench and there'll be other
421 guys on all the other racks or whatever, I'm the only one approached and asked how much longer
422 I have. So there's this pressure to get off." A third form of micro-aggression occurred when men
423 offered unsolicited advice or critique to women, effectively demoting women's status in the
424 gym. Marie, who was a regular in the weight room, explained that

425 [U]sually it's guys who will come up and like say, 'don't do it that way,' so it's more
426 annoying than de-motivating, but it is a little bit like, you know, which I think is the
427 reason why women don't like to go lifting because they're scared that, you know, all the
428 guys are gonna be scrutinizing them and like criticizing their techniques and go and give
429 unsolicited advice.

430 Finally, some women cited sexualized gazes and interactions as intruding upon their workouts
431 and mobilities within the gym. Liz made clear the extent to which this intrusion is normalized in
432 the gym when she described relocating to avoid a man who was looking at her:

433 If I have to go and take, you know, 15 minutes in the change room to just sit and chill out
434 and maybe, you know, ponder around on my phone and just kill time [until he's moved
435 on], yeah it's unfortunate but I think that's kind of the role that women—not the role—
436 but it's just something that we have to deal with. It's like an occupational hazard.
437 Together, these micro-aggressions were a reductive force on women's time and space in the
438 gym.

439

440 *4.4 Breaking gender binaries*

441 A contingent of women, and a handful of men, consciously, and sometimes vigorously, rejected
442 the gendered lines of the gym and configured their practices and mobilities to this end. For some
443 women, breaking binaries involved embracing aspects of both traditional femininity and
444 alternative femininities to express their gendered selves in more complex and nuanced terms.
445 Emily, for example, enthusiastically described how she planned to perform a 315-pound deadlift
446 wearing a tutu as a way to celebrate the multiple dimensions of her femininity and reclaim the
447 derogatory notion "you lift like a girl" with the response, "yes, I do, and I lift 315 pounds'." For
448 other women, breaking gender binaries involved an active political challenge—an attempt to
449 discredit, reject, dissociate from stereotyped ideas of femininity, as Angela (age 32) explained, "I
450 want to move beyond gender—and you know, just be as strong as possible without my gender
451 being a part of it." Later, writing in her journal, Angela noted that she deliberately refrained from
452 engaging in a seemingly feminized activity as a challenge to gender conformity: "Was going to
453 do the elliptical, but hate to use it because of its connotations with 'cardio bunnies', lack of
454 fitness + being seen as a 'woman's' workout machine" (Jan. 25, 2015). A few men spoke of the
455 potential for gender fluidity in the gym and distanced themselves from the dictums of hegemonic

456 masculinity. Tom, for example, explained how he located himself in-between the binaries: "I
457 think if I was way more toward the masculine side, if it's a spectrum, then I would be doing
458 more the man, masculine type activities or exercises in the gym. Likewise, the, the feminine side.
459 I think I'm somewhere in the middle, roughly." For the men who unsubscribed from hegemonic
460 norms, doing so was often less of a political statement, but rather reflected interests, shifting
461 exercise goals, and changing relationships with dominant masculine ideals through the life-
462 course.

463

464 **5. Discussion**

465 Overall, we argue that socio-spatial processes within gym environments help to set the stage for
466 the normalization of gender differences in exercise participation in the gym, and possibly
467 beyond. Collectively, the three processes we identified—embodying gender ideals, policing
468 gender performance, and spatializing gender relations—demonstrate that the gender regime of
469 the gym (re)produces and reinforces wider gender disparities and differences in physical activity.
470 Importantly, the gendering processes we identified are not detectable at the neighborhood level,
471 evidencing the need to unsettle the spatial privilege afforded to obesogenic environments
472 (Andrews et al., 2012; Colls & Evans, 2014). Indeed, without looking *indoors*, geographies of
473 physical activity miss significant gendering processes altogether. This speaks to the importance
474 of continuing to disrupt the "fallacy of enclosure" and venture inside everyday physical activity
475 places to advance equity in health opportunities (Biehler & Simon, 2010).

