



Perspectives and Experiences on Engaging in Physical Activity for Adults with Intellectual Disabilities



Brianna J Miller* and **Lauren Berlingo**

Department of Special Education, Florida Atlantic University, USA

Submission: April 30, 2023; **Published:** May 26, 2023

***Corresponding author:** Brianna J Miller, Department of Special Education, Florida Atlantic University, Boca Raton, FL 33431, USA, Email: bjo-sep28@fau.edu

Abstract

Physical activity [PA] benefits all individuals, especially those with intellectual disabilities [ID]. This study explores the lived perspectives and experiences of PA for individuals with ID. Two focus groups (n = 8; n = 12) were conducted with participants enrolled in a postsecondary program at an institution of higher education [IHE] postsecondary education. The focus group was conducted on Zoom. Audio recordings were transcribed using NVivo 12, a qualitative software for themes and subthemes. Three main themes emerged: motivation, self-efficacy, and fitness considerations. Several subthemes within each theme emerged to support the main themes. Application of health education and opportunities to engage in physical activities [PAs], education of PA facility capacities to assist all adults, and community health-related supports may improve the retention of participating in PAs for all.

Keywords: Physical activity; Health outcomes; Adults with intellectual disabilities

Physical activity

According to the World Health Organization [1,2], physical activity [PA] is defined as bodily movements that require energy exertion. PA is a quality-of-life component that can increase health benefits and decrease health-related risks. It is essential for cardiovascular fitness, endurance, bone health, and psychological well-being [3]. Regular participation in PA is encouraged for all individuals due to the potential reduction of chronic diseases, which used to be associated with older individuals but are now more frequently seen in younger adults [4,5]. Throughout one's childhood and adult years, physical health education is necessary for understanding the functions of the body, expanding connections between mind and body, and understanding the role PA plays in overall health [6]. Adequate physical health education can allow individuals with opportunities to explore various fitness levels and personal preferences when choosing the type of PA [6,7]. Additionally, physical health education provides children with the prerequisite knowledge for application, leading to a higher likelihood of shaping, maintaining, and embodying PA in their everyday lives [7].

Intellectual Disability

Within the adult population, adults with intellectual disabilities (ID) make up 10.8 % of the adult population in the United States [8]. Some disabilities within ID are not limited to Down syndrome, fragile X syndrome, and cerebral palsy. Intellectual disability is defined as deficits in conceptual, pragmatic, social, and behavioral proficiencies [9]. There are four levels of ID; mild, moderate, severe, and profound. These levels range from needing limited support and resources to requiring day-to-day 24-hour support to aid in everyday living. Individuals with ID are likely to have more health disparities from early childhood to adulthood than their non-disabled peers [10-12].

Biological factors. Individuals with ID may have biological factors that may interfere with PA, such as hearing and sensory impairments, physical limitations, and some forms of mental ill-health [13]. Compared to those without disabilities, individuals with ID also have a higher rate of chronic conditions such as cardiovascular disease, noncommunicable diseases, various

cancers, thyroid disorders, and obesity [3,7,8,12,14]. Although the mortality percentage for adults with ID has decreased since the 1970s, as of 2020, this population is still at a higher risk of mortality and other diseases than other adult subpopulations [15,16].

Levels of PA. There are three levels of PA intensities: light, moderate, and vigorous. Light-intensity PAs stabilizes that heart rate and does not result in increasing or decreasing the heart rate (e.g., walking slowly, cooking, and light cleaning) [2]. Moderate-intensity PAs increases the heart rate and oxygen flow to muscles (e.g., brisk walking, light yard work, and biking) [2]. Vigorous intensity PAs involves a rapid increase in heart rate and physical exertion (jogging or running, swimming laps, rollerblading, competitive sports, and jump roping) [2]. As stated in previous literature, adults with ID tend to participate in low levels of PA, which is associated with adverse health outcomes, and is the fourth leading risk factor for mortality worldwide [2-4,7]. Research has shown that preassumptions and stigmatization from health professionals, family, and societal views on the physical abilities of this population have resulted in these individuals' disbelief and self-efficacy of engaging in moderate or vigorous PAs [5-7].

Barriers

Physical activity education barriers: Since 1820, physical education (PE) within the U.S. has been taught from childhood to postsecondary education. The PE curriculum is currently embedded and sometimes restricted to a mandatory or interest course, where students can learn, receive many opportunities to explore PA, and get exposure to various forms of cardiovascular endurance and strength training [17-19]. Although PE is a crucial quality-of-life component for all, every student does not get the opportunity to take it. Studies have shown that students with ID have limited exposure and repeated opportunities to engage in PA throughout their schooling [20-22]. The common contributions of the lack of effective PE are based on others' presumptions on limitations of comprehension and execution of PA, training physical educators on this population, and social barriers that may decrease self-efficacy and self-determination to engage in PA without others and independently [22]. It should be noted that other countries are experiencing the same segregation within inclusive education settings for this population. Some studies from other countries state similar barriers for students with ID included in the PE curriculum, activities, and assignments [23,24].

Social barriers: The beliefs and attitudes of PA are affected by perspectives and experiences throughout one's life [25]. Individuals with ID are subjected to obstructive perceptions from their support systems [e.g., family, friends, educators, and health professionals] that lead to low-intensity PA participation or no PA and increased sedentary behaviors [26]. Negative perceptions

from caregivers can impact individuals with ID partaking inadequate PA. Bodde & Seo [27] found that many adults with ID can participate in PA but are perceived as frail. Thus, they were prohibited from doing any PA or taught to increase their physical exertion [p.63]. These types of perceptions are critical for the health of individuals with ID [28].

