

# Sport Participation among Persons with Disabilities during the COVID-19 Pandemic

Suveshnee Munien

ORCID iD: <https://orcid.org/0000-0003-1976-234X>

## Abstract

The COVID-19 pandemic has disrupted participation in sports activities, including sport therapy. Measures to curb the spread of the virus (including the lockdown and social distancing) has placed persons with disabilities at a higher level of risk of being further excluded from participation in sport-related activities, which are often central to maintaining their health and well-being. This paper undertakes a desktop analysis approach to examine how the COVID-19 pandemic has impacted persons with disabilities in relation to the requisite sporting activities, inclusion and participation, types of activities involved, and identification of specific needs. Additionally, the closure of specialised sports facilities, lack of access to trainers and sports therapists and the concomitant effects on physical and psychological health and well-being are assessed. While many trainers have been offering online training, this poses challenges for persons with different disabilities, which are examined as well. Responses to address the sporting needs of persons with disabilities are also identified. Finally, the paper forwards recommendations about how the needs of persons with varying disabilities should be catered for as restrictions ease, including how to ensure their safety as facilities re-open and facilitate opportunities to encourage participation in sports activities.

**Keywords:** COVID-19, disabilities, sports participation, health and well-being, physical activity

## **Introduction**

Unquestionably, the Coronavirus Disease 2019 (COVID-19) pandemic has sparked large scale impacts globally; the rise in infection and death rates has catapulted the world into a new state of isolation and growing paranoia, coining the term *social distancing*. Further restrictions associated with trade, socialising, travel and sport have had unparalleled impacts on socio-economic well-being. These impacts are experienced disproportionately across the globe (Ataguba 2020; Cash & Patel 2020; Millett, Jones, Benkeser, Baral, Mercer, Beyrer, Honermann, Lankiewicz, Mena, Crowley & Sherwood 2020), with rapid spikes in infection and death rates across developed nations. In contrast, developing nations display delayed yet equally devastating figures, which is compounded by further complexities associated with limited economic activity and historic poverty-related challenges (Watermeyer, Swartz, Lorenzo, Schiender & Priestley 2006). Amidst these tangible outcomes, concerns over the psychosocial impacts are steadily escalating (Bhuiyan, Sakib, Pakpour, Griffiths & Mamum 2020; Brooks, Webster, Smith, Woodland, Wessely, Greenberg, & Rubin 2020; Karnon, 2020; Kazmi, Hasan, Talib & Saxena 2020; Hao, Tan, Jiang, Zhang, Zhao, Zou, Hu, Luo, Jiang, McIntyre & Tran 2020; Sood 2020; Wang, Pan, Wan, Tan, Xu, McIntyre, Choo, Tran, Ho, Sharma & Ho 2020). The COVID-19 pandemic has and continues to transform all aspects of life, highlighting the need for social distancing and other restrictions (Swenor 2020; United Nations [UN] 2020a; World Health Organisation [WHO] 2020). However, the prolonged isolation, restrictions, and social distancing may have unwanted consequences, especially among marginalised, especially persons with disabilities (Armitage & Nellums 2020; den Houting 2020; Lund & Ayers 2020; Singh 2020; UN 2020a; 2020b; WHO 2020).

The looming reality that social distancing and associated restrictions may be the ‘new normal’ in these COVID-19 moments are undeniable. This raises concern since the lived experiences of the ‘new normal are varied because even under pre-COVID-19 circumstances, persons with disabilities experienced exclusionary arrangements (Barnes & Mercer 2005; Chermak 1990; Van De Ven, Post, De Witte & van den Heuvel 2005; Ware, Hopper, Tugenberg, Dickey & Fisher 2007). This critical is affording adequate support and representation of persons with different disabilities, especially given the calls for preparedness and response plans to be inclusive and ‘leave nobody behind’. In addition, the stigmatisation of COVID-19 is widespread; this could worsen the experiences of many disabled groups who are already subjected to

various forms of social exclusion, discrimination and stigmatisation (Armitage & Nellums 2020; Banerjee 2020; Lin 2020). There is also a tendency to homogenise types of disabilities when designing effective policies, management and response plans (McMaugh 2011). In this regard, the diversity of disabilities may be underrepresented in preparedness and response plans. Further restrictions and continued social distancing may have devastating impacts on the health and well-being of persons with disabilities (UN 2020a; 2020b; WHO 2020). In this regard, the UN (2020a; 2020b) and WHO (2020) set out various guidelines for the care, treatment, protection and promotion of rights, inclusion and, prioritisation of persons with disabilities. The recognition that these individuals may be classified as having higher levels of risk during the pandemic is echoed across various social, political and government agencies (Shakespeare, Ndagire & Seketi 2021; United Nations International Children's Fund [UNICEF] 2020). The concerns over adequate and appropriate representations of persons with disabilities stem from the historic inadequacies witnessed in relation to pandemic preparedness and response plans (Campbell, Gilyard, Sinclair, Stenberg & Kalies 2009; Singh 2020; UN 2020a; WHO 2020). Campbell *et al.* (2009) highlight that emergency planning and preparedness plans inadequately represent the needs of persons with disabilities, which is worsened in developing countries due to inadequate public and clinical health infrastructure (Oshitani, Kamigaki & Suzuki 2008).

Aside from the many COVID-19-related restrictions and regulations, engagement in sport is severely limited and, in most cases, prohibited. As a result, a series of challenges arise for persons with disabilities, specifically those dependent on physical activity and sport therapy as rehabilitation. Participation in sport-related activities highlights a positive impact on the holistic well-being of persons with disabilities (Kesumawati, Rahayu & Rahayu 2018). In addition, sports participation is claimed to enhance social cohesion and integration (Blauwet & Willick 2012; Seeland & Nicolè 2006; Southby 2013; Ware, Hopper, Tugenberg, Dickey & Fisher 2008). Thus, further restrictions due to COVID-19 may lead persons with disabilities into further isolation.

