

Disability and the Gym: Experiences, Barriers and Facilitators of Gym Use for Individuals with Physical Disabilities

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1 **Disability and the Gym: Experiences, Barriers and Facilitators of Gym Use for**
2 **Individuals with Physical Disabilities**

3 **Abstract**

4 **Purpose:** Individuals with physical disabilities are among the most inactive population in
5 society, arguably due to a lack of suitable environments to exercise. The gym is a space
6 dedicated to improving physical fitness in a controlled environment with specialized
7 equipment and qualified instructors. The feasibility of using this space to promote health to
8 this population, however, has yet to be established. **Method:** Over an eighteen month period
9 twenty one people with physical disabilities were interviewed regarding their experiences in
10 the gym. Data was collected using semi-structured interviews, transcribed verbatim and
11 subject to thematic analysis. **Results:** Four broad themes were identified (1) experiencing
12 enhanced well-ness (2) perceived conflict between gym values and disability (3) influence of
13 a previous gym identity and (4) experiences of psycho-emotional disablism. **Conclusions:**
14 Participants were perceived to experience a variety of health benefits however they also
15 experienced many barriers such as not aligning to the cultural norms of the gym, limited
16 interpretations of health, oppressive messages from the built environment and negative
17 relational interactions. While there is potential for the gym to be used a place to promote
18 health, more must be done to foster an inclusive atmosphere in this space.

Introduction

It is well documented that having a disability can negatively impact physical, psychological and social health. Physically, as well as pain and trauma from initial injury^[1], individuals can experience secondary health issues such as obesity and heart disease^[2], muscle atrophy^[3] and muscle degeneration^[4]. Psychologically, having a disability can cause many mental health issues^[5] including depression and anxiety^[6]. Socially, instances of isolation^[7] and feelings of abandonment^[8] are also prevalent in this population. Many of these co-morbid deficits however, can be managed through exercise^[1].

Physically, exercise can reduce pain^[9], distribute body fat more evenly alleviating pressure on vital organs^[10] and enhance physical function^[11]. There is also evidence to suggest exercise can assuage negative psychological effects of disability through enhanced perceptions of empowerment^[12], self-confidence, self-belief^[13], positive identity^[14] and subjective and psychological well-being^[15]. Social well-being can also improve through increased social status^[16], reduced isolation^[17] and a reduction in discriminatory behaviors from able-bodied individuals^[18]. Nevertheless, despite this array of knowledge, individuals with disabilities remain the most inactive population in society^[19].

Research has been conducted to identify barriers and facilitators of exercise in the hope of informing exercise promotion. Common barriers included an inaccessible built environment, unsuitable equipment^[20] lack of assistance^[21] and a poor attitude from others^[22]. Facilitators included full access and suitable equipment^[20], knowledgeable staff^[23] and aspirations of improved health and independence^[24]. Despite this knowledge of barriers and facilitators, there is still a marked absence of individuals with disabilities in exercise domains. This could be attributed to research providing a broad overview of barriers and facilitators from different exercise domains rather than a more in-depth investigation. This broad

1 approach does provide researchers with some knowledge regarding exercise and disability
2 but it does not allow for a comprehensive investigation into meanings of exercise,
3 mechanisms of motivations to exercise or how the values of a particular culture may
4 influence understandings of exercise. A more domain specific investigation may allow
5 researchers to gain an enhanced understanding of exercise experiences.

6 An exercise domain which has received little attention, yet could be a suitable space
7 to promote exercise for individuals with disabilities, is the gym. The gym is a space dedicated
8 to the improvement of physical fitness in a controlled environment with specialized
9 equipment, health and safety legislations and qualified instructors^[25]. Culturally, the gym can
10 also be seen as the domain of the young and physically fit^[26]. It is argued that individuals
11 who do not align to the youthful, muscular stereotype therefore, may feel intimidated and
12 unwelcome in this space^[27]. There is, however, no research contextualizing disability in the
13 gym, thus barriers and facilitators are unknown or speculative with no empirical grounding.

14 The feasibility of the gym as a suitable space to exercise for individuals with
15 disabilities has yet to be established. The purpose of this research, therefore, is to investigate
16 the gym as a potential place to promote health for this population. In order to do this, two
17 specific aims were set out; (i) to lay a foundation of knowledge about what it is like to have a
18 disability in the gym and (ii) to identify perceived barriers and facilitators of exercise in this
19 space. From these findings, recommendations for future practice and research could be
20 proposed.

21 **Methods**

22 **Philosophical Assumptions**

1 To reflect the subjective nature of this research, a relativist ontology and a subjectivist
2 epistemology were adopted. A relativist ontology is underpinned by a belief that reality is
3 multiple and subjective^[28]. A subjectivist epistemology is underpinned by the belief that
4 knowledge is constructed through interactions with others and the social, cultural
5 environment^[29]. These ontological and epistemological underpinnings inform an interpretivist
6 paradigm where researchers seek to make meaning from human experience through
7 interactions with participants and within social settings^[30].

8 **Sampling Procedure and Participants**

9 Ethical approval was granted by the University Ethics Committee before data
10 collection commenced and informed consent obtained before interviews were conducted.
11 Participants were recruited using purposeful sampling where individuals with disabilities over
12 the age of eighteen and with gym experience were sought. This type of sampling allowed
13 researchers to collect information rich cases where a great deal could be learned about their
14 experiences^[31].

