Chapter

# Healthcare Services for the Physically Challenged Persons in Africa: Challenges and Way Forward

*Malik Olatunde Oduoye, Aymar Akilimali, Umulkhairah Arama, Mohammed Fathelrahman Adam, Uwezo Biamba Chrispin and Bonk Muhoza Gasambi*

## Abstract

This chapter is based on persons with physical disabilities in Africa, their challenges, and how it affects their health-seeking behaviors. We noticed that physical challenge has a substantial long-term adverse effect on one's ability to carry out normal day-to-day activities. Both the causes and the consequences of physical disability vary throughout the world, especially in Africa. Environmental, technical, and attitudinal barriers and consequent social exclusion reduce the opportunities for physically challenged persons to contribute productively to the household and the community and further increase the risk of falling into poverty and poor healthcare services. The inability of the physically challenged persons to perceive the lack of points of interest of government has intensified to make significant recommendations and possible solutions. This is appalling because the rate to which a community provides and funds restoration is a way of grading how much interest it has, and importance it connects to the quality of life of its citizens. We advocate and recommend swift actions and disability inclusiveness to accommodate persons with physical disabilities in Africa for them to have a good perception of life.

**Keywords:** physically challenged, persons, Africa, healthcare, services, way forward

## 1. Introduction

Disability is the interaction between the person with a medical condition (e.g., cerebral palsy, down syndrome, or depression) and personal and environmental factors (e.g., negative attitudes, inaccessible transportation and public buildings, and social support limit) [1]. Physical challenge has a substantial long-term adverse effect on one's ability to carry out normal day-to-day activities. Both the causes and the consequences of physical disability vary throughout the world, especially in Africa. Environmental, technical, and attitudinal barriers and consequent social exclusion

reduce the opportunities for physically challenged persons to contribute productively to the household and the community and further increase the risk of falling into poverty and poor healthcare services.

The inability of the physically challenged persons to perceive the lack of points of interest of government has intensified to make significant recommendations and possible solutions. This is appalling because the rate to which a community provides and funds restoration is a way of grading how much interest it has, and importance it connects to the quality of life of its citizens. We also note that disability upsets the visions and habits of individuals because it is the pure manifestation of difference from a certain normality erected by social representations. We must allow those whom the chance of birth or life has placed in a situation of handicap, to be recognized as subjects and to fully play their role in society.

## 2. Concept of disability

### 2.1 Conceptual review

This concept is based previous studies, articles, research, and paper reviews on persons with physical disabilities in Africa, their challenges, and how it affects their health-seeking behavior. We come to realized that since the year 2001, the World Health Organization (WHO) has shown a wider, contemporary view of the concepts of "health" and "disability" through the recognition that every human being may encounter or have some degree of physical disability in their life span either through a change in health or environment. As you may know, physical disability is a global human experience, which is sometimes permanent and sometimes temporary. It is not something limited to a small part of the general population in the world [2]. Research shows that the number of people with disabilities has grown greatly over the last 2 decades. And it is estimated that there are over 1 billion disabled persons worldwide, with about 200 million of them experiencing very significant difficulties. This growth has been impacted both by the increasing life expectancy and by exposure to factors such as road traffic accidents physical or mental stress, drug abuse, infections. Thus, due to these factors mentioned, it is estimated that an individual born in a country where the mean life expectancy is 70 years of age is likely to spend, on average, 11 years of his/her life with some form of physical disability or challenge [1].

By definition, physical disability is a situation when there is a restriction in one's physiological functionality as well as anatomical activities. In other words, a person's day-to-day performances, movement, and flexibility (web.archive.org., 2003). This could be temporary, for a short period or long period, or may go into a lessening of the manifestations of the problems. Disability could be congenital or acquire. That is, a person could be born with physical disability from birth or after been born. The congenital disability could be due to some kind of genetical problems or chromosomal abnormalities. While the acquired form could be through external factors such as infections, harsh weather conditions, trauma, for example, road motor accidents. In a wide range, physical disability could exist. This could be from surgical removal of a limb (amputation), injury to the spinal cord, inflammation of the joints, progressive muscular weakness due to muscular dystrophy or from cerebral palsy, that is, a group of on-progressive, non-contagious conditions, caused by brain damage before birth or during infancy. Other conditions such as multiple sclerosis and Gullein-Barre syndrome have also been implicated.