The impacts of COVID-19 are still poorly understood, and although research highlights some of the more immediate experiences (McKibbin & Fernando 2020; Wenham, Smith & Morgan 2020), the long-term consequences are yet to be unpacked. This article argues that restricted access and participation in sport-related activities have and will continue to have severe

consequences on the health and well-being of persons with disabilities. Through a desktop analysis focusing on persons with disabilities, this article highlights the challenges associated with accessing some of the interim and remedial measures and forwards recommendations.

## **Disabilities in the Time of COVID-19**

There are more than 1 billion people with disabilities across the world (Armitage & Nellums 2020), with more than 690 million located in Asia and the Pacific (UN Economic and Social Commission for Asia and the Pacific [UNESCAP] 2020). It is concerning to note that these areas also show alarming rates of COVID-19 infections and deaths. During a rapidly intensifying global pandemic such as COVID-19, concerns over the well-being of marginalised groups are justifiable. The UNICEF (2020) further acknowledge that persons with disabilities are underrepresented among marginalised groups living in poverty. This raises grave concern over the well-being of persons living with disabilities and in poverty. Campbell *et al.* (2009) rightfully point out that there is limited data unpacking the experiences of pandemics among persons with disabilities, and they further argue that these individuals may be at higher risk given the disruptions to their care.

In relation to COVID-19, unlike the Severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) outbreaks, the WHO and UN have released several guidelines on the rights, treatment and care, and protection of persons with disabilities (United Nations Conventions of the Rights of Persons with Disabilities [UNCRPD] 2006 UN 2020a; 2020b; WHO 2020). However, the extent to which these are incorporated into national emergency response and preparedness plans will differ across countries and is informed by socio-economic well-being, governance structures, and available resources and infrastructure. The WHO guidelines recommend interventions to ensure that persons with disabilities are always able to access ‘healthcare services, water and sanitation services and public health information they require’ (WHO 2020:1). Interestingly, the WHO (2020) further highlight the following reasons for persons with disabilities being at higher risk to COVID 19 infections:

- barriers to practising basic hygiene, regular sanitisation and compliance with safety regulations;

- limited ability to maintain social distancing as a result of residing in care facilities or being dependent on live assistance;
- reliance on touch for mobility and communication;
- disruptions to the care and management regimes due to COVID-19 restrictions and regulations;
- previous health conditions; and
- physical and institutional barriers constraining access to public health facilities and information.

In countries like South Africa, many communities (especially the informal and rural) still do not have access to adequate water and sanitation, making them more vulnerable due to limited capacity to practice basic hygiene. For example, in instances where water has to be acquired (from communal/shared stand-pipes and boreholes, rivers etc.), persons with physical disabilities that have limited mobility may face an unfair burden in protecting themselves against COVID-19. Similar challenges are noted with accessing health care, basic services, personal protective equipment (PPE), food and other medical supplies (Buckley 2020; Hopman, Allegranzi & Mehtar 2020; McKibbin & Fernando 2020; Siedner, Kraemer, Meyer, Harling, Mngomezulu, Gabela, Dlamini, Gareta, Majazi, Ngwenya & Seeley 2020). Other issues are raised by Lund & Ayers (2020), who warn of possible health care rationing since COVID-19 infections grow at alarming rates across the globe, where even developed and well-resourced countries have surpassed the ability to meet the demand of health care and supplies. The authors also caution that should the rationing be formalised, persons with disabilities may be severely under-represented.

Singh (2020) draws our attention to disability ethics by emphasising structured discrimination in COVID-19 responses, where the lives of persons who are elderly, disabled, immunocompromised, and those with comorbidities were given less attention in comparison to persons who are younger, able-bodied and those persons without comorbidities. This is further evidenced by the accounts in mainstream media of patient profiling when administering care within the COVID-19 hotspots across the world (Arora & Arora 2020; Leclerc, Donat, Donat, Pasquier, Libert, Schaeffer, D'Aranda, Cotte, Fontaine, Perri-gault & Michel 2020). Equally important are issues of equity and equality when accessing health care and other supplies; these debates become more complicated in developing countries that are grappling with historic and geographic

resource disproportionality (Singh 2020). Risk across disability types may also differ, for example, persons with developmental disabilities are characterised as being the most vulnerable due to comorbidities, such as diabetes, respiratory diseases and the long-term use of psychotropic drugs, thus, increasing their vulnerability and severity of COVID-19 (Hassiotis, Ali, Courtemanche, Lunskey, McIntyre, Napolitano, van der Nagel & Werner 2020). Clearly, there are differences within categories; yet the plight of persons with disabilities are homogenised within response plans. This demonstrates our under-preparedness and shows that marginalised groups are still plagued with services that fail to recognise and respond adequately to their heterogeneity, especially during crises such as the covid-19 pandemic. The following sections highlight the foremost impacts on persons with disabilities during COVID-19 related regulations and in relation to physical activity and sports participation in particular.

## **COVID-19 Regulations and Well-being**

The impacts of COVID-19 restrictions and regulations are grossly underestimated<sup>1</sup>. Amidst the fear and anxiety over the pandemic, there was a wave of activity around acquiring food, medical supplies, and PPE in preparation of lockdowns. Undoubtedly, many persons with disabilities may have been sidelined in this process. Swenor (2020) indicates that most communication around COVID-19 risks, regulations, inventions and available support, amongst others, in mainstream media may not have been accessible or suitable for individuals with specific disabilities. Swenor (2020) draws particular attention to persons with hearing, sight, and speech-related disabilities. The UNICEF (2020) warns that some groups may not have received adequate, accessible information on the prevention and protection against the virus, thereby increasing the risk of exposure to the pandemic.

