

Article

Using a university service-learning program to explore the experiences of older adult participants with physical disabilities

Gardenia A. Juarez ¹, Josephine Blagrave ², Luciana Zuest³ and Kevin Patton ^{2*}

Received: 6th November 2021; Accepted: 19th July 2022; Published: 30th August 2023

Abstract: Researchers have investigated older adults without physical disabilities in various physical activity (PA) programs. However, few studies have focused on older adults with physical disabilities. To the authors' knowledge, no studies have explored the experiences of this population in a university service-learning program. To that end, the purpose of this study was to explore the experiences of older adults with physical disabilities in a physical activity university service-learning program. A qualitative research design was used to explore the experiences of six adults with physical disabilities using open-ended interviews, program observations, and case file examinations. Participant responses fell into three themes: 1) Positive mental health; 2) Physical competence and confidence; and 3) Program vibe. In this exploratory study, adults with physical disabilities perceived both physical and mental benefits from participating in a physical activity service-learning program.

Keywords: adapted physical activity; qualitative research; interview; kinesiology; higher education service learning

Introduction

Research on physical activity has shown psychological and physical benefits for all populations. Examples are improved cognitive function (Northey et al., 2018), improved emotional well-being (Boone & Brausch, 2016; Brenes et al., 2007), lowered risk of chronic diseases (Musich et al., 2017; Reiner et al., 2013), and maintenance of skeletal muscle for bodily movements (Gylling et al., 2020; Papadopoulou, 2020). Physical activity positively affects the older adult population through the above examples. Older adult physical activity engagement is significant because the population numbers are increasing (Profile of older Americans, 2021). The older adult population in the United States (U.S.) age 65 and above reached 54.1 million in 2019. The data reflects the most recent numbers, which captures the 10-year U.S. population growth among adults who are age 65 and above. Since 2009, the U.S. older adult population increased by 14.4 million (36%) and such numbers are expected to reach 94.7 million in 2060 (Profile of older Americans, 2021). Due to the increased older adult population, it is imperative to provide community-based organizations to address health issues such as chronic diseases (i.e., cardiovascular disease, obesity, and diabetes), depression, falls, and disabilities. It is also imperative to provide inclusive environments for all older adults to safely engage in physical activity.

Community-based organizations provide a wider reach to community-dwelling older adults, where group-based programs are amongst the preferred option to engage in (Farrance et al., 2015; Mehra et al., 2016). Benefits of older adult group-based physical activity programs include increased physical activity, enjoyment of social interactions with other participants (Mehra et al., 2016), and the overall quality of health (Farrance et al.,

2015). On the other hand, university-based service-learning programs are an additional option to provide physical activity opportunities. For the purposes of this study, the focus will encompass university service-learning participant perspectives because a gap exists in the literature, whereas, community-based research has provided success in exploring the perspectives of older adults (Farrance et al., 2015; Mehra et al., 2016).

Such university service-learning research has focused on perspectives of undergraduate students (Augustin & Freshman, 2016; Garbarino & Lewis, 2020). Augustin and Freshman (2016) addressed the gap of limited health care workers in the field of gerontology. The authors conducted a qualitative analysis of student experiences in an intergenerational service-learning program and found undergraduate students had positive interactions with seniors, developed positive feelings toward aging, developed positive attitudes and behaviors toward seniors, reflected about self and seniors, understood the stigma behind aging, developed professional interest towards working with seniors, and saw a change in their attitude toward seniors.

Similar results were found by Garbarino and Lewis (2020) where a mixed methods approach was used to synthesize student experiences in a service-learning program working with older adults. From the qualitative results of the study, undergraduate students acknowledged their preconceptions about older adults prior to starting the course, experienced a positive shift in their perceptions about older adults during their interactions, expressed a growing interest in working with older adults, appreciated the skills required to care for older adults, and felt the course offered a valuable opportunity to learn nursing skills and form connections From both studies, students had an increased positive attitude towards older adults, visualized the aging process (e.g., with themselves and family), career trajectory toward gerontology, decreased nervousness and anxiousness, and gained insightful interest working in a health science field (Augustin & Freshman, 2016; Garbarino & Lewis, 2020).

Researchers has shown the impact of university-based service-learning programs for students and quantified physical outcomes for older adults with disabilities (Olsen et al., 2019; Waller et al., 2017;), yet little research has focused on the older adult's (participant) perspective. Facilitating opportunities for participant perspective in service-learning research is needed to incorporate client-centeredness. To explore how service-learning programs operate, and improve, it is important to listen to participant perspectives of such programs. Learning about older adult experiences in physical activity programs will assist in how community-based organizations and universities offer programming. To this end, the purpose of this study was to explore the experiences of older adults with physical disabilities in a physical activity university service-learning program. This study aimed to answer these two primary questions: 1) what are the experiences of older adults participating in a service-learning physical activity program, and 2) are the program artifacts supportive of these experiences?