15 Participants were recruited through the first author attending a program designed to
16 train individuals with disabilities to become gym instructors. At this program, she discussed
17 the purpose of the research with the group and asked if individuals would be interested in
18 taking part. A total of twenty one participants were recruited; thirteen were male and eight
19 female. The ages of participants ranged between 23 and 60 years with an average age of 40.
20 Eighteen individuals had acquired their disabilities and three were born with them. Further
21 demographics can be found in Table 1.

22 *Insert table 1 about here*

23 **Data Collection**

1 Data was collected through interviews. The majority of interviews were conducted
2 face to face, however some novel methods were also implemented; video conferencing and
3 mobile methods.

4 **Semi structured interviews.**

5 Semi-structured interviews allowed participants freedom to discuss stories and
6 experiences most important to them but also gave researchers the opportunity to focus on
7 areas of interest^[28]. This method also gave participants and the first author the opportunity to
8 elaborate and make meaning out of experience, and discuss unexpected phenomena which
9 would not otherwise have been investigated^[29]. An interview guide was crafted before
10 interviews began. Questions included, ‘can you tell me about your experiences in the gym?
11 What would you say are the main reasons for not going to the gym? What are the key reasons
12 that helped you go to the gym?’ Where necessary, elaboration and clarification probes were
13 used to elicit more information and ensure understanding. Probes included ‘could you tell me
14 more about that (gym experience)?’ ‘Can you give me an example?’ ‘How did that make you
15 feel?’ ‘Could you explain that further?’ ‘What do you mean by excluded?’ Interview length
16 ranged from 30 to 200 minutes.

17 **Video conferencing.**

18 Some participants requested that interviews be conducted using a method allowing
19 them to stay at home due to difficulties travelling or low energy. It was in these instances that
20 video conferencing was used. Video conferencing is an immerging method of data collection
21 used increasingly by qualitative researchers^[32]. This method allowed for longer, more in
22 depth interviews as there was little effort committed to travel^[33]. Second, as interviews were
23 conducted in the privacy of the respective homes of parties involved, more sensitive issues

1 could be freely discussed^[34]. Third, there was also a reduced perceived power differential
2 between the researcher and participant as they had the ability to terminate interviews
3 instantaneously if they wished^[35].

4 **Mobile interviews.**

5 A mobile interview is a means of interviewing participants as they move through
6 space(s)^[36]. For this research, participants guided the first author through their day to day
7 routine in the gym. Here, issues could be discussed as they were encountered. This also
8 stimulated participants' memories of past experiences and provided contextually meaningful
9 stories in physical spaces. This method also enhanced the interviewer's understanding and
10 appreciation of participants stories by providing a multi-sensory experience of both seeing
11 and hearing about their stories^[29].

12 **Data Analysis**

13 This research follows an inductive, qualitative design whereby themes were
14 constructed from the data in a bottom-up approach^[37]. As this is an area with no previous
15 research, thematic analysis was selected as it allowed for a comprehensive overview
16 reflecting the experiences of individuals with disabilities in the gym. Thematic analysis is a
17 method used to organize and describe collected data in rich detail by identifying, analyzing
18 and interpreting common themes^[29]. To ensure analysis was conducted rigorously, the six-
19 phase guide of Braun and Clarke (2006)^[38] was followed.

20 Primarily, the first author immersed herself in the data through the conducting and
21 transcribing of interviews. Each participant was assigned a pseudonym to conceal their
22 identity. In phase two, codes were applied to the data highlighting potential areas of interest,
23 generating a list of initial ideas for each participant. A code is a segment of data which

1 appears interesting to the researcher and has the potential to be a theme. It is highlighted
2 through a worded description or a different color to identify what is of interest and why. The
3 third phase was searching for themes. After codes were applied throughout all transcripts a
4 list was crafted for each participant. This list of codes was then sorted and collated into
5 potential themes. Similar codes were placed in the same group and from this a theme name
6 assigned. In the fourth stage, these themes were reviewed to determine if they were too
7 diverse, not sufficiently supported, could combine with a similar group or divided into more
8 specific themes. The fifth phase consisted of naming a theme in a way that explained its data
9 content and also identified if subthemes existed within another theme. The final phase of this
10 analysis was producing the report which will be presented in the following section. Once
11 themes were identified, conceptual and theoretical understandings were applied to provide a
12 more in-depth interpretation of gym experiences.

13 **Results**

14 The results and discussion section will be combined allowing data to be immediately
15 conceptualized and theorized. Through thematic analysis, four key themes regarding gym
16 experiences were identified; (i) experiencing enhanced wellness, (ii) perceived conflict
17 between gym values and disability (iii) influence of a previous gym identity and (iv)
18 experiences of psycho-emotional disablism.

19 **Experiencing Enhanced Wellness**

20 Participants perceived the gym as a place they could improve their overall wellness
21 and quality of life. They discussed three specific ways this was done: physical improvement,
22 enhanced social life and psychological respite.

23 **Physical improvement**

1 All participants stated their motivation to initiate gym behavior was the belief that it
2 would result in physical improvement. This related to improved function, reduced pain and
3 improved fitness that enhanced independence:

4 *I knew from the start (of recovery) how important exercise was to improve...I started*
5 *to build my level of fitness and my pain was better... After that I thought 'ok fair*
6 *enough, this (exercise) is the way forward' and that was the key point where I went*
7 *back to the gym...I just rebadged gym fitness because that's what kept me*
8 *strong...when I do go to the gym I can do my shopping on my own really easily and*
9 *feel less vulnerable...I can build up to a level of fitness and performance that my GP*
10 *couldn't give me an assurance on so that gave me a physical baselines of real, real*
11 *positiveness for the future. (Julie, SCI, 60).*

12 The desire to physically improve has been highlighted in previous research^[21]. This
13 improvement, however, relates to reducing pain and increasing independence, function and
14 overall quality of life rather than improvement of an aesthetic nature. To interpret this finding
15 further, specifically why participants hold the belief that exercise has healing benefits,
16 narrative theory can be drawn upon.

