



# The Open Public Health Journal

Content list available at: <https://openpublichealthjournal.com>



## RESEARCH ARTICLE

### Perceptions of Leisure-time Physical Activity for People Living with Disabilities amidst the COVID-19 Pandemic in the City of Cape Town, South Africa

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#### Abstract:

##### Background:

Leisure time physical activity is an essential part of taking care of the body and the mind. It assists in keeping our bodies healthy and functioning. However, COVID-19 challenged the community's ability to engage in leisure time physical activity.

##### Aim:

The aim of this study was to explore and describe the perceptions of leisure-time physical activity amidst the COVID-19 pandemic in the City of Cape Town for people with disabilities.

##### Methods:

The study was conducted using a descriptive qualitative research design, making use of semi-structured interviews with open-ended questions. The study used a purposive sampling technique to recruit participants from NGOs' in the City of Cape Town townships, which caters to people with disabilities. Eight participants were recruited and interviewed for this study. The participants were free and voluntarily to participate in the study, were able to withdraw from the study at any time, and were made aware of their rights.

##### Results:

The study reported two themes which are leisure time physical activity during and post COVID-19 and leisure time physical activity support to advance participation. Results have shown that the participants had different perceptions of leisure time physical activity and they engaged in different leisure time physical activities of their own understanding. The challenges people with disabilities experienced were similar during and post the COVID-19 pandemic and they included a lack of facilities and financial support.

##### Conclusion:

The COVID-19 pandemic had a psychological and physical impact on the participants and more resources need to be made available to advance leisure time physical activity for people with disabilities.

**Keywords:** Inclusion, Leisure, LTPA, COVID-19, People with disabilities, Physical activity.

#### Article History

Received: January 31, 2023

Revised: May 08, 2023

Accepted: May 23, 2023

## 1. INTRODUCTION

The World Health Organization (WHO) classified coronavirus disease (COVID-19) a pandemic on March 11, 2020. As of March 12, 2021, over 118 million verified COVID-19 cases and over 2,621,000 linked deaths worldwide.

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In South Africa, a national lockdown had to be put in place to avoid the largest catastrophe that may occur. During the first level (Level 5: March 26, 2020, to April 30, 2020), a five-stage shutdown was implemented to flatten the curve and prepare the health system [1]. The government of South Africa imposed severe lockdown regulations, limiting movement to only essential services [2]. Public spaces for leisure and recreation, for example, beaches, open spaces, and parks, were closed until the beginning of July 2020. Within each lockdown level, the limits were loosened, walking, jogging, or cycling were

prohibited after the start of level. During level 4, physical exercise was only allowed between 6 to 9 am; only allowed within a 5 km radius of walking; however, beach activities like surfing were still prohibited [3]. South Africa is considered a low-income country with limited resources compared to Western and European countries.

It is without a doubt that the experiences of COVID-19 were different across the world. Since the vaccine roll-outs, there has been “vaccine resistance/hesitancy” specifically in South Africa. Currently (2022), in South Africa, there are 17.5M (million) people who have been vaccinated against COVID-19, and there are 32.5M doses that have been given to South Africa. Worldwide there are 4.46B (billion) people that are vaccinated against COVID-19 and 10.9B doses that have been sent out/distributed throughout the world. The first phase of South Africa’s vaccine rollout began on February 17, 2021. This phase reflected the Sisonke Trial, in which Johnson & Johnson donated 500 000 single-dose vaccines to the South African government to help frontline healthcare workers to be vaccinated more quickly [4]. In total, the country planned to vaccinate 1.25 million healthcare professionals from this initiative. Phase two began on May 17, 2021, by vaccinating healthcare workers who were not vaccinated in phase 1A and vaccinating six million adults over the age of sixty, followed by 4.8 million adults aged 50 to 59 (began July 15, 2021) and 6.9 million adults aged 40 to 50, essential workers such as teachers (began 23 June 2021). The remaining national population of 23.5 million persons between the ages of 18 and 40 were vaccinated in Phase 3 followed by children under 18 [4].

As known by all, since the COVID-19 pandemic hit, the county of South Africa, especially in the City of Cape Town province, has been hit hard with wave after wave [5]. As a result, leisure and physical activities were hindered. People’s leisure choices and preferences have changed drastically due to the aftermath of COVID-19. This has disrupted daily lives and leisure activities for all people. The distinctions between leisure activities and activities of daily living, in particular, are blurred due to people’s situational and subjective nature, more so for people with disabilities [6]. Leisure in this study is defined as free time away from their daily work and obligations people engage in for their enjoyment and peace of mind [7].