Environmental barriers: Gym facilities may not have accessible adaptive fitness equipment or personal trainers certified in adaptive fitness training [29]. Some individuals with ID cannot drive and are often dependent upon others for transportation, thus only having access to the gym facility based on the driver's schedule [25]. Cui et al. [30] and Furjan-Mandic et al. [31] found that exercising at home can have the same effect as exercising at the gym. However, the absence of human coaches in the immediate environment makes it necessary for an individual to have the knowledge and experience of engaging in PA to effectively exercise at home and reap the same benefits as in the gym. Due to Coronavirus 19 (COVID-19), individuals with ID had limited opportunities to continue and maintain PA engagement across individuals and environments [11,29,32,33].

Qualitative research on PA

Some quantitative intervention research is comprised of helpful information that is derived from a subpopulation in qualitative studies. For example, Taliaferro & Hammon [34] interviewed adults with ID and their caregivers and found that caregivers' perceptions can be a factor in increasing or decreasing the motivation of their adult child with ID. The researchers also found facilitators play important roles in encouraging, supporting, and acting as role models by participating with their adult child in PA. Other qualitative studies found other impactful facilitators, including socialization in PA, illustrating modifications of movements, exposure to moderate intensity exercises and activities, engaging in PA with others with and without disabilities [not one-on-one with a caregiver or personal trainer], and natural positive reinforcements [35,36]. These facilitators can be found in various interventions for individuals with ID and PA [18,25,37,38].

This study aims to explore the lived perspectives and experiences of adults with ID engaging in physical activity. This study seeks to find information that can be added to the literature and used as a resource for various interventions, settings, activities, and education of PA for this population. The research questions for this study were:

1. What are the perceptions of adults with intellectual disabilities on their physical activity?
2. What are the experiences of adults with intellectual disabilities participating in physical activity?
3. How did the perceptions and experience of physical activity impact their efficacy on physical activity?

Methods

Participants

All twenty participants are adults with ID between 21-27 years old. The researchers recruited students with ID enrolled in a Comprehensive Transition Postsecondary [CTP] program, a program that provides federal funding for postsecondary education programs for college students with ID that are equivalent to typical peers (e.g., access to applying and receiving funding by completing the Free Application for Federal Student Aid) at a Southeastern region university of the United States. Participants for each focus group were recruited via email from the researchers. Only students that met the inclusion criteria were sent the email. Inclusion criteria included students that have completed at least one semester in the program and taken the required health and fitness course before this study. To decrease a potential academic conflict that may result in participants being unable to participate in the study, the researchers consulted student instructors to determine participants that met satisfactory grades (C, 73% or higher) in their current CTP program courses. Due to this study corresponding with the vocalizing of lived experiences with PA,

participants being able to communicate their wants and needs verbally without assistance from the researchers was also a part of the inclusion criteria.

Exclusion criteria were participants from the program who were in their first and had not taken the Health and Fitness course. Potential participants not in this particular CTP program at this university were ineligible for this study. All university courses transitioned to remote learning for the first focus group due to the Coronavirus 2019 [COVID-19]. If students did not have any experience with using Zoom, a videoconferencing platform, students were excluded. Lastly, any former students that graduated from the program were also excluded from the study.

Demographic information pertaining to each participant was obtained from their instructor through the program database. The Wechsler Adult Intelligence Scale [WAIS-IV] fourth edition was added as an additional cognitive demographic for selected participants. All participants completed the WAIS-IV, measuring their cognitive abilities within the program’s first semester. Participant scores range between 53-74, indicating a cognitive deficit. See additional demographics in Table 1.

Table 1: Participant Demographics.

Participant Name	Sex	Age	Race	PSE Certificate(s)	Disability Diagnosis	WAIS-IV
Mitchell	M	27	Caucasian	Certificate: Employment, Independent Living, Community Access	ID, ASD	74
Mr. Bean	M	22	Hispanic	Certificate: Employment, Independent Living, Community Access	ID, ASD	65
Ariana	F	22	Caucasian	Certificate: Employment, Independent Living, Community Access	ID, ASD	60
Pablo	M	24	Caucasian	Certificate: Employment, Independent Living, Community Access	ID	66
Britney	F	24	Caucasian	Certificate: Employment, Independent Living, Community Access	ID	53
Sarah	F	22	Caucasian	Certificate: Employment, Independent Living, Community Access	ID	62
John	M	23	Caucasian	Certificate: Employment, Independent Living, Community Access	ASD	63
Cher	F	21	Caucasian	Certificate: Employment, Independent Living, Community Access	ID	59
Wayne	M	27	Black	Certificate: Employment	ID, ASD	64
Abraham	M	23	Caucasian	Certificate: Employment, Independent Living	ASD	63
LeAnn	F	20	Hispanic	Certificate: Employment, Independent Living	ID, ASD	60
Anna	F	21	Caucasian	Certificate: Employment, Independent Living, Community Access	ID	59
Peppermint	F	21	Caucasian	Certificate: Employment, Independent Living	ID	65
Jasmine	F	26	Caucasian	Certificate: Employment, Independent Living	ID	59
Jacob	M	24	Caucasian	Certificate: Employment, Community Access	ASD	63
Morgan	F	26	Caucasian	Certificate: Employment, Independent Living	ID	60

Simone	F	24	Black	Certificate: Employment, Independent Living	ID	64
Mozart	M	22	Caucasian	Certificate: Employment, Independent Living	ASD	58
Xavier	M	22	Caucasian	Certificate: Employment	ASD	48
Taylor	F	23	Caucasian	Certificate: Employment, Independent Living	ASD	71
*Intellectual Disability (ID); Autism Spectrum Disorder (ASD); Wechsler Adult Intelligence Scale- Fourth Edition (WAIS IV)						

Participant consent

The first focus group was conducted in 2021. Due to COVID-19, all procedures and interactions with the participants for the first focus group were conducted virtually. All participants have completed technological courses and experience taking courses online using the videoconference platform, Zoom. The researcher met with participants and their legal, authorized guardian to review the study. Researchers discussed the study and ensured that participants and their guardians could discontinue anytime throughout the study not to continue, and no penalties would be administered. Finally, participants signed consent and assent forms to participate in the study.

