

Covid-19 Pandemic and Persons with Disabilities: Impacts and Risk Factors, Lessons for Future Interventions

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Keywords:

Persons with disabilities, Covid-19, Impacts, Lessons, Risk factors, Interventions

Received: Feb 26, 2021

Accepted: Mar 11, 2022

Published: Mar 16, 2022

Editor:

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Abstract

Background

The pandemic has disrupted the lives of many globally including persons with disabilities. These disruptions are universal. However, the vulnerable communities are more affected.

Purpose

The study examines impacts on persons with disabilities to share knowledge and inform interventions that ensure persons with disabilities are supported.

Methodology

The study is a systematic literature review using different search engines to search for scholarly articles all over the globe.

Results

Persons with disabilities have been negatively impacted in numerous ways: lack of access to healthcare services, inadequate rehabilitation services, increased human rights violation, stigmatization and discrimination, increased risk of dying, being subjected to violence, losing financial income, lack of access to education and treatment, increased in neglect and traumatization, poverty, lack of access to food, decreased in community support; and worse of all, in comparison with the overall population, the death of persons with disabilities during the Covid-19 is higher. These impacts were precipitated by inaccessible built environment and sense of touching, lack of disability sensitive policies, increased prevalence of risk factors, difficulties in adhering to WHO recommendations, pervasiveness of underlying health conditions, lack of disability-friendly information and inclusive intervention, national budget cuts; and poorly funded institutions.

Conclusion

Persons with disabilities have been negatively impacted due to many risk factors peculiar to them.

Introduction

The coronavirus pandemic has disrupted the lives of millions including persons with disabilities [15]. By all indications, these disruptions are universal in characteristics and ramifications, strongly suggesting that it impacts all nations in spite of their status on the world stage [10]. However, in view of the fact that 15% of the world's population are persons with disabilities, it is fundamental to scientifically document how this pandemic is uniquely affecting persons with disabilities in all respects [5].

Persons with disabilities regardless of where they live encounter similar negative impacts due to many factors that are social, economical; and political in nature such as access to appropriate and timely educational services, disability friendly health information, discrimination, inadequate community support, lack of access to financial support and basic needs [2]. These factors and others yet to be unearthed demand global and national level interventions so that the global commitments like equal rights and equal opportunities for all are attained.

Aims and Methodology

Aims

The rationale for the literature review is to examine the present scale and degree of the impacts of the Covid-19 on persons with disabilities in order to share knowledge to inform a process that ushers rapid growth from all directions in ensuring that persons with disabilities are supported to access relevant services in this trying moment.

Methodology

A systematic review of the literatures using information collected from different sources namely Google Search Engine, Web of Science; and Scopus. During the search combinations of words and phrases were used to ensure articles reflect the most recent knowledge and scholarly publications. The systematic searches beget varied and voluminous articles which had to be sieved not only to meet the inclusion and exclusion criteria but to

ensure the fundamental objectives of the study are attained.

Therefore, only peer-reviewed scholarly publications published after 2018 were selected except extracts perceived to be of great value to the study and those published by highly respected international organizations known to have been working in disabilities and pandemics.

Inclusion and Exclusion Procedures

The following procedures were followed in articles inclusion: it must be peer-reviewed, on disabilities and Covid-19, published from 2019 to 2020, on international or regional perspectives on disabilities and Covid-19; and on disabilities and Covid-19 published by international organizations with years of experience.

The exclusion criteria was based on articles being non-peer reviewed, published before 2019, media generated; and not published in the English language.

In spite of the fact that both qualitative and quantitative articles were trawled, only 45 articles were qualified which is due to a dearth of data.

Findings and Discussions

The literature review has unveiled a variety of negative impacts which Covid-19 is having on the lives and living conditions of persons with disabilities and some factors that put persons with disabilities at the risk of contracting the virus. To discuss these impacts, they are codified into negative impacts and risk factors. While the negative impacts include lack of access to healthcare services, inadequate rehabilitation services, increased human rights violation, stigmatization and discrimination, increased risk of dying, victims of violence, losing financial income, lack of access to education and treatment, increased in neglect and traumatization, poverty, lack of access to food; and decreased in community support, the risk factors entail inaccessible built environment and relying on the sense of touching, lack of disability sensitive policies, increased prevalence of risk factors, difficulties in adhering to WHO recommendations, pervasiveness of underlying health conditions, lack of disability-friendly

information, lack of inclusive intervention, national budget cuts, poorly funded and managed residential institutions, and positive impacts of Covid-19.