(LTPA) encompasses all physical activity related behaviour people engage in during their free time [8]. Sport and exercise are the fundamental areas of leisure time physical activity because they are specialized forms of leisure time behaviour that intentionally strive to improve physical fitness [9]. While there were many good findings, the leisure industry was among the most affected by the lockdown during COVID-19. Many sports, fitness, cultural, and non-profit organisations lost members quickly and had to close owing to financial restrictions [10]. People were allowed to participate in certain creative online sessions, but the mental impact on citizens, particularly children and teens, including people with disabilities who were socially isolated from their peers, was obvious.

People with disabilities account for about 16% of the world’s population. Nonetheless, according to the South

African Human Rights Commission, people with disabilities continue to lack access to decent health care, basic education, and economic opportunities [10]. This is intensified by South Africa’s socio-economic divisions, with economically disadvantaged populations suffering the most in times of natural catastrophes and health emergencies, such as the current COVID-19 pandemic. The demand for self-help and support for people with disabilities is greatest in many South African communities. LTPA can offer people with disabilities with social and health support during COVID-19. LTPA have numerous benefits, including lower rates of chronic illnesses, better body mass and composition, greater cardiovascular and muscular fitness, and a lower risk of fractures [11]. LTPA also help to minimise stigma, boost happiness, and enjoyment through social engagement in people with disabilities, regardless of race, class, and gender [12]. Therefore, this study takes the notion that people with disabilities in the current study can benefit from participating in LTPA during and post COVID-19 as reported above.

People with disabilities have been disproportionately affected by COVID-19 because of three factors: an elevated risk of poor outcomes from the disease directly, restricted access to public health treatment and rehabilitation, and the negative social consequences of pandemic mitigation measures [13]. People with disabilities faced barriers from the inclusion COVID-19 response, as a result of the lockdown measures imposed by countries during the COVID-19 epidemic [13]. Security personnel and law enforcement agencies used force to enforce lockdowns and curfews. Termination or postponing normal health treatment or rehabilitative services has substantially impacted persons with special health care needs. People with disabilities become dependent on family members and their caretakers when assistive technology is not prescribed, maintained, or repaired [14]. When social care is suspended, cancelled, or curtailed, people with disabilities are forced to rely on the support of their relatives to survive during these times of COVID-19 aftermath.

### **1.1. Problem Statement**

LTPA is scarce and sometimes unavailable for individuals with disabilities. Participation in LTPA has been a challenge for people with disabilities in general and has been exacerbated by the COVID-19 pandemic. There is a stigma within the South African communities, especially in the disadvantaged areas towards people with disabilities. People with disabilities are often marginalised and this poses a challenge in terms of recreation and leisure. The pandemic has presented more obstacles to the people with disabilities as everyone was locked in for a while, not only did this cause a decrease in physical activity but also an increase in noticeable mental health changes. Becoming antisocial has been seen in a lot of people during the pandemic and this does more harm in trying to get people with disabilities to participate in social events. Being in an enclosed and controlled environment has led to people with disabilities not gaining social skills and independence. The challenges faced by people with disabilities affect not only their physical health but also their mental and emotional health [15]. People with physical disabilities lack access to facilities and infrastructures within their communities. This was made

harder because of the COVID-19 restrictions and lockdown procedures. Therefore, the current study seeks to address the research question: what are the perceptions of leisure-time physical activities for people with disabilities during and post the COVID-19 pandemic?

The physical, geographic, and social environment that people with disabilities live in has a significant impact on how they participate in LTPA. These included a lack of both private and public resources, insufficient funding, and the high expense of wheelchair sport participation. Participants encounter challenges, including accessibility and availability, even when there are shared workout facilities. In other cases, a lack of amenities leads to frustration over the inability to maintain fitness levels attained while in the hospital. A lack of LTPA is caused by a variety of biological deficits, such as exhaustion, a loss of motor control, and secondary medical disorders. Another environmental factor that discourages people with disabilities from being physically active is a perceived lack of social support [16].

### 1.2. Aim

The aim of this study was to explore and describe the perceptions of leisure-time physical activity amidst the COVID-19 pandemic in the City of Cape Town for people with disabilities.