For focus group one, the consent form was disseminated using a free digital PDF form with a link that all participants could access, read, and complete the consent form. A visual six-step PDF document was created for instructions on navigating the form. All potential participants were also given links to two free text-to-speech websites to read the consent form. Only one participant required an assent form because their parent was their legal guardian. Participants were asked for permission to audio record the focus group to capture the focus group’s statements.

Restrictions of the university due to COVID-19 resulted in the Health and Fitness course being implemented the following

year; thus, the second focus group was conducted a year later. For the second focus group, all consent components were completed in person. Researchers were given the instructor permission to present the study at the end of the Health and Fitness class session. Students who met the inclusion criteria were given the consent and assent forms to take home, review with guardians, and, if decided, voluntarily sign the consent and assent forms. Participants who completed the forms turned in their forms the following class session to their instructors, and the instructors then gave the researchers the signed consent and assent forms.

Setting and materials

COVID-19 temporarily eliminated any on-campus field research studies. Therefore, the participants for focus group one and the researchers conducted the focus group on Zoom. During COVID-19, participants completed a year of distance learning courses using Zoom, and therefore, the researchers found Zoom to be a suitable videoconferencing platform for the study. After restrictions were lifted for the university, the second focus group was administered a year later. The second focus group was held in a classroom within the College of Education building. The classroom consisted of seven 60 by 24 economy training tables with 28 fabric stackable chairs, one instructor smart desktop, a projector, and a projector screen.

Table 2: Semi-Structured Interview Questions.

1. What does being physically active mean to you?
2. When you began participating in physical activities, what physical activities did you try?
3. Have you ever been taught and/or shown how to participate in physical activity for yourself?
4. What types of physical activities do you like and some that you don't like?
Probe: Why?
5. Do you like exercising on your own or with others?
6. Do individuals help you when you are participating in physical activities?
7. Have you ever been encouraged to participate in physical activities?
Probe: How did it feel when you were encouraged?
8. Have you ever been discouraged from participating in physical activities?
Probe: How did it feel when you were discouraged?
9. Do you have any difficulties performing physical activities?
Prompts: help/doesn't know how to perform/physical health/afraid of getting hurt
Probes: Do these difficulties decrease your motivation to participate in physical activities? Why?
10. Are you interested in learning new physical activities?

Probe: What are some things that you think will help you with learning new physical activities?
11. What are some supports you think would help you improve your participation in physical activities?
12. Do you think health professionals, professional trainers, people who work in health programs need to learn more about participating in physical activity?
Closing
Mediator summarize the activity
13. Is there anything you want to discuss before we end?
Mediator and notetaker thank the participants in focus group.

Development of questions

The semi-structured interview questions were initially developed from previous literature on focus groups [39,40]. Researchers also reviewed Marks, Sisirak & Heller’s [7] on Health Matters: The exercise and nutrition health education curriculum for people with developmental disabilities. Prompts and probes were added for additional support for participant comprehension of questions. Topics included PA components such as background knowledge, engagement, and maintenance. The researchers disseminated questions via email to graduate students in the special education department. Graduate students were asked to read the questions and determine if any terminology needed to be changed to be more comprehensible and if any probes needed to be added to prompt participants’ critical thinking processing skills. The graduate students found several words that needed to be replaced by layperson synonym words and probes for some questions to increase the probability of participants elaborating their answers. See Table 2 for the semi-structured interview questions.

Procedure and application of focus group

The University’s Institutional Review Board [IRB] approved this study before disseminating the consent forms and implementing the focus group. After participants completed their consent forms, the researchers contacted each participant for their availability and, as a result, set a day and time to meet. To possibly retrieve a variety of responses from participants, two focus groups (Spring 2021 [*n* = 8]; Spring 2022 [*n* =12]) were conducted within two different academic years that the Health and Fitness course was offered. Each focus group was conducted between 90-110 minutes.

Focus group one

Each participant was provided the same Zoom link, telephone meeting number, password, and YouTube videos on Zoom troubleshooting. The researchers provided the videos to assist the participant in case of technological difficulties. The participants were also emailed a paragraph on videoconferencing etiquette to uphold the validity of the focus group. Before meeting with the participants, researchers met for 20 minutes to discuss an overview of the focus group, including the rationale for the prompts

and probes. All participants were also instructed to meet on Zoom 5-10 minutes before the start time to resolve technical issues with their microphone, camera, and any distractions that will need to be removed from the participant’s environment [e.g., background noises and other individuals within the environment that are not in the focus group]. One researcher acted as the facilitator [asking the questions] and the other as the notetaker [writing notes throughout the focus group that may be beneficial when analyzing the data]. Both researchers introduced themselves, and the facilitator provided a brief yet informative briefing of the focus group and reiterated video conferencing etiquette. For example, “One person at a time will speak. If you’re not speaking, please make sure your microphone is muted.” As their signed consent forms stated, the facilitator reminded the participants that the focus group would be audio recorded. The researchers asked all participants to provide pseudonyms for confidentiality and privacy purposes. Participants could choose any name that did not closely resemble their name. Some participants chose character/celebrity names that they liked or were inspired to be (e.g., Mr. Bean and Mozart).

