

**Mobility of people with physical disabilities in Brazil***Movilidad de personas con discapacidad física en Brasil**Mobilidade de pessoas com deficiência física no Brasil***Janaina Guilhermina de Alcântara<sup>1</sup>**

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**Submission:** 06-23-2021**Approval:** 07-27-2021**Abstract**

The aim was to identify the relevant interventions to help in coping with physical disability. This is a narrative literature review. The search for data collection was performed in Latin American and Caribbean Health Sciences Literature, Scientific Electronic Library Online (SciELO) and Academic Google. Altogether, a total of 400 articles were found, when the inclusion and exclusion criteria were applied, 361 articles were excluded and only 39 were selected for this research. As a result, it is argued that many people with physical disabilities improve their quality of life and well-being through the practice of sports activities. Thus, in this modality, they enjoy positive effects for their health by regularly practicing this activity, relying on Assistive Technologies for this purpose, whether the practice is competitive or not, as the person wishes. In conclusion, this study showed that only a small number of publications dealt with the issues of psychological adaptation and coping with patients with physical disabilities, requiring further studies in the literature focusing on interventions in rehabilitation issues for patients with sequelae or disabilities.

**Descriptors:** Freedom of Movement; Mobility Limitation; Disabled Persons; Unified Health System; Aged.**Resumén**

El objetivo fue identificar las intervenciones relevantes para ayudar a afrontar la discapacidad física. Esta es una revisión de literatura narrativa. La búsqueda para la recolección de datos se realizó en Literatura de Ciencias de la Salud de América Latina y el Caribe, Scientific Electronic Library Online (SciELO) y Academic Google. En total, se encontraron un total de 400 artículos, cuando se aplicaron los criterios de inclusión y exclusión, se excluyeron 361 artículos y solo 39 fueron seleccionados para esta investigación. En consecuencia, se argumenta que muchas personas con discapacidad física mejoran su calidad de vida y bienestar a través de la práctica de actividades deportivas. Así, en esta modalidad gozan de efectos positivos en su salud a través de la práctica regular de esta actividad, apoyándose para ello en Tecnologías Asistivas, ya sea que la práctica sea competitiva o no, según lo desee la persona. En conclusión, este estudio mostró que solo un pequeño número de publicaciones abordaron temas de adaptación psicológica y afrontamiento de pacientes con discapacidades físicas, requiriendo más estudios en la literatura enfocados en intervenciones en temas de rehabilitación para pacientes con secuelas o discapacidades.

**Descriptores:** Libertad de Circulación; Limitación de la Movilidad; Personas con Discapacidad; Sistema Único de Salud; Anciano.**Resumo**

Objetivou-se identificar as intervenções pertinentes para auxiliar no enfrentamento da deficiência física. Trata-se de uma revisão narrativa de literatura. A busca para a coleta de dados foi feita na Literatura Latino-Americana e do Caribe em Ciências da Saúde, *Scientific Electronic Library Online* (SciELO) e Google Acadêmico. Ao todo, foram encontrados um total de 400 artigos, ao serem aplicados os critérios de inclusão e exclusão, 361 artigos foram excluídos e apenas 39 foram selecionados para esta pesquisa. Como resultado, discute-se que muitas pessoas, com deficiência física, melhoram sua qualidade de vida e seu bem-estar por meio da prática de atividades esportivas. Assim, nesta modalidade, eles usufruem de efeitos positivos para sua saúde pela prática regular desta atividade, contando com Tecnologias Assistivas para esta finalidade, sendo a prática competitiva ou não, conforme a pessoa desejar. Por conclusão, este estudo mostrou que apenas um pequeno número de publicações tratava das questões da adaptação psicológica e do enfrentamento do paciente com deficiência física, sendo necessários mais estudos na literatura com foco em intervenções nas questões de reabilitação ao paciente portador de sequelas ou deficiência.

**Descritores:** Liberdade de Circulação; Limitação da Mobilidade.; Pessoas com Deficiência; Sistema Único de Saúde; Idoso.

## Introduction

According to the American Occupational Therapy Association (AOTA), Daily Living Activities (ADL), which can also be described as basic life activities, correspond to activities aimed at taking care of one's own body, such as bathing, bladder elimination and intestinal, clothing, nutrition, mobility, toilet use and personal hygiene. Mobility consists of the individual's ability to move or move from one position to another when performing daily activities, such as moving in bed, transfers, walking, moving objects or locomotion in a wheelchair<sup>1</sup>.