Persons with physical disabilities are also human beings who form a proportionate size of population of the world in which they cannot be write off or neglected. According to research done by James et al., there are over 25 million individuals who have difficulty in moving around. This was made known by the National Coordinator of the Association of Indigenous People with Disabilities (AIPD), Dr. Josephy Ify Chikunie, a physically challenged lecturer at the University of Lagos (UNILAG), Akoka, Nigeria. Physically challenges have been seen to restrict the ability of an individual to perform excellently like other "abled" people as may be required. This is obvious to people through the ability to move or inability to move of the individual, and thus can affect his or her ability to carry out habitual activities. In another way round, a physically challenged person is one who has a limitation with his body and, due to that, is unable to perform rudiment things that other people do easily. These rudiment things include but not limited washing clothes, eating food, drinking water, sweeping, cycling, running, etc.

### *2.1.1 Prevalence of disability*

We realized that the definition of disability, the quality and methods of data collection, rigor of sources, and varying disclosure rates are factors influencing the prevalence of disability. We also note that poor service provision and stigma may result in lower disclosure. On this note, we realized that national statistics can be misleading, incomparable, and inaccurate. And thus, these limitations may result in a higher prevalence of disability in developed countries being reported compared to developing countries. As a matter of fact, poor service provision, stigma, and predominantly collecting data through census result in lower-income countries recording lower disability prevalence rates compared to higher-income countries. Despite these potential influences, the data that do exist indicates that low- and middle-income countries in reality do have higher disability prevalence compared to high-income countries.

The prevalence of physical disability could also be enhanced by different factors many countries, most especially in Sub-Saharan African countries. Certain features in health conditions, physical environmental factors, and other inconstant occurrences such as motor accidents, natural disasters, like earthquakes and volcanoes, a clash or disagreement, diet, and drug abuse, for example, cocaine, alcohol, has been identified. For example, an estimated 20 to 50 million people are injured by road motor accidents every year. And the number of people injured due to these accidents is not well documented, although road traffic injuries are estimated to account for about 1.7% of those living with physical disability. Also, individuals who have low source of livelihood, jobless, or have low educational background and stratification have been shown to have a higher risk of physical disability as compared with other children, and those from poorer households, especially in the rural settlements, have a significant higher burden of physical disability [3].

### *2.1.2 Global perspective*

According to the WHO global disability action plan 2014–2021 [2], globally, there is an estimate of over 1000 million people living with physical disability, this corresponds to 15% of the world's population or one in seven people. Among this population, between 110 million and 190 million adults experience significant difficulties in carrying out their normal physiological functions. A paper reviewed also show an estimated of about 93 million children, and an equivalent of one in twenty of

those below the age of 15 years are living with a moderate or severe form of physical disability [4]. The number of people who experience physical challenges or disabilities will keep increasing as populations age, in a geometric form. Similarly, with the global increase in chronic health conditions, national patterns of disability are affected by certain trending features in health conditions and physical and social environmental and other factors, such as road traffic injuries, falls, violence, emergencies including natural disasters, like earthquakes, volcanoes, and disagreements, unhealthy food and drinks and drug abuse [2].

### *2.1.3 Disability in Africa*

According to the WHO, about 75% of people with disabilities are living in the developing countries. In Nigeria, for instance, WHO estimates put the number of people with disability at 19 million or approximately 20% of the country's population. Let us give a practical example. One of the Authors of this chapter was discriminated by some of his lecturers in medical school in Nigeria, due to his impaired left arm. The author has untreated post-polio syndrome at the age 2 years, but was fortunate to study human medicine in the university. He was asked to change his medical course as a result of his impairment toward the end of his medical training. This made him frustrated and wanted to give up on his dream as a medical doctor.