The second focus group had similar procedures but was administered in person. For example, since the participants were conducted in their Health and Fitness course, the researchers stated classroom etiquette/expectations such as raising hands, waiting to be called on, not talking over others, etc. The facilitator and notetaker were the same researchers from focus group one. After reviewing the classroom etiquette/expectations, the facilitator presented each question on an individual PowerPoint individual slide. The notetaker with their laptop sat in the back of the classroom to not distract the students.

After the focus group, the facilitator and the notetaker thanked the participants for volunteering in the focus group.

Data collection and coding data

The researchers collected data for both focus groups by audio recordings using the Android Samsung-9 voice recorder app, Otter. Otter allowed the researchers to transcribe the Zoom audio recordings. The researchers tested the Otter app prior to the focus group session by recording a 5-minute conversation and playing back the recording for quality.

Data were analyzed from the transcription and audio recordings. The notetaker listened to the original audio to verify the overall accuracy of the digital transcription. If there were any discrepancies in the transcriptions, the notetaker edited the transcript section with the correct wording equivalent to the audio recording. Filler vocalizations (i.e., ummm... and soo...) were also deleted from the transcripts to increase coding accuracy. The facilitator then listened and read the transcripts individually to correlate the transcript and the audio. The notetaker also completed this same procedure after the facilitator. After completing this procedure separately, the researchers met via Zoom to compare any errors the transcription did not correctly transcribe based on the audio recording. Themes and subthemes were analyzed from the transcriptions [41].

Data analysis

The researchers used inductive reasoning and thematic analysis that would lead to conjectures. The inductive reasoning approach examined the transcripts to determine correlations and discrepancies that may conclude with themes and subthemes. Thematic analysis was a method that was used in this study to analyze relationships and patterns within the transcript [42]. NVivo 12, a digital software for analyzing qualitative data, was used to code themes and subthemes. The researchers reviewed the transcript to type the name of each participant throughout the entire focus group and for any errors missed during the coding phase within the transcript [e.g., transcription of noises, transcripts of others within the participant's environment, and any duplicated sections]. The researchers followed Braun and Clarke's six steps in their thematic analysis [43].

First, both researchers read each transcript to become more familiar with the data. Secondly, initial codes were created based on patterns and relationships found in the transcripts. These codes were used as descriptors for similarities and differences in the transcript. Researchers read the transcript and developed initial codes. Both researchers then met via Zoom to discuss the codes and any segments that may have needed further dissecting. Thirdly, after determining the codes that would be used, the researchers discussed data patterns that appeared to have similar relationships, leading to potential themes. Fourthly, using the NVivo 12 software, the data was placed in the themes and analyzed for additional specific information that can be grouped as a subtheme. While analyzing the data, the researchers found several subthemes within the three main themes: motivation, self-efficacy, and fitness considerations. Subthemes were generated based on a grouping of specific information from each theme. Fifthly, the researchers deliberated on explicit definitions and extracted descriptors' data correlations once the themes and subthemes were established. Finally, the researchers wrote the data findings using components of Kuckartz's [44] principles on Qualitative Text Analysis: A Guide to Methods, Practice & Using Software to analyze the data.

Results

Several themes and subthemes emerged based on the data provided by the semi-structured interview from both focus groups. The first theme was motivation, defined as the rationale for engaging in PA that embedded force choice, sedentary behaviors, preferences, and limitations. The second theme focuses on the self-efficacy of the participant's beliefs of their ability to participate in PAs based on encouragement, learning new PAs, and physical activity structure. The third and last theme was fitness considerations the participants found helpful or should be correlated in PAs, such as fitness education and accommodations/modifications.

Motivation

Force choice: Participants in both groups stated that their opportunities to explore PAs consisted of force choice options and presumed parental assumptions from parents/guardians. They shared experiences of situations in the past that have decreased their intrinsic motivation to engage in PA. Participants in the first focus group ($n = 5$) discussed being told no to activities of potential interest, especially if the activity dealt with moderate-to-vigorous high intensities. One participant stated that their parents insisted on joining karate because they felt it was safer than the community basketball team. This participant also stated that they had no physical limitations that would prevent them from being on the team. Their perspective on PA has changed from wanting to try new PAs to only engaging in activities that their parents recommended. While several participants within each group stated that they did not perceive their parents telling them no as a "bad thing" because their parents "knew what's best for their disability." However, participants in the second focus group ($n = 9$) stated that they were signed up by their parents/guardians to join activities such as Special Olympics. Still, they were then able to find other PAs within the special needs community to engage by asking peers and their families in Special Olympics.

Sedentary behaviors. All participants had prerequisite knowledge of the importance of participating in PA but did not incorporate PAs into their daily and weekly schedules. For example, one participant stated they engage in PA randomly and do not have a structured schedule. Four participants in the first focus group stated that they would rather sit on the couch and watch a stream platform service on the television [i.e., Netflix] than exercise. One participant noted that they did not need to exercise after work because they "walk around at work," which is "enough exercise." Participants in both groups mentioned that COVID-19 has significantly decreased their motivation and structure of engaging in PA and increased their sitting, sleeping, and eating routines. Most of the second focus group ($n = 10$) stated that they engaged in sedentary behaviors but increased their participation in PA once the COVID-19 community restrictions decreased. One participant stated, "I like watching T.V., but I like to [be active], move and exercise more. It's fun with others."

