

Lifestyle and health vulnerabilities of people with disabilities in the COVID-19 pandemic

Vulnerabilidades no estilo de vida e saúde de pessoas com deficiência na pandemia da COVID-19
Vulnerabilidades en el estilo de vida y la salud de las personas con discapacidad durante la pandemia de COVID-19

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Abstract

Objective: To analyze the vulnerabilities related to lifestyle and health of people with disabilities in the COVID-19 pandemic. **Methods:** This cross-sectional study analyzed the characteristics and health perceptions of 250 people with disabilities based on home visits using the reference network or snowball sampling strategy. A questionnaire was used to collect data on type of disability, cause, duration, physical activity, smoking and alcohol consumption, use of continuous medication, and pre-existing diseases. The chi-square test was used to analyze the data for compliance, frequency, percentages and p-values. **Results:** People with motor disabilities, acquired over the course of their lives and related to disease complications, predominated. With regard to health vulnerabilities, lack of physical exercise and continuous medication use were predominant. However, most respondents reported that they did not smoke or drink alcohol. **Conclusion:** The health and lifestyle vulnerabilities of people with disabilities identified in this study could help in the development of actions aimed at promoting the quality of life and health of this population, as well as in the identification of risk factors to be considered when designing health policies.

Descriptors: Disabled persons; Health vulnerability; Lifestyle; COVID-19; Nursing.

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Whats is already known on this?

People with disabilities have limitations in physical activity that affect their lifestyle and the prevalence of chronic noncommunicable diseases compared with people without disabilities.

What this study adds?

The study employs a sample size of 250 individuals and examines variables related to disability and lifestyle, contextualizing these issues within the context of the ongoing COVID-19 pandemic.



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Resumo

Objetivo: Analisar as vulnerabilidades relacionadas ao estilo de vida e saúde de pessoas com deficiência na pandemia da COVID-19. **Métodos:** Estudo transversal que analisou as características e percepções de saúde de 250 pessoas com deficiência a partir de visitas nas residências utilizando a estratégia de amostragem por rede de referência ou bola de neve. Para a coleta, utilizou-se questionário relacionado ao tipo de deficiência, causa, tempo, prática de exercícios físicos, tabagismo e etilismo, uso de medicações contínuas e doenças preexistentes. Para análise dos dados, foi empregue o teste Qui-Quadrado de Aderência, frequência, porcentagem e p-valor. **Resultados:** Prevaleram as pessoas com deficiência motora, adquiridas no decorrer da vida, relacionadas a complicações de doenças. No que diz respeito às vulnerabilidades em saúde, predominaram a ausência da prática de exercícios físicos e a utilização de medicamentos de modo contínuo. Contudo, a maioria dos entrevistados referiu não fazer uso de cigarro ou bebidas alcoólicas. **Conclusão:** As vulnerabilidades relacionadas à saúde e ao estilo de vida das pessoas com deficiência, identificadas no estudo, poderão auxiliar no desenvolvimento de ações direcionadas à promoção da qualidade de vida e saúde do público, assim como favorecer a identificação de fatores de risco a serem considerados na elaboração de políticas de saúde.

Descritores: Pessoas com deficiência; Vulnerabilidade em saúde; Estilo de vida; COVID-19; Enfermagem.

Resumen

Objetivo: Analizar las vulnerabilidades relacionadas con el estilo de vida y la salud de las personas con discapacidad durante la pandemia de COVID-19. **Métodos:** Estudio transversal que analizó las características y las percepciones de salud de 250 personas con discapacidad mediante visitas domiciliarias utilizando la estrategia de muestreo por la red de referencia o bola de nieve. Se utilizó un cuestionario para recoger datos sobre el tipo de discapacidad, la causa, el tiempo, la práctica de ejercicios físicos, el consumo de tabaco y alcohol, el uso continuo de medicamentos y las enfermedades preexistentes. Se utilizó la prueba de Chi-cuadrado de adherencia, frecuencia, porcentaje y p-valor para analizar los datos. **Resultados:** Hubo una prevalencia de personas con discapacidad motora, adquirida a lo largo de la vida y relacionada con complicaciones de enfermedades. En cuanto a las vulnerabilidades sanitarias, la ausencia de la práctica de ejercicios físicos y el uso continuo de medicamentos fueron predominantes. Sin embargo, la mayoría de los entrevistados declaró no consumir cigarrillos ni bebidas alcohólicas. **Conclusión:** Las vulnerabilidades relacionadas con la salud y los estilos de vida de las personas con discapacidad, identificadas en el estudio, podrían ayudar en el desarrollo de acciones dirigidas a promover la calidad de vida y la salud de ese público, así como favorecer la identificación de factores de riesgo a tener en cuenta en la elaboración de políticas de salud.