Another scenario in the Eastern part of Nigeria, where a female medical doctor, named Dr. Judith Etim from the University of Nigeria, Nsukka (UNN), was discriminated due to her lower limb paralysis. Aside these sad stories and events, there are many untold stories of people in Africa with physical disabilities who have been discriminated and left to suffer. These people rather commit suicides if no one come to their aids, or rather became beggar to sustain themselves. The question now is WHY? From the above stories, we realized that despite the expertise in therapeutic exercises and the available evidence of effectiveness, many people continue to live with physical disabilities across the globe, especially in Africa [5]. In Africa as in the world, people with physical disabilities face exclusion, discrimination and difficulties in enjoying their rights. Such as their rights to education, job, inheritance rights and property ownership, and social rights.

## 2.2 Information needs of the physically challenged persons in Africa

As we have highlighted earlier, persons with physical disabilities are also human beings like any other person therefore; there are certain needs they long for. According to [6], these needs include the information for educational development and growth, the information needed for social and personal development, and the need information for recreational or social purposes [3]. It must be emphasized that in trying to meet the above needs of persons living with physical challenges, in the library for instance, they are likely to need more assistance than the "abled" users.

We come to realize that it is also important that the information needs of the persons living with physical disabilities are quite numerous. Some of this information is available in the school libraries, music collections, spoken words collections, picture books, books in enlarged print, and high-interest/low-vocabulary materials. It is quite unfortunate that in many countries in the world today, persons with physical disabilities still struggle to be educated/literate irrespective of their medical condition [3]. We realized that some of these people that are focused often perform better than their colleagues that are not suffering from any form of disabilities. For example, the case

of one of the authors and Dr. Judith Etim. And after their education, the next thing they think of is how to get a befitting paid job [3].

## 3. Disability and accessing healthcare in Africa

According to the United Nations (UN) standard rules for equal opportunities (United Nations 1993), it is stated that having access to health and rehabilitation services is a vital condition to equal opportunities, and an important component of being a respected and productive member of the society [5]. Statically speaking, globally, about 15% of people with disabilities have difficulty accessing healthcare. These problems are particularly common among person with physically disability in Africa and most developing countries, and widen the access gap between them and their counterparts in the developed world. These challenges are compounded in low- and middle-income countries (LMICs) where factors such as poverty, poverty-related diseases, inefficient healthcare systems, training and equipment, inaccessible transportation systems, corruption, political instability, and negative attitudes toward disability occur. The combination of high needs and low capacity to pay for healthcare is a major policy concern and a serious global challenge for providing available, accessible, and affordable healthcare for Person with Physically Disability. For each patient, access to care is a fundamental right. And for people with disabilities, the pathologies are more numerous.

People with a specific type of disability such as mental illness, and intellectual or psychosocial disabilities often face high social exclusion. They consult later, present more frequent emergency situations and more complex problems, and are more difficult to reach by prevention campaigns. A study in Ghana reported that inaccessible healthcare facilities and equipment, specifically the absence of ramps and elevators, narrow corridors, the absence of toilets, and lack of sidewalks, were among the biggest barriers to access healthcare services. Each individual with disability should obtain appropriate healthcare services in situations of perceived need for care.

A study conducted among South Africans with disabilities shows that these healthcare challenges aggravate the existing health conditions in them. There exist many layers of injustice, unfairness, and bias, as a result of the era of policy of racial separation/segregation and discrimination, which further worsens the challenges of the persons with disabilities face every day. This study further revealed that despite the adoption of democracy in 1994, many African people with physical disabilities remain less privileged in many ways, with African physically challenged females facing more discrimination based on their ethnicity, tribe, gender, and physical disability. Also, this study made it known that the challenges facing persons with disabilities living in rural communities are even worse due to the lack of healthcare services, medical experts, long distant travels, poor motorable roads, as well as high rate of stigmatization related to physical disability.

Furthermore, we realized that during times of hardship like times of disaster, and other unforeseen occurrences, many individuals with physical disabilities are further alienated and opted out. These individuals witness an inability to access basic healthcare services especially from the primary healthcare centers and secondary health facilities. They are faced with difficulties to obtain information in an accessible way and receive good medical evaluations and interventions. Also, with regard to the era of COVID-19 pandemic, more factors such as pre-existing comorbidities, as well as public living spaces like the home or educational facilities, further make the individuals with physical challenge vulnerable to contract the COVID-19 virus [3]. Many have

also experienced struggle and direct discrimination in accessing life-saving treatment such as critical care admission, ICU, and oxygen support. We believed that some of these issues have made persons with physical challenges more susceptible to a higher risk of contracting the COVID-19 virus during the present pandemic era.