476 Embodying gender ideals was a key driver dichotomizing the gym participation of
477 women and men, in line with other studies (Brace-Govan, 2004; Dworkin, 2001, 2003; McCabe
478 and James, 2009; Salvatore & Marecek, 2010; Sassatelli, 2010). The fact that participants were

479 quick to imagine conforming to gender norms when asked if they would do anything differently
480 in the gym if they were of a different gender underlines the magnitude of this effect in place.
481 Since 'doing' physical activity in the gym is clearly inseparable from 'doing' gender (Courtenay,
482 2000; Dyck, 2003), our findings suggest that efforts to address gender inequities need to account
483 for this synonymy. Moreover, the materialization of these wider gendered body ideals in the
484 gym's gender regime articulates a power-geometry of inter-scalar social relations (Massey,
485 1994). This connectivity highlights the potential in Biehler and Simon's (2010) proposal that
486 interventions at the indoor level can transcend other scales of impact for health.

487 Gender also operated as a constraint on participation in the gym through the policing of
488 gender performance. The external and internal regulation of gender-norm adherence reinforced
489 men's and women's gym participation expressed as a duality—occupying distinct spaces and
490 equipment in a form of oppositional gender relations. Participants in this study described
491 instances of social sanction, akin to Browne's (2004) concept of genderism, whereby
492 participants' performance of masculinities and femininities was punitively regulated. Genderist
493 processes worked to embed hierarchical gender relations in the gym environment in ways that
494 directly impeded what participants did and where they went. For some, the *potential* of social
495 sanction alone kept them from participating in certain activities, such as Tom who refrained from
496 so-called feminine exercises because he felt it was not permissible as a man. Both women and
497 men restricted the scope of their exercise practices to remain within the bounds of 'acceptable'
498 masculinity and femininity. Femininities, however, were doubly policed in the gym, as women
499 also felt scrutinized for being *too feminine* if their activities aligned with stereotypically
500 feminized practices. This made women's place in the gym even more precarious by narrowing
501 the range of 'acceptable' femininities.

502 Exclusionary processes were further ensconced in a set of spatial practices which, in
503 concert, yielded spatial power to hegemonic masculinity. Both men and women avoided spaces
504 or altered workout practices to avoid encountering hegemonic masculinity, but women
505 additionally performed a series of more deferential practices to further minimize their
506 consumption of space in the gym. Women's diminutive role in the process of spatializing gender
507 relations can be seen as a pre-emptive response to potential genderist sanctions; however, these
508 manoeuvres to avoid encountering hegemonic masculinity had the unfortunate effect of
509 reinforcing its power by forfeiting space. Women were also on the receiving end of micro-
510 aggressions that effectively crowded them out. The additional dimension of spatial disadvantage
511 experienced by women makes sense in light of Connell's theory of gender relations where,
512 although some men are marginalized by hegemonic masculinity, women are always subordinated
513 by patriarchy. Indeed, the way that some women accepted spatial displacement as an
514 "occupational hazard" speaks to the common sense status of these gendered power imbalances
515 within the gym (Browne, 2007).

516 Importantly, a fourth theme—although reflective of a smaller group of participants—
517 demonstrated the agency some women and men enacted in re-drawing gendered lines. Several
518 women in particular engaged their gym practices as a way to consciously contest traditional
519 femininities and express their gender identities on their own terms. While we are critical of the
520 notion that genderist processes, as a source of negative reinforcement, might act as a back-
521 handed impetus to change the gendered bifurcation of physical activity, there is certainly
522 evidence in our research that it is the rejection of these very processes that motivated some
523 individuals to actively (re)negotiate the gendered bounds of their participation. This agency,
524 however, was not without constraints. Recall Emily who, despite engaging in traditionally

525 masculine heavy weightlifting, behaved on the understanding that she would be enacting a form
526 of 'pariah femininity' (Schippers, 2007) threatening the gender order if she asserted herself with
527 regards to equipment sharing. Likewise, Angela refrained from engaging in a feminine
528 stereotyped activity in rejection of gender categories, but in doing so paradoxically imposed
529 limits on her own participation—perhaps even conforming to new and shifting ideals, such as
530 'strong is the new skinny.'¹ These tensions highlight the situated nature of this agency in that
531 while participants consciously pushed back against the gendered structures of the gym, they were
532 not entirely autonomous of them (Gregson & Rose, 2000; Nelson, 1999).