17 Narrative is a way of understanding human lives within a social world through
18 investigating which stories an individual draws upon to make sense of their experience^[39]. By
19 analyzing which narratives an individual chooses, researchers can gain a greater understanding
20 of the lived experience of that individual^[40]. Put into context, participants' belief that exercise
21 would improve physical health could relate to a narrative of 'exercise is medicine' which has
22 the plot of "I experienced an ailment, then I engaged in exercise, then the ailment is eased or
23 eradicated"^[41]. All participants seemed to be aware of this narrative. This could be attributed
24 to individuals' experiences in hospital and rehabilitation centers. Here, the exercise is

1 medicine narrative is told continually by doctors, nurses and specialists to encouraged
2 patients to partake in active rehabilitation to regain as much physical function as possible^[24].

3 **Enhanced social life**

4 Participants saw the gym as a social space where they could make new friends and
5 interact with people; “it’s (the gym) social because people do speak to you and say hello and
6 you just feel part of something rather than being secluded again” (Susan, SCI, 34). Many of
7 these social experiences in the gym then progressed to outside the gym walls:

8 *We’ll (friends made in the gym) meet up and somebody will say “I’ll see you next*
9 *week then?” and I’ll then think ‘ok.’ Then I’ll think (next gym trip) ‘oh so and so’s*
10 *going to be there and so and so’s going to be there.’ It sort of makes me think ‘I don’t*
11 *want to let them down so I’ll go.’ It builds up this peer support...It’s that rapport I*
12 *look forward to and it’s just very nice to get other people to recognize that you can*
13 *actually make a really nice social life, and you feel great afterward and you can*
14 *actually help post recovery. I’ve made a collection of friends and even after the*
15 *healthy eating we all go out for a curry! (Tara, SCI, 32)*

16 The importance of this finding must be contextualized within the wider social
17 experiences of participants. This perception of belonging and acceptance is very different
18 from general social experiences where participants discussed feeling of being ostracized
19 through negative interactions; “I didn’t go out for months because I could not stand the stares
20 and being continually ignored...you just feel completely worthless and abandoned” (Arthur,
21 transverse myelitis, 32). Society as a whole may see disability as a personal tragedy^[42]
22 resulting in individuals with disabilities feeling isolated, lacking self-worth and othered^[43].
23 Within the gym, however, positive social interactions with others could counter this negative

1 experience through fostering an inclusive environment resulting in individuals feeling they
2 belong to a community and enhancing perceptions of social acceptance and self-worth.

3 **Psychological respite**

4 Participants also discussed how exercising in the gym gave them a sense of
5 psychological respite from the stresses associated with having a disability. These stresses
6 included the presence of a disability itself, medications and claiming benefits:

7 *It's (working in the gym) freeing I guess, peaceful... You just forget everything that's*
8 *wrong, forget the benefits stress, forget all the medication you're on, forget sometimes*
9 *that you have a disability because you are doing something. I can't tell you the*
10 *psychological boost it gives, it's that hour, hour and a half break from the stresses of*
11 *life that gives you new energy to face the challenges ahead. (Carl, chronic head and*
12 *shoulder injuries, 56)*

13 The finding of respite through exercise has also been discussed by Caddick, Smith
14 and Phoenix (2015)^[44] who found retired veterans suffering from post-traumatic stress
15 disorder fully embodied a sense of relief from their suffering through surfing. In this study, a
16 similar conclusion can be made. Having a disability is more than a physical impairment and
17 there are many personal, social and legal anxieties which may be experienced contributing to
18 poor mental health^[51]. Exercising in the gym however, provided a sense of release from these
19 stresses and, for some, left them feeling energized to tackle awaiting challenges.

20 **Perceived Conflict Between Gym Values and Disability**

21 The previous theme highlighted the many benefits individuals experienced through
22 gym use, however for many the gym environment itself was a barrier. Not aligning to cultural
23 values of the gym and limited interpretations of health inhibited gym use, however these

1 barriers were tempered by the presence of other clients with disabilities who acted as
2 aspirational figures.

3 **Not aligning to cultural gym values**

4 Participants discussed how a particular physical image (strong, muscular and
5 aesthetically pleasing) was valued in the gym. Not looking like this image resulted in feeling
6 othered:

7 *Not all gyms are the same but...in most I've been to if you're not what I call a*
8 *meathead then you just do not belong and you are not wanted there and you are made*
9 *to feel not wanted...if you don't have an excessive amount of testosterone, are the*
10 *perfect physical specimen or grunting your way lifting weights then you do not*
11 *belong... We're (individuals with disabilities) not necessarily the image they (gyms)*
12 *want to portray. I think that's the problem. Image is an old hat but that's still what*
13 *they want to sell themselves on. (Susan, SCI, 35)*

14 The valuing of particular traits in the gym over others can be interpreted through the
15 concept of ableism. Ableism is “a network of beliefs, processes and practices that produces a
16 particular kind of self and body (the corporeal standard) that is projected as the perfect,
17 species-typical and therefore essential and fully human. Disability is cast as a diminished
18 state of being human”^[45]. Individuals are seen as less worthy if they do not conform to strict
19 corporeal standards and values set by an institution^[46]. In the gym, the rigidity of values such
20 as musculature and physical aesthetic can become culturally embedded resulting in an
21 unwavering understanding of what constitutes health. Individuals who perceive health a
22 different way e.g. physical function may feel invalidated and marginalized as an
23 understanding of their needs is left wanting.