Descritores: Personas con discapacidad; Vulnerabilidad en Salud; Estilo de vida; COVID-19; Enfermería.

INTRODUCTION

The most recent data on the prevalence of disabilities in Brazil indicates that over 17 million individuals in the country have some form of disability, representing 8.4% of the total population. This figure highlights a significant demand for care services aimed at promoting health and quality of life on an equal footing with the rest of the population.⁽¹⁾

The quality of life and health of people with disabilities is an increasingly important issue globally. These discussions are focused on implementing services that guarantee comprehensive care and enable rehabilitation from the perspective of adopting a healthy lifestyle that increases total life expectancy.⁽²⁾ However, specific factors related to disability result in limitations in participation and access to these services and activities. This ultimately leads to the prevalence of unhealthy behaviors, such as sedentary lifestyles, smoking, and alcohol consumption, which are responsible for the prevalence of chronic diseases and obesity in the disabled population when compared to the non-disabled population.^(3,4)

In addition to disability-related variables, debates about access to health services for this public have become increasingly frequent among researchers in the field. This is due to studies that have shown the incidence of factors that limit the use of these services by people with disabilities. These factors include inaccessible environments, routes marked by environmental barriers such as potholes, the absence of audible signs, stigmatizing behavior by health providers, and even conditions that may put them at risk.⁽⁵⁻⁷⁾ As a result of these conditions, the demand for health-related services drops considerably when it comes to people with disabilities. The Unified Health System (SUS) is based on the principle of universality, which means that every individual, regardless of any form of discrimination, has the full right to access health services and actions. Furthermore, Brazilian inclusion laws ensure the promotion of comprehensive health operations for people with disabilities, including all levels of complexity, guaranteeing universal and equal access. Consequently, it is necessary to implement strategies that favor the coverage of the needs of people with disabilities.^(8,9)

Despite the significance of studies evaluating the context of life and health of people with disabilities during the pandemic, there are still gaps in this area. Most studies have focused on knowledge and communication regarding the cycle of contamination by the virus.

Consequently, an understanding of the lifestyle characteristics and health vulnerabilities of this population is a crucial strategy for identifying issues and promoting improvements in the health services

provided, with the objective of increasing adherence by people with disabilities and enabling the implementation of strategies aimed at rehabilitation through a healthy lifestyle. The objective of this study was to examine the vulnerabilities associated with the lifestyle and health of individuals with disabilities during the course of the ongoing Coronavirus Disease 2019 (COVID-19) pandemic.

METHODS

The objective of this cross-sectional study was to examine the lifestyle characteristics and health perceptions of individuals with disabilities residing in the central and rural regions of the municipality of Redenção in the state of Ceará, Brazil. The data was collected between January and December 2021 from individuals with visual, hearing, and motor disabilities. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines were employed.

A total of 250 individuals with disabilities, aged 18 and above, who had been diagnosed with visual, hearing, or motor impairments and resided within the defined study area were included in the study. Those who were absent from their homes at the time of data collection were excluded.

The study commenced with visits to the homes of individuals with disabilities, employing a sampling strategy based on a reference network or snowball approach.⁽¹⁰⁾ Each individual identified was queried as to whether they were aware of any neighbors or family members in the area who met the research criteria.

The visits were conducted during the daytime and were dependent upon the collaboration of community health agents from units in the vicinity who had undergone training in the identification of individuals with disabilities. Once the disability had been identified, the community agents informed the disabled individuals in advance that they would be visited. They traveled by automobile in areas where vehicular access was permitted and on foot in areas where such access was not possible.