The growing number of people with mobility difficulties is attributed, in the first place, to the increase in the incidence of chronic-degenerative diseases resulting from the population aging process that has been advancing every day, however, accompanied by diseases and sequelae that limit functional performance, generating situation of dependency and change in the lives of families, who often for lack of financial resources, see this incapacity increase daily<sup>2</sup>. In addition to having economic and social consequences for families, and longer hospital stay for the patient<sup>3</sup>.

According to data from DATASUS, a Brazilian public domain used by the Unified Health System (SUS) and updated by the Ministry of Health (MS), every six seconds, regardless of age or gender, an individual dies of a cerebrovascular accident (CVA), and others remain with sequelae that prevent the performance of ADLs, remaining dependent on a caregiver or family member, whose economic and social impact not only falls on the family, but also entails a burden for the health system<sup>4</sup>.

In 2009, data from DATASUS indicated that 160,620 hospitalizations were due to cardiovascular accidents, with stroke being the third highest incidence<sup>4</sup>. A little less than a decade later, in 2017, admissions rose to 211,319<sup>5</sup>.

CVA comprises a disorder that injures the brain due to an interruption in the blood flow irrigation of the Central Nervous System (CNS), which can occur in an ischemic or hemorrhagic way. The consequences of stroke vary considerably, depending on the brain region affected, causing impairment in the individual's functionality<sup>5</sup>.

Worldwide, stroke also has negative impacts, comprising the leading cause of death. In Brazil these numbers reach 100,000 deaths/year. This situation worsens as the Brazilian population ages, so that it is already the leading cause of functional disability, or physical disability related to sequelae such as: neurological deficit and decreased cognitive function, in addition to a slow recovery, which significantly compromises the quality of life, being also one of the biggest causes of permanent sequelae, especially related to mobility<sup>5</sup>.

Within this scenario of mobility difficulties, physical rehabilitation is an integral part of the individual's recovery process, which counts on the help not only of family members, but of the multidisciplinary health team<sup>6</sup>.

The rehabilitation and monitoring team of a person with a sequel or a physical disability often uses the Ranking scale, which helps to assess the patient to measure the degree of disability and dependence in their daily activities

of life. The scale ranges from 0 (no symptoms) to 5 (severe disability). Scientifically, it was used in a study carried out in Paraíba-Brazil in 2017, to assess the degree of dependence of people with sequelae due to stroke, in the result of this study 51.40% of patients had severe disability<sup>7</sup>.

The limitations of a physical disability impede connection with society. The first six months with a disability are considered the most critical, as until adaptation, the individual is highly dependent and requires greater care<sup>5</sup>.

Limitations and impairments due to physical sequelae (hemiparesis) comprise about 50% of cases, that is, dependence on ADLs justify the need for auxiliary mobility devices, which include: wheelchairs, bath chairs, walking sticks and walkers, which is provided by the Guidelines for the Rehabilitation of Persons with CVA or for any other physical disability, being an important component of this adaptation process, representing the overcoming of barriers for these patients, who with this support tend to carry out their activities more actively<sup>5</sup>.

Another problem is the Polio virus that caused paralysis in more than 350,000 children from at least 125 countries during its epidemic. Although eradicated in Brazil, the disease continues to represent an expense of more than US\$ 40 billion in countries like Afghanistan and Pakistan, not only due to the costs of caring for people with sequelae, but also due to the high expenses with hospitalization and rehabilitation<sup>8</sup>.

In Brazil, polio has generated many people with sequelae. The first records of the epidemic were registered in Rio de Janeiro in the 1930s and 1940s, and it can be considered the largest epidemic recorded in our country to date, challenging public health and causing anxiety and inconvenience to society at the time<sup>9</sup>.

Although the disease was eradicated in the 1990s by joint actions of the Pan American Health Organization and the United Nations Children's Fund, through vaccination, millions of individuals remained with sequelae such as: muscle weakness, difficulty in walking, joint deformities, having to look for a way to also continue performing their daily activities of life<sup>9</sup>.

Thus, people who are victims of Poliomyelitis today are elderly with sequelae and need greater demand for rehabilitation and home adequacy for physical and social well-being<sup>10</sup>.