Materials and Methods

Setting

Beyond Exercise: Wellness Enhancement for Life (BE:WEL) has provided services to a rural northern California community for over 20 years. BE:WEL provides client-centeredness physical activity programming in a group setting, while providing support for adults with physical disabilities. Participants are referred to the program through physical therapists, word of mouth from current participants, area hospitals, and university faculty. This program takes place two times per week (Monday and Wednesday) for 50-minutes (each session). The program is staffed by kinesiology or other health-related undergraduate student volunteers who are enrolled in an adapted physical activity course. Students are

required to meet a certain number of volunteer hours each semester they volunteer, which are determined by their professor. Student volunteers are matched with participants each semester, who facilitated a prescribed exercise routine. For example, a participant who has a goal of increasing strength would start a warm-up (5-10 minutes) on an arm ergometer, stationary bike, or treadmill. Next, the student volunteer would read the workout log and guide the participant to the next portion: sets (i.e., dumbbells, barbell, body weight exercises, or weight machine), which can vary between 15-30 minutes. During this time, student volunteers may ask participants about their exercise routine (i.e., try new exercises, increase the number of repetitions, switch equipment, or increase the weight) and provide feedback. Finally, the cool-down period (5-10 minutes) may consist of walking outside (weather permitting), stretching, arm ergometer, stationary bike, or treadmill. A faculty member serves as the program coordinator each semester and oversees the student volunteers. The BE:WEL program was chosen because no studies have examined the program before.

Participants

This study was approved as exempt by the Chico State University Institutional Review Board prior to recruitment of participants. Participants had prior medical clearance to participate in the university physical activity service-learning program (UPASLP). The participants were purposefully recruited in groups for the amount of time they had participated in the UPASLP; first year in BE:WEL, two-four years in BE:WEL, and five or more years in BE:WEL. Due to a limited sample of BE:WEL participants, the decision to categorize by years allowed us to differentiate experiences of new and long-standing participants. All participants who gave their written consent to participate in the qualitative study were 55 years or older with a physical disability (congenital or acquired in their life). Each participant was given a pseudonym to keep their identity private. Participant demographics can be found below in Table 1.

Table 1. Participant demographics.

Participant	Ethnicity	Gender	Age	Disability	Year
Gunnar	Caucasian	Male	59	TBI and ISCI	1
Harvey	Caucasian	Male	80	Senior Mobility	1
Emily	Caucasian	Female	56	TBI	2
Gordon	Caucasian	Male	82	Stroke	2
Xavier	Hispanic	Male	55	ISCI	6
Spencer	Caucasian	Male	80	CSCI	7

Note. Year represents number of years in BE:WEL. TBI: Traumatic Brain Injury; ISCI: Incomplete Spinal Cord Injury; CSCI: Complete Spinal Cord Injury

Design

To gain an understanding of the experiences of older adults with physical disabilities in a service-learning physical activity program, multiple data sources (e.g., observations, program artifacts, and interviews) needed to be included to better understand the shared phenomenon: participation in a service-learning physical activity program. Researchers have used an exploratory qualitative approach to explore perceptions of aging adults in a community-based exercise program (Dabkowski et al., 2021). Thus, an exploratory qualitative approach was used to understand the experiences of these participants within BE:WEL in a broad context. The study design allowed the exploration of participant beliefs, motivations, attitudes, and lived experiences (Dahlberg & McCaig, 2010). To support participant perspectives, additional artifacts of the program were collected for triangulation. Collecting additional artifacts is a useful approach when little is known about the phenomenon being experienced and are less interpretive than theoretical or phenomenological approaches (Sandelowski, 2010). Where there is an interpretation of the

experience in other qualitative approaches, an exploratory descriptive approach "entails the presentation of the facts of the case in everyday language" that was conveyed by the participants in the study (Sandelowski, 2000, p. 336).

Data Collection

The first author was responsible for observations, collecting program artifacts, and conducting the interviews. Data were collected over a 7-week period, which began in early April 2018 and ended in May 2018. Multiple avenues of data collection were used throughout this study. Included data were observations, program artifacts, and semi-structured interviews.

Observations

Older adult participants in this study were observed in their program routines once a week for four weeks. Observations were used to corroborate participants' experience in BE:WEL. Attitude (e.g., having an 'off day', but remaining positive), social interaction with students, program participants, and exercise routines are examples that may have been observed. The first author's field notes were explored, bracketing (i.e., put aside any personal beliefs) any preliminary thoughts, questions, or experiences. Observations were reviewed to triangulate participant experiences and provide additional trustworthiness to the data presented. Specifically, if participants shared their enjoyment, relationships, conversations with others at the program or types of activities they engaged in, such perspectives may be validated by the first author's observations.

Program Artifacts

Workout logs containing ongoing data collection of participant's exercise sets, equipment weight, and the number of repetitions were reviewed. Volunteers took notes after each session with focused observations on the participant's mood, milestones, any notable physical or emotional changes, and ongoing health information. Conversations with their participants gave insight into mood and emotional changes. Program artifacts were collected at the end of May 2018. These artifacts were reviewed to triangulate what the participants shared about their experiences and provide additional trustworthiness to the data presented. Specifically, if a participant shared how often they came to the program, or what they typically did with a volunteer during a session, these statements were reviewed by the first author.