Another example is the prescribed use of PPE, such as masks and gloves (key recommendations to curtail the spread of COVID-19), which are physically practical and feasible for many persons with disabilities (UNICEF 2020). Likewise, regulations suggesting the practice of regular basic hygiene and sanitation (for example, washing and sanitising hands) is a challenge for

---

<sup>1</sup> The UN highlights the case of a 16 year old cerebral palsy child in China who died due to being left alone after both parents were quarantined (UN 2020a).

many with limited mobility (Swenor 2020; UN 2020a; WHO 2020). More concerning are the impacts of the social distancing regulations since many individuals with disabilities are dependent on live assistance for activities of daily living and treatment for their physical and mental well-being (UNCRPD 2006). There are reports of significant disruptions in the care and management of persons with disabilities during periods of social distancing (WHO 2020; UN 2020b). These disruptions contributed to the challenges in accessing medical care and supplies, physical therapy, assistance with essential purchases, personal hygiene and communication. Falvey, Krafft & Kornetti (2020) describe the closure of clinics and care centres as paradoxical since the services offered by these facilities may, in fact, lessen the burden of the pandemic. This applies to persons with disabilities who experience significant disruptions to care and treatment, concomitantly rendering them more susceptible to the virus.

den Houting (2020) highlights the challenges experienced by persons with disabilities as a consequence of change of routine, panic over supplies and assistance, and increased isolation due to social distancing. Lee (2020) argues that the plight of children, especially those with mental and physical disabilities, amidst these disruptions is severely neglected and underestimated in COVID-19 emergency preparedness and response plans. Additionally, disruptions to treatment and care may be more pronounced among children with special needs. The closure of schools, gyms, public sport facilities, and treatment centres may have resulted in significant disruptions to their care and therapy routines. In the absence of temporary and ad hoc support and care measures, their well-being and human rights may have been compromised. Similarly, it is noted that the plight of athletes with disabilities may be worsened due to limited participation in sport and physical therapy (Dantas, Dantas, Dantas Júnior, Oliveira Neto & Gorla 2020). In addition, to the higher risk of infections due to their pathologies, comorbidities, and immunosuppressive medication, persons with disabilities may also experience unique and devastating manifestations of COVID-19 (Dantas *et al.* 2020).

Other studies purport increased levels of stress and anxiety, depression, and suicide due to social distancing, lockdowns, and the pandemic in general (Brooks *et al.* 2020; Catty 2020; Karnon 2020; Kazmi *et al.* 2020; Millet *et al.* 2020). Brooks *et al.* (2020) use evidence from past pandemics to warn that staying home during the pandemic for lengthy periods is likely to cause long-term distress, anger and confusion. Hassiotis *et al.* (2020) suggest

that persons with developmental disabilities may experience these psychosocial dysfunctions at increased intensity, given their inherent cognitive and conception difficulties. Clearly, the psychological impacts may be worsened among persons with disabilities, especially those with limited support systems and dependent on live assistance, and those who are in complete isolation. The UNICEF (2020) draws our attention to persons in abusive relationships and emphasise that these individuals may experience enhanced psychological distress due to lockdowns; in these instances, persons with disabilities are seen to be at higher risk of danger since their ability to protect themselves or seek help may be severely constrained by the type of disability.

### **Sport Participation during COVID-19**

The UN (2020b:1) underscores the importance of sport and asserts: ‘Through sport, various social groups are able to play a more central role towards social transformation and development, particularly in divided societies. Within this context, sport is used as a tool for creating learning opportunities and accessing often marginal or at-risk populations’. Adaptive sport for persons with disabilities is a rapidly growing sector and includes activities such as tennis, wheelchair basketball and volleyball, golf, swimming, paddling and skiing. Blauwett and Willick (2012) emphasise participation in such sport as a stimulus for self-confidence and efficacy as well as improvements in morale and perceived quality of life amongst persons with disabilities. Sport can be used as a tool to promote social integration and the rights of persons with disabilities (Blauwett & Willick 2020; Murphy & Carbone 2008). Southby (2013) suggests that sport fandom, that is, attending and/or viewing live events can be a valuable tool to establish social identities, belonging and facilitating social inclusion, especially among scholars with learning disabilities. Ion-Ene, Roşu and Neofit (2014) highlight improved development, motor and tactile-kinesthetic skills; social integration; and self-worth as some of the many benefits of Judo amongst children with visual disabilities. Murphy and Carbone (2008:1057) state that ‘the participation of children with disabilities in sports and recreational activities promotes inclusion, minimises deconditioning, optimises physical functioning, and enhances overall well-being’.

The importance of sport participation, particularly amongst persons with disabilities, has been widely acknowledged with several benefits. However, little consideration for these aspects is reflected in COVID-19

responses. In relation to COVID-19, Falvey *et al.* (2020) suggest that participation in rehabilitative physical and adaptive sport may improve functional activities and could potentially make a difference in surviving or succumbing to COVID-19 infections. They further argue that providing these services as part of the care and treatment regimes of persons with disabilities can reduce the risk of COVID infection and hospitalisation (Falvey *et al.* 2020). While the risk of contact-based sport and physical therapy is acknowledged, alternative measures can provide some relief in the interim to lessen the burden of disruptions in care and therapy.