Upon arrival at the residences, the researchers, in collaboration with the Community Health Agents, read the Informed Consent Form aloud and, once the individuals had consented, collected the signatures of those who were literate or the fingerprints of those who were illiterate or unable to sign.

With regard to individuals with visual and hearing impairments, data was collected with the assistance of family members or caregivers who were responsible for directing and ensuring that the information was understood throughout the implementation of the research.

The instrument utilized for data collection consisted of a questionnaire developed by the researchers, which included questions pertaining to the type of disability, its cause, the duration of the disability, questions regarding physical exercise, smoking and alcohol consumption, the use of continuous medication, and pre-existing illnesses^(11,12).

The data from the interviews was tabulated and organized in Excel spreadsheets and analyzed in Epi Info version 7 using the Chi-Square Adherence test. The data was then distributed in tables and described in simple absolute frequency, percentage, and *p*-value, with a significance level of 95% considered.

The study was approved by the Human Research Ethics Committee of the University for International Integration of the Afro-Brazilian Lusophony, with opinion number: 4.384.493/2020 and CAAE: 39270220.0.0000.5576. In accordance with Resolution 466/12, participants were guaranteed the establishment of ethical aspects.

RESULTS

Table 1 presents variables related to the type and causes of the disability, as well as the characteristics of the disability in terms of time and origin.

Table 1. Disability-related characteristics of participants (n=250). Redenção, CE, Brazil, 2021.

Variables	n (%)	CI (95%)*	p-value†
Type of disability			<0.001
Motor	149 (59.6)	53.2 - 65.7	
Visual	69 (27.6)	22.1 - 33.5	
Auditory	32 (12.8)	8.9 - 17.5	
Cause of deficiency			<0.001
Acquired	203 (81.2)	75.8 - 85.8	
Congenital	47 (18.8)	14.1 - 24.2	
If acquired			<0.001

Caused by disease complications	152 (60.8)	54.4 - 66.8
Not applicable	47 (18.8)	14.1 - 24.2
Caused by accident	39 (15.6)	11.3 - 20.7
Other	12 (4.8)	2.5 - 8.2
If acquired, how long ago? (years)		<0.001
<0.6	4 (1.6)	0.4 - 4.0
0.6 - 2	31 (12.4)	8.5 - 17.1
> 3	23 (9.2)	5.9 - 13.4
> 5	33 (13.2)	9.2 - 18.0
>10	111 (44.4)	38.1 - 50.7
Not applicable	48 (19.2)	14.5 - 24.6

*CI: Confidence Interval; † Chi-square test of adherence.

Source: prepared by the authors.

Of the 250 individuals with disabilities who were identified and agreed to participate, 149 (59.6%) reported having a motor disability, 69 (27.6%) reported having a visual disability, and 32 (12.8%) reported having a hearing disability.

With regard to the cause of the disability, a considerable number of respondents indicated that they had acquired the disability at some point in their lives, accounting for 203 (81.2%; $p < 0.001$) of the sample analyzed.

Of those who reported having acquired the disability, 152 (60.8%; $p < 0.001$) indicated that it was due to complications from illnesses, while 39 (15.6%) attributed it to accidents. Furthermore, with regard to time, it is noteworthy that 111 respondents (44.4%; $p < 0.001$) reported having acquired their disability more than ten years ago.

Table 2 presents the health conditions and profiles of individuals with disabilities.

Table 2. Health conditions and profile of participants (n=250). Redenção, CE, Brazil, 2021.

Variables	n (%)	CI (95%)*	p-value†
Has an illness or health problem			<0.001
No	53 (21.2)	16.3 - 26.7	
Yes	197 (78.8)	73.2 - 83.7	
Ongoing medication			<0.001
No	62 (24.8)	19.5 - 30.6	
Yes	188 (75.2)	69.3 - 80.4	
Physical activity			<0.001
No	194 (77.6)	71.9 - 82.6	
Yes	56 (22.4)	17.3-28.0	
Use of alcohol			<0.001
No	223 (89.2)	84.6 - 92.7	
Yes	27 (10.8)	7.2 - 15.3	
Smoker			<0.001
No	211 (84.4)	79.3 - 88.6	
Yes	39 (15.6)	11.3 - 20.7	

*CI: Confidence Interval; † Chi-square test of adherence

Source: prepared by the authors.