Overall, persons with physical challenges have problems to have the possibility to identify healthcare needs, to seek healthcare services, to reach the healthcare resources, to obtain or use healthcare services, and to actually be offered services appropriate to the needs for care. They could not conceptualize five dimensions of accessibility of service, such as approachability; acceptability; availability and accommodation; affordability; and appropriateness.

### 3.1 Problems to means of transportation for healthcare services

Generally speaking, Africans have problems in accessing good transportation. These problems are compounded with people living with disabilities, most especially in seeking for healthcare. In Nigeria, for example, most of the roads are dilapidated. Most "abled" individuals are even finding it difficult to drive on these bad roads not to talk of the physically challenged people. As a result of this, most people living with disabilities in Africa and other developing countries find it difficult to go to the nearest hospitals for help. Thus, imposing their problems simultaneously and consequently, they develop more complications either from road accident or the disease itself. Similarly, most railway networks in many African countries are not accessible to wheelchair users. Unfortunately, there are limited or no assistance or support given to assist passengers with physical challenge in accessing and using trains. This makes these passengers more vulnerable because of safety concerns and measures.

In addition, several studies have shown that many African countries do not have telecoil (TTY) facilities available for passengers using hearing aids, and many airport stations have bad signage and faulty audio speaker devices. Persons with physical disabilities in many African countries experience many challenges, including lack of assistance getting into and out of a taxi. Most of these people are being required to lift and carry their own wheelchairs on board, being charged an extra fare for their wheelchairs and concerns surrounding safety. In South Africa, for example, during national COVID-19 pandemic lockdown Level 1 and Level 2, public transport was significantly reduced in order to assist in containing the spread of the COVID-19 virus. Public train transportation was suspended, a limited number of busses were permitted, and small bus taxis were allowed to operate at limited capacity for limited hours. Transport was allowed for health professionals and other workers employed in essential work space and services, and individuals that require basic life amenities such as food, clothing, and shelter.

In recent times, it is quite unfortunate and sad in many African countries, travel time limits were too confined for many persons with physical challenges as a result of their disabilities and dependence on assistance and or support from others, requiring a longer time to finish up their morning hygiene routine, travel to buy food and medical provisions, and return home. It is of this note that the limited public transportation intensely affected the ability of caregivers to travel to assist the persons living with physical disabilities [7].

### 3.2 Problem for means of personal assistance and caregivers

It has been shown that persons with physical disabilities as well as their relatives carried an inner and incessant fear that their caregivers may be susceptible to

sickness and/or need to be isolated [4]. Unlike high-income African countries such as Rwanda, Ghana, Nigeria, and South Africa where caregivers are paid for or procured *via* government structures and agencies [2], South Africans with disabilities are obligated to pay for caregivers in reserved way or use their R1890 state disability grant for this means. Also, we realized that in most cases, caregivers travel on public transport and interact with others at home, socially and while shopping when not on duty. Loneliness and social isolation from caregivers have also been shown to affect some persons with physical challenges and could have a long-term detrimental impact on their psychomotive well-being. It has been reported that isolation from caregivers who assist with drugs, together with reduced accessibility to mental health services, could lead to relapse of the disease [4, 7].

### 3.3 Problems with communication systems

Many African countries have poor communication systems. These are worse with persons with physical disabilities. The people living with hearing difficulties have limited accessible to hearing aids and interpretations. Studies show that African healthcare policy dictates that patients living with disabilities may not be followed by their friends or family when accessing healthcare, as these could impose more communication barriers and challenges to these people [7]. It is obvious that many deaf persons use sign language as their primary methods of communication and are unable to communicate with healthcare workers without interpretation. Also, for individuals who rely on lip reading, understanding healthcare workers wearing medical masks is not possible. Furthermore, we realized that the provision of a patient with disability history or having to sign consent may pose an obstacle, at times not possible for an individual with severe mental or psychosocial disabilities, or on the autistic symptoms [8].