Lack of Accessing Healthcare Services

In maintaining a healthy life, accessing quality and affordable health services is fundamental. This is all the more important particularly for persons with disabilities who more often than not need some medical services to cope with associated challenges. However, with the upsurge of the pandemic, accessing healthcare becomes extremely difficult due to: the pandemic has seriously affected the state of living arrangements, access to services, impact of social distancing, careers' wellbeing [20]. The pandemic has led to a reduction of many public services some of which persons with disabilities were depending on for better life, for example, reduction or closure of special transport services, blood test centers, psychological evaluation, and re-allocation of disability related budget [8]. Persons with disabilities depend heavily on special services like accessible facilities, technical aid, accessible transportation, brail, specialized healthcare facilities, regular medical treatments for their daily survival which has been greatly threaten by the pandemic [8]. Covid-19 in addition to overstretching caregivers, it has made access to professional support and healthcare services for example, respite much reduced if not unavailable [40]

Like most vulnerable communities, Covid-19 and the resultant restrictions have significantly affected the movement of persons with disabilities to fend for themselves, look for healthcare services and other assistance to live a decent life [7]. Evidence indicates that persons with disabilities encounter disparities in accessing and utilizing healthcare services because of the pandemic [20].

Inadequate Rehabilitation Services

Acquiring disabilities of any type at any stage of human development can be profoundly challenging especially when the victim has started enjoying the beauty of being able to perform things independently. To restore

both that dignified lifestyle and medical fitness to stand the test of both natural and human challenges, access to medical and social rehabilitation services is *sin qua non*. However, with pandemic like Covid-19 and its global ramifications, such services are not only disrupted or scanty but in some cases effaced from the national priorities concurring with the pandemic has not only reduced the quality of community based rehabilitation services but has equally constrained initiatives in those areas [9]. Due to Covid-19 in many countries, evidence demonstrates that medical treatment, rehabilitation and support services for PWDs have been disrupted [17]. International organizations have different policies to protect all but organizations charged with dissemination of information and specific endeavors failed to address the unique needs of PWDs like rehabilitation, etc. [36].

Increased Human Rights Violations

Disadvantaged communities are claimed to have suffered some human rights violations for some years. In the case of persons with disabilities, the violation of their human rights is not only common but for some communities they are some of things they have to put up with, sometimes with little if ever any support to bring such practices to a halt sooner than later by promulgating and enforcing anti-discrimination legislations. In the event of disaster and pandemics, these violations become more intense and explicit as alluded to: in the Philippine, although the rights of PWDs were not well mainstreamed, they have become worse during the pandemic because of government policies and guidelines in the health and educational sectors in view of preventing and addressing the virus [36]. In some instances particularly in the United Kingdom there were decisions made by health personnels based on "clinical frailty scale" (i.e. in advance care-planning for making end-of-life decisions) which were largely targeting PWDs especially those with mental impairment without their involvement or consent which is a plain violation of their right [14].

Similarly, the denial of access to life-saving services, is flagrant violation of most national constitutions leave alone the United Nations Convention

on the Rights of Persons with Disabilities that doesn't only promote equality regardless of what but unambiguously criminalized discrimination against persons with disabilities the right to life, inherent dignity, access to healthcare; and protection of dignity [22].

Stigmatization and Discrimination

Persons with disabilities like most vulnerable groups have been victims of stigma and discrimination for years. In some communities, the stigma and discrimination is so profound that they are denied the enjoyment of even their basic human rights such as living a dignified life. These are more severe during conflict and pandemics when their needs and aspirations are relegated at the bottom of the priority list if ever they are thought of. This is corroborated with: disability friendly facilities are critically in protecting children with disabilities from the virus as it reduces dependence since there are disability-friendly toilets, staff trained in sign language, wheelchairs, ramps, etc. that further reduces discrimination and stigma [14]. Based on Article 25 read with Article 2 of UNCRPD, persons with disabilities have equal rights to access healthcare services and as such any denial of such is a plain discrimination [22]. Though some countries have taken some measures to protect their citizens from the pandemic, the needs of persons with disabilities were not fully considered and cater for [33]. During the pandemic just like the pre-pandemic, persons with disabilities have been severely discriminated against since they don't have equal access to critical health information, guidelines; and public services meant to save the populace[30].

Similarly, persons with disabilities are often victims of discrimination like racial inequality in the healthcare system and other critical social institutions, causing stress and depression; thus, they have undoubtedly disproportionately suffered during the pandemic [12]. The pandemic with its ongoing challenges has heightened the risk of persons with disabilities since it has made it more difficult for their voice to be heard even during reasonable normal time [36]. Persons with disabilities have most of the time suffered from

discrimination and social isolation which without doubt have been worsened by the panic and its preventive measures and the fact that persons with disabilities are regarded as outcasts who don't deserve emergencies support services including basic needs like food [8].

Similarly, the pandemic has promoted the promulgation of policies and laws that have increased discrimination against persons with disabilities vis-à-vis access to equitable and fair treatments[3]. Persons with disabilities are at risk of contracting the virus because they find it extremely difficult to observe public health recommendation including social distancing, regular handwashing, mostly live in slums, overcrowded places, poorly funded residential cares; and suffer from discriminatory practices, lack of personal space and basic necessities including clean water, sanitizers [33].