Chen, Mao, Nassis, Harmer, Ainsworth and Li (2020) indicate that there has been an increase in online guided fitness programmes. Some level of creativity is required in establishing routines and programmes across disability types due to social distancing. In this regard, recorded messages, do-it-yourself videos on yoga, Judo, taekwondo, aerobics, and functional training may assist in encouraging home-based therapy and physical activity. This could also assist in lessening the effect of emotional disorders. Shahidi, Williams and Hassani (2020) show that the introduction of circus arts offers a fun alternate to maintaining musculoskeletal and cardiovascular health. Other opportunities for sport participation during COVID-19 include *Twitch*, an online gaming platform to view and engage in sport-related activities, including football and Formula One racing. Via the *Twitch* platform, participants can view and engage with other users, which could assist in providing some level of support and social interaction. Initiatives such as ‘Appetite for Life’ and ‘SIMPLE Movement’ are programmes specifically designed to provide support for physical activity among children while at home (Shahidi *et al.* 2020); however, representation of children with disabilities is limited. It should also be noted that the use of online tools and social media may be determined by the availability of family and support systems to facilitate use and the level and type of disability (WHO 2020). Furthermore, online tools and videos should be used with caution and based on the guidance of trained professionals since some applications may be inappropriate or even harmful for specific disabilities (Murphy & Carbone 2008; Shahidi *et al.* 2020; Wilhite & Shank 2009).

## **Reflections and Recommendations**

Often in crises situations, the complexities and gaps in our societies become more apparent. With regard to COVID-19, the efficacy and functionality of

health infrastructure were crucial. Access to health care has and continues to plague many developing countries. The COVID-19 pandemic has exacerbated these challenges and reinforced negative effects for persons with disabilities. Unsurprisingly, access to health care services remains a critical factor in all preparedness and response plans. While the limited number of hospitals, clinics and health care professionals are acknowledged, an important recommendation is to increase investment in health care facilities. In this regard, the provision of mobile health care services that cater for the needs of persons with disabilities may offer some much-needed relief, especially to those who are immobile, dependent on public and assisted transport services, and in remote and rural communities. This option could be more easily attainable in comparison to increasing the number of constructed hospitals and clinics. Part of the mobile health care services portfolio offering should include accessible information on participating in sport and physical exercises. This will require trained health care professionals to provide the relevant support, inclusive of being sensitive to different disabilities. It would be helpful to include trained physical and psychotherapists in the health professional team staffing these mobile health centres.

According to Campbell *et al.* (2009), few emergency plans adequately meet the needs of persons with disabilities before, during and after a crisis. Similarly, Singh (2020) argues the importance of social justice and ethics, advocating for improved representation of all groups, especially persons with disabilities, in relation to emergency plans. Sport-related activities, particularly sport therapy during lockdowns and in the context of physical and social distancing, needs specific attention. The needs of those in fragility and care facilities may have been compromised by these regulations. The need for participation in sport-related activities for the treatment of persons with disabilities was not appropriately unpacked in the regulations. Consequently, these impacts are still being experienced and suggest that long-term implications for persons with disabilities have not been considered in the response plans. Since the duration of the pandemic and associated disruptions is unclear, policies and interventions to curb the spread of the virus and enforce social distancing protocols need to be revised to ensure sensitivity to disability issues. From the perspective of sports and physical activity participation, mechanisms need to be in place to assist persons with disabilities in continuing with these activities, especially when it is part of their treatment. Inclusive post-pandemic plans should, therefore, prioritise the needs of these individuals

whose care and treatment was interrupted. Moreover, the importance of sport in relation to psychological wellness has been wholly underestimated amidst this pandemic. Participation in sport-related activities should be seen as necessary in rehabilitation and remedial plans during and post the COVID-19 pandemic.

The UNESCAP (2020:1-2) highlight the links with the Sustainable Development Goals (SDGs) 1, 3 8, 10, 11 and 16, specifically, in the following recommendations for improved representation of persons with disabilities:

- Disability-inclusive responses through improved consultation and partnerships;
- Continued access to all goods and services that support the well-being of persons with disabilities;
- The delivery of all public information in accessible formats; and
- Mechanisms to safeguard income security and livelihoods of persons with disabilities.

It is imperative to have adequate representation of persons with disabilities in planning committees to prioritise the integration and adaption requirements of persons with disabilities in COVID-19 emergency response and preparedness plans as well as post-COVID-19 recovery plans. Creating spaces (including virtual interactions) to engage with persons with disabilities is essential to frame sports and physical activities that meet the needs of persons with disabilities. Additionally, persons with disabilities can be provided with the necessary infrastructure and support to facilitate some of the online training. Persons with disabilities can also be involved in developing and implementing appropriate videos, programmes and, training routines to enable participation. This could include contributing to innovations and technology development that will be of benefit even after the pandemic.

The plight of children and women with disabilities is underscored by Wenham *et al.* (2020). Given that resources may be severely constrained during these times of the state of disasters and emergencies, particularly within developing countries, establishing community-based response systems may lessen the burden on the state and concomitantly assist in establishing social networks and support systems. As a result, specific plans that focus on making social services, health care and sites of recreation more accessible to all persons with disabilities, inclusive of children and women. However, this will involve

some initial investment in training and skilling local communities on how to better respond to such pandemics in the future. Establishing community-based systems may also provide improved surveillance on the spread of such pandemics, especially in remote areas (Campbell *et al.* 2009).