### 3.4 Problems for means of curative management, restoration, and medications

Generally speaking, many countries face restorative solutions to disability problems especially chronic forms of disabilities and those that are related to nervous system. These problems are more rampant in most African tertiary healthcare facilities. Most of these facilities do not have a sophisticated physical therapy facilities to restore physical disabilities as well as well-trained experts in that aspect of medicine. Thus, many people with physical disabilities in Africa would rather have a sequela of their disabilities or die like that in their disabled form. Although African countries such as Nigeria, Ghana, South-Africa, Rwanda, and Egypt have tried to establish neurophysiotherapy and functional recovery centers to correct some physical disabilities due to stroke, cerebral palsy, poliomyelitis, etc., only a few successes have been recorded. We realized that most of these centers end up referring their patients with such debilitating and physical impairment to the Western countries for possible curative and restoration, such as limb lengthening, nerve grafting, tendon transfer surgeries, and prosthetic insertions.

### 3.5 Problems in accessing intensive care and emergency management and triage

Several studies on emergencies and disasters show that when availability of resources is restricted, healthcare workers may be forced to make decisions as to who qualifies to receive life-saving healthcare. In emergency situations, such as the World

Trade Centre attack (2001), and natural disasters such as earthquakes and hurricanes, the significance of having triage policies in place arises, and what challenges can occur if they are not established in emergency situations. For example, most hospitals, nowadays, adopt the Advanced Trauma Life Support (ATLS) system in managing multiple injured patients as well as mass casualties [9].

Triage policies are important in normalizing the allocation of resources and care, as well as guiding healthcare workers in emergency practice. There are different methods of triage systems utilized across the globe and are different within countries that have dual healthcare systems; for example, the scoop and run system is mostly practiced in many African healthcare systems, for example, in Ahmadu Bello University Teaching Hospital (ABUTH), Shika, Kaduna state, Nigeria, the University of Ilorin Teaching Hospital (UITH), Ilorin, Kwara state, Nigeria, and the University College Hospital (UCH), Ibadan, Oyo state, Nigeria. Unfortunately, even though this is been practiced, there are no special arrangements and inclusiveness to accommodate persons living with disabilities.

While triage policies are fundamental to effective emergency healthcare services, it is important to ensure that they do not discriminate against any specific population group especially with persons living with physical disabilities. We realized that such discrimination is currently in practiced in London, UK (United Kingdom), where, during the COVID-19 pandemic, persons with physical disabilities and the less privileged persons have reportedly been denied the rights to be admitted into health centers or receive life-saving emergency treatment if they become sick [7].

## 4. Challenges of physically challenged persons in Africa

We realized that disability affects virtually everybody but more rampant among the women, children, older people, and poor people in different proportions. African children from poorer homes, indigenous populations, and those in ethnic minority groups are significantly higher risk of experiencing disability. Women and girls with disability are likely to experience what is called double discrimination. Double discrimination as a concept includes gender-based violence, abuse, marginalization, and stereotyping. As a result, women with disabilities are likely to face more disadvantages when compared with men with physical challenges and women without physical challenges. A country man, internally displaced, or stateless persons, refugees, migrants and prisoners with physical challenge also face peculiar problems [10].

### 4.1 Challenges in the health sector

The relationship between poor health and disability is not fully understood. However, persons with disabilities are commonly poorer, and suffer from stigmatization and discrimination in education, employment and access to different services [1]. We noticed that the challenges faced by disabled persons in accessing healthcare are not new and are numerous. Physically disabled persons have always been faced with challenges in healthcare services, political or leadership positions, and education. According to MacLachlan and Mannan [1], access to healthcare, even in wealthy countries, is often difficult for persons with disabilities, but in poorer countries the challenges are exacerbated, combining physical, financial, and attitudinal components.

Many policies have been put in place to improve these people's access to healthcare, but until now, physically disabled people show worse health outcomes than others. In addition to poor health system infrastructure and poor healthcare services in African countries, the access to healthcare services by persons with disabilities remain an unsolved challenge [2]; for example, in south Africa persons with disabilities were found to have a higher un approached health needs compared to persons without disabilities [5].