### 1.3. The Objectives of this Study were to explore

- Factors that affect participation in leisure-time physical activities during the current COVID-19 pandemic.
- Possible resources given to people with disabilities during the COVID-19 pandemic to influence participation in leisure-time physical activities.
- Support level to be given post COVID-19 pandemic to influence participation in leisure-time physical activities for people with disabilities.

## 2. LITERATURE REVIEW

Physical activity is an essential part of human development, but it could help tremendously ease the challenges faced by people with disabilities [17]. It helps improve the social, physical and mental aspects of the person's life. Adding regular exercise to the routines of people with disabilities can result in strength gains, enhanced flexibility, improved bone health, and improved endurance and cardiovascular fitness, contrary to popular belief [17]. Physical activity is fundamental for people with movement disabilities to retain their agility throughout their growth and development. People can better fight obesity and the health issues that come with it if their physical fitness is improved. Physical activity and exercise can also help to improve one's overall mood and well-being [18]. In people with special needs, regular exercise has been related to greater self-esteem, social consciousness, and self-confidence, all of which are attributes that can empower them throughout their adolescence. Interaction and engagement with peers people will give them a sense of satisfaction and unity while also allowing them to improve their communication abilities. Participating in structured sports

is an excellent illustration of this [18]. Structured sports can be a useful technique for teaching people self-control and decision-making skills.

### 2.1. Leisure-time Physical Activity Pre-COVID-19 for People with Disabilities

Physical inactivity in persons with disabilities could be a result of many factors that play a role in how their lives are lived. These factors include a lack of knowledge and skills, the person's preferences, fear, parental behaviour, negative attitudes to disability, inadequate facilities, and lack of transport, lack of programmes and staff capacity, and cost. Parents/caregivers often have little to no knowledge about their relatives' disability; hence, they cannot help them participate in physical activities at home. They also tend to behave in ways that do not allow people to explore and engage in physical activity. The parent's lack of knowledge about the person's disabilities unfortunately leads to crippling fear most times, which is harmful to the person as it enforces their differences from other able-bodied persons. In marginalised communities, there is a lack of programmes offering physical activities to people with disabilities and the parents cannot afford to pay the costs.

### 2.2. Benefits of Leisure-time Physical Activity for People with Disabilities

LTPA has been shown to enhance social connections and experiences such as meeting new individuals and increase confidence in social skills which are both significant factors associated with the quality-of-life construct [19]. Individuals with physical disabilities have been found to benefit significantly from various forms of physical activity in terms of strength and general functioning. Physical activity, from a psychological standpoint, can prove people's perceptions of their bodies, provide a way to combat negative social stereotypes and stigma commonly experienced by people with disabilities, improve emotional states, and empower people at the individual, group, and societal levels [20].

### 2.3. Leisure-time Physical Activity during COVID-19 for People with Disabilities

The restrictions imposed by COVID-19 have put a variety of difficulties and strains on the lives of people with disabilities. People with disabilities' capacity to be physically active has been hindered due to park and open space closures [21]. The closure of these important facilities led people to resort to engaging in physical activity at home. But this was not an easy decision for people with disabilities as they experienced feeling unsafe as a loss of protection from physical danger and a concern of being in an uncontrollable environment. People experienced isolation and loneliness during the COVID-19 lockdown. The ability to self-regulate thoughts, feelings, and behaviour has been proven to be impacted by loneliness. The rate in which physical activity occurs had a negative impact, potentially lowering motivation for participation [22 - 24]. According to studies, the absence of adaptable elements in the built environment can operate as both a facilitator and a barrier to physical exercise [25 - 27]. Especially in disadvantaged and developing countries where

most houses are not user-friendly for people with disabilities. The national lockdown had made it almost impossible to engage in physical activities.

### 3. METHODOLOGY

#### 3.1. Research Design

The study used qualitative descriptive design to explore the perceptions of leisure-time physical activity post-COVID-19 pandemic in the City of Cape Town for people with disabilities. Qualitative description is suited to gaining direct and theorised answers to issues of interest to researchers [28]. Qualitative descriptive designs provide a detailed description of an event in daily language [29].

#### 3.2. Sample Size and Sampling Technique

Participants were recruited in liaison with centres and Non-Governmental Organisations (NGOs) for people with disabilities in the Western Cape. There were over 17 centres identified in the Western Cape with over +150 members. The centres for persons with disabilities were day-care facilities that serve as a safe space and comfortable environment. The centres were typically designed for social welfare and social gatherings, support and advocate for the rights of people with disabilities, and did not have specific programmes. The age range for people with disabilities in these centres are from 16-60 years; however, participants from 18-60 years were recruited for this study.