Swenor (2020) shows that telehealth was effective in the United States of America in providing some persons with disabilities access to health care during the COVID-19 outbreak. The ability to communicate with trained health care professionals may provide some remediation to the varied impacts, especially stress, anxiety and depression. Likewise, telehealth may be expanded and used to guide home-based sport and/ or physical therapy, especially among persons who have daily treatment requirements; however, this form of assisted therapy may only be suitable to a select few (Falvey *et al.* 2020).

Equally important are including persons with disabilities who reside in specialised facilities. It is disturbing to note that in many countries, the rates of COVID-19 infections within these care facilities were alarming (McMichael, Currie, Clark, Pogojans, Kay, Schwatz, Lewis, Baer, Kawakami, Lukoff & Ferro 2020; Remuzzi & Remuzzi 2020; UNICEF 2020; Wang, Li, Barbrino, Gauthier, Brodaty, Molinuevo, Xie, Sun, Yu, Tang & Weidner 2020). Future planning and preparedness plans should prioritise facilities that cater for the specialised needs of all persons with disabilities (Hussain 2010; Kools, Chimwaza & Macha 2015; UN 2020b; Wenham *et al.* 2020; Weis & Murdoch 2020). The WHO (2020) highlights the following considerations for the management of persons with disabilities during and post COVID-19:

- Public health information should be accessible and in formats that cater for a diverse range of disabilities.
- Financial support and work-related flexibility for families and caregivers to ensure that the needs of persons with disabilities are timeously and continuously managed.
- Greater support for agencies that recruit caregivers and/or live assistance to ensure safety and continuity plans
- Prioritise caregiver access to free PPE such that the management of persons with disabilities remains uninterrupted through various stages of the pandemic

In specialised facilities, physical activities need to be integrated into programmes while ensuring that health and safety protocols are being adhered

to. This again may require investment in employing persons with the requisite expertise, training, equipment and infrastructure in these facilities. Furthermore, the lack of institutional support and representation of persons with disabilities must be remedied through awareness and sensitisation programmes on the specialised needs of persons with disabilities during and after crises. Proactive training, information campaigns and mechanisms for support should be a clear agenda for all. Ng (2020) calls for early preparations for COVID-19 exit plans, specifically practitioners involved in physical therapy, given the backlogs and disruptions due to social distancing and lockdowns. Although response plans may not have been proactive in relation to the needs of persons with disabilities, this can be remedied by improving representation and interventions that address the varying needs of persons with different disabilities in post-pandemic strategies. The reactive approach to disaster relief and pandemics places the most vulnerable persons at risk and violates their fundamental human rights.

## **Conclusion**

The impacts of COVID-19 are devastatingly far-reaching, and the long term impacts are yet to be unpacked. It can be argued that COVID-19 has showcased our under-preparedness in responding to pandemics at the global level. Furthermore, despite the many responses and calls to ‘leave nobody behind’, this article underscores the challenges that persons with disabilities face in relation to sports and physical activity participation, which can be extended to other aspects of their lives as well such as studying online, seeking health care and being able to socialise (even virtually). Our current responses to the COVID-19 pandemic demonstrate that both responses and impacts disproportionately burden persons with disabilities. More importantly, the impacts may be experienced differently across diverse disabilities.

Poignant lessons can be learnt from the many efforts in how best each country can respond to such pandemics, given their resource and infrastructural constraints. Participation in sport-related activities has the potential to improve physical and mental well-being across disability groups and should, therefore, appear more prominently in current and future pandemic response plans and post-pandemic treatment. The importance of planning at various stages during pandemics is also brought to the fore. In this regard, the significance of post-COVID planning is emphasised, especially in relation to persons with disabili-

ties who have specialised needs. The recommendations for COVID-19 responses during and after the pandemic establish the importance of instituting robust plans that address long and medium-term socio-economic, physical, and psychological well-being emerging from the voices of persons with disabilities.

## References

- Arora, A. & A. Arora 2020. Ethics in the Age of COVID-19. *Internal and Emergency Medicine* 15: 889-890. <https://doi.org/10.1007/s11739-020-02368-2>; PMID:32440984 PMCID:PMC7240805
- Armitage, R. & L.B., Nellums 2020. The COVID-19 Response must be Disability Inclusive. *The Lancet Public Health* 5,5: e257. [https://doi.org/10.1016/S2468-2667\(20\)30076-1](https://doi.org/10.1016/S2468-2667(20)30076-1)
- Ataguba, J.E. 2020. COVID-19 Pandemic, a War to be Won: Understanding its Economic Implications for Africa. *Applied Health Economics and Health Policy* 18: 325 – 328. <https://doi.org/10.1007/s40258-020-00580-x>; PMID:32249362 PMCID:PMC7130452
- Banerjee, D. 2020. The COVID-19 Outbreak: Crucial Role the Psychiatrists can Play. *Asian Journal of Psychiatry* 50: 102014. <https://doi.org/10.1016/j.ajp.2020.102014> PMID:32240958 PMCID:PMC7270773
- Barnes, C. & G. Mercer 2005. Disability, Work, and Welfare: Challenging the Social Exclusion of Disabled People. *Work, Employment and Society* 19,3: 527 - 545 <https://doi.org/10.1177/0950017005055669> PMID:23174549
- Blauwet, C. & S.E. Willick 2012. The Paralympic Movement: Using Sports to Promote Health, Disability Rights, and Social Integration for Athletes with Disabilities. *American Academy of Physical Medicine and Rehabilitation* 4,11: 851-856. <https://doi.org/10.1016/j.pmrj.2012.08.015>
- Bhuiyan, A.I., N. Sakib, A.H. Pakpour, M.D. Griffiths & M.A. Mamun 2020. COVID-19-related Suicides in Bangladesh Due to Lockdown and Economic Factors: Case Study Evidence from Media Reports. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00307-y> PMID:32427168 PMCID:PMC7228428
- Brooks, S. K., R.K. Webster, L.E. Smith, L. Woodland, S. Wessely, N. Greenberg & G.J. Rubin 2020. The Psychological Impact of Quarantine