Increased Risk of Dying

The risk of dying and dead is the worst of all exposures to a pandemic. The Covid-19 pandemic has not only put many people at the risk of dying but globally has claimed the lives of many. PWDs, due to many factors: stigma and discrimination, lack of access to prompt healthcare services, proper treatments, information, inability to stick to recommendations, non-inclusive national responses, etc. did not only put them at the risk of demise, but many died of it as substantiated by: persons with disabilities particularly the elderly experienced more deaths than any other group without disabilities [37]. In comparison with the overall population, the death of persons with disabilities during the Covid-19 is higher as such posing greater risk to them [14]. Persons with disabilities and the elderly suffered highest mortality [33]. Covid-19 has lead not only to shortage of community support for persons with disabilities but more isolation, hardship under lockdown, increase deaths in residential care and psychiatric facilities, intensification of inaccessible healthcare services, information, discrimination, more obstacles in getting livelihood and income, participation in remote learning; and getting support for protection against violence[28]. In England and Wales, the risk of persons with disabilities dying from Covid-19 is

twice greater than people without disabilities [27]. persons with disabilities, in addition to being at the risk of dying, they are equally at risk of being de-prioritized for care [18]

Victims of Violence

Violence is not uncommon during conflict including the pandemic and mostly the disadvantaged groups pay the highest price. Stressful and deadly situations can make many people react with violence. persons with disabilities as a vulnerable group have suffered lot violence being physical, social, emotional and/or sexual either from closed family members or ordinary people as validated by: in stressful and over stretched communities persons with disabilities are highly at the risk of abuse and exploitation hence the support system is in disarray [9]. Because of the pandemic's associated stress caregivers are undergoing, many persons with disabilities have become victims of domestic violence and neglect [8].

Covid-19 has impacted on the right of persons with disabilities to protection from violence as it put them more at the risk of gender, sexual; and domestic violence and worse of all, support services are either not available or are inaccessible due to lack of interpretation for visually impaired and hearing impaired ones, shelters being not prepared to accommodate persons with disabilities [28].

Losing Financial Income

To maintain decent and dignified life, the ability to independently afford things including the basic needs is critical justifying the right for people to secure and maintained jobs. During conflicts and pandemics, many people lose their jobs particularly the non-critical staff the bulk of whom are the unlettered ones. Persons with disabilities because of their lack of higher education, stereotypes; and the social and physical barriers they are hardly critical staff, thus, they easily become victims of job lost during pandemic as corroborated by the virus has resulted in many persons with disabilities losing their income especially those in the formal sector in spite of the fact that they are not critical staff and so too it is with

those in the informal sector including sport, music, service industry, etc. where social distancing and other guidelines are fundamental [31]. Covid-19 has negatively impacted the income and livelihood of persons with disabilities in many ways like losing income because they cannot afford to work from home since they work in the informal sectors, family bread-winners being out of employment; and restrictions increasing expenditures on disability related issues pulling persons with disabilities more quickly and deeply into poverty[28]. Covid-19 has contributed to pulling persons with disabilities deeper into poverty due to loss of income because of disruptions to work especially in the informal sector, increased spending on healthcare and rehabilitation services; and decreased in social protection schemes[6].

Lack of Access to Education and Treatment

Access to quality and relevant education is critical in the psychosocial and economic development of all vindicating it being one of the best tools in empowering and liberating communities. In the same vein, access to quality and affordable medical treatment is pivotal in ensuring a healthy community. However, with the outbreak of the pandemic some of these critical social services become hard to access by certain groups including persons with disabilities making them more vulnerable and susceptible as upheld by moving to e-learning by educational institutions without sufficient time to prepare, has placed persons with disabilities education at risk due to many factors like lack of access to internet, not having friends to support in understanding pictures, videos, falling asleep due to difficulty in concentrating, etc.,[30]. Persons with disabilities encounter discrimination and difficulties in all aspects of life and living including education, employment; and access to quality healthcare services[22].

Covid-19 has made persons with disabilities accessing education difficult for most classes are now held online which requires strong internet connection which is hardly affordable to majority of PWDs since they are not only poor but live in impoverished communities; and worse of all, online teaching platforms and applications

hardly cater for persons with disabilities [1].

Similarly, in most countries, during the pandemic their health and educational institutions are unable to provide for persons with disabilities [36]. Persons with disabilities engage in remote learning encounter many problems like absence of needed equipment, access to internet, accessible materials and required support to follow online classes resulting in being left behind academically [28].

Furthermore, the policies of rationing medical services has undoubtedly fortified the discriminatory practices against persons with disabilities during pandemics which furthermore intensify the anxiety of getting sick and the desire to look for medical treatments [3]. The Covid-19 pandemic has posed a great threat to many aspects of persons with disabilities' life including the rights to equal treatment, independence, because of some triage and policies that have disadvantaged persons with disabilities [14]. Covid-19 has caused the delivery of medical services based on worth, placing persons with disabilities more at risk of not being accorded the needed medical treatment in case of any infection [11].