Interviews

Dabkowski and colleagues (2021) determine an exploratory design is beneficial to gauge participant experiences in a community-based exercise program. The authors used focus groups and interviews as a means for participants to freely discuss their experiences (Dabkowski et al., 2021). In the current study, participants also shared their experience freely. However, a question guide was created by the authors to collect participant demographics and prompt discussions (when needed) during the interviews. Interview questions included broader concepts such as, how participants heard of the program, how many years in the program, their motivation for attending, and if any changes seen or felt since beginning the program. Semi-structured interviews were held during the last two weeks of the BE:WEL program (late April through early May 2018) and audio recorded on an electronic device. Interviews lasted 30-60 minutes and were conducted with the participants in the same location as the BE:WEL program, as per participant request. The full interview guide is included in Appendix A1.

A semi-structured interview was also conducted with the program coordinator to gain their perspective on participant experiences and have a better understanding of how BE:WEL operates. The coordinator has held the position for over 5 years and knew all the participants. The interview lasted approximately 30 minutes. The full question guide is included in Appendix A2.

Data Analysis

Inductive coding or "literal coding" was used to code in the participants' own words and is "most appropriate when studies prioritize participant voice" (Saldaña, 2013, p. 91). Examples of inductive coding are referenced in the themes and subthemes in Table 2. Data analysis began with the interviewer transcribing the audio files and re-reading extensively through the data by all authors. First, horizontalization was used to group responses of the older adult participants. Reduction and elimination followed, to remove irrelevant and vague responses (Saldaña, 2013). Following Saldaña (2013) inductive coding process, the authors created themes from the common terms, shared experience, or segments of grouped data. All authors independently reviewed the themes for one month and met again to address any discrepancies until all four authors reached a consensus.

Trustworthiness was verified throughout this study by the utilization of several mechanisms: credibility, transferability, dependability, and conformability as long-established by Lincoln and Guba (1985). Credibility was verified by triangulating the data between field note observations, semi-structured interviews, workout logs, volunteer notes, experiences between participants, and the program coordinator interview. Member checks were also included in credibility because participants were able to examine their transcripts for accuracy. Transferability as achieved through providing a detailed method corresponding to the present study, including the contextual setting of BE:WEL, purposive sampling, participant demographics, interview procedures, and interview guides. Dependability was achieved using question guides for each participant, organization of data, and an inquiry audit from J.B, L.Z., and K.P. Conformability was established by kept detailed notes of the process, drafts, and journaling throughout the study.

Results

The present findings indicate subjective experiences of the six participants and are based on the specific programming of BE:WEL. Interpretations of findings are based on participant experiences. For a theme to be overarching across all participant experiences, it had to be present in each narrative (Smith et al., 2009). Three themes emerged from participant data: 1) Positive mental health, 2) Physical competence or confidence, and 3) Program vibe. The major themes, subthemes, and codes are presented in Table 2.

Positive mental health

Positive mental health was defined as any self-reported positive psychological outcome by the BE:WEL participants. Observations by the first author (GJ) noted positive changes in the participants during weekly observations. All participants described the program as giving them a sense of purpose in their lives. Shared experiences were present in perceived improvement of mental health and the positive feeling of having a routine to look forward to. Throughout the interviews, artifact reviews, and observations, each participant was seen as committed, happy, and proud to be present in BE:WEL. Smiles and conversations were seen amongst participants and their student volunteers. The atmosphere was filled with encouragement, positive talk, and connectedness. All stakeholders appeared to be excited to collaborate with each other. Previous volunteer notes and the program coordinator confirmed improvement; noting consistent attendance, positive or negative moods like happy, excited, sad, or upset, personal conversations, and decreased depressive symptoms. A relatively new participant described his experience in the program and why he felt BE:WEL gave him a sense of purpose,

Table 2. Referenced participants statements reflected in themes and subthemes.

Theme	Subthemes	Codes	
Positive mental health	Sense of purpose	Increase of mental health	
		Improved outlook	
		Mental toughness	
		Sense of purpose	
		No change	
	Empowerment	Highly motivated	
		Self-empowerment	
		Not afraid	
Physical competence or	Cognitive benefits	Increase of perceived health	
confidence		Toned muscles	
		Body awareness	
		Knowledge	
		No change	
	Successful PA	No falls	
	participation	Strength test improvements	
Program vibe	Relationship	Social	
-	building	Volunteers	
	Uniqueness	Low cost	
		Unique experiences	

Well, yeah obviously I just... there is more of a sense of you know purpose to life because like I said, I am not feeling like I am on a decline and uh I am feeling like more in charge of myself and my future and that. (Gunnar)

Feeling motivated and empowered was another shared experience among participants. Motivation was commonly found among all participants. Harvey stated, it was "...something to look forward to each week. I get up with a positive attitude and I think it is very important that the older we get to have goals and work towards them...". Emily concurred with the positive experience by expressing, "...it is a very uplifting positive experience, and it makes me want to continue to go. It is a happy place to be." The outcome of positive mental health was also expressed by Gordon about his student volunteer, "...they were motivating." To which he experienced a "good tired" (i.e., felt his workouts were a good thing to be doing) while attending BE:WEL.