- and How to Reduce It: Rapid Review of the Evidence. *The Lancet* 395,10227: 912-920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Buckley, R.M. 2020. Targeting the World's Slums as Fat Tails in the Distribution of COVID-19 Cases. *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 9: 358-364. <https://doi.org/10.1007/s11524-020-00450-w>; PMID:32488763 PMCID:PMC7266650
- Campbell, V.A., J.A. Gilyard, L. Sinclair, T. Sternberg & J.I. Kailes 2009. Preparing for and Responding to Pandemic Influenza: Implications for People with Disabilities. *American Journal of Public Health* 99,S2: S294-S300. <https://doi.org/10.2105/AJPH.2009.162677> PMID:19797741 PMCID:PMC4504380 <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2009.162677>
- Cash, R. & V. Patel 2020. Has COVID-19 Subverted Global Health? *The Lancet* 395,10238: 1687-1688. [https://doi.org/10.1016/S0140-6736\(20\)31089-8](https://doi.org/10.1016/S0140-6736(20)31089-8)
- Catty, J. 2020. Lockdown and Adolescent Mental Health: Reflections from a Child and Adolescent Psychotherapist. *Wellcome Open Research* 5,132: 132. <https://doi.org/10.12688/wellcomeopenres.15961.1> PMID:32802965 PMCID:PMC7424913
- Chen, P., L. Mao, G.P. Nassis, P. Harmer, B.E. Ainsworth & F. Li 2020. Coronavirus Disease (COVID-19): The Need to Maintain Regular Physical Activity while Taking Precautions. *Journal of Sport and Health Science* 9,2: 103-4 <https://doi.org/10.1016/j.jshs.2020.02.001> PMID:32099716 PMCID:PMC7031771
- Chermak, G.D. 1990. A Global Perspective on Disability: A Review of Efforts to Increase Access and Advance Social Integration for Disabled Persons. *International Disability Studies* 12,3: 123-127. <https://doi.org/10.3109/03790799009166266> PMID:2151390
- Dantas, M.J.B., T.L.F.S. Dantas, J.P. Dantas Júnior, L. Oliveira Neto & J.I. Gorla 2020. COVID-19: Considerations for the Disabled Athlete. *Revista Brasileira de Fisiologia Exercício* 19,2: S30-S34. <https://doi.org/10.33233/rbfe.v19i2.4023>
- den Houting, J. 2020. Stepping out of Isolation: Autistic People and COVID-19. *Autism in Adulthood* 2,2: 103-105. <https://www.liebertpub.com/doi/full/10.1089/aut.2020.29012.jdh> <https://doi.org/10.1089/aut.2020.29012.jdh>
-

- Falvey, J. R., C. Krafft, & D. Kornetti 2020. The Essential Role of Home- and Community-based Physical Therapists during the COVID-19 Pandemic. *Physical Therapy* pzaa069. <https://doi.org/10.1093/ptj/pzaa069> PMID:32302404 PMCID:PMC7188170
- Hao, F., W. Tan, L. Jiang, L. Zhang, X. Zhao, Y. Zou, Y. Hu, X. Luo, X. Jiang, R.S. McIntyre & B. Tran 2020. Do Psychiatric Patients Experience more Psychiatric Symptoms during COVID-19 Pandemic and Lockdown? A Case-control Study with Service and Research Implications for Immunopsychiatry. *Brain, Behaviour, and Immunity* 87: 100-106. <https://doi.org/10.1016/j.bbi.2020.04.069> PMID:32353518 PMCID:PMC7184991
- Hassiotis, A., A. Ali, A. Courtemanche, Y. Lunsky, L.L. McIntyre, D. Napolitano, J. van der Nagel & S. Werner 2020. In the Time of the Pandemic: Safeguarding People with Developmental Disabilities against the Impact of Coronavirus. *Journal of Mental Health Research in Intellectual Disabilities* 13,2: 63-65. <https://doi.org/10.1080/19315864.2020.1756080>
- Hopman, J., B. Allegranzi & S. Mehtar 2020. Managing COVID-19 in Low- and Middle-income Countries. *Jama* 323,16: 1549-1550. <https://doi.org/10.1001/jama.2020.4169> PMID:32176764
- Hussain, S. 2010. Empowering Marginalised Children in Developing Countries through Participatory Design Processes. *CoDesign* 6,2: 99-117. <https://doi.org/10.1080/15710882.2010.499467>
- Ion-Ene, M., D. Roşu & A. Neofit 2014. Judo Adapted for the Therapy of Children. *Procedia – Social and Behavioral Sciences* 137: 37 – 42. <https://doi.org/10.1016/j.sbspro.2014.05.249>
- Karnon, J. 2020. A simple decision analysis of a mandatory lockdown response to the COVID-19 pandemic. *Applied Health Economics and Health Policy*, 18: 329- 331 <https://doi.org/10.1007/s40258-020-00581-w> PMID:32249361 PMCID:PMC7130451
- Kazmi, S.S.H., K., Hasan, S., Talib & S., Saxena 2020. COVID-19 and Lockdown: A Study on the Impact on Mental Health. SSRN 3577515: <http://dx.doi.org/10.2139/ssrn.3577515>
- Kesumawati, S.A., T., Rahayu & S., Rahayu 2018. Game model to increase fundamental movement skills in children with mild intellectual disability. In International Conference on Science and Education and Technology 2018. <https://doi.org/10.2991/iset-18.2018.87>
-