The study used convenience sampling techniques to recruit and select eight participants from NGOs in the City of Cape Town townships, which caters to people with disabilities. Data was collected until deemed sufficient. Data sufficiency refers to the point in which categories appear to guide the collected data without further modification [30]. Fouché and De Vos (2011) suggested that convenience sampling could identify participants who demonstrate some qualities or processes critical to the study. However, that does not simply mean that any case can be chosen [31]. When conducting qualitative research, saturation occurs when the same topics frequently emerge during interviewing or observation [32].

#### 3.3. Inclusion and Exclusion Criteria

The study included only people with physical disabilities. The study participants were 18 years and older, stayed in the township, and had no language preference. Deaf participants were excluded as there were no sign language interpreters available during the data collection phase. Participants were excluded if they were unable to read or understand information independently to avoid participant persuasion.

#### 3.4. Data Collection and Procedures

The South African government lifted the state of disaster on 5<sup>th</sup> of April 2022 [33]. During the data collection period, South Africa recording over 1000 infections daily, with a recovery rate of +97% and over 8000 active cases in the country. Face-to-face interviews were conducted with 8 participants from an NGO for people with disabilities. A semi-structured interview guide with open-ended questions were

used to engage the participants in the topic. To strengthen the rigour of the current study, the researchers recognised the participants' cues and body language to probe further into the meanings of participants' responses during the interviews for a deeper understanding of the cues. The interview schedule consisted of open-ended semi-structured questions, which included the following questions: a). What does the term "leisure time physical activity" mean to you? b). What activities would you recommend as part of your leisure time physical activities during the COVID-19 pandemic? c). How has participation in LTPA been for you during the Covid-19 pandemic? d). What support would you require to be active in LTPA post the COVID-19 pandemic? e). In your opinion, what influences your participation level in these LTPA, during and post COVID-19 pandemic? Interviews ranged in length from 30-50 minutes. Observations and field notes formed part of data collection throughout the interview sessions.

#### 3.5. Piloting

A pilot study, which is typically a smaller-scale study that aids in planning and modifying the major study, is the initial step of the complete research methodology. It is helpful for this aim to evaluate its feasibility prior to carrying out the main study (also known as the full study or large-scale main trial) [34]. This was done by recruiting experienced qualitative research as part of the pilot study, to engage the participants in the topic before the interviews were done. This helped the researchers gain knowledge and experience of how to conduct interviews with participants and be able to interpret their body language.

#### 3.6. Data Analysis

The study's data were verbatim transcriptions of the audio recordings. For analysis, transcripts were put into the Atlas ti software. The transcriptions of the data were analysed thematically. Thematic analysis, according to Braun and Clarke [35], is a technique for finding, examining, and reporting patterns within the data, organising and presenting the data set in a rich and complete manner, and interpreting various facets of the research issue. Rapley [36], reports that recognising initial themes and concepts, locating sub-themes, using a thematic framework to the themes and sub-themes (to prevent duplication), and interpreting the themes, for example, by producing themed charts. To avoid repetition, sub-themes were combined and checked for similarities. The process of immersing oneself in the data while coding was done by the researcher consulting the research question to ensure that it served its intended goal [37]. The data was analysed using an open-ended coding technique. After discussing the themes and sub-themes that arose from the data, the researcher and a separate co-coder came to an agreement. Prior to grouping the texts to determine themes and sub-themes, the researchers first coded texts from the transcripts.

#### 3.7. Trustworthiness /Rigour

The degree of confidence in the data, interpretation, and procedures employed to ensure the quality of a study is referred to as the study's trustworthiness or rigour [38]. However, because it is spelled out in different ways in this study, the

concept is confusing. Establishing credibility, transferability, confirmability, and dependability is what trustworthiness is all about, all of which are explained how they were implemented in this study.

### 3.7.1. Credibility

The researcher employed triangulation to ensure that the research findings were trustworthy. Triangulation is a mechanism for examining a large number of different sources, methodologies, investigators, and hypotheses [38]. Credibility in this study was achieved through exploring and describing the perceptions of LTPA during and post the COVID-19 pandemic in the City of Cape Town for people with disabilities. Data was collected through semi-structured interviews with open-ended questions, and data sufficiency was achieved when 8 participants joined the study.

### 3.7.2. Transferability

The proof that the research study's findings could be applied to various locations, situations, times, and populations is used to prove transferability. The researchers employed a technique known as a thick description to establish transferability. Thick description is a strategy used by researchers to provide a comprehensive and detailed account of the research methodology and procedures [38].