1 **Limited interpretations of health**

2 Linked to the previous sub theme, participants noted the values of the gym were
3 embedded within the gym's sociocultural fabric and gave very few alternative interpretations
4 of health. For example, slogans on gym walls such as 'no pain, no gain' promoted the
5 experience of pain as a positive, necessary step to achieving health. These discourses left
6 little room for the possibility of an alternate experience resulting in perceptions of
7 invalidation when participants tried to share their stories:

8 *The little boys just tell you to pump till it hurts. For someone who's got fibromyalgia*
9 *or anyone over 40, any age, if your body is telling you something is hurting you,*
10 *please stop!... When I said to him my knees hurts he said do another 20. And I looked*
11 *at him and I wanted to call him the b word so I did the other 20 and it killed me. I got*
12 *off the leg press, I got off it, before I knew it I was flat on my bum looking at the*
13 *ceiling. My knee gave way. Know what he said to me? "When you've got up, on the*
14 *running machine."* (Brenda, fibromyalgia and ME, 57)

15 Frank (2006)^[47] stated there is often incongruity between what individuals with a
16 disability are experiencing and the institutionally legitimated stories that are told about their
17 experience. Participants discussed a similar phenomenon when trying to share their stories of
18 exercise which went against the dominant discourses in the gym. The pain experienced by
19 individuals with disabilities was seen as a warning that they were causing harm to their body;
20 however instructors were perceived to understand this pain to be a positive, necessary step to
21 earn the body admired in gym culture^[48]. These conflicting understandings of exercise
22 illustrate there is a limited availability of interpretations of health for those who do not fit the
23 typical model presented in dominant discourses^[49].

24 **Clients with a disability as aspirational role models**

1 While the previous two subthemes discussed issues regarding a lack of alternative
2 understandings of health in the gym, the presence of other individuals with disabilities in this
3 space provided aspirational figures they could relate to:

4 *I did come across a guy with a disability using the gym...and that reinforced for me*
5 *that it (going to the gym) was ok regardless because I enjoyed it. I think seeing*
6 *someone else with a disability made me think 'yeah he's doing it and so I can do it' ...I*
7 *talked to him a lot and we developed a bond and friendship. It was because of seeing*
8 *someone else who was working with an impairment in the gym and he encouraged me*
9 *saying "if it's something you want to do, don't just discard it and think you can't do it.*
10 *Pursue it." So that's what I did. (Jerzy, cerebral palsy, 30)*

11 Frank (2006)^[47] stated people need to “hear their own voices and, by knowing others’
12 stories, become empowered to tell their own” (p. 422). In other words, individuals with
13 disabilities may feel more supported and accepted in the gym if there is someone they can
14 relate to. For many, this came in the shape of another individual with a disability who acted
15 as an aspirational figure strengthening the belief that an individual with a disability can
16 exercise in the gym and do so on their own terms. The presence of an individual with a
17 disability in the gym may provide additional resources and interpretations of health which
18 others can draw upon, reduce perceptions of otherness and promote the gym as an inclusive
19 space to exercise.

20 **Influences of A Previous Gym User Identity**

21 Many participants had been a gym user before acquiring their disabilities. The
22 influence of this previous identity, however, was markedly different for women and men. For
23 women, this acted as a facilitator to reinitiate gym use as they sought to reclaim a sense of
24 self. For men, they negatively compared their current body to their past body.

1 **Reclaiming a sense of self**

2 A previous identity as a gym user was a key reason for initiating gym use for women.
3 They saw reengaging in a particular activity they had done before their injury as a way they
4 could reclaim a sense of self:

5 *I would get into the bathroom and I would just cry my heart out. I would sob and sob*
6 *and sob and just think I can't kill myself. I wanted to...I was in hospital and I was like,*
7 *if there's one thing I can get back, if there's one thing from my previous life I can get*
8 *back again, I can get back to exercise...I thought this is something I can get back to*
9 *and I love and I know that I love. I was at that point of grieving. I was grieving my*
10 *lost identity and exercise was a huge part of that. (Kathleen, SCI, 32)*

11 Acquiring a disability can result in a fracturing of identity leaving the individual
12 lacking a sense of self^[50]. Giddens (2001)^[51] stated that if an identity can be sustained
13 through life, this enables individuals to maintain a sense of self. Put in the context of this
14 study, if an individual is able to sustain an identity of a gym user before and after injury their
15 sense of self can be reclaimed after a potential loss of identity. The women in this study
16 identified with this as they felt exercising in the gym was something they could 'get back'
17 from their previous life. Arguably, this continuity provided a sense of 'normality' despite
18 having a 'new' identity as an individual with a disability. Indeed, Shakespeare (1996)^[52]
19 noted that newly disabled people often try to align to their old self in order to feel as
20 'ordinary' as possibly. Watson (2002)^[53] concurred stating that some people with a disability
21 redefine their identity not by including bodily traits but through a construction of what, to
22 them, normalcy is. In this case, it was normal to be active and go to the gym.