- Kools, S., A., Chimwaza & S., Macha 2015. Cultural humility and working with marginalised populations in developing countries. *Global Health Promotion*, 22,1: 52-59  
<https://doi.org/10.1177/1757975914528728> PMID:24842988
- Leclerc, T., N., Donat, A., Donat, P., Pasquier, N., Libert, E., Schaeffer, E., D'Aranda, J., Cotte, B., Fontaine, P.F., Perrigault, & F., Michel 2020. Prioritisation of ICU treatments for critically ill patients in a COVID-19 pandemic with scarce resources. *Anaesthesia Critical Care & Pain Medicine*, 39, 3: 333-339. <https://doi.org/10.1016/j.accpm.2020.05.008>  
PMid:32426441 PMCid:PMC7230138
- Lee, J. 2020. Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health*, 4,6: 421.  
[https://doi.org/10.1016/S2352-4642\(20\)30109-7](https://doi.org/10.1016/S2352-4642(20)30109-7)
- Lin, C.Y. 2020. Social reaction toward the 2019 novel coronavirus (COVID-19). *Social Health Behaviour* [serial online] Available from: <http://www.shbonweb.com/text.asp?2020/3/1/1/280554>  
(Accessed 28/06/2020) [https://doi.org/10.4103/SHB.SHB\\_11\\_20](https://doi.org/10.4103/SHB.SHB_11_20)
- Lund, E. M., & K.B., Ayers 2020. Raising Awareness of Disabled Lives and Health Care Rationing During the COVID-19 Pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. <http://dx.doi.org/10.1037/tra0000673> PMID:32463287
- McKibbin, W.J. & R., Fernando 2020. The global macroeconomic impacts of COVID-19: Seven scenarios. CAMA Working Paper No. 19/2020. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.3547729>
- McMaugh, A. 2011. Encountering disablement in school life in Australia: Children talk about peer relations and living with illness and disability. *Disability & Society*, 26,7: 853-866.  
<https://doi.org/10.1080/09687599.2011.618740>
- McMichael, T.M., D.W., Currie, S., Clark, S., Pogosjans, M., Kay, N.G., Schwartz, J., Lewis, A., Baer, V., Kawakami, M.D., Lukoff & J., Ferro 2020. Epidemiology of Covid-19 in a long-term care facility in King County, Washington. *New England Journal of Medicine*, 382,21: 2005-2011. <https://doi.org/10.1056/NEJMoa2005412>  
PMid:32220208 PMCid:PMC7121761
- Millett, G.A., A.T., Jones, D., Benkeser, S., Baral, L., Mercer, C., Beyrer, B., Honermann, E., Lankiewicz, L., Mena, J.S., Crowley & J., Sherwood 2020. Assessing Differential Impacts of COVID-19 on Black Communi-

- ties. *Annals of Epidemiology*.  
<https://doi.org/10.1016/j.annepidem.2020.05.003>  
PMid:32419766 PMCID:PMC7224670
- Murphy, N.A. & P.S. Carbone 2008. Promoting the participation of children with disabilities in sports, recreation, and physical activities. *Pediatrics*, 121,5: 1057-1061. <https://doi.org/10.1542/peds.2008-0566>  
PMid:18450913
- Ng, K. 2020. Adapted Physical Activity through COVID-19. *European Journal of Adapted Physical Activity*, 13: 1-3.  
<https://doi.org/10.5507/euj.2020.003>
- Oshitani, H., T., Kamigaki, & A., Suzuki 2008. Major issues and challenges of influenza pandemic preparedness in developing countries. *Emerging Infectious Diseases*, 14,6: 875-880.  
<https://doi.org/10.3201/eid1406.070839>  
PMid:18507896 PMCID:PMC2600290
- Remuzzi, A. & G., Remuzzi 2020. COVID-19 and Italy: what next? *The Lancet*, 395,10231: 1225-1228.  
[https://doi.org/10.1016/S0140-6736\(20\)30627-9](https://doi.org/10.1016/S0140-6736(20)30627-9)
- Seeland, K. & S., Nicolè 2006. Public green space and disabled users. *Urban Forestry and Urban Greening*, 5,1: 29-34.  
<https://doi.org/10.1016/j.ufug.2006.03.001>
- Shahidi, S.H., J.S., Williams & F., Hassani 2020. Physical activity during COVID-19 quarantine. *Acta Paediatrica*, 00:1-2.  
<https://doi.org/10.1111/apa.15420> PMid:32557827 PMCID:PMC7323361
- Shakespeare, T., F. Ndagire & Q.E. Seketi 2021. Triple Jeopardy: Disabled People and the COVID-19 Pandemic. *Lancet*.  
[https://doi.org/10.1016/S0140-6736\(21\)00625-5](https://doi.org/10.1016/S0140-6736(21)00625-5)
- Siedner, M.J., J.D. Kraemer, M.J. Meyer, G. Harling, T. Mngomezulu, P. Gabela, S. Dlamini, D. Gareta, N. Majozi, N. Ngwenya & J. Seeley 2020. Access to Primary Healthcare during Lockdown Measures for COVID-19 in Rural South Africa: A Longitudinal Cohort Study. *MedRxiv*.  
<https://doi.org/10.1101/2020.05.15.20103226>
- Singh, S. 2020. Disability Ethics in the Coronavirus Crisis. *Journal of Family Medicine and Primary Care* 9: 2167-71.  
[https://doi.org/10.4103/jfmpc.jfmpc\\_588\\_20](https://doi.org/10.4103/jfmpc.jfmpc_588_20)  
PMid:32754466 PMCID:PMC7380818
- Sood, S. 2020. Psychological Effects of the Coronavirus Disease-2019 Pan-