A positive perspective in life was seen challenging at times. The following statement from an experienced participant emphasized the impact of not attending BE:WEL,

If I am home 2 or 3 days my mind like...well I forget things and I get bored and I am not as happy, but when I come here I feel more comfortable and confident because my mind is alert. I do not feel as stressed because I do feel stress when I'm just home. (Xavier)

From Xavier's perspective, the inability to attend BE:WEL negatively affected his mind, productivity, mood, confidence, and stress level. The volunteer notes and observations confirmed when Xavier's mindset would change. Especially when the university would be closed for spring, summer, and winter breaks, which meant BE:WEL did not operate until the university reopened after the breaks.

One participant, Spencer, shared he did not notice any psychological changes. However, he did share the same sentiment as Xavier when BE:WEL is not in session, "I miss it when it is, whenever like, when it is over and I do not have anything else to do." Overall, mental health improvements were seen in various ways by five of the six participants. The theme of positive mental health was enriched by program artifacts (e.g., volunteer notes in

files) and observations. Only one participant said no changes were perceived. Yet, the participant was observed as a motivated individual who encouraged other participants. The overall positive mental health outcomes provided several reasons to participate in a UPASLP.

Physical competence or confidence

Physical competence or confidence was defined as participants' reporting of improvements in their physical health as a result of participating in BE:WEL. Improvements were reported by participants as translation of knowledge, physical improvement, and cognitive benefits from perceived successful program participation. Participants' subjective experiences of cognitive benefits were reported as improved mindfulness of how much your body can endure during physical activity. It is a learned skill which helps with body awareness. Through observations, it was noted a few of the volunteers developed an honest bond with their participant to talk about personal (e.g., school, family, and work) and professional topics (e.g., exercises, suggestions, and support). In one conversation, it was observed that a volunteer gave advice to one of the participants. That participant described what "tricking your mind" meant to her, which related to other participants,

It is so much more than learning and trusting your strengths and things you have never thought you can do. Um,.. you know the hands-on experience, because it goes both ways. It is not just hands on for the students, you know, learning different exercises and that is what is awesome about [the student volunteer]. (Emily)

In Emily's workout log, her increased repetitions and trying new exercises were recorded. Emily believed being able to "trick your mind" helped her progress her physical activity skills in sessions.

Before attending BE:WEL, all participants attended physical therapy and rehabilitation programs. Each participant had a different adjustment period post injury or diagnosis. Xavier's recollection of his progress was the following: "The first three years were tough. You know you have to relearn everything again and you have to keep yourself afloat, but now I am able to navigate really well." Gordon is another participant who perceived he had improved in the two years of participating in BE:WEL: "I was in a wheelchair, I was at [hospital] and I could not walk. I could not do hardly anything. When I have been here, I have made major improvements". The notion of successful physical activity participation was the mention of improvements in physical health and daily activities. Like Xavier and Gordon, another's description of his success in the program was also related to mobility,

My hands are much stronger now. My upper body is much stronger...that is what I was working on. You know it goes from a simplicity of opening a bottle cap which you would be surprised when you age...Yea and uh, just lifting things around the house and, uh, just being able to do more uh definitely. (Harvey)

Whereas, successful physical activity participation was described as,

Yes, there is definitely increased stability in doing those kinds of more coordination type to get everything to work globally. Yea, it is always, I have always improved, and I pick up something more every semester. (Gunnar)

The volunteer notes supported the physical competence of Emily, logging the new information she had learned. To support the experiences of Xavier, Gunnar, and Gordon, program artifacts reflected physical confidence through workout logs. From the logs, there

were notes of the increased progression of weights and any new exercises the participant wanted to try. The participants' statements were also supported by the program coordinator. One participant perceived no physical competence or confidence. He has had experience with physical activity throughout his life,

I have, uh, my master's in physical education which focused a lot on, uh, physical therapy, exercise, that sort of thing. So, I am fairly knowledgeable, you know, about most stuff. Certainly not an expert in anything but, uh, somewhat knowledgeable. (Spencer)

Contrary to his perception, his workout log showed increased weight and repetitions during his sessions. Furthermore, he mentioned the program, "helps my muscles, keeps me toned". In their own way, each participant experienced physical competence or confidence. Providing experiences on how one can gain knowledge in a UPASLP is another way to reach more participants.

Program vibe

Program vibe captured responses in which added personal value to the program and differed from other rehabilitation or activity settings, such as relationship building and program uniqueness. Participants shared similar experiences of relationship building during their BE:WEL sessions. Interactions included personal, informational, and casual conversations with other participants, volunteers, and the program coordinator. When asked about social interactions with their student volunteer, Spencer stated, "sad because you do become acquainted and [they] are a part of your life, at least for an hour a week or two". The sentiment of Spencer expressing sad feelings when interacting with his volunteer was prominent in the observations as the sessions progressed. Perhaps, knowing he will not have the same volunteer for the next semester contributed to his perception of sadness.