23 **Negative comparisons with a past identity**

1 While a previous identity as a gym user enabled women to reclaim a sense of self, for
2 men this past identity acted as a barrier to their engagement in the gym as they felt ashamed
3 or embarrassed at the body they now possessed compared to the body they had before injury:

4 *I just felt intimidated going into the gym because I was big and now over the years*
5 *I've put on weight and I feel ashamed or embarrassed because of who I am now. I*
6 *used to run for miles with a backpack on! So that put me off...you look at it totally the*
7 *wrong angle. You think they're (other gym users) looking at you or judging you but*
8 *they're not. You know you have an issue or know you have a problem or you've*
9 *suffered from putting weight on because of your problem. (Frank, chronic leg injury,*
10 38)

11 While previous research investigating the intersection of gender and disability has
12 concluded women with a disability experienced a 'double handicap'^[54] as men were given the
13 opportunity to embody masculine practices (such as lifting weights)^[55], in this study the
14 opposite was the case; the intersection of *masculinity* and disability was the 'double handicap.'
15 Men were continually comparing their past body to their current disabled body. This
16 comparison lead to feelings of embarrassment, disappointment and shame as their body no
17 longer looked or functioned in a way they felt it should, an essence of what Frank (1996)^[56]
18 described as a 'dys-appeared' body. This dys-appeared body may have impacted the men in
19 this study rather than the women as, before injury, they had fully embodied the masculine,
20 muscular values of the gym. As these values became embodied, returning to the gym after
21 injury was problematic as they were no longer able to fully identify and achieve what they
22 believed a man in the gym should be.

23 **Experiences of Psycho-emotional Disablism**

1 Participants discussed a key barrier to gym use was through experiencing oppressive
2 practices from both the physical structure of the gym and interactions with others in the gym.

3 **Disabling messages from physical environment**

4 Participants discussed the difficulties they had in managing the structural barriers of
5 the gym. This included a lack of access into and within the building, and unsuitable,
6 inaccessible equipment; “if you can’t provide physical access it’s pretty pointless going
7 further than that... there’s a lot of machines I can’t use because I can’t get my chair in or I
8 just can’t physically do it” (Aadi, polio, 33). Although previous literature has highlighted
9 access as a key barrier to exercise^[20] these studies have not delved deeper into how these
10 experiences can compound psycho-emotional well-being, a defining experience of
11 participants:

12 *At the end of the day, if they're (gyms) meeting legal requirements they're doing more*
13 *than enough and they're not gonna get sued and some care so little that they're*
14 *willing to take the chance and still not make it accessible. You will get that in a lot of*
15 *places, a hell of a lot. Even though you have the law that states they have, to they still*
16 *don't... The access only relates to the frontage, getting in and out. How is that*
17 *inclusive if you don't provide a toilet for someone? How can you feel anything but*
18 *you're not wanted? Your money isn't as valuable as the next persons. (Kathleen, SCI,*
19 *35).*

20 By drawing on disability theory, the experiences described above can be interpreted
21 using the social relational model proposed by Thomas (1999)^[57] and the concept of disablism.
22 Disablism is “a form of social oppression involving the social imposition of restrictions of
23 activity on people with impairments and the socially engendered undermining of their
24 psycho-emotional well-being” (p.73). Disablism arises in two forms; indirect psycho-

1 emotional disablism relating to the impact of exclusory messages through encounters with
2 structural barriers and direct psycho-emotional disablism pertaining to negative interactions
3 an individual with a disability has with other people or themselves^[58].

4 The experience of structural disablism described above is an example of indirect
5 psycho-emotional disablism. This experience can evoke emotional responses such as anger,
6 perception of a lack of self-worth and hurt at being excluded^[43]. These physical barriers act as
7 'landscapes of exclusion' sending individuals with disabilities the message "you are out of
8 place, you are different"^[59] which can have a detrimental effect on psycho-emotional well-
9 being as individuals with disabilities feel more othered, isolated, and lacking self-worth^[60].
10 Morris (2014)^[61] concurred stating the experience of being excluded from physical
11 environments reminds individuals with disability that they are different and can leave them
12 with a feeling of not belonging in the places where non-disabled people spend their lives.

13 **Disabling interactions within the gym environment**

14 Participants also discussed experiences of direct psycho-emotional disablism in their
15 interactions with instructors in the gym which made them feel unwelcome:

16 *I went in as a guide to find out what the prices were and have a look round to see who*
17 *was there. I can actually remember...the look on the face of the receptionist like*
18 *'Christ!' and one of the membership guys came round...I didn't go to the gym that day,*
19 *I went back the next say at the crack of dawn 6 o'clock...you can kind of, in the gym*
20 *you can feel the eyes on the back of your head; 'what's fatty doing in the gym?'* (Terry,
21 visual impairment, 35)

22 Direct psycho-emotional disablism occurs at the point a stranger reacts to the person
23 with a disability and in the words and deeds that exclude or invalidate^[58]. The experience of

1 being stared at by others is an action which invalidates an individual based on public
2 perceptions of normality, beauty and perfection^[62]. Hargreaves (2000)^[63] developed this
3 further stating people with disabilities “are looked upon, identified, judged and represented
4 primarily through their bodies, which are perceived in popular consciousness to be imperfect,
5 incomplete and inadequate” (p.185). Effectively, disabled bodies in the gym go completely
6 against the aesthetic values the gym aligns to. A failure to match the culturally ‘normal’ body
7 can result in perceptions of being stigmatized and judged^[64]. This finding illustrates how and
8 why an individual with a disability may perceive the gym as unsuitable for them to exercise,
9 despite the specialized equipment and knowledgeable instructors.