Another scenario that has been awakening the Public Power in recent decades is population aging, indicating specific actions to create conditions to provide greater autonomy and socialization for the elderly, intra-household or in society<sup>11</sup>.

The Unified Health System is still unable to meet the country's demand, as care policies for the elderly do not keep up with the needs arising from the senile impairment that aging itself brings, such as the increase in non-communicable chronic diseases that cause dependence and disability, or often limit and cause dependence for daily activities of life<sup>11</sup>.

Faced with this situation, demands are placed on Brazilian public health and health services, demanding



models that transform social relations and redimension protection and social relations in the country<sup>11</sup>.

The aim of this study is to seek scientific evidence to identify relevant interventions to help cope with physical disability.

The rationale for this study is that, although some articles have already explored the limitations that a physical disability causes in the lives of patients and the rehabilitation interventions applied to such patients, it is still common to observe, in practice, the difficulty of these individuals in returning your life and your routines, or even to supply your necessities of life. Therefore, adaptations are necessary, so that they can live with dignity and quality of life.

## Methodology

It is a narrative literature review. This work aims to answer the following guiding question: what is the scientific evidence in the literature that seeks to identify relevant interventions to help in coping with physical disability? The following descriptors were used: Assistive Technology for the Physically Disabled; Technological Assistance for People with Sequelae; Physically Disabled; Impaired Physical Mobility. Data were collected in the following databases: Latin American and Caribbean Literature on Health Sciences (LILACS), Scientific Electronic Library Online (SciELO) and Academic Google.

The search for studies took place in February 2020. The following were used as a filter: full texts in Portuguese, English, or Spanish in the form of an article, title containing the descriptors and deficient as the main subject, published between 2010 and 2020, however the search was extended to the year 2000 to 2020. The main reason for this time frame is the scarce literature, specifically in this area of research. It was possible to find, in the databases, a total of 400 articles.

The selection criteria were specific articles whose main theme was the relevant interventions to help in coping with physical disability.

The exclusion criteria were articles that would only have physical disability as a theme; physical and mental disabilities; physical disability at work; disability according to the Roper-Logan-Tierney nursing model.

After surveying the literature, available bibliography, the next step was to organize the material by means of filing, which constituted a first approach to the subject. Subsequently, the articles obtained were subjected to re-reading to carry out an interpretive analysis guided by the objectives previously established and, thus, the contents found were grouped in their historical and conceptual aspects. Thus, 361 articles were eliminated, resulting in 39 articles, which made up this scientific work.

Two articles from dates prior to those mentioned above were used, of fundamental importance to give a greater scientific basis to the text, the following articles: the health of elderly Brazilians on the eve of the 21st century: problems, projections and alternatives<sup>12</sup>; quality of life from the perspective of people with spinal cord injury<sup>13</sup>.

## Results and Discussion

A physical disability or the after-effects of illnesses often prevent the simple task of crossing a room in the house, lying down, or getting out of bed, using the toilet, dressing, or undressing, taking a shower, buying, and preparing food, leaving the house, using the phone, taking their own medications, becoming a challenge to be overcome by the individual and their families<sup>14</sup>.

Given this factor, the socioeconomic situation has a determining factor for the health and well-being of individuals in these conditions, for the necessary adaptation of the household or even for the purchase of resources to walk on the street<sup>15</sup>.

Studies with different population bases show that elderly people with better socioeconomic status present faster recovery, even those who face a situation of sequelae<sup>15</sup>.

Unfortunately, Brazil is a country with important social inequalities, occupying the second position in the world in terms of income concentration, which negatively influences people's rehabilitation and health situation, especially for those with these consequences and the physically handicapped<sup>15</sup>.

A scientific survey carried out among five European countries revealed that the direct cost of cardiovascular events involving hospitalization and rehabilitation was 1.26 billion euros/year. This cost is also relatively high in the United States and even in Brazil, where hospital costs with cardiovascular events appear in the SUS table totaling 415,018 cases (49% of the total) and the costs of these events reached R\$ 645,963,613.40, a relatively high index<sup>16</sup>.