### 3.7.3. Dependability

The research study's consistency and repeatability are established by dependability. A technique known as an external audit was used by the researchers to establish dependability. This entailed conducting research beyond data collection, data analysis, and research study outcomes. It is done to make sure the findings are correct and that the data collected back them up [38].

### 3.7.4. Confirmability

In qualitative research, confirmability refers to the degree to which the findings may be cross-examined by others. The researchers used the audit trail technique, which is one of the techniques for applying confirmability. This is where the researcher explained how the data was collected, analysed, and interpreted [38].

## 4. RESULTS

### 4.1. Demographic Information

All the participants have been living with disability (in wheelchairs) for 3+ years and the cause of their disability was car accidents, gunshots and strokes. All the participants live in the township, Nyanga, which is considered to be a low-income community.

#### 4.1.1. Theme 1: LTPA During and Post COVID-19

During the lockdown in various parts of the country, specifically in South Africa, leisure time physical activity was the least prioritised commodity for all people. This led to sedentary behaviour increasing during the COVID-19 pandemic [39]. The current theme reports on the events and

experiences of people with disabilities. Although the harsh realities and days of COVID-19 are behind us, the consequences are nonetheless still in our midst. In this theme, participants report their experiences and perceptions of how their LTPA was impacted during the COVID-19 pandemic.

#### 4.1.1.1. Subtheme: Perceptions of LTPA

In this subtheme, participants experienced and perceived LTPA in different ways. Below are the responses from participants in this study:

*"To me, leisure-time physical activity means spending time with other people who have a physical disability because this encourages me to live my life and be hopeful of the future". P1*

Adding to this, another participant said:

*"...for me, it means exercising in my house, lifting weights, and spending time with my disability groups". P2*

*"It is my own time to play some TV games and do gardening. I learnt that I needed to look after my health, and be aware of what is happening around me". P3*

Continuing on this, two participants reported that:

*"At the present moment, leisure-time physical activity means performing my daily living activities... such as cleaning, gardening and washing of dishes". (P4 & P5)*

*"My leisure time is when I leave the house, sweep around the yard and sit outside. There's nothing else that I do besides reading a magazine from time to time, talking to people and telling them stories on how we grew up and showing them the right ways of doing things and living life instead of doing the wrong things, such as crime and drugs". P7*

*"For my leisure time, I am currently doing nothing, but leisure time for me would be going to work". P6*

To conclude, another participant added that:

*"To me leisure time physical activity is important", it is a way I need to know how to spend my time" P8*

Participants in this study perceived LTPA differently. This is evident based on the responses reported in this subtheme. There is an aligned perception from participants about what the concept is and how it impacts them on a personal level.

#### 4.1.1.2. Subtheme: Preferred LTPA during COVID-19

The health of individuals all across the world has been compromised by the COVID-19 pandemic and the related physical and social exclusionary measures. According to research Disability and Health Related Conditions [40], people with disabilities are more likely to experience psychological discomfort than the general population and this group may also be more susceptible to infection or serious disease as a result of underlying medical conditions. Inactivity and sedentary behaviour have unfortunately been made worse by the pandemic, especially for those with impairments who were already less active than their able-bodied peers. Promoting healthy behaviours, such as LTPA, for people with disabilities is therefore crucial at this time [41]. The current subtheme reports the preferred LTPA for participants in this study:

A participant reported that:

*"I would go do mini-jogs around my house for maybe like 10 minutes. I would also try some stretching and performing some therapeutic movements on myself, as per the recommendations from my physiotherapist. Because I am in a wheelchair, I would try to kneel, go down and do some few exercises to test/strengthen my balance and coordination. With the kneeling down, I have to open my knees a bit to support my back and that would in turn allow me to do new exercises".P1*

Furthermore, this participant stated that:

*"one of the activities that I enjoy is pushing myself on my wheelchair around the area I live in because this helps me exercise my limbs and upper body. So, in doing this, I found that the people I would usually go on these "walks" with, would often get tired on the way. So, I would need people who would be eager to do this activity with me."P1*

Another participant added:

*"I play tennis, attend events with my disability groups, and play activities".P2*

*"I would just play video games on my TV, do gardening, go on "walks" with my disability group and catch up".P3*