There are many factors that serve as barriers to access healthcare services for persons with disabilities in Africa which include (1) stigmatization, (2) negative attitudes toward physically disabled persons, (3) cost of access to healthcare services and insufficient resources as a result of unemployment and poverty, (4) inadequate policy implementations by health and political authority, (5) physical inaccessibility to healthcare services, (6) long distance of health facilities and lack of transportation, (7) insecurity, (8) hilly terrains and flooding of rivers during the rainy season, (9) challenges as a result of inadequately trained healthcare providers to deal with disabled persons including poor communication and poor attitude, and (10) gender-based challenges in which women were the most affected group [3, 5, 7].

Those challenges commonly increased along with disability severity, being female in gender and declined with increasing education level, type of household, and age [2, 5]. Furthermore, in Africa, many physically challenged people are neglected because many of them are in the lower class in society, and many are left with no one to cater to them. They are often only catered to by their family members and sometimes neglected by the government. It is no doubt that many African countries are low-income countries, and healthcare systems are less developed compared with other countries in the world. A study conducted by Vergunst et al. [2] in rural Madwaleni, South Africa, showed that physically disabled persons faced barriers in accessing healthcare services, and the widely faced barrier was transportation; meanwhile, a higher level of education and socioeconomic status often reduced those barriers [11]. Another challenge is the sentiments and stereotypes toward people with disabilities. Some people view disabilities as punishments and abnormalities. A study conducted by Haruna [5] in Tamale Metropolis, Ghana, showed that some of the barriers faced by physically disabled people include the following: (1) sociocultural factors that consist of variables such as education, ignorance, stigmatization, and belief systems that exist within households and the communities, (2) service factors that relate to conditions prevailing at the health facility are the attitude of providers, service cost, waiting times, insurance, and distance, and (3) economic factors relating to income, occupation, and transport cost determine the physically disabled person's ability to access health services. Consequently, the falling standard of healthcare systems and migration of healthcare workers from African countries have worsened access to healthcare for physically disabled people. Lack of infrastructures like roads and standard hospitals, and lack of adequate policies that improve the welfare and inclusion of physically disabled people have increased the inaccessibility of physically disabled people to healthcare [10].

## 5. Recommendations and way forward

To address this issue, in which we believe stigma and the autonomy of people with disabilities are heavily implicated. We recommend to the African and international communities to think carefully about the psychological and social repercussions

suffered by disabled people who have difficulty accessing care, and to integrate into humanitarian aid programs a space reserved for supporting both financially and in terms of education for the independence of people with disabilities. Such as; (1)—To encourage initiatives, among others: investments, candidacies,... by people with disabilities in all sectors of activity. (2)—The establishment of specific organizations to support people with disabilities in terms of health and easy access to care [2]. To African governments to subsidize health insurance for all persons physically unable to work, (3)—to set up specialized structures at each medical training course for easy and unlimited access to care for any disabled person [2]. To sensitize the African population in the fight against discrimination or all other forms of stigmatization and to call on them to work together in perfect cohabitation... [5]. To nursing staff—to administer equal and satisfactory treatment to everyone. Taking for instance, the case of South-African government policy [5].

In a nutshell, we are recommending disability inclusiveness for persons with disabilities and anti-discrimination policies from the all-African government. We believed that this policy would provide an important backdrop to the development of more inclusive health services for persons with disabilities in Africa. As this would also reflect a greater understanding and awareness of the experience of individuals with disabilities in their health-seeking behaviors and of the impact of disabling barriers on their independence, and strengthening their autonomy, health and well-being, as a result, health service providers in African countries would be able to address the issues of medical consultation with and participation of persons with disability in planning and quality healthcare service delivery [12].

## 6. Conclusion

Persons with physical challenges in African countries experience significant challenges especially in having quality healthcare services and support. Most of these people are denied their rights to seek good and affordable healthcare and restorative services. They are often left to suffer in pain, frustrations, and regrets. Injustice, marginalization, and inequality have made them to have bad perceptions about a good quality of life. Thus, we are advocating for full inclusion of persons with disabilities. Anti-discrimination has provided an important backdrop to the development of more inclusive health services for persons with disabilities.