When asked about conversations with other participants, Gordon described his experience as, "not really no. It is, usually I get here and I do my workout and it is time to go home." Gordon may not have had any interactions with other participants, but it could be related to his two years in the program. Contrary to Gordon, Xavier has been a part of the program for six years. He shared his perspective on how he became comfortable talking to others since starting BE:WEL,

Well, yeah just [one participant] really, um, I mean he has helped me and has even gone over to my house to help with my wheelchair brakes, and he knows where I live. So, if I have a question he is always willing to help, and everyone else, I just say hi. I do not have any problem talking to others. Before I did, that is why, here it is good for me because my mind tends to be forgetful, but it feels good to come here. I talk to [the] elderly and they forget more, but they do not do much to keep active. I do like to come and talk to others. (Xavier)

The contrasting perspectives of Gordon and Xavier pertained to differences in routine. In addition, participant adherence and longevity in BE:WEL is a factor in the differing perspectives. To bridge the missed opportunities of connectedness among participants, Gunnar suggested an idea:

...In the future, to give people an opportunity, if there would be an opportunity to give people some kind of support time. You know, maybe one day a week and say 'would you like to participate in a support group for 15 minutes of your exercise time'. (Gunnar)

One of the elements contributing to the uniqueness of BE:WEL were the student volunteers. All participants shared the same experience, volunteers were "very supportive," as stated by Harvey. Their interactions were positive because the volunteer-participant pairs would talk about personal topics such as family, work, and school. The majority of the pairs observed showed empathy and support for each other. Even though participants perceived positive experiences, there were also negative encounters. Harvey and Gunnar shared a similar negative moment while working with their volunteer, "[volunteer] do not interject too much with what I should do or better form", stated by Harvey. Since the negative experiences related to not interjecting and not feedback, the suggestion for future volunteers could be informed to provide information to participants. The volunteer pairings were positive interactions with a few suggestive comments to improve the experience for participants.

Participants shared that they felt BE:WEL was more valuable than other programs. Gordon captured the shared experiences among all participants as he described, "Physical therapists at the hospital did not have much to work with, so I just practiced sitting down and standing up. It was elementary. I wanted more challenging." The workout logs and observations of all six participants supported the notion of engaging in a more challenging program by logging new exercises, increasing their weight loads on machines or dumbbells, more time walking, more time on the stationary bike, and more stretching.

Another uniqueness of BE:WEL was the perceived benefit to everyday life. Spencer described an overarching response shared by all participants,

I just enjoy the program. It is, uh, I just feel a lot better when I do, uh you know, when I do. It really helps me, uh, do things that I normally do in my daily routine and stuff like that. So it is really helpful in that respect uh like I say I miss it. (Spencer)

The cost and atmosphere were the last elements in the uniqueness of BE:WEL. The low cost for a semester resonated with all participants, as Emily excitedly stated, "It's only \$90 a semester!". Participants felt the fee was worth it. The university campus atmosphere made the participants feel privileged to be there. Gordon shared, "I enjoy coming here. I enjoy the college environment because I taught college for a long time. Being around students keeps me very young." As a supported measure, Emily captured the essence of the BE:WEL program as,

...I have had a really positive relationship with those students who have worked one on one with me. Like I said, it has benefitted me in more ways than just physical and you know strengthening and my ability to just accept myself, and I could do more so that is cool. So social, emotional, and physical... that support you really do not anticipate getting from an exercise program, so that has been really good. (Emily)

The program vibe extended from volunteer and participant interactions to the atmosphere of the program. Participants shared the social interaction with volunteers and other participants was a fun aspect of the program. The physical challenge, perceived benefits, low program cost, and the campus atmosphere contributed to the uniqueness of BE:WEL. As Emily mentioned above, BE:WEL is more than a PA program; BE:WEL captured the essences of physical, social, and psychological aspects of life.

Discussion

This study explored the experiences of older adults with physical disabilities in a university physical activity service-learning program (UPASLP). Participating in a service-

learning program had a perceived positive impact on participants (e.g., psychologically, physically, and socially). The positive results of the study are participant and site specific, which are not representative of all university-based service-learning programs. However, the present study serves as a starting point to promote or create UPASLP to provide adults with opportunities for active engagement as they age.

The perceived physical health benefits of this UPASLP included keeping muscles toned, increased cardiovascular endurance, upper body strength, stability, balance, and activities of daily living. The results of this study add to the extensive literature on physical activity. The experiences conveyed have similar, yet different experiences where the routine of BE:WEL has become innate. Researchers have reported more physically competent individuals are more willing to adhere to PA programs and activities (Raymond & Grenier, 2013) and the BE:WEL program (according to participants) has provided ample support for participants. From the current study, we imply quality of life has improved through PA participation for older adults with spinal cord injuries, as found in previous research (Camboim et al., 2017; Langlois et al., 2012;). However, such results are subjective and specific to six individual experiences of a UPASLP. We called upon other researchers to explore the true impact of how quality of life has improved through objective measures.