*"But when Covid-19 hit, I could no longer attend, and was fortunate enough to be given a list of exercises I could do in the comfort of my home. I do these exercises for 30 minutes in the morning, and 30 minutes in the evening, then engage in stretches before I go to bed. I work at an after-school care, where I cook for the kids". P5*

*"Since I got injured the only leisure time I do is to sweep the yard and go to physiotherapy at the local hospital. I am worried that I do not have work to keep me distracted from my condition and I will only go for physiotherapy".P6 & P7*

And another participant reported that:

*"Ways in which I spend my time is to wash cars and clean the garden and yard at home. I also assist my neighbour where he needs help. As I said that if I do work around the house and any home activities that need to be done".P8*

Participants in this study reported their preferred LTPA during the COVID-19 pandemic. The results illustrate that people with disabilities in this study do participate in LTPA to some extent despite being confronted by COVID-9. People can learn more about leisure and the relations between, lifestyle, and society through leisure education, which can be a developmental process. Sports, gardening, and socialising with friends are among activities that might help develop abilities through leisure and recreation programs. To encourage participation in recreational and leisure activities by individuals with disabilities, numerous programs and interventions need to be put into place [42].

#### **4.1.1.3. Subtheme: Lived Experiences of COVID-19**

During the pandemic, participants felt defenseless when seeking social and medical assistance. As a result of their (people with disabilities) need for specialised tools to enable them to work comfortably, their home's small size started to

become a problem. The COVID-19 pandemic's uncertainty has been detrimental to participants' mental health. The COVID-19 regulations, as well as the support and information made accessible to people with disabilities throughout the pandemic, presented difficulties for the participants in general [43]. Participants in this study reported that:

*"...my diet was full of fats and that made me fatigue easily. So I would eat fruits and vegetables to up my energy stores, more especially green leafy vegetables. And so my eating habits played a major role in my leisure-time physical activity participation because I would eat more than I was supposed to (in relation to boredom, not really having anything else to do)."P1*

Leisure time physical activity offers an opportunity for people to develop tolerance to exercises. Continuing on this:

*"...the COVID-19 regulation made it challenging for me to play tennis and we could not train or organise and attend events as people with disabilities. During COVID-19, the isolation made it challenging to engage in our usual leisure and physical activities".P2*

Open spaces in the face of unforeseen circumstances offer an opportunity for people to be active and socialise.

*"I think I speak for everyone when I say that the isolation has hit the nation hard".P3*

To conclude this subtheme, one participant stated that:

*"During Covid-19 I had a stroke on my left side of the body. I had to collect treatment at the local clinic. I only go for physio and collect my treatment at the local treatment center. Before Covid-19 I worked in construction as part of my leisure time and physical activity".P6*

People with disabilities are disadvantaged in almost every aspect of life. Prior to COVID-19, individuals with disabilities had to battle both institutional and social hurdles. There has not been much discussion on COVID-19's different needs and inclusive solutions since it arrived, regarding LTPA.

#### **4.1.2. Theme 2: LTPA Support to Advance Participation**

People's sedentary habits and inactivity, including people with disabilities who were previously less active than counterpart able bodies, have been made worse by the COVID-19 epidemic. Therefore, it is crucial to consider how to maintain and increase their LTPA [41]. In this theme, participants reported what keeps them motivated, what influences their LTPA and the type of support the participants need to take part in their leisure time physical activities.

##### **4.1.2.1. Subtheme: Influential Factors for Participating in LTPA**

People with disabilities have challenges engaging in leisure time physical activity as they are faced with issues of lack of resources, facilities, financial assistance and more [44]. These obstacles are not only brought on by the lack of resources, they are also exacerbated by lack of knowledge, unfavourable social attitudes, the risk of violence, prejudice, and stigma, all of which limit opportunities for people with physical disabilities

[45]. Participants reported their experience and perceptions on this sub-theme stating that:

One of the participants stated that:

*“During COVID-19, factors that influenced my participation included isolation, challenges of eating healthy, spaces to engage in physical activity as our homes are not designed for people with disabilities, and anxieties around catching the pandemic”.***P1**

Additionally, another participant said:

*“For post pandemic, the lack of resources and open facilities, including the lack of financial support are all the factors that can make participation incredibly challenging”.***P2**

One participant boldly said that:

*“I do not need any resources to influence my participation”.***P8**

In this study, participants reported that their participation is influenced by some factors. These factors are noted to be overcome with proper intervention and planning. Accessibility should be tailored to their specific needs, people with disabilities are able to engage in physical activities. The value of engaging in modified physical activities for the individual should not be underestimated, especially given that health outcomes for people with disabilities generally appear to be worse than those of the general population.