Increased in Neglect and Traumatization

Outbreak of diseases, conflict and disaster being natural or human has always been taxing and traumatizing for most people. In circumstances of this nature, caregivers of vulnerable people including persons with disabilities who are nearly overstretched with other commitments find it difficult to continue rendering the needed support thus, resulting in some being neglected either voluntarily or otherwise increasing stressfulness while heightening their risk of infection as verified by persons with disabilities in addition to being exposed to heightened risk of contracting the virus because of living in densely populated residential institutions, their prolonged seclusion due to the virus has resulted in increased depression and worsened cognitive, physical and mental problems [12].

With the Covid-19 children with disabilities particularly those in developing nations are at risk of

trauma, physical neglect, and malnutrition which in the long term will result in delayed social development, poor self-esteem, academic underachievement, declining literacy, mental health, loneliness, anger; and depression [34].

Poverty and Lack of Access to Food

To develop and make progress in life, access to balanced diet is indispensable. However, with poverty, it is near impossible to have a balanced diet for growth and necessary defense mechanisms against virus attack. Most poverty-stricken communities including that of persons with disabilities they can hardly afford the basic requisites to prevent or treat Covid-19 infection, thus, elevating their risk of infection while making them sink deeper in poverty and lack of access to a balanced diet as they rarely engage in any economically viable activities while footing some bills as vindicated by because persons with disabilities, are economically disadvantaged due to many factors including high medical bills, being unemployed or underemployed, Covid-19 has made them sink deeper in poverty [12]. Persons with disabilities, due to the effect of structural disadvantages are faced with a lot of increased barriers in accessing healthcare services, increased rate of poverty, lower literacy levels, lower insurance coverage rates; and lower employment rate in comparison with the general population [33].

Similarly, in view of the fact that persons with disabilities fall within the lower socioeconomic status, homelessness, residing in densely populated settlements, inadequate access to food; and poor sanitation they are at higher risk of contracting the virus [37]. PWDs are at high risk because during pre-pandemic they have lower incomes, savings, weaker social networks, fewer assets, heightened risk of food insecurity compared to their counterparts [6].

Decreased in Community Support Services

In difficult circumstances community support is critical especially when the central and local government is overwhelmed. During most pandemics, most resources are overstretched while some activities are halted including the income-generating one. In situations of this

nature, people tend to depend on the neighbors and the larger community for their needs including the basic ones. While governments are expected and obliged to support all during pandemics, certain groups including persons with disabilities are hardly supported putting them more at the risk of infection as validated by in addition to depending on government for their basic needs, persons with disabilities rely on their families and communities that have been seriously restrained by the pandemic [8]. Caregivers of children with disabilities unfortunately receive less social support during the pandemic compare to caregivers of children without disabilities [40]. Inadequate support and attention to persons with disabilities during the Covid-19 only make them more disadvantaged [33]. With the Covid-19 restrictions, persons with disabilities are placed at high risk of losing community support since people including their caregivers' movements are constrained [34].

Similarly, during the pandemic, caregivers of children with disabilities have experienced high reduction in social support both from the family and government resulting in mental health deterioration [40]. Pressure from the pandemic has led in persons with disabilities losing support from their caregivers as quoted in [40].

The pandemic has resulted in persons with disabilities' caregivers' feeling more forgotten and ignored even at breaking point and on the brink of collapse as captured in [40]. The Covid-19 has significantly affected the quality of care persons with disabilities have been enjoying from the caregivers because of the burnout and stress of the pandemic as cited in [40].

Inaccessible Built Environment and Sense of Touching

To be successful, one must be able to move freely from one point to another without solely relying on others. However, due to the nature of the built environment, persons with disabilities and the elderly find it extremely difficult if not impossible to move around even in their very own localities without relying on others. In the case of the mobility impaired ones, they are push around while for the visually impaired they are held

around or depend on their sense of touching. However, whichever mode, it seriously exposes persons with disabilities to contracting Covid-19 as substantiated: due to inaccessible built environment including the streets, the movement of many persons with disabilities are severely curtailed and as such they depend on friends and caregivers to meet their daily needs which undoubtedly will involve being pushed in a wheelchair or holding the shoulder of a person in case of the visually impaired increasing the chances of infection[30]. Persons with disabilities being seriously constrained by the health literacy gaps in relation to new routines, restrictions to activities and changes in assistive environment, they are at heightened risk of infection [37]. Most blind, deaf-blind, leprosy victims,, and mobility impaired ones rely on support and cannot avoid touching things while those with spinal cord impairments cannot survive in isolation as they depend on caregivers for their daily needs[35].