Consistent with research published by Weinberger and Whitbourne (2010), the participants in BE:WEL experienced mental health improvements. The BE:WEL program provided positive mental health through increasing confidence, purpose, mood and motivation in participants. The increase of positive mental health was seen throughout all six participants, regardless of their time in BE:WEL. The consistency provides more evidence on how universities are an option for older adults with disabilities to participate in group physical activity service-learning programs. Future studies encompass measuring mental health outcomes to provide objective insight into the perceived improvements.

Previous research has also shown social connectedness as one of the main reasons for participation in physical activity programs (Capalb et al., 2012; Farrance et al., 2015; Mehra et al., 2016). However, in this study, little social interactions took place among participants versus participant-volunteer interactions. During the interviews, a desire to interact more with each other was emphasized. The program vibe also highlights the uniqueness of BE:WEL on how social interaction is a desired piece of the program. Perhaps including a support group, as suggested by Gunnar, will facilitate more conversations and a sense of social togetherness among participants. Closely related is the sense of purpose reported by participants engaging in BE:WEL. Importantly, a heightened life purpose was reported as a primary facilitator of BE:WEL adherence. The importance of purpose is a useful concept to provide PA programs for adults with physical disabilities. Participants who are supported to develop a greater sense of purpose in life may be more likely to engage in physical activity. At the same time, physical activity can contribute to a sense of purpose in life. This bidirectional relationship between sense of purpose in life and physical activity (Yemiscigil & Vlaev, 2021) is worthy of additional exploration and may serve helpful in the design and conduct of UPASLP.

The current study serves as a unique model for future university or community PA programming for older adults with physical disabilities. Conducting a similar study at a new location will provide transferability of the present study to determine if and how participant experiences differ. The present research study adds to the gap in the literature by exploring the perspectives of older adults with disabilities – specifically, perspectives on program environment, cost, location, and participant motivational factors. In addition, utilizing a client-centred approach with student-participant pairing was shown to be impactful. Service-learning programs are stepping-stones to create community-based PA programs for older adults with physical disabilities. Community-based and university programs should

consider working together to bridge programs to reach older adults with physical disabilities. Further studies using a mixed methods approach is suggested to capture experiences quantitatively.

Limitations

There were limitations to this study. Only one program was investigated, and the experiences of the participants in this program could be unique to the setting. Beyond Exercise: Wellness Enhancement for Life has never been explored as this study indicates, which intrigued the authors to explore only one program. The ages included in the study provided a glimpse of the perceptions of the older adult population in UPASLP, but individuals in different age ranges may have different perceptions of their experiences. The authors sought out purposeful sampling in willing participants to reduce bias among individuals in the same age group. The vast majority of volunteers for BE:WEL were students, most of whom were taking an introductory adapted physical activity class, or have previous experience working with individuals with disabilities, which may be difficult to reach other disciplines. As such, the students brought knowledge and experience to share with their participant. Due to the setting of BE:WEL, one semester may have been too short to be concrete in the participant's perspectives. Due to the nature of the program having new students each semester, a semester was a starting point.

Future Research

Future research may utilize a mixed-methods approach. Quantitative data of the workout logs could be statistically used to see how participants have changed over their time in BE:WEL. Quantitative data of the workout logs could be statistically used to see how participants have changed over their time in BE:WEL along with determinants of health like Kaupuzs (2012). Another research idea could be longitudinally replicating this study, following participants for a year or more. Due to the rise in participant perspectives studies, group interviews are another idea. A group discussion would explore additional experiences not mentioned in the interviews. Moreover, future research includes a more personal approach with participants by interviewing their family and friends. Lastly, looking into how a university service-learning program is translated into a community-based setting is another idea for future research.

Perspectives

Community-based programming closes the gap between clinic and community health upkeep. University service-learning programs are one way to reach vulnerable populations like older adults with disabilities. Having unique program attributes, like BE:WEL student volunteers, brings opportunity for researchers to investigate the experiences of the aforementioned population. The researchers provided positive and negative experiences of participants in a physical activity university service-learning program. This information is useful to partner communities and universities to provide a safe space for older adults with disabilities to engage in physical activity.

Author affiliations:

- ¹ University of Pittsburgh, PA, USA; gaj34@pitt.edu
- ² California State University, Chico, CA, USA; <u>ablagrave@csuchico.edu</u>; <u>kpatton@csuchico.edu</u>
- ³ Towson University, MD, USA; <u>lzuest@towson.edu</u>
- * Correspondence: Gardenia Juarez; gai34@pitt.edu; Tel.: +1 412-383-4594

Author Contributions: Conceptualization: G.A.J, J.B, L.Z, and K.P; Methodology: G.A.J, J.B, L.Z, and K.P; Formal analysis: G.A.J, J.B, L.Z, and K.P; Writing-Original Draft Preparation: G.A.J; Writing-Review and Editing: G.A.J, J.B, L.Z, and K.P.