Preferences. Based on prior experiences with PA, all participants had preferred PAs. Majority of participated in PAs in secondary schooling ($n = 15$). One participant said that feeling sweat on their body and the uncomfortableness they felt as a teenager often made them stay away from exercises that made them sweat more than they could tolerate. Participants in the first ($n = 5$) and second ($n = 7$) focus groups stated that some of their preferences were based on PA exposure. They are hesitant to try other activities that may interest them due to some of the skill-related fitness components within the PA to improve their fitness level. One participant stated, "Yeah, I did [participate in] football, but I didn't like pushups and running." Most participants in both groups stated that they prefer participating in PA, such as a sport or exercising at a gym with others, than alone ($n = 6$; $n = 10$). Other participants preferred engaging in PA or going to the gym independently. One participant in the first focus group mentioned that they did not like isolated core exercises at the gym, but their preference changed when they noticed improvements in their body, "I did not like butterfly crunches, squats, and biceps, and now I do after trying it with my personal trainer. I can see my body getting smaller [getting toned]." Another participant emphasized the feeling of being sweaty, "I really don't like baseball and soccer because he makes me sweaty it's too hot."

Limitations. Participants in the first group [$n = 4$] and the second group [$n = 7$] expressed their physical limitations when engaging in PA. One participant discussed wanting to participate and increase physical fitness but has some lower body limitations that prevent them from certain PAs, "I try to do all physical activities, but sometimes I can't do everything because of my muscles [spasms]. I do try, though." Participants in the first group ($n = 4$) mentioned limitations told them by former and current supportive stakeholders [i.e., Vocational Rehabilitation Counselor, immediate family members, and health professionals]. Participants were physically limited to certain PAs that were considered light intensity. One participant said they could do more things when they tried and not think about what others assumed they could and could not do, "I started to do things [PAs] that I wanted to do and not what my family thought I should do." In contrast, other participants [$n = 5$] stated that they did not have any limitations that would prevent them from participating in PAs.

Self-efficacy

Encouragement: Participants were asked about encouragement from others to participate in PA. Two participants stated that their parents and close relatives encouraged them to continue engaging in PAs. These participants expressed various experiences of having the opportunity to explore their interests with the support of their families. For example, one participant is a soccer team player for Special Olympics, and they enjoyed learning more about the sport and competing against other teams. One participant said that they were encouraged. However, the encouragement was for PAs of no interest to them. They want

someone to help her learn more about PA and get physically fit. Participants in both groups stated they did not feel discouraged and were often encouraged to participate in PAs ($n = 3$; $n = 8$).

In comparison, seven participants in the second group stated being discouraged by others. One participant expressed their frustration, "I've been discouraged a few times. They just said you can't do that, and I just said okay. I felt confused because I was doing something I wanted to do." Three participants in the first group and two in the second group expressed intrinsic encouragement, such as creating an inspiration board or providing external praise to themselves with rewards, such as shopping for a new workout outfit or occasionally self-deluding in unhealthy meal choices.

Learning new Pas: All participants were enthused to try a new PA. Six participants in the first group mentioned various PAs, such as dance, tennis, weightlifting, and golfing. While two participants expressed their interest and facilitators, such as not completing PA with a family member, exercising with individuals that want to exercise, implementing a socialization component to the PA, and feeling comfortable giving feedback to individuals like personal fitness trainers. Unlike the first group, all participants in the second group wanted to try new PAs not for socialization but to see physical changes in their bodies. For example, one participant stated, "I want to learn how to lift heavier weights to increase my biceps," and another participant, "I want to learn how to lose weight correctly and my cholesterol to go down, so this way I can get a better weight and muscles."

Physical activity structure: Participants ($n = 5$) in the first focus group stated the need to implement a scheduled routine to increase participation in PA throughout the week. Although all participants were open-minded about improving their PA routines, all stated that they had no prior knowledge and application of creating, putting into action, maintaining, and evaluating a schedule before taking the Health and Fitness class in the program. In addition, one participant noted the details of their schedule but has never made a weekly exercise schedule, "I want to make a list [schedule] of days of the week to exercise. Now that I learned how to make one in the Health and Fitness class, I'm going to use it in my life." One participant reported they only exercise when someone in his house wants to exercise and that they would like to set up his PA schedule independently from the rest of his family. All twelve participants in the second focus group stated that the Health and Fitness course has taught them the importance of PAs and exercising with a purpose. One participant mentioned, "Now I feel okay with working out by myself or joining a community sports group because I now know how to without help from others."

Fitness considerations

Fitness Education: Participants stressed the need to increase their knowledge and application of fitness. One participant in the first focus group stressed that their disability should not defy

them but also their ability and willingness to participate in PAs, "I have a disability, but I want to do [participate] stuff [physical activities] like everyone else, but I want help so that I can be better at working out." Participants [$n = 7$] in the first group stated they could understand how to apply fitness virtually because of COVID-19. In comparison, participants [$n = 8$] in the second focus group expressed their lack of knowledge during COVID-19. One participant stated, "I know now that I need to make better choices of physical activities; a little help would be great at figuring out how to do this during the virus [COVID-19]." All participants share their rationale for wanting to be more independent about their health due to taking the Health and Fitness course. One participant mentioned their desire to communicate to ask questions about their health before and during COVID-19, "I need to improve on asking for help from a trainer, a nutritionist, and my doctor."