533 This study makes clear that mitigating gender inequities in physical activity is not as
534 simple as women versus men. Men also experienced significant limitations on their gym
535 participation due to the presiding gender regime of the gym. Interventions for gender equity in
536 the gym therefore need to go beyond engaging women to comprehensively contend with the sets
537 of situated gender relations that sustain gender hegemony. This requires thinking further than
538 fitting women into so-called men's spaces or merging men into spaces of hegemonic
539 masculinity. Likewise, gender-specific gyms or women's only training spaces in co-ed gyms are
540 not a sufficient solution for gender equity. Such approaches leave hegemonic gender relations
541 intact rather than transforming the gender relations that come to define those spaces (cf.
542 Salvatore & Merecek, 2010). While women-only environments undoubtedly play a valuable role
543 for some women, they may more widely reinforce gender stereotypes about what activities
544 women, and men, should be doing. Despite our focus on co-ed gyms, a number of women
545 recalled unsatisfactory past women's-only experiences, often emphasizing a lack of equipment,
546 as Hannah (age 32) put it: "I think that's really ridiculous that a woman shouldn't be able to go

¹ We thank an anonymous reviewer for this observation.

547 and do the weight workouts she needs to do at a gym because apparently they've decided that
548 women don't need those weights."

549 We therefore suggest that interventions following from our findings take their cue from
550 gender-transformative approaches to health—adopted with success in fields such as HIV/AIDS
551 and gender-based violence—that seek to reshape health-damaging aspects of gender relations to
552 improve equity and health for women and men (Dworkin, Fleming, & Colvin, 2015; Gupta,
553 2000). It would be crucial for such initiatives to avoid co-opting aspects of masculinities and
554 femininities in ways that reinforce harmful stereotypes, in particular the potential pitfall of
555 framing men as 'bad guys' in the gym (Fleming, Lee, & Dworkin, 2014). This work could
556 involve, for instance, communications campaigns—on-site or on social media—grounded in
557 experiential accounts of the gym that aim to de-hierarchize masculinities and femininities by
558 drawing attention to some of the commonalities and aspects of shared experience articulated in
559 our findings here. Another intervention could be to spatially challenge 'the gendered lines' by
560 interspersing traditionally gendered activities throughout the gym, as suggested by two
561 participants, to "allow men and women to sort of merge a little bit more" (Tom). Back to Biehler
562 and Simon (2010), transformations *indoors* have the potential to transform society-environment
563 relations *outdoors* because "ecologies *in* indoor spaces seldom stay there" (p. 186). Thus, by
564 unsettling the routine embeddedness of gender difference within gyms and other physical activity
565 places, further down the line, there could be scope for shifting how individuals and communities
566 engage in physical activity. Indeed, a gender-transformed gym may be more welcoming to
567 participants who previously disengaged precisely due to these very gender dynamics. A recent
568 systematic review of barriers and facilitators of adhering to exercise referral schemes for inactive
569 individuals found participant perceptions of gym environments as uncomfortable and

570 intimidating to be a significant barrier (Morgan et al., 2016). This highlights the importance of
571 taking the experiential dimensions of physical activity settings into account in physical activity
572 promotion and intervention design.

573 There are four main limitations to this study. Reflective of our research setting, our
574 sample was relatively ethnically homogenous and did not include many participants with diverse
575 sexualities or any with gender-diverse identities. The fact that substantially more women
576 participated in our research than men might also have affected our findings to the extent that a
577 more critical reading of the gym from the perspective of men who react negatively to the
578 gendered nature of the gym is possibly understated. Relatedly, our study focuses on the gender
579 regime of gyms in a Western English-speaking context and localized nuances within other
580 cultural milieus should be considered, particularly to inform tailored gender-transformative
581 interventions. In Japan, for instance, Andreasson and Johansson (2017) found that the culturally-
582 specific body ideal of 'cuteness' was important to understanding gendered use of the gym. Given
583 that exercise class environments have been shown to operate as distinct micro enclaves unto
584 themselves (Crossley, 2004, 2006), gym-goers engaging only in instructor-led group classes (i.e.,
585 not using the individual training (weight/cardio) sections of gyms) were excluded from this
586 study. These limitations only underscore the need for future research that purposefully samples a
587 more diverse population to permit a more intersectional analysis, as well as exploring other
588 physical activity settings, to inform gender-transformative place-based interventions.

589

590 **6. Conclusions**

591 Although gyms are potentially sites for health promotion, they may also be places where
592 gendered inequities in health opportunities emerge and are sustained. Our findings demonstrate

593 that micro-level processes at the scale of the everyday exercise environment work to routinize
594 gender disparities and differences in physical activity. Public health efforts to close the gender
595 gap in physical activity must account for the socio-spatial processes that reproduce, as well as
596 challenge, gender hegemony in everyday physical activity places such as the gym.

597

598 **7. References**

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Figure 1. Drawing by a participant that prompted her to reflect on how her femininity is implicated in the policing of her practices and spatial presence in the gym