Lack of Disability Sensitive National Policies

To ensure peace, equitable management; and distribution of resources, well thought national policies are indispensable. However, in certain times, especially when resources are deficient and society is threaten by phenomena, including pandemics, the needs and the aspirations of certain groups not excluding their lives are sacrificed concurring with: Covid-19 fight resulted in the implementation of policies of whose lives matter and whose life deserve saving over other people [22]. The absence of inclusive policies, laws; and infrastructures, have not only made PWDs being unable to live independently but has catapulted their risk of being infected with Covid-19 because they are unable to observe the basic guidelines including social distancing, regular hand wash, etc.[30]. Covid-19 has among other things forced governments and development partners to change legislations and policies which have considerable impacts on a number of rights of persons with disabilities including right to liberty, equality, independence; and right to make informed decisions even when it comes to treatment administration[14]. At the peak of the

pandemic, persons with disabilities were four times more likely to be injured or die than people without disabilities not simply because of their disabilities but rather due to national policies that failed to put into account persons with disabilities inherent vulnerabilities and their unique situations [22].

Similarly, while several nations have made some attempts to provide some financial, healthcare, and educational support, some have implemented policies that were detrimental to the welfare of persons with disabilities [33]. In some South American countries, a plethora of policies have been implemented to protect people from the virus but not a single one of these policies clearly considered the needs of persons with disabilities [33].

Increased Prevalence of Risk Factors for Contracting the Virus

Contracting a virus like Covid-19 is not only one of the most unfortunate things to happen to a person during 2020. To contract a virus can be due to several factors including natural and human ones. Persons with disabilities for various reasons including lack of adequate information, support; and the fact they rely on people for most of their basic needs have resulted in their contracting the virus and worse of all died of it concurring with: because of insufficient and improper installation of disability-friendly equipment in public buildings and streets, persons with disabilities, in Japan are heavily expose to the risk of contracting Covid-19 since they cannot access medical facilities on their own and entirely depend on skeleton professional, caregivers and above all, there has been some scale down in funding in supporting persons with disabilities, making the profession unattractive to many people [21]. Covid-19 poses greater risk to persons with disabilities particularly those at younger age [37]. Communication of valid information is critical in the fight against the virus however, with the imposed restrictions, some persons with disabilities are disadvantaged for example, the deaf who depend on lip reading cannot understand people with the mask on and sometimes these pandemics come with new

vocabularies [34]. Persons with disabilities are seriously susceptible to the virus physically, mentally and socially [9].

In addition, persons with disabilities are disadvantaged in understanding critical information that protect people from the virus and as such depend on their caregivers even at quarantine facilities [9]. For some persons with disabilities, restrictions are not only a serious challenge to their overall wellbeing but increase the tendency of stress, challenging behaviors, risk of breaking placement rules; and the use of psychotropic medication [9]. Reliance on sense of touch, caregivers, and technical aids has meant increase risk for some categories of persons with disabilities [16]. Covid-19 pandemic resulted in many hardship for most communities including persons with disabilities especially children with special needs who are more prone to the virus because of high reliance on caretakers, limited ability to practice precautions, frequent hospital visits, and higher prevalence of co-morbidities like gastroesophageal reflux [9]. Because children with disabilities constantly need caregivers to support them their risk of getting infect is high and this situation also makes it a serious challenge for them to live in isolation or alone on hospitalization if infected[14]. Because persons with disabilities are mostly poverty-ridden and live in poverty-stricken settlements, they are at heightened risk of contracting the virus [4].

Similarly, persons with disabilities are more at risk of contracting Covid-19 due to numerous factors including difficulties in adhering to protection requirements by applying the set measures, which is partly due to lack of access to clean and potable water, sanitation; and hygiene facilities as most of them live in areas where there is no running water [13]. Some PWDs need regular physical contact with people in order to get the needed support either to move around or perform basic functions such as being carried, lifted or fed which is virtually impossible in view of social distancing and self-isolation [25]. Some persons with disabilities are simply at risk because of lack of access to relevant and timely information vis-à-vis transmission and prevention

as a result of many factors such as the information being in an inaccessible format, lack of interpreters; and being complex for persons with intellectual disabilities to comprehend, [18] Some persons with disabilities especially the visually impaired and those institutionalized are at heightened risk because they heavily rely on touching things to function for example, feeling walls, buttons on elevators, etc. and for the institutionalized ones sometimes they live in overcrowded or unsanitary residential cares exposing them more to risk of contracting the virus [22].