#### **4.1.2.2. Subtheme: Behaviour Modification**

In this sub-theme, participants were asked what support they needed to advance their participation in LTPA and how their behaviour was modified or changed during the LTPA participation. Below are the responses that the participants in the study gave to this question:

*“After the pandemic, I still had reservations because then I still was not sure in terms of contracting the virus and how my body would react to it. I am one of the members that go around my community to make my fellow people understand that even if we are disabled, we still need to engage in some leisure activities to keep our bodies strong. I decreased my screen time and started to do more gardening around the house.”***P3**

*“I was struggling at first to be motivated to follow the exercise sessions given to me by my physiotherapist, because I fatigued easily and quickly”.***P5**

*“What will influence my participation would be to assist my family where needed to not see them struggling and also to better my condition and not have to think about the pain I get sometimes. What influences me to go to physiotherapy is to get better and to get back to working. I do not like sitting around and not doing anything as I think too much about the pain I feel sometimes when sitting at home.”***P6**

*“What influences my current leisure time is to keep my body active and to exercise my legs and keep myself busy.”***P7**

For people with physical disabilities or chronic diseases, behaviour modification provides immediate health benefits. Increasing physical activity is also regarded as a secondary (reducing or preventing long-term effects of an established

health problem or disease) and tertiary (addressing the issues of an established medical condition or disease by restoring function and minimizing disease-related complications) prevention strategy [46].

#### **4.1.2.3. Subtheme: Support Level to become Active in LTPA**

Compared to individuals without disabilities, people with disabilities are less active and have a higher burden of diseases. Participation in LTPA is associated with improved health [47]. People with physical disabilities may encounter intrapersonal, interpersonal, and environmental obstacles to LTPA. Barriers like motivation, lack of social support and physical obstacles in the built or natural environment are all experienced by people with disabilities. However, LTPA can offer people with disabilities exhibit improved physical and emotional health as well as enhanced social bonds [48]. Participants in this sub theme reported that:

*“There are some people in my disability group that need wheelchairs. We also need a facility that has enough space for us and resources that will help us participate in sports. For example, sports equipment, and professionals with experience of working with people with disabilities, and we would also need support with finances”.***P2**

*“I would like for my family to understand and be patient with me as I did not bring this situation to myself. I would also love to find a job fully catered for people who have had a stroke, to earn a living again”.***P4**

One of the participants stated that:

*“I am involved in a certain organisation where they cater for persons with disabilities. We already do not have open facilities catering to people with disabilities, so we were always cooped up in our houses, with the only salvation being our family members who are well enough to engage in exercise with us. with the organisation I am involved with, we could do with more exposure and financial injection of capital. With that we could reach people from neighbouring communities to learn of the benefits of exercise, the peace that comes with it and the pain/discomfort relief it provides”.***P3**

In conclusion, providing support to people with disabilities to partake in LTPA is important as the results have shown. Participants report their level of assistance and devices, such as wheelchairs, to be able to take part in the provided activities in their communities. Their level of support varies as reported in the above subtheme. Having support allows for participants to be motivated daily and improve their mental, physical and social health.

## **5. ETHICAL APPROVAL AND CONSENT**

The study received ethics clearance from Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of the Western Cape to conduct this study (HS/22/5/40). The study followed the Helsinki ethical principles. Before data collection, permission to recruit participants from the NGOs involved was sought. An MOU between the researcher and NGOs was drafted for liaison between the two parties. The participants were fully informed of the study, its objectives, requirements, and written consent

for participating was requested and accepted. The participants were free and voluntary to participate in the study, able to withdraw anytime, and were made aware of their human rights. The information given by participants was kept confidential and their identity was protected at all times as participants were anonymous with participant IDs. There were no anticipated risks in the study, however, in the instance that participants felt overwhelmed, triggered and uncomfortable, professional service was assigned to participants that may have felt emotionally triggered. Data collected will be stored for a limited time only at UWC, preferably 5 years, where only the researchers and study supervisors will be able to access it. It is important to note that this study was shared with all participants prior to public dissemination. It is with hope that the results of the study will be published in an accredited journal and a peer reviewed journal.