Funding: This research received no external funding.

Acknowledgments: Thank you to all stakeholders involved in this study.

Data Availability Statement: All data generated or analyzed during this study are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Augustin, F., & Freshman, B. (2016). The effects of service-learning on college students' attitudes toward older adults. *Gerontology and Geriatrics Education*, *37*(2), 123-144. https://doi.org/10.1080/02701960.2015.1079705
- Boone, S. D., & Brausch, A. M. (2016). Physical activity, exercise motivations, depression, and nonsuicidal self-injury in youth. *Suicide and Life-Threatening Behavior*, *46*(5), 625-633. https://doi.org/10.1111/sltb.12240
- Brenes, G. A., Williamson, J. D., Messier, S. P., Rejeski, W. J., Pahor, M., Ip, E., & Penninx, B. W. J. H. (2007). Treatment of minor depression in older adults: A pilot study comparing sertraline and exercise. *Aging and Mental Health*, 11(1), 61-68. https://doi.org/10.1080/13607860600736372
- Camboim, F., Nobrega, M., Davim, R., Camboim, J., Nunes, R., & Oliveira, S. (2017).

 Benefits of physical activity in the third age for the quality of life. *Journal of Nursing Universidade Federal de Pernambuco On Line*, 11(6), 2415-2422.

 https://doi.org/10.5205/reuol.10827-96111-1-ED.1106201721
- Capalb, D. J., O'Halloran, P., & Liamputtong, P. (2012). Why older people engage in physical activity: An exploratory study of participants in a community-based walking program. *Australian Journal of Primary Health*, *20*(1), 74-78. https://doi.org/10.1071/PY12090
- Dabkowski, E., Porter, J. E., & Barbagallo, M. (2021). A thematic analysis of the perceptions of a community-based exercise program on the health and well-being of ageing adults. *Health and Social Care in the Community*, *29*(6), 1990-1997. https://doi.org/10.1111/hsc.13343
- Dahlberg, L., & McCaig, C. (2010). *Practical research and evaluation : A start-to-finish guide for practitioners*. SAGE.
- Farrance, C., Tsofliou, F., & Clark, C. (2015). Adherence to community based group exercise interventions for older people: A mixed-methods systematic review. *Preventive Medicine*, 87, 155-166. https://doi.org/10.1016/j.ypmed.2016.02.037
- Garbarino, J. T., & Lewis, L. F. (2020). The impact of a gerontology nursing course with a service-learning component on student attitudes towards working with older adults: A mixed methods study. *Nurse Education in Practice*, *42*, 102684-102684. https://doi.org/10.1016/j.nepr.2019.102684
- Gylling, A. T., Bloch-Ibenfeldt, M., Eriksen, C. S., Ziegler, A. K., Wimmelmann, C. L., Baekgaard, M., Boraxbekk, C.-J., Siebner, H. R., Mortensen, E. L., & Kjaer, M. (2020). Maintenance of muscle strength following a one-year resistance training program in older adults. *Experimental Gerontology*, 139, 1-10. https://doi.org/10.1016/j.exger.2020.111049
- Kaupuzs, A. (2012). A cross-sectional analysis of physical activity, psychological determinants and health related variables of latvian older adults. *European Journal of Adapted Physical Activity*, *5*(1), 39-52. https://doi.org/10.5507/euj.2012.004
- Langlois, F., Vu, T. T., Chasse, K., Dupuis, G., Kergoat, M. J., & Bherer, L. (2012). Benefits of physical exercise training on cognition and quality of life in frail older adults. *The Journals of Gerontology: Series B*, 68(3), 400-404. https://doi.org/10.1093/geronb/gbs069
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Mehra, S., Dadema, T., Kröse, B. J., Visser, B., Engelbert, R. H., Van Den Helder, J., & Weijs, P. J. (2016). Attitudes of older adults in a group-based exercise program toward a blended intervention; a focus-group study. *Frontiers in Psychology*, 7, 1827. https://doi.org/10.3389/fpsyg.2016.01827
- Musich, S., Wang, S. S., Hawkins, K., & Greame, C. (2017). The frequency and health benefits of physical activity for older adults. *Population Health Management*, 20(3), 199-207. https://doi.org/10.1089/pop.2016.0071
- Northey, J. M., Cherbuin, N., Pumpa, K. L., Smee, D. J., & Rattray, B. (2018). Exercise interventions for cognitive function in adults older than 50: A systematic review with

- meta-analysis. *British Journal of Sports Medicine*, *52*(3), 154-160. https://doi.org/10.1136/bjsports-2016-096587
- Olsen, P. Ø., Termannsen, A.-D., Bramming, M., Tully, M. A., & Caserotti, P. (2019). Effects of resistance training on self-reported disability in older adults with functional limitations or disability a systematic review and meta-analysis. *European Review of Aging and Physical Activity*, 16(1), 24. https://doi.org/10.1186/s11556-019-0230-5

Papadopoulou, S. K. (2020). Sarcopenia: A contemporary health problem among older adult populations. *Nutrients*, *12*(5). https://doi.org/10.3390/nu12051293

Profile of older Americans. (2021).