Difficulties in Adhering to World Health Organization's (WHO) Recommendations

To fight and eliminate life threatening phenomenon, is not the sole responsibilities of national institutions alone but as well international and/or multilateral organization. WHO, the main international organization charged with the responsibilities of supporting nations in the fight against pandemics, in fulfilling its obligations, developed and promoted lot of strategies and recommendations including regular hand washing, social distancing, wearing mask, etc. to halt the spread and deadly consequences of Covid-19. However, due to many factors certain groups and communities including persons with disabilities could not strictly adhere to them thus, heightening their risk of contracting it concurring with: though WHO's recommendations for Covid-19 are brilliant, some categories of persons with disabilities found them extremely difficult to follow because of the nature of their disabilities for example, staying away 1 to 2 metres from others, is difficult for a persons with disabilities who depend on their caregivers for their daily requirements that require movement for instant. Equally the covering of one's mouth with elbow when coughing could be difficult for persons with disabilities with spinal cord injuries or muscular skeletal conditions. In same the vein, physically impaired ones experience similar constraints when it comes to their mobility aid, handrails, crutches, and wheelchairs, etc. So too it is for persons with cognitive disability in terms of avoiding to touch their eyes. Thus, all

these put persons with disabilities more at risk of contracting the virus if other appropriate measures are not instantly taken [24] . Some persons with disabilities because of the nature of their disabilities they cannot observe social distancing making them more vulnerable[28]. With social distancing, persons with disabilities and the elderly who are mostly left alone are more likely to be at increased risk of isolation resulting in more severe depression and anxiety [34]. With restriction in performing of routine activities either by persons with disabilities themselves or their caregivers, it can result in the worsening of certain behaviors [9].

Similarly, in addition to increasing anxiety among certain persons with disabilities, restriction can lead into series of behavioral and psychological interventions being either not adequately rendered or being not rendered at all because of the need to reduce face to face contact with social and health workers [9]. Because of the pandemic, some plans meant to support some persons with disabilities have to be revised resulting in some caregivers heavy reliance on medication to cope with the negative impacts of restrictions measures including lockdown and social distancing [9]. In conjunction with the anxiety associated with catching the virus, social distancing and quarantine measures in place can be mentally stressful for some persons with disabilities [29].

Furthermore, staying alone in doors and social distancing resulted in increased anxiety and behavioral difficulties in children with intellectual disabilities [14]. The constant usage of mask and always washing hands is a challenge for children with intellectual disabilities and above all, it is deviation from what they are much use to[14]. Social distancing and isolation has undoubtedly affect everyone in one way or the other but the impacts on persons with disabilities is far greater because generally, the coping capacity of many persons with disabilities is poor [9].

Pervasiveness of Underlying Health Conditions

To remain healthy and non-susceptible to diseases, balance diet, physical exercise, conducive living environment, etc. is fundamental but above all, the

absence of underlying conditions that easily make a person contract a virus is critical. Some persons with disabilities because of their disabilities, they have acquired some underlying health conditions that make them less resistant to certain virus including Covid-19 as substantiated by because of underlying health conditions such as obesity, diabetes, acute and chronic respiratory diseases, etc. Persons with disabilities are severely at risk of contracting Covid-19 [32].

In addition to the sharp rise in deaths of persons with disabilities in institutional cares from 42% to 57%, institutionalized persons with disabilities are more at risk because of their underlying health conditions, difficulties in ensuring social distancing between staff and residents themselves, abandonment by staff and gross human rights violation like neglect, restraint, isolation; and violence[28].

Persons with disabilities are more at increased risk to contract virus due to many factors: they are disproportionately represented in the elderly population, mostly have some underlying conditions, disproportionately represented in poverty-stricken communities [39]. While disability alone doesn't put persons with disabilities at heighten risk of Covid-19 infection, most persons with disabilities have some underlying health conditions that make the disease more threatening to them [38].

Lack of Disability-Friendly Information

In today's sophisticated world to live a secured and dignified life, access to relevant and affordable information is indispensable particularly when there is an emergency including the outbreak of a pandemic. To ensure all have equal access to life protecting information, it must be packaged in such a way that everyone will be able to understand it with ease. Some groups, because of their level of comprehension due to many factors it is obligatory that the information is presented in manner that best suites them in view of their conditions. However, during the Covid-19 most governments and development partners failed to adequately cater for the needs of persons with disabilities by having the said information in

the form of braille, sign language, larger size print, etc. resulting in many being at heightened of contracting the virus as vindicated by governments and partners failing to provide information in a disability-friendly formats like in screen-reader software, braille, larger text, pictures, etc. has plunged persons with disabilities deeper in the risk of Covid-19 since they would not know the value of maintaining hygiene like hand washing, social distancing, avoiding touching objects, one's eyes, mouth, face, coughing on shoulder, etc.[30]. Persons with disabilities vulnerability to Covid-19 is heightened since majority of health education information are inaccessible because they are not in braille, plain language, sign language, etc. [32]. persons with disabilities are at heighten risk of Covid-19 due to many factors including interrupted social service, critical information being not disability-friendly, being unable to observe social distancing because they depend on people for support, they have many underlying health problems, plain discrimination by associating disability to inherent vulnerability and poorer chances of survival, living in poverty and in poor communities; and inadequate access to life saving treatments [33].