## 6. DISCUSSION

This paper aimed to explore the perceptions of leisure time physical activity on people with disabilities in the City of Cape Town during and post Covid-19. Tables 1 and 2 illustrates an overview of the participants' profile and the study's overview results. Leisure time physical activity encompasses all physical activity related behaviour people engage in during their free time [9]. Results showed how each participant in this study perceived and experienced LTPA during and post the COVID-19. In the findings, participants of this study reported

different support levels needed to participate in LTPA. The result illustrates that people with disabilities in this study do participate in LTPA to some extent despite being confronted by the COVID-19 pandemic. From the results of the study, the most prominent issue that the participants were concerned about is the lack of support from the government, with regard to assistive devices to improve their daily living and increase their participation in LTPA at the local community centres.

Accessing healthcare services and support is extremely difficult for people with disabilities, especially those living in low- and middle-income nations. People with disabilities are more marginalised and excluded and this has been evident during the COVID-19 pandemic. Persons with disabilities are unable to access healthcare facilities, get treatment plans or rehabilitation, or obtain medicine during the COVID-19 pandemic [49]. Participants reported their level of assistance and devices, such as wheelchairs, to be able to take part in the provided activities in their communities. In South Africa, people with disabilities are still unable to gain access to healthcare facilities and receive their medication [50]. Many South Africans with disabilities live in areas that are not accessible *via* public transportation therefore making it difficult to receive any medical help when needed. The results show the participants were greatly affected by the COVID-19 pandemic as the restrictions, such as the lockdown, affected the participants daily living and LTPA.

**Table 1. Demographic profile of participants in the study.**

Variables	Characteristics
P1	Male, 45, African, holds a Diploma
P2	Male, 32, Coloured, Grade 10
P3	Male, 27, African, Matric certificate
P4	Female, 35, African, Grade 10
P5	Male, 41, Coloured, Matric
P6	Female, 50, African, Diploma
P7	Female, 39, Coloured, Grade 11
P8	Male, 51, African, Grade 9

**Table 2. Themes and Sub-themes overview.**

Themes	Sub-themes	Quotations
LTPA during and post COVID-19	Perceptions of LTPA	<i>"My leisure time is when I leave the house, sweep around the yard and sit outside. There's nothing else that I do besides reading a magazine from time to time, talking to people and telling them stories on how we grew up and showing them the right ways of doing things and living life instead of doing the wrong things, such as crime and drugs."</i> (P7)
	Preferred LTPA during COVID-19	<i>"I would also try some stretching and performing some therapeutic movements on myself, as per recommendations from my physiotherapist."</i> (P1)
	Lived experiences of COVID-19	<i>"During COVID-19, factors that influenced participation included isolation, challenges of eating healthy, spaces to engage in physical activity as our homes are not designed for people with disabilities, and anxieties around catching the pandemic."</i> (P1)
LTPA support to advance participation	Influential factors for participating in LTPA	<i>"For post pandemic, the lack of resources and open facilities, including the lack of financial support are all the factors that made participation incredibly challenging"</i> . (P2)
	Behaviour modification	<i>"I decreased my screen time and started to do more gardening around the house"</i> . (P3)
	Support level to become active in LTPA	<i>"There are some people in my disability group that need wheelchairs. We also need a facility that has enough space for us and resources that will help us participate in sports."</i> (P2)

## RECOMMENDATIONS AND CONCLUSION

Having local community centres or government donation assistance devices to the communities that need them for the participants to take part in their LTPA would be very helpful and allow individuals to feel more independent in their daily life. This has the following implications: Leisure service providers are urged to offer programs that enable participants to learn new skills while participating in activities. To guarantee that their needs are considered, youth should be at the forefront of program planning. To promote peer interactions and role modelling, the type of disability that adolescents live with should be considered. This study concludes that the perceptions of leisure time physical activity among people with disabilities were affected by the COVID-19 pandemic. The researchers conclude that COVID-19 did have a psychological and physical effect on people with disabilities and their supporting systems and families. The perceptions and experiences that the study shows can be used in future research for further studies and effectiveness.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study received ethics clearance from the Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of the Western Cape to conduct this study (HS/22/5/40).

## HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All procedures performed in studies involving human participants were in accordance with the ethical standards of institutional and/or research committee and with the 1975 Declaration of Helsinki, as revised in 2013.

## CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

## STANDARDS OF REPORTING

COREQ guidelines were followed.

## AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author [M.M] upon reasonable request.

## FUNDING

This study was funded by World Leisure Organization, Funder ID: (Special Grant).

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

## ACKNOWLEDGEMENTS

The authors wish to acknowledge the Vukusenzele NGO and all the participants who participated in this study.

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