Regarding the presence of illnesses, it can be observed that 197 (78.8%; $p < 0.001$) individuals reported having a health problem or illness. It is also noteworthy that 188 (75.2%; $p < 0.001$) of the respondents reported taking medication continuously.

With regard to the lifestyle habits of the people with disabilities who participated in the study, it is noteworthy that 194 (77.6%; $p < 0.001$) reported not engaging in any physical activity during their daily routine. Nevertheless, it is noteworthy that a considerable proportion of the respondents reported abstaining from alcohol consumption (223, 89.2%; $p < 0.001$) and tobacco use (211, 84.4%; $p < 0.001$).

DISCUSSION

It is estimated that more than a billion people worldwide live with some form of disability. This figure has led to a series of reflections on the progression of this number in the coming years. The evolution of health practices has led to greater longevity in terms of life expectancy for the population.⁽¹³⁾

Based on the number of individuals in the sample and the number of individuals referenced in census surveys, it is estimated that the number of individuals with disabilities in the context under investigation is even higher. Furthermore, the state of Ceará is the third state with the highest prevalence of disability (10.6%) in the population. It is therefore postulated that the prevalence is higher than that considered in the study, given that not all homes were visited and not all people agreed to contribute to the survey.

Furthermore, the National Health Survey revealed a discrepancy with the findings of the 2010 Demographic Census. While visual impairment was the most prevalent type of disability in 2010, it was surpassed by motor impairment, which now represents the leading cause of disability in the Brazilian population. The findings of this study are consistent with those of the National Health Survey, which reported that a significant proportion of the population (6.5%) has a motor disability, followed by visual impairment (2.5%) and hearing impairment (1.1%).⁽¹⁾ It is noteworthy that no individuals with intellectual disabilities were identified in the study in question. Nevertheless, it is important to note that this type of disability represents 1.2% of the Brazilian population. Further studies are necessary to gain a deeper understanding of the specific nature of this and other disabilities in the context of the study.

In regard to the etiology of disabilities, it is evident that perinatal and congenital disorders resulting from the absence or inadequacy of care during the reproductive period, communicable and chronic non-communicable diseases, psychiatric problems, excessive consumption of alcohol and other drugs, malnutrition, trauma and injuries represent the primary causes. The study considered only congenital and acquired classifications. The latter were divided into complications of diseases, accidents, and other categories.

The increased life expectancy of the Brazilian population has led to an increase in the prevalence of disabilities related to hypertension, diabetes mellitus, acute myocardial infarction, strokes, Alzheimer's disease, cancer, osteoporosis, and other conditions. Moreover, individuals with disabilities exhibit a higher prevalence of chronic diseases and comorbidities in comparison to the general population.⁽¹⁴⁾

Chronic non-communicable diseases have been identified as a contributing factor to the worsening of COVID-19 cases in the population, resulting in an increased length of hospitalisation and a higher incidence of mortality.⁽¹⁵⁾ In light of the ongoing pandemic, individuals with disabilities are at heightened risk of infection due to the prevalence of positive responses to underlying health conditions.

It is also noteworthy that a significant proportion of the sample, namely 75.2%, were individuals with disabilities who were taking continuous medication. When analyzing the use of medicines by deaf or hearing-impaired patients, it was observed that anti-inflammatory, analgesic, and anti-rheumatic drugs were consumed at a higher rate than other medications. Furthermore, the participants expressed dissatisfaction with the dispensing instructions and demonstrated limited knowledge of rational use, which predisposes them to self-medication.⁽¹⁶⁾

The necessity for social isolation to contain the spread of the novel coronavirus (COVID-19) and the dissemination of information about medication used to prevent and treat the disease have contributed to the practice of self-medication.⁽¹⁷⁾ In this context, there has been a considerable increase in the consumption of analgesics, antipyretics, vitamins, and anxiolytics, which, when added to the continuous use of medications for the treatment of chronic diseases, may favor the existence of cases of drug poisoning.⁽¹⁸⁾

With regard to the lifestyle and health habits of the sample analyzed, 77.6% of the participants reported no engagement in any form of physical activity. It is well-established that regular physical activity plays a pivotal role in the prevention and management of chronic non-communicable diseases. It is thus imperative that all individuals integrate physical activity into their daily routines, including those with disabilities. In this case, guidance and clarification regarding the importance of physical activity in their routine is necessary. It is also incumbent upon nurses to provide guidance to this audience.