10 **Discussion**

11 This is the first study to contextualize disability in the gym and has provided
12 important insights into the experiences of individuals in this space. From these findings,
13 multiple recommendations for future practice can be made to improve the exercise experience
14 for this population. First, although a lack of access is not an original finding, the psycho-
15 emotional impact of this social barrier has not been given due attention. Practitioners and
16 activists must be cognizant of the psycho-emotional distress which may be experienced in
17 conjunction with structural barriers. It is more than a mere inability to enter an establishment
18 or use certain pieces of equipment; these barriers are messengers of oppression which tell
19 individuals with disabilities that they are not welcome or wanted in this space. This can be
20 detrimental to the recipients’ self-esteem, sense of self-worth and creates a more cemented
21 perception that an individual does not ‘fit in’. Moreover, those in a position of responsibility
22 in reinforcing access requirements (e.g. managers) must be advocates of full access to leisure
23 facilities and committed to implementing these adaptations.

1 Second, instructors were perceived as paramount to creating a positive gym
2 experience. These people are the face of the gym, holders of knowledge and represent the
3 gym at the experiential level. Issues which were discussed regarding poor experiences with
4 instructors were a lack of understanding of disability and an invalidation of the corporeal
5 experience of the clients. Instructors therefore need a greater understanding and appreciation
6 of disability and what it is like being disabled in a gym. This can be done through education,
7 specifically through the level 3 disability and the gym qualification. This qualification
8 teaches gym instructors about disability and how to treat and adapt exercise to suit various
9 needs. With this knowledge and experience, instructors may feel more comfortable and
10 confident working with someone with a disability.

11 Third, relating to the above recommendation, participants felt they were other in the
12 gym as they did not align to cultural values or dominant institutional discourses. To address
13 this, having someone able to bridge the gap between disability and the gym may be a viable
14 means to enhance understandings of disability and temper a potentially intimidating cultural
15 image. Indeed, the presence of individuals with a disability in the gym was perceived to make
16 the gym environment more accessible by providing aspirational figures who were relatable.
17 Future research should investigate whether having a fitness instructor who has a disability
18 her/himself could a) reduce the perception of this population feeling othered in the gym b) act
19 as an aspirational role model for individuals and c) be a support for able bodied instructors
20 who feel apprehensive working with clients with a disability.

21 Fourth, having a previous identity as a gym goer had very different ramifications for
22 men and women. Men found it difficult to accept a new body and identity as a gym user with
23 a disability due to comparisons with a past self while women perceived a rebuilding of their
24 sense of self. Taking this finding forward, women who are having difficulty processing their
25 new identity could be encouraged by medical personnel to reclaim a part of themselves by

1 exercising, going to the gym or participating in an activity they enjoyed before their injury.
2 For men, as they negatively contrasted to their past self, a group exercise program with other
3 men with disabilities, and potentially run by an instructor with a disability, may create a
4 system of support and encourage them to positively identify with a role model who has had a
5 similar experience. This theme may have arisen due to the majority of participants having an
6 acquired disability so they had gym experience as an able bodied individual.

7 More research is required to better understand the lived experience of individuals with
8 disabilities in the gym and lay a solid foundation of knowledge for future research and
9 interventions to build on. The findings in this study may have been influenced by the number
10 of individuals with acquired disabilities; future research should investigate the experiences of
11 individuals with a congenital disability to see if their experiences are markedly different from
12 those who have acquired their disabilities. Research must also be conducted to highlight ways
13 exercising in the gym can be improved. For example, applying narrative theory such as
14 Frank's (2006)^[47] ideas of health consciousness or McAdams (2006)^[65] cultural menu may
15 provide important insights into the narrative environment of the gym and the narratives (or
16 lack of narratives) available for this population to draw upon. Alternatively, applying social
17 comparison theory (SCT) can be used to emphasize the importance of the instructor/ client
18 relationship and the impact this has on sustaining exercise behavior. Also, while the findings
19 of this study are contextualized in the gym, future research should consider how the results
20 and experiences of participants in this study could be applied in a broader view concerning
21 participation of people with disabilities in society, particularly with regards to psycho-
22 emotional disablism and aspirational figures.

23 While there are benefits to exercising in the gym there is an issue regarding gym
24 culture and understandings of health. If the gym can provide a more inclusive atmosphere

1 with alternative interpretations of health made available, the gym can be promoted as a
2 suitable space for individuals to engage in health enhancing behaviors.

3 **Declaration of Interest**

4 The authors report no declarations of interest.

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References

1. Gorgey AS. Exercise awareness and barriers after spinal cord injury. *World J of Orthop* 2014; 5: 158-162.
2. Rimmer JH, Marques AC. Physical activity for people with disabilities. *The Lancet* 2012; 380: 193-195.
3. Rimmer JH. Health promotion for people with disabilities: The emerging paradigm shift from disability prevention to prevention of secondary conditions. *Phys Ther* 1999; 79: 495–502.
4. Stensrud S, Risberg MA, Roos EM.. Effect of exercise therapy compared with arthroscopic surgery on knee muscle strength and functional performance in middle-aged patients with degenerative meniscus tears: A 3-month follow-up of a randomized controlled trial. *Am J Phys Med Rehab* 2015; 94: 460–73.
5. Tate DG, Forchheimer M, Bombardier CH, Heinemann AW, Neumann HD, Fann JR. Differences in quality of life outcomes among depressed spinal cord injury trial participants. *Arch Phys Med Rehab* 2015; 96: 340–348.
6. Craig A, Tran Y, Middleton J. (2009). Psychological morbidity and spinal cord injury: A systematic review. *Spinal Cord* 2009; 47: 108-114.
7. Geyh S, Nick E, Stirnimann D, Ehrat S, Muller R, Michel F. Biopsychosocial outcomes in individuals with and without spinal cord injury: A Swiss comparative study. *Spinal Cord*,2012; 50: 614–622.