Accommodations/modifications: Participants in both groups expressed the need for PA programs and facilities to accommodate their needs. Participants in the first group ($n = 5$) and the second group ($n = 10$) stated that they do not want to only engage in PA with adults with disabilities but be included in PAs with typical peers. However, two participants in the first focus group stressed wanting to feel included by trainers and typical peers and not feeling isolated, "Someone to teach me how to do [participate] physical activities with others but supporting me with maybe different things [movements and exercises] I can do if I can't do what everyone else does." Two participants in the second focus group addressed the need for modifications to include more education for PA program directors and personal trainers to learn more about adults with disabilities. One participant stated, "They [personal trainers] need to know that the person with the disability, they might not need to know how to do certain things, so they might need to know how to change [modify] that [movements]."

Discussion

This study aimed to explore the perspectives and experiences of adults with ID engaging in PA. All participants in this study are enrolled in a CTP in an institution of higher education. The results indicated the participant's perspectives and experiences were impacted by motivation, self-efficacy, and fitness considerations. Although this study was conducted remotely using Zoom and in-person, the participant's prerequisite technological skills decreased the difficulty in completing this study. Also, the participants having prior training with video conferencing platforms like Zoom without any instructor assistance was a benefit for the study.

Ways to increase motivation to continue were a struggle for most of the participants. Participants recounted childhood experiences of exploring PA based on immediate family members' recommendations, not their interests. This finding may increase

the dialogue on the independent component of quality-of-life outcomes for adults with ID [45,46]. Exercising is a significant part of one's well-being. One of the various facilitators to initiate and continue PA is based on interest. Without an interest in PA or preferred PAs, the probability of an individual initiating and continuing PA is sparse.

Most participants shared their experiences and comfortableness in participating in light-intensity PAs that do not elevate heart rate and oxygen consumption (e.g., causally walking, doing laundry, etc.). It is worth mentioning that there are benefits to light-intensity PAs; however, seeing and feeling the benefits will take an extended time than varying light intensity with higher-intensity PAs [47-49]. One student stated that they were getting enough exercise daily by walking around on the job. When the facilitator asked about their job occupation, the participant said they worked at a grocery store. The participant's assumption suggests that the lack of fitness education throughout their primary and secondary schooling may have influenced the participant's perspective on beneficial ways to engage in PAs in adulthood.

Although participants in the first focus group indicated that their opportunities to explore or maintain their PA had decreased due to COVID-19, this group of participants was able to engage in PA during COVID-19 due to their enrollment in the adaptive online course Health and Fitness class. Participants in the second focus group reflected on their fitness knowledge during and after COVID-19. Findings also suggest the need for this population to have opportunities to be exposed to PAs in generalizable settings through education and explorative trials that are equivalent to their typical peers. Also, knowing how to continue or maintain a PA regimen when unplanned life expectancies arise, such as COVID-19, is crucial to learn how to adapt and still find ways to increase and maintain PA.

All participants gave examples of ways that their community can include them, suggesting that this population may have been exposed to PAs in isolation and one-on-one with an individual with scarce opportunities to engage with peers with and without disabilities. Participants also stated that they want to learn more about PA and implement various exercises in their lifestyle. The limited amount of information the participants had in their repertoire may put forward a broader discussion on PA for this population. The possible lack of knowledge and application that this population receives, in turn, could decrease self-efficacy and self-determination of engaging in PA to begin, continue, and apply their mastery to maintaining and generalizing a structured PA schedule that meets their needs [17,19,27,31].

One theme that resonated with most participants was being included within their community in PA environments with accommodations/modifications based on their fitness

levels. Participants voiced their concerns about the portrayal of inclusivity when wanting to participate in PAs. These findings may indicate the need to evaluate the reliability of possible gaps that can be addressed to meet the needs of all individuals. Participants stated that although they want to learn more about PAs, they also need support and resources. The participants demonstrated the need for health and fitness personnel and gym facilities to have the knowledge and apply accommodating support for adults with ID. Inclusion within all sectors is always stressed but may not be effectively executed for this population.

Implication for Research to Practice

The data can provide insight and social validity into the groups' perspectives and experiences affecting their view of physical activity. However, after completing this study, it is apparent that individuals with ID may have limited knowledge, application of intrinsic motivation skills, and education to maintain a healthy lifestyle [49-51]. To effectively change this, future research should address four areas: education of health facility employees, accessibility of health facilities, and health education within primary and secondary schooling [51-53]. As evidenced-based interventions and supports are disseminated, this information should be one of the foundations for physical education, the well-being and quality of life for this population, and training for health professionals to implement supports and resources effectively [53,54].

Limitations

There are several limitations to this study. Within this study, 80% of participants are Caucasian, 20% are Hispanic, and 20% are Black, limiting the varied lived experiences of other races and ethnicities within this adult subpopulation. Due to the participants being in their mid to late twenties, participants may not be a sufficient age representation of adults with ID. Both researchers were also the facilitator, notetakers, and instructors of several courses within the program. The participants may have responded more openly to the researchers due to familiarity. The impact of COVID-19 led to the Health and Fitness course not being offered the following semester. Therefore, the researchers had to wait a year to administer the second focus group. The lapsed time may have shaped their perspectives and experiences engaging in PA differently than the first focus group. Participants were previously exposed to meetings via the videoconferencing platform, Zoom. The researchers did not need to pre-train any participants to use Zoom. Replicating this study might be difficult if technological skills are not presented before conducting a focus group online. The findings were based on a study conducted with CTP participants with ID and may not represent the entire adult population with ID.