In accessing preventive and response strategies, persons with disabilities are disadvantaged because of inadequate disaggregated data making it difficult to know the impact of the virus, lack of disability-friendly information and communication methods that make it hard for some categories of persons with disabilities to access fundamental preventive information, physically inaccessible built environment and limited health personnels trained in disabilities, lack of access to assistive technologies in remote learning, disrupted residential care and; and non-disability-friendly quarantine, medical facilities and transport system as critical components of the strategies [39].

Lack of Inclusive Intervention

To maintain unity in the community, each and every one must be recognized and appreciated as a bona fide member through initiatives that don't only ensure their effective and efficient participation in communal engagements but ensures all benefits and improvements

are accessible to all without discrimination. In pandemics, to ensure all are given the required attentions, support; and services, inclusive interventions stood out exclusively. In Covid-19 intervention strategies because most of them were not inclusive in nature, persons with disabilities were not only left out, their risk of infection elevated but resulted in increased inequality, dependence rate, unhealthy living conditions, etc. as corroborated by to better protect persons with disabilities it is a must that all responses are inclusive, recommendations practicalized, mainstream policy and disability-friendly ones co-exist and serious attention devoted for reconstruction [33]. To ensure inclusive and disability-friendly response mechanisms, it requires that the messages or information are in braille, large print, easy-to-read, accessible web with screen readers, accessible social media and other disability sensitive technology-based platforms [39]. To ensure persons with disabilities live in healthy, safe, dignified; and independent lives in the communities, Disabled People Organizations (DPOs) and experts have demanded governments and international organization to formulate and implement inclusive strategies [38]. To protect persons with disabilities and reduce the risk exposure, it is fundamental that all national interventions are disability sensitive and inclusive [22].

Comparably, disability-inclusive responses don't only eliminate inequality but furthermore boost programs for the benefit of all [6]. Covid-19 has undoubtedly threatened the life of nearly everyone but persons with disabilities are disproportionately affected as a result of many factors including attitudinal, environmental and institutional obstacles that were unfortunately replicated in response strategies[28]. The highest impact of Covid-19 has been witnessed by the poorest households including those of persons with disabilities and thus, worsening pre-existing inequalities [23].

National Budget Cuts

One of the most important contracts citizens and their governments have, is the honest, transparent; and professional management of state resources and the delivery of quality, relevant and affordable social and

economic services to all within a reasonable period of time. However, with budget cuts, many services are negatively affected both in quality, quantity; and time of delivery if not deleted from budget line. In the event of anything of this due to some calamities including pandemics or economic meltdown, in most cases if not in all cases, the needs of the vulnerable groups including persons with disabilities such as access to medical treatment to prevent further infections, sanitary services, innovative initiatives for rehabilitation services, lifesaving medical equipment like ventilators, etc. are the first victims as validated by in developing countries, with the economic impacts of the pandemic, projects and programs are the first victim of budget cutting and even facilities closures that provide for example, medical treatments like dermatology centers, cancer screening centers without alternatives [8]. The pandemic has increased persons with disabilities succumbing to other diseases due to lack of access to adequate healthcare services, closure of specialized institutions and programs both supported by the governments and NGOs; and soaring up of new threatening conditions [8]. At the peak of the pandemic because of the scarcity of resources and healthcare services in most nations, the rationalization policy in which healthcare workers must decide who is to be saved and who is not persons with disabilities especially those with physical and intellectual impairment are first victims, particularly, in accessing intensive care admission, receiving ventilators [22].

Covid-19 has not only stretched national resources but has resulted in resource-allocation based on benefit maximization making some groups including persons with disabilities more disadvantaged in accessing quality and relevant services[34]. The Covid-19 pandemic has made persons with disabilities accessing critical medical and healthcare services more difficult, isolated, and lonelier especially during social distancing which led to increase in heart disease, dementia and other problems persons with disabilities are encountering [3]. Although many persons with disabilities are healthy, some have underlying acute health conditions for example,

suppressed immune systems or respiratory, skin breakdown, urinary tract infection, concerns which the pandemic have worsen[3]. The Covid-19 has resulted in many hardships which have changed focus making the proper understanding of different disability models difficult resulting in persons with disabilities to continue living in difficult circumstances [11].

Poorly Funded and Managed Residential Institutions

In many communities, people in difficult circumstances including persons with disabilities have been cared for by institutionalization. However, during emergency, including pandemics, when governments and development partners are resources constrained, these institutions become victims of budget-cut or closure without well-thought plan thus, exposing them to many problems including contraction of different diseases as substantiated by in some countries including Brazil, some of the recommendations are never incorporated into the relevant policies and worse of all, at certain point people were asked to protect themselves without considering the plight of persons with disabilities particularly those in residential care [33]. persons with disabilities living in institutional care were only protected by recommendations and not by legislations [33]. Persons with disabilities living in institutions are more likely to be infected with the virus and above all, have higher rates of deaths due to many factors namely difficulties in ensuring basic hygiene, maintaining social distancing, inadequate access to healthcare information and services, testing and delivery of appropriate and timely healthcare services[4].