- 1 8. Campbell J, Oliver M. Disability politics: Understanding our past, changing our future.
2 New York: Routledge; 2013.
- 3 9. Norrbrink C, Lindberg T, Wahman K, Bjerkefors A. Effects of an exercise programme
4 on musculoskeletal and neuropathic pain after spinal cord injury—results from a seated
5 double-poling ergometer study. *Spinal Cord* 2012; 50: 457-461.
- 6 10. D’Oliveira GLC, Figueiredo FA, Passos MCF, Chain A, Bezerra FF, Koury JC. Physical
7 exercise is associated with better fat mass distribution and lower insulin resistance in
8 spinal cord injured individuals. *J of Spinal Cord Med* 2014; 37: 79-84.
- 9 11. Martin Ginis KA, Jörgensen S, Stapleton J. Exercise and sport for persons with spinal
10 cord injury. *PM&R*, 2012; 4: 894-900.
- 11 12. Blinde EM, Taub DE. Personal empowerment through sport and physical fitness activity:
12 From male college students with physical and sensory disabilities. *J Sport Behav* 1999;
13 22: 181-202.
- 14 13. Graham R, Kremer J, Wheeler G. Physical exercise and psychological well-being among
15 people with chronic illness and disability: A grounded approach. *J Health Psych* 2008; 13:
16 447-458.
- 17 14. Kay T, Dudfield O, Kay C. The Commonwealth guide to advancing development
18 through sport. London: Commonwealth Securitat; 2010.
- 19 15. Williams TL, Papathomas A, Smith B. Narratives of activity-based rehabilitation for
20 people with spinal cord injury. 5th International State of the Art Conference held at
21 Rehabilitation: Mobility, Exercise and Sports; 2012 Apr 23-25; Groningen, Netherlands.
- 22 16. Arbour KP, Latimer AE, Martin Ginis KA, Jung ME. Moving beyond stigma: The
23 impression formation benefits of exercise for individuals with a physical disability.
24 *Adapt Phys Act Quart* 2007; 24: 144-159.

- 1 17. Sporner ML, Fitzgerald SG, Dicianno BE, Collins S, Teodoreski PF, Pasquina PF,
2 Cooper RA. Psychosocial impact of participation in the National Veterans Wheelchair
3 Games and Winter sports clinic. *Rehab Pract* 2009; 31: 410-418.
- 4 18. Tyrell A, Hetz SP, Barg C, Latimer AE. Using exercise for the stigma management of
5 individuals with on set-controllable and onset- uncontrollable spinal cord injury. *Rehab*
6 *Psych* 2010; 55: 383-90.
- 7 19. Carroll DD, Courtney-Long, EA, Stevens AC, Sloan ML, Lullo C, Visser SN et al. Vital
8 signs: Disability and physical activity — United States, 2009–2012. *MMWR* 2014; 63:
9 407-413.
- 10 20. Rimmer JH, Riley B, Wang E, Rauworth A, Jurkowski J. Physical activity participation
11 among persons with disabilities: Barriers and facilitators. *Am J Prev Med* 2004; 26: 419-
12 425.
- 13 21. Kehn M, Kroll T. Staying physically active after spinal cord injury: A qualitative
14 exploration of barriers and facilitators to exercise participation. *BMC Pub Health* 2009; 9:
15 168-179.
- 16 22. Rolfe DE, Yoshida K, Renwick R, Bailey C. Negotiating participation: How women
17 living with disabilities address barriers to exercise. *Health Care Women Int* 2009; 30:
18 743-766.
- 19 23. Scelza WM, Kalpakjian CZ, Zemper ED, Tate DG. Perceived barriers to exercise in
20 people with spinal cord injury. *Am J Phys Med Rehab*, 2005; 84: 576-583.
- 21 24. Williams TL, Smith B, Papatomas A. The barriers, benefits and facilitators of leisure
22 time physical activity among people with spinal cord injury: A meta-synthesis of
23 qualitative findings. *Health Psychol Review* 2014; 8: 404-425.
- 24 25. Hedblom C. ‘The body is made to move’: Gym and fitness culture in Sweden.
25 (Unpublished doctoral dissertation). Stockholm University, Stockholm, Sweden; 2009.

- 1 Available from [http://www.diva-](http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A218786&dswid=9511)
- 2 [portal.org/smash/record.jsf?pid=diva2%3A218786&dswid=9511](http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A218786&dswid=9511)
- 3 26. Sassatelli R. *Fitness culture: gyms and the commercialisation of discipline and fun.*
- 4 Basingstoke: Palgrave Macmillan; 2010.
- 5 27. Johansson T. Gendered spaces: The gym culture and the construction of gender. *YOUNG*
- 6 1996; 4: 32-47.
- 7 28. Denzin NK, Lincoln YS. *The SAGE handbook of qualitative research.* Thousand Oaks,
- 8 California: Sage; 2011.
- 9 29. Sparkes AC, Smith B. *Qualitative research methods in sport, exercise and health: From*
- 10 *process to product.* London: Routledge; 2013.
- 11 30. Collins H. *Creative research: the theory and practice of research for the creative*
- 12 *industries.* London, UK: Ava Publishing; 2010
- 13 31. Patton MQ. *Qualitative research and evaluation methods.* Thousand Oaks, CA: Sage;
- 14 2002
- 15 32. Hanna P. Using Internet technologies (such as Skype) as a research medium: A research
- 16 note. *Qual Res* 2012; 12: 239–242.
- 17 33. Janghorban R, Roudsari R, Taghipour A. Skype interviewing: The new generation of
- 18 online synchronous interview in qualitative research. *Int J Qual Studies Health Well-*
- 19 *being* 2014; 9: DOI: 10.3402/qhw.v9.24152
- 20 34. Madge C, O'Connor H. Online methods in geography educational research. *J Geog*
- 21 *Higher Educ* 2004; 28: 143-152.
- 22 35. Bertrand C, Bourdeau L. Research interviews by Skype: A new data collection method.
- 23 *Proceedings of the 9th European conference on research methodology for business and*
- 24 *management studies* Madrid, Spain: IE Business School; 2012.
- 25 36. Buscher M, Urry J, Witchger K. *Mobile methods.* Abingdon: Routledge; 2010.