Similar results were observed in the evaluation of variables related to the life habits of deaf people in the south of the country. In this region, 75.4% of the interviewees agreed positively with the question that considered the insufficient practice of physical activities in the development of their routines.⁽¹⁹⁾

The lifestyle of adults with perceived disabilities assessed in quilombos also identified a high prevalence of low-activity habits in the sample analyzed. This study also indicates that the majority of individuals who participated in the study are at risk of developing illness and obesity, based on the findings related to physical activity practice.⁽²⁰⁾ This may also be associated with the significant proportion of the sample who reported having some illness or health problem (78.8%).

The perceived impact of the coronavirus pandemic on physical and mental health and healthy lifestyle behaviors in people with disabilities revealed a notable decline in physical activity levels, accompanied by alterations in fruit and vegetable consumption and sleep habits that significantly influenced the well-being of participants.⁽²¹⁾

With regard to the consumption of alcoholic beverages and smoking, there is a low proportion of the sample who maintain these behaviors, but there is still a prevalence of 12.6% of smokers among the adult Brazilian population. With regard to alcohol consumption, 18.8% of the Brazilian population shows abusive drinking behavior.⁽¹⁾

With regard to smoking, the prevalence of tobacco use is higher among people with disabilities than among people without disabilities, especially among people with visual impairments.⁽¹⁸⁻¹⁹⁾ In addition, the likelihood of tobacco dependence has also been observed in people with intellectual disabilities.⁽²²⁾

With regard to alcohol consumption, there are patterns of chronification after the diagnosis of disability, which increases the risk of morbidity and mortality, especially among people with motor disabilities.⁽²³⁾ Therefore, despite the low number of people with disabilities who reported not consuming alcohol, strategies should be developed to prevent and raise awareness of the harmful effects of this practice on health.^(24,25)

During the pandemic, with the need for social isolation, evidence shows that smokers increased their consumption by up to 20 cigarettes per day and alcoholics increased their alcohol consumption by 17.6%.⁽²⁶⁾ As these are practices that, when used in large quantities, can promote significant changes in mental and psychological functioning and are considered risk variables for chronic disease, alcoholism and smoking emerge as important issues to consider when assisting people with disabilities. Therefore, some assistive technologies have been developed with the aim of educating the public, such as the educational game "Drogas: Jogando limpo", used to educate visually impaired people about the use of psychoactive drugs.⁽²⁷⁾

In terms of limitations, the study provided important but local data, and it is important that more of this type of research is carried out to contribute to the design and implementation of public policies for this target group, as well as to set targets for lifestyle changes and the adoption of healthy habits.

To implement the principle of universal health care, the knowledge of the characteristics of the profile and vulnerabilities in health care of people with disabilities allows the definition of strategies for inclusion in health services. Therefore, this study helps nurses and managers of health care units to understand the reality of their population and to establish measures to make them accessible to the public.

CONCLUSION

Considering the scarcity of studies aimed at assessing the health characteristics of people with disabilities in the Brazilian context, this study allowed the assessment of the relevant health and lifestyle characteristics, showing a prevalence of unhealthy lifestyles with lack of physical exercise, despite the fact that the majority of them have chronic diseases that require the use of continuous medication. Therefore, the study will allow the development of actions aimed at promoting the quality of life and health of these users, in order to put into practice the principles of integrality, equity and universality of care that govern the Brazilian Health System.

CONTRIBUTIONS

Contributed to the conception or design of the study/research: Oliveira PMP, Silva GM. Contributed to data collection: Luzia FJM, Silva GM. Contributed to the analysis and/or interpretation of data: Costa EC, Carvalho CML, Grimaldi MRM. Contributed to article writing or critical review: Aquino SMC, Luzia FJM. Final approval of the version to be published: Oliveira PMP, Luzia FJM, Silva GM, Costa EC, Carvalho CML, Grimaldi MRM.

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