Conclusion

Lived experiences can be a learning evaluation for distributors to add and improve on meeting the needs of all subgroups within a population. If PA is a highly imperative factor for all adults, education, accessibility, and community-inclusive PA support should be measured to meet the needs of all adults. Early intervention can be one of the crucial contributors to success for individuals, especially those with disabilities, which should be considered when discussing PA since education regarding health and physical fitness typically begins in primary school. Creating a more inclusive environment inside and outside the school setting can change the trajectory of health outcomes for subgroups within the population that might get left behind, such as individuals with ID. Inclusive physical and health education within the schools and community can improve health outcomes by providing education and accessibility, allowing for a better quality of life. Destigmatizing the abilities of individuals with ID to participate in PAs is one step that all stakeholders need to take into consideration.

References

1. Yessick A, Haegle JA (2019) "Missed opportunities": Adults with visual impairments' reflections on the impact of physical education on current physical activity. *British Journal of Visual Impairment* 37(1): 40-49.
2. World Health Organization (2022) Physical activity.
3. Warburton DE, Nicol CW, Bredin SS (2006) Health benefits of physical activity: The evidence. *Canadian Medical Association Journal* 174: 801-809.
4. Fereday J, Muir-Cochrane E (2006) Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods* 5(1): 80-92.
5. Durstine, JL, Gordon B, Wang Z, Luo X (2013) Chronic disease and the link to physical activity. *Journal of Sport and Health Science* 2(1): 3-11.
6. Talbot M (2001) The case for physical education. World summit on physical education. Germany.
7. Marks B, Sisirak J, Heller T (2010) Health matters: The exercise and nutrition health education curriculum for people with developmental disabilities. Baltimore, MD: Paul H. Brooks Publishing Company.
8. Center for Disease Control and Prevention (2023) Disability Impacts All.
9. American College of Sports Medicine (2021) ACSM/NCHPAD certified inclusive fitness trainer.
10. Anderson L, Humphries K, McDermott S, Marks B, Sisirak J, Larson S (2013) The state of the science of health and wellness for adults with intellectual and developmental disabilities. *Intellectual and Developmental Disabilities* 51(5): 385-398.
11. Carmeli E, Imam B (2014) Health promotion and disease prevention strategies in older adults with intellectual and developmental disabilities. *Frontiers in Public Health* 2(31): 1-7.