- demic. *Research and Humanities in Medical Education* 7: 23-26. Available at: <https://www.rhime.in/ojs/index.php/rhime/article/view/264/280>
- Southby, K. 2013. Social Inclusion through Football Fandom: Opportunities for Learning-disabled People. *Sport in Society* 16,10: 1386-1403 <https://doi.org/10.1080/17430437.2013.790899>
- Swenor, B. 2020. COVID-19 Poses Unique Challenges for People with Disabilities. Josh Hopkins press release. Available at: <https://hub.jhu.edu/2020/04/23/how-covid-19-affects-people-with-disabilities> (Accessed 27/06/2020)
- UN 2020a. The impact of COVID-19 on Sport, Physical Activity and Well-being and its Effects on Social Development. Available at: [https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/05/PB\\_73.pdf](https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/05/PB_73.pdf); (Accessed 27/06/2020)
- UN 2020b. COVID-19 and the Rights of Persons with Disabilities: Guidance. Available at: [https://www.ohchr.org/Documents/Issues/Disability/COVID-19\\_and\\_The\\_Rights\\_of\\_Persons\\_with\\_Disabilities.pdf](https://www.ohchr.org/Documents/Issues/Disability/COVID-19_and_The_Rights_of_Persons_with_Disabilities.pdf) (Accessed on 16 June 2020.)
- UNESCAP 2020. Ensuring Disability Rights and Inclusion in the Response to COVID-19. Social Development Policy Brief. Available at: [https://www.unescap.org/sites/default/files/SDD\\_policy\\_brief\\_COVID19PW\\_Ds.pdf](https://www.unescap.org/sites/default/files/SDD_policy_brief_COVID19PW_Ds.pdf) (Accessed on 20 June 2020.)
- UNICEF 2020. COVID-19 Response: Considerations for Children and Adults with Disabilities. Available at: [https://www.unicef.org/disabilities/files/COVID-19\\_response\\_considerations\\_for\\_people\\_with\\_disabilities\\_190320.pdf](https://www.unicef.org/disabilities/files/COVID-19_response_considerations_for_people_with_disabilities_190320.pdf) (Accessed on 15 June 2020.)
- van De Ven, L., M. Post, L. De Witte & W. van den Heuvel 2005. It Takes Two to Tango: The Integration of People with Disabilities into Society. *Disability and Society* 20,3: 311-329. <https://doi.org/10.1080/09687590500060778>
- Watermeyer, B., L. Swartz, T. Lorenzo, M. Schneider & M. Priestley 2006. *Disability and Social Change: A South African Agenda*. South Africa: HSRC Press.
- Wang, C., R. Pan, X. Wan, Y. Tan, L. Xu, R.S. McIntyre, F.N. Choo, B. Tran, R. Ho, V.K. Sharma & C. Ho 2020. A Longitudinal Study on the Mental Health of General Population during the COVID-19 Epidemic in China.
-

- Brain, Behavior, and Immunity* 87: 40-48  
<https://doi.org/10.1016/j.bbi.2020.04.028> PMID:32298802
- Wang, H., T. Li, P. Barbarino, S. Gauthier, H. Brodaty, J.L. Molinuevo, H. Xie, Y. Sun, E. Yu, Y. Tang & W. Weidner 2020. Dementia Care during COVID-19. *The Lancet* 395,10231: 1190-1191.  
[https://doi.org/10.1016/S0140-6736\(20\)30755-8](https://doi.org/10.1016/S0140-6736(20)30755-8)
- Ware, N.C., K. Hopper, T. Tugenberg, B. Dickey & D. Fisher 2007. Connectedness and Citizenship: Redefining Social Integration. *Psychiatric Services* 58,4: 469-474. <https://doi.org/10.1176/ps.2007.58.4.469>;  
PMid:17412847.
- Ware, N.C., K. Hopper, T. Tugenberg, B. Dickey & D. Fisher 2008. A Theory of Social Integration as Quality of Life. *Psychiatric Services* 59,1: 27-33.  
<https://doi.org/10.1176/ps.2008.59.1.27>; PMID:18182536
- Weis, P. & D.R., Murdoch 2020. Clinical Course and Mortality Risk of Severe COVID-19. *The Lancet* 395,10229:1014-1015.  
[https://doi.org/10.1016/S0140-6736\(20\)30633-4](https://doi.org/10.1016/S0140-6736(20)30633-4)
- Wenham, C., J. Smith & R. Morgan 2020. COVID-19: The Gendered Impacts of the Outbreak. *The Lancet* 395,10227: 846-848.  
[https://doi.org/10.1016/S0140-6736\(20\)30526-2](https://doi.org/10.1016/S0140-6736(20)30526-2)
- WHO 2020. Disability Considerations during the COVID-19 Outbreak. Available at: <https://www.who.int/publications/i/item/disability-considerations-during-the-covid-19-outbreak>
- Wilhite, B. & J. Shank 2009. In Praise of Sport: Promoting Sport Participation as a Mechanism of Health among Persons with a Disability. *Disability and Health Journal* 2: 116-127. <https://doi.org/10.1016/j.dhjo.2009.01.002>

Associate Professor Suveshnee Munien  
Ecology & Environmental Studies  
Florida Gulf Coast University  
33965, USA, and

Research Associate  
School of Agriculture, Earth and Environmental Science  
University of KwaZulu-Natal, Westville Campus  
Durban, South Africa  
[smunien@fgcu.edu](mailto:smunien@fgcu.edu)