## Acknowledgements

We give thanks to the Almighty God for giving us the abilities to put this piece of writing together. Special thanks to the main author of this book, Mr. Malik Olatunde Oduoye, who corroborated with us from different parts of Africa. We are indeed grateful. We also acknowledged our parents, siblings, teachers, friends, and colleagues for their support in helping us with ideas, and moral and financial supports. We say a big thank you to all of you.

Funding is by all authors that contributed to this book.

## Conflict of interest

The authors declare no conflict of interest.

## Dedications

We dedicate this chapter to all persons living with physical challenges and disabilities in Africa.

## Notes/thanks/other declarations

We declare that this chapter is for people who have interest in disabilities and willing to help and support people living with disabilities in the world, especially in Africa. Thank you all and God bless you! Amen!

## Acronyms and abbreviations

| | |
|---|---|
| WHO | World Health Organization |
| QoL | Quality of Life |
| ICU | Intensive Care Unit |
| UK | United Kingdom |
| USA | United States of America |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| ILO | International Labour Organization |
| YLD | Years lived with Disability |
| DALYs | Disability-adjusted life Years |

## Author details

Malik Olatunde Oduoye[1*], Aymar Akilimali[2], Umulkhairah Arama[1], Mohammed Fathelrahman Adam[3], Uwezo Biamba Chrispin[4] and Bonk Muhoza Gasambi[2]

1 Ahmadu Bello University, Zaria, Kaduna State, Nigeria

2 Faculty of Medicine, Official University of Bukavu, Bukavu, Democratic Republic of Congo

3 University of Science and Technology, Omdurman, Sudan

4 Universite de Goma, Goma, Democratic Republic of Congo

*Address all correspondence to: malikolatunde36@gmail.com

## References

[1] OMS. Handicap et santé. World Health Organization (WHO). 2021. pp. 1-1. Available from: https://www.who.int/news-room/fact-sheets/detail/disability-and-health

[2] World Health Organization (WHO). WHO Global Disability Action Plan 2014-2021. Better Health for all People with Disability. Switzerland: World Health Organization (WHO); 2015. pp. 1-32

[3] Idhalama OU. Provision of reference and information services to the physically challenged persons In Nigeria: Challenges and prospects. 2018. pp. 1-20. Available from: https://www.researchgate.net/publication/332495531

[4] United Nations - Division for Social Policy Development (DSPD D of E and SA (DESA). Toolkit on Disability for Africa - Disability-Inclusive Development. 2012. pp. 1-36. Available from: https://www.un.org/development/desa/dspd/2016/11/toolkit-on-disability-for-africa-2/

[5] Program GE, Hills T, Centre H, Hills T. Disability Care in Nigeria : The need for professional advocacy. 2009;30-36

[6] Egunjobi RA. Towards Meeting the Library and Information Needs of the Handicapped in Nigeria. In: Adedoja TA, Ajobiewe T, editors. Issues in Coping with Disability. 2003. p. 205

[7] McKinney EL, McKinney V, Swartz L. Access to healthcare for people with disabilities in South Africa: Bad at any time, worse during COVID-19? South African Family Practice. 2021;**63**(1):a5226. DOI: 10.4102/safp.v63i1.5226

[8] Vankova D, Mancheva P. Quality of life of individuals with disabilities. Scripta Scientifica Salutis Publicae 2015;**1**(1):21-28

[9] Love B A Short Practice Textbook of Surgery. 26th ed. 2015:1-1000

[10] Bright TKHA. Systematic review of access to general healthcare services for people with disabilities in low- and middle-income countries. International Journal of Environmental Research and Public Health. 2018. pp. 1-15

[11] Vergunst R, Swartz L, Hem KG, Eide AH, Mannan H, MacLachlan M, et al. Access to health care for persons with disabilities in rural South Africa. BMC Health Services Research. 2017;**17**:1-8

[12] United Nations-Division for social Policy Development (DSPD D of E and SA (DESA). Inclusive Health Services for Persons with Disabilities. Washington DC: United States of America (USA); 2012. pp. 1-37