12. García-Domínguez L, Navas P, Verdugo MÁ, Arias VB (2020) Chronic Health Conditions in Aging Individuals with Intellectual Disabilities. *International Journal of Environmental Research and Public Health* 17(9): 3126.
13. Simpson N, Mizen L, Cooper SA (2016) Intellectual disabilities. *Medicine* 44(11): 679-682.
14. Krahn GL, Fox MH (2014) Health disparities of adults with intellectual disabilities: What do we know? What do we do? *Journal of Applied Research in Intellectual Disabilities* 27(5): 431-446.
15. McCall P (2015) How to make group exercise accessible to everyone. *American Council on Exercise*.
16. Lauer E, McCallion P (2015) Mortality of people with intellectual and developmental disabilities from select US state disability service systems and medical claims data. *Journal of Applied Research in Intellectual Disabilities* 28(5): 394-405.
17. Bailey R (2006) Physical education and sport in schools: A review of benefits and outcomes. *Journal of School Health* 76(8): 397-401.
18. Barr M, Shields N (2011) Identifying the barriers and facilitators to participation in physical activity for children with down syndrome. *Journal of Intellectual Disability Research* 55: 1020-1033.
19. Hinckson EA, Dickinson A, Water T, Sands M, Penman L (2013) Physical activity, dietary habits and overall health in overweight and obese children and youth with intellectual disability or autism. *Research in Developmental Disabilities* 34(4): 1170-1178.
20. Bartlo P, Klein PJ (2011) Physical activity benefits and needs in adults with intellectual disabilities: Systematic review of the literature. *American Journal on intellectual and developmental disabilities* 116(3): 220-232.
21. Wieczorek M, Sadziak A, Karásková V (2018) Emotions related to physical education lessons in students with intellectual disabilities. *Trends in Sport Science* 1(25): 29-34.
22. Hutzler Y, Meier S, Reuker S, Zitomer M (2019) Attitudes and self-efficacy of physical education teachers toward inclusion of children with disabilities: a narrative review of international literature. *Physical Education and Sport Pedagogy* 24(3): 249-266.
23. Yun J, Beamer J (2018) Promoting physical activity in adapted physical education. *Journal of Physical Education, Recreation & Dance* 89(4): 7-13.
24. Maher AJ (2018) 'Disable them all': SENCO and LSA conceptualisations of inclusion in physical education. *Sport, Education and Society* 23(2): 149-161.
25. Bossink LW, van der Putten AA, Vlaskamp C (2017) Understanding low levels of physical activity in people with intellectual disabilities: A systematic review to identify barriers and facilitators. *Research in Developmental Disabilities* 68: 95-110.
26. Taggart L, Cousins W (2014) *Health promotion for people with intellectual and developmental disabilities*. London, UK: McGraw-Hill Education.
27. Bodde AE, Seo D (2009) A review of social and environmental barriers to physical activity for adults with intellectual disabilities. *Disability and Health Journal* 2: 57-66.
28. Cartwright L, Reid M, Hammersley R, Walley RM (2017) Barriers to increasing the physical activity of people with intellectual disabilities. *British Journal of Learning Disabilities* 45(1): 47-55.
29. Rogers NT, Waterlow NR, Brindle H, Enria L, Eggo RM, et al. (2020) Behavioral change towards reduced intensity physical activity is disproportionately prevalent among adults with serious health issues or self-perception of high risk during the UK COVID-19 lockdown. *Frontiers in public health* 8(575091):1-12.
30. Cui J, Aghajan Y, Lacroix J, Van Halteren A, Aghajan H (2009) Exercising at home: Real-time interaction and experience sharing using avatars. *Entertainment Computing* 1: 63-73.
31. Furjan-Mandic G, Bilbija B, Radas J, Ivkovic G (2018) Impact of home fitness program on anthropological characteristics of physically active and physically inactive people. *Sport Mont* 16(1): 33-36.
32. Lake JK, Jachyra P, Volpe T, Lunskey Y, Magnacca C, et al. (2021) The well-being and mental health care experiences of adults with intellectual and developmental disabilities during COVID-19. *Journal of Mental Health Research in Intellectual Disabilities* 14(3): 285-300.
33. Theis N, Campbell N, De Leeuw J, Owen M, Schenke KC (2021) The effects of COVID-19 restrictions on physical activity and mental health of children and young adults with physical and/or intellectual disabilities. *Disability and Health Journal* 14(3): 1-8.
34. Talianferro AR, Hammond L (2016) "I don't have time": barriers and facilitators to physical activity for adults with intellectual disabilities. *Adapted Physical Activity Quarterly* 33(2): 113-133.
35. Mahy J, Shields N, Taylor F, Dodd J (2010) Identifying facilitators and barriers to physical activity for adults with Down syndrome. *Journal of Intellectual Disability Research* 54: 795-805.
36. Brooker K, Van Dooren K, McPherson L, Lennox N, Ware R (2015) Systematic review of interventions aiming to improve involvement in physical activity among adults with intellectual disability. *Journal of Physical Activity and Health* 12(3): 434-444.
37. McGarty AM, Melville CA (2018) Parental perceptions of facilitators and barriers to physical activity for children with intellectual disabilities: A mixed methods systemic review. *Research in Developmental Disabilities* 73: 40-57.
38. Vader K, Doulas T, Patel R, Miller J (2021) Experiences, barriers, and facilitators to participating in physical activity and exercise in adults living with chronic pain: a qualitative study. *Disability and Rehabilitation* 43(13): 1829-1837.
39. Marshall H (2014) Qualitative text analysis: A guide to methods practice; Using software and qualitative content analysis in practice [Book Review]. *Evaluation Journal of Australia* 14(2): 52.
40. Kristensen GK, Ravn MN (2015) The voices heard and the voices silenced: Recruitment processes in qualitative interview studies. *Qualitative Research* 15(6): 722-737.
41. Wolgemuth JR, Erdil-Moody Z, Opsal T, Cross JE, Kaanta T, et al. (2015) Participants' experiences of the qualitative interview: Considering the importance of research paradigms. *Qualitative Research* 15(3): 351-372.
42. Johnson B, Christensen L (2019) *Educational research: Quantitative, qualitative, and mixed approaches (7th Edn)*, Needham Heights, MA: Allyn & Bacon.
43. Dabkowski E, Porter JE, Barbagallo M (2021) A thematic analysis of the perceptions of community-based exercise program on the health and well-being of ageing adults. *Health & Social Care in the Community* 29(6): 1990-1997.
44. Kuckartz U (2014) *Qualitative Text Analysis: A Guide to Methods, Practice and Using Software*. London, UK: SAGE Publications Ltd.
45. Thompson LJ, Jago R, Cartwright SA, Page RK (2010) Physically active families - de-bunking the myth? A qualitative study of family participation in physical activity. *Child: Care, Health and Development* 36(2): 265-274.

46. Locke EA, Schattke K (2019) Intrinsic and extrinsic motivation: Time for expansion and clarification. *Motivation Science* 5(4): 277-290.
47. De Feo P (2013) Is high-intensity exercise better than moderate-intensity exercise for weight loss? *Nutrition, Metabolism and Cardiovascular Diseases* 23(11): 1037-1042.
48. Littman JA, Kristal RA (2005) Effects of physical activity intensity, frequency, and activity type on 10-y weight change in middle-aged men and women. *International Journal of Obesity* 29(5): 524-533.
49. Oppewal A, Hilgenkamp TIM, Van Wijck R, Evenhuis HM (2013) Cardiorespiratory fitness in individuals with intellectual disabilities- A review. *Research in Developmental Disabilities* 34(10): 3301-3316.
50. Asonitou K, Mpampoulis T, Irakleous-Paleologou H, Koutsouki D (2018) Effects of an adapted physical activity program on physical fitness of adults with intellectual disabilities. *Advances in Physical Education* 8(3): 321-336.
51. Özer A, Hilgenkamp TIM, Van Wijck R, Evenhuis HM (2013) Cardiorespiratory fitness in individuals with intellectual disabilities- A review. *Research in Developmental Disabilities* 34(10): 3301-3316.
52. Rimmer J, Padalabalanarayanan S, Malone LA, Mehta T (2017) Fitness facilities still lack accessibility for people with disabilities. *Disability and Health Journal* 10: 214-221.
53. National Strength and Conditioning Association (2023) Become a certified special populations specialist (CSPS).
54. American College of Sports Medicine (2021) ACSM/NCHPAD certified inclusive fitness trainer.



This work is licensed under Creative Commons Attribution 4.0 License
DOI: [10.19080/GJIDD.2023.11.555824](https://doi.org/10.19080/GJIDD.2023.11.555824)

Your next submission with Juniper Publishers

will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>