Comparably, because of Covid-19 some residential cares were closed resulting in persons with disabilities being returned to their families some of whom do not have the required professional knowledge to properly care for them while protecting them from the virus [25]. Covid-19 presents heighten risk to persons with disabilities particularly those living in congregated residential homes and as such both mortality, morbidity; and fatality rate is substantially higher among them compare to other groups [19].

Positive Impacts of Covid-19

Hardly can anyone think that pandemics have any positive impacts on the societies because of the great lose and risk they pose to humanity. However, with a critical review, some positive impacts can be realized during a pandemic. Some disadvantaged groups including PWDs over the years have been advocating for protection against abuse and violation of their fundamental human rights like free movement, employment, association, access to healthcare services, etc. resulting in some living in isolation or without their basic needs. With the advent of the virus, many lessons like the mental and psychological torture in being discriminated against because one is differently able, lockdown at one place because of negative attitudes and poorly built environment, being institutionalized because of people erroneously believed one will infect them with physical impairment or one will bring bad luck to them, etc. have been learned which are daily living of some persons with disabilities which no human being would like to live in for the rest of his or her as supported by the pandemic has rendered deep insights into the bad experience of loss of meaning, opportunities to community participation, income, identity, living on benefits while not contributing; and being unable to study remotely due to inaccessibility, the daily lives of persons with disabilities [11]. Covid-19 has demonstrated that there are some alternatives in work and education if effective and efficient formats are developed and maintained [11]. Covid-19 has demonstrated to people being forced to stay indoors is not pleasant and is socially unacceptable for others to be lonely or isolated, all public information must be accessible to all and alternatives must be developed to ensure nobody is left behind, universal healthcare should be the new order and not a privilege, the value of working and contributing to welfare schemes, social protection and benefits are critical in society, that social policies that promote and sustain equity is a strong prerequisite in ensuring a society for all [11].

Correspondingly, the pandemic to some degree had resulted in people trying to understand the life and

living conditions of persons with disabilities which can be subsequently applied to design an inclusive society [11]. Covid-19 has made societies realized that inclusive healthcare services and universal access should be the new order as such social good is both unifying and empowering for all [11]. Covid-19 has taught some members of the society what living in institutions, isolation and loneliness, the common characteristics of persons with disabilities' life [11]. The Covid-19 has given value to the essence of having access to clear and understandable information, to be protected from harm, justifying the rights for persons with disabilities' to easily access disability-friendly information[11]. Covid-19 has assisted in condemning the act of discrimination and stigma against persons with disabilities simply because of a disease they have contracted which is the daily of persons with disabilities[11].

If the pandemic can be associated with positive impact, it is the fact that it has increased public attention on persons with disabilities especially when it comes to clinical medicine and public health. There has been lot of discussions since the start of the pandemic which resulted in some controversial issues about disabilities being brought to the public domain. In view of this, and the fact that persons with disabilities' issues are hardly considered in the academic arena, the mere visibility can be validly claimed to be a great success [26].

Recommendations

For a way forward in both addressing the current and future problems, it is critical that the following issues among others are highly considered, financial support, commissioning more studies, providing caregiver substitutes, accessible health facilities and transport system, policies and laws are strengthen, etc. as substantiated by to ensure decent lives for persons with disabilities there is urgent need for financial support either in the form of unemployment benefits, tax credits for their employers; increment in existing disability benefits, automatic renewal of expired entitlements[28]. To effectively response to future pandemics, it is pivotal that lessons learned during the Covid-19 are pooled together

through some studies the findings of which can equally be useful to persons with disabilities themselves, disabled people organizations; and caregivers [9].

Similarly, in inclusive response mechanisms it is fundamental that governments consider a near perfect caregiver substitute in case a current caregiver is infected and quarantined, providing financial and material support to persons with disabilities hence in most communities disability and poverty are two sides of the same coin, in spite of the need for rationalization, attention must be paid to the provision of rehabilitation services including assistive technologies, production of disaggregated data on disabilities to be able to meet the needs of persons with disabilities both in the prevention and treatments efforts through policies and legal instruments designing [16]. To reduce risk, morbidity and mortality, it is critical that response strategies include accessible health facilities and transport systems, working with disabled people organizations to further support the efforts in de-prioritization of persons with disabilities in accessing medical treatments, training health and childcare professionals in how to include persons with disabilities in their programs designing and implementation, sanitization and washing facilities are made accessible and affordable, rationing and treatments are non-discriminatory; and be more vigilant to identify persons with disabilities that need more urgent attention [39]. To protect persons with disabilities from the pandemic, it is pivotal that policies and laws are strengthen, barriers to accessible healthcare services are eliminated, healthcare services are improved and expanded making it affordable for persons with disabilities, staff are trained in disabilities related issues, empowered persons with disabilities to make informed healthcare decision, discrimination is criminalized; and research is conducted on healthcare service delivery and the facilities [38].

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