- https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2020ProfileOlderAmericans.Final .pdf
- Raymond, É., & Grenier, A. (2013). Participation in policy discourse: New form of exclusion for seniors with disabilities? *Canadian Journal on Aging*, *32*(2), 117-129. https://doi.org/10.1017/S0714980813000135
- Reiner, M., Niermann, C., Jekauc, D., & Woll, A. (2013). Long-term health benefits of physical activity a systematic review of longitudinal studies. *BioMed Central Public Health*, *13*(1), 813. https://doi.org/10.1186/1471-2458-13-813
- Saldaña, J. (2013). *The coding manual for qualitative researchers* (2nd ed.). London: SAGE.
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health*, 23(4), 334-340. https://doi.org/10.1002/1098-240x(200008)23:4
- Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing and Health*, *33*(1), 77-84. https://doi.org/10.1002/nur.20362
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis:* Theory, method and research. Sage.
- Waller, B., Munukka, M., Rantalainen, T., Lammentausta, E., Nieminen, M. T., Kiviranta, I., Kautiainen, H., Häkkinen, A., Kujala, U. M., & Heinonen, A. (2017). Effects of high intensity resistance aquatic training on body composition and walking speed in women with mild knee osteoarthritis: A 4-month rct with 12-month follow-up. *Osteoarthritis and Cartilage*, 25(8), 1238-1246. https://doi.org/10.1016/j.joca.2017.02.800
- Weinberger, M. I., & Whitbourne, S. K. (2010). Depressive symptoms, self-reported physical functioning, and identity in community-dwelling older adults. *Ageing International*, *35*(4), 276-285. https://doi.org/10.1007/s12126-010-9053-4
- Yemiscigil, A., & Vlaev, I. (2021). The bidirectional relationship between sense of purpose in life and physical activity: A longitudinal study. *Journal of Behavioral Medicine*, 44(5), 715-725. https://doi.org/10.1007/s10865-021-00220-2

Appendix A1

Interview Guide for Older Adults with Physical Disabilities Participant. The questions below are prompt questions for the participants:

"Can you tell me about yourself?"

"How old are you?"

"Can you tell me about your disability?

When did you acquire?

"How did you hear of BE:WEL?"

Why did you join?

What did you hope to gain?

"How long have you attended BE:WEL?"

If first year, what motivated you to start to BE:WEL?

If 2-3 years, what motivated you to return?

If >5 years, what drives you to be committed to this program?

"What does your typical day at BE:WEL look like?"

"Did you set any goals for yourself in BE:WEL?"

If yes, did you meet them?

If not, why?

"How does coming to BE:WEL make you feel?"

"Is your experience at BE:WEL different than other rehab/exercise experiences?" Please explain.

"Tell me about your experience with your student volunteer."

How did he/she make you feel?

Did you feel your volunteer consistent in attendance?

Did you feel your volunteer prepared for the sessions?

Did you feel that your volunteer was motivating? Explain.

"Did you notice any changes in yourself physically or mentally this semester?"

Did you observe any physical or mental changes in your volunteer this semester?

"Which aspects of BE:WEL help you when not in sessions?"

"Any mental skills learned from BE:WEL that help in your daily life?"

"Any physical skills learned from BE:WEL that help you in your daily life?"

"Any specific activities that help with daily activities learned from BE:WEL?"

"Does any socializing take place between you and other participants?"

If yes, can you tell me about your experience?

"Has your socializing skills in your daily life changed since participating in BE:WEL?"

"If you had to describe your overall BE:WEL experience, what would you say?" (can be positive or negative)

i.e.: better mood? More energy? Increase in self-efficacy? Identity awareness?

"Would you recommend this program to others?"

If ves, why?

If no, why not?

"Anything else you would like to share?"

"Would you continue to attend BE:WEL?"

If yes, why?

If no, why not?

Appendix A2

Interview Guide for BE:WEL Program Coordinator. The questions below are prompt questions for the program coordinator:

"Can you tell me about yourself?"

"How long have you been the BE:WEL program coordinator?"

"Can you tell me about the purpose of BE:WEL?"

Who can participant?

"What does a typical day of BE:WEL look like?"

"Have you seen any psychological changes in the participants?"

If yes, can you tell me about it?

If no, why do you think that is the case?

"Have you seen any physical changes in the participants?"

If yes, can you tell me about it?

If no, why do you think that is the case?

"Have you seen any social interactions between the participants?"

If yes, can you tell me about it?

If no, why do you think that is the case?

"What do you see in new participants versus long-term participants?"

How are their motivational levels?

Same workout routine or tries new things?

Any emotional changes?

"Have you received any feedback on the program from participants?"

"Anything else you would like to share?"

"Would you recommend this program to others?"

If yes, why?

If no, why?



@ 2023 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).