- 1 37. Creswell JW. *Qualitative inquiry and research design: Choosing among five approaches*.
2 Thousand Oaks, California: Sage; 2012.
- 3 38. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psych* 2006; 3: 77-
4 101.
- 5 39. Frank, A. W. *Letting stories breathe: A socio-narratology*. Chicago: University of
6 Chicago Press; 2010.
- 7 40. Smith B, Sparkes AC. Narrative and its potential contribution to disability studies.
8 *Disabil Soc* 2008; 23: 17-28.
- 9 41. Papathomas A, Williams TL, Smith B. Understanding physical activity participation in
10 spinal cord injured populations: Three narrative types for consideration. *Int J Qual*
11 *Studies Health Well-being* 2015; 10: DOI: 10.3402/qhw.v10.27295
- 12 42. Shakespeare T. Cultural representation of disabled people: dustbins for disavowal?
13 *Disabil Soc* 1994; 9: 283-299.
- 14 43. Reeve D. Psycho-emotional disablism and internalised oppression. In: Swain J, French S,
15 Barnes C, Thomas C editors. *Disabling barriers – enabling environments*. London: Sage;
16 2014. p 92-98.
- 17 44. Caddick N, Smith B, Phoenix C. The effects of surfing and the natural environment on
18 the well-being of combat veterans. *Qual Health Res* 2015; 25:76-86.
- 19 45. Campbell F. Inciting legal fictions: Disability’s date with ontology and the ableist body
20 of the law. *Griffith Law Review*, 2001; 10: 42–62.
- 21 46. Loja E, Costa ME, Hughes B, Menezes I. Disability, embodiment and ableism: Stories of
22 resistance. *Disabil Soc* 2013; 28: 190-203.
- 23 47. Frank AW. Health stories as connectors and subjectifiers. *Health*,2006; 10: 421-440.
- 24 48. Andreasson J. ‘Shut up and squat!’ Learning body knowledge within the gym. *Ethnog*
25 *Educ* 2014; 9: 1-15.

- 1 49. Rossing H, Ronglan LT, Scott S. 'I just want to be me when I am exercising': Adrianna's
2 construction of a vulnerable exercise identity. *Sport Educ Soc* 2014; (ahead-of-print): 1-
3 17.
- 4 50. Dziura J. Psychological adaptation and identity change after the acquisition of a physical
5 disability in adulthood. A critical analysis of an autobiography. *Gallaudet Chron Psychol*,
6 2015; 1: 31-42.
- 7 51. Giddens A. *Modernity and self-identity: Self and society in the late modern age*.
8 Stamford: Stanford University Press; 1991.
- 9 52. Shakespeare T. Disability, identity and difference. In: Barnes G, Mercer G editors
10 *Exploring the divide: Illness and disability*. Leeds: Disability Press; 1996. p 94-113.
- 11 53. Watson N. 'Well, I know this is going to sound very strange to you, but I do not see
12 myself as a disabled person. *Disabil Soc* 2002; 17: 509-527.
- 13 54. Deegan MJ, Brooks NA. *Women and disability: The double handicap*. New Brunswick,
14 NJ: Transaction Books; 1985.
- 15 55. Blinde EM, McCallister SG. Women, disability, and sport and physical fitness activity:
16 The intersection of gender and disability dynamics. *Res Quart Ex Sport* 1999; 70: 303-
17 312.
- 18 56. Frank AW. From dysappearance to hyperappearance: Sliding boundaries of illness and
19 bodies. *Theory Psychol* 1996; 6: 733-760.
- 20 57. Thomas C. *Female Forms: Experiencing and understanding disability*. Buckingham:
21 Open University Press; 1999.
- 22 58. Reeve D. Psycho-emotional disablism: The missing link? In: Watson N, Roulstone A,
23 Thomas C editors. *Routledge handbook of disability studies*. London: Routledge; 2012. p
24 78-92.

- 1 59. Kitchin R. 'Out of place', 'knowing one's place': Space, power and the exclusion of
2 disabled people. *Disabil Soc* 1998; 13: 343-356.
- 3 60. Reeve D. Towards a psychology of disability: The emotional effects of living in a
4 disabling society. In: Goodley D, Lathorn, R editors. *Disability and Psychology: Critical*
5 *Introductions and Reflections*. London: Palgrave; 2006. p 94-107.
- 6 61. Morris J. *Pride against prejudice: Transforming attitudes to disability*. London, UK: The
7 *Womans Press Ltd*; 2014.
- 8 62. Hughes B. The constitution of impairment: modernity and the aesthetic of oppression.
9 *Disabil Soc* 1999; 14: 155-172.
- 10 63. Hargreaves J. *Heroines of sport: The politics of difference and identity*. London, UK:
11 *Routledge*; 2000.
- 12 64. Garland-Thomson R. *Staring: How we look*. Oxford: *Oxford University Press*; 2009.
- 13 65. McAdams DP. The problem of narrative coherence. *J Constructiv Psychol* 2006; 19:
14 109-125.