Currently, a patient hospitalized for a stroke costs the SUS on average R\$6,000.00 (six thousand reais), which is estimated on a highly complex hospitalization for treatment and care. When recovering from the neurological deficit, the hospital stay is usually no longer than 3 to 5 days at a cost of R\$640.00 per day. For cases of severe sequelae, the period of hospitalization can reach a month, causing this cost to rise to R\$ 32,000.00<sup>17</sup>.

It can be said that in the last ten years this value totaled around 1 million and 800 thousand. In 2009, there were 169,453 patients and 191,988 in 2018, an increase of 13.29% in the period. The amount spent on hospitalizations for stroke exceeded the margin of 2 billion in 10 years. Regionally, these hospitalization indicators follow the population index to which it refers, with the Southeast region, for example, having in 2009 745,461 hospitalizations; in second place in the Northeast with 494,162; followed by the southern regions 360,828; Midwest 110,592 while the northern region registered 107,225 cases<sup>18</sup>.

According to the World Health Organization (WHO), by 2030 there is a forecast of an increase in these cases to 23 million, which will cause about 7.8 million deaths and the rest of the 15.2 million will have sequelae, automatically bringing an increase of costs for the management of health services<sup>19</sup>.



*effectiveness and effectiveness in the provision of urban transport services; V - democratic management and social control of the planning and evaluation of the National Urban Mobility Policy; VI - safety in people's movements; VII - fair distribution of benefits and burdens arising from the use of different modes and services; VIII - equity in the use of public circulation space, roads and public spaces; and IX - efficiency, effectiveness and effectiveness in urban circulation*<sup>23</sup>.

Although actions to prevent the occurrence of stroke are increasingly strengthened, it is noteworthy that it still comprises the third leading cause of death in the world, and its mortality rate is 12 to 37% in the first episode and 63% for a second BIRD. The more than 2 million survivors of it, remain with sequelae or disabilities and need assistance in the daily activities of life<sup>20</sup>.

These "survivors", who are most often elderly, come to live with risk factors for chronic-degenerative diseases, and at the same rate as the number of elderly and life expectancy in Brazil grows, consequently it becomes more frequent to incidence of other comorbidities, such as Parkinson's, Alzheimer's, femur fractures from falls, modifying the health profile of the elderly population<sup>12</sup>.

Although, in Brazil there is a high number of ordinances aimed at creating an urgent and emergency network, protocols and clinical guidelines for the implementation of lines of care for CVA or for the rehabilitation of its complications after discharge, the rates of readmissions due to disabling sequelae that end up resulting in a future death are still significantly high. These sequelae can be not only physiological, but also mental, resulting in anxiety or even depression from not being able to walk in one's own home, for example<sup>21</sup>.

To alleviate this situation and this compromise, currently, one can count on auxiliary mobility devices, such as wheelchairs and bath chairs, canes, and walkers, which help not only people with sequelae, but also any other physical disability that the individual present, as well as the security bars that can be installed inside the home, but that represent a high value for the Unified Health System or even for the individual and their family<sup>5</sup>.

Even with several public measures of entrepreneurship in benefit of people with disabilities, others are necessary, but they are not implemented for several reasons. It is also necessary to identify the public policies that serve this population group, in order to know what is the impediment for government officials and for society, if only the lack of resources or the legal and technical ignorance of resources that can be implemented, benefiting these individuals at a low cost to the public system, meeting not only basic needs, but preserving the natural and positive right of inclusion of people with disabilities in society<sup>22</sup>.

Certainly, poorer groups have found unequal access throughout the history of civilization, failing to match the opportunity for rehabilitation at home, thus, it was not guaranteed the effective right to citizenship<sup>22</sup>.

In Brazil, since 2012, Law No. 12,58723 has been in force, which regulates the National Mobility Policy and which brings about the creation of a National System of Urban Mobility, whose purpose is to favor the access of people with disabilities in order to use transport and displacement throughout the Brazilian territory, and which is highlighted in its Article 5:

*"Art. 5 - The National Urban Mobility Policy is based on the following principles: I - universal accessibility; II - sustainable development of cities; III - equity in citizens' access to public transport; IV - efficiency,*

However, even today, the disabled face many difficulties in their daily lives, whether it is to get around on the streets, in their own homes or even to perform daily activities of life or to take care of their children. It is certainly much easier for a person who is born with a disability and has a natural adaptation occurring in childhood to adapt, than for an adult in an adverse post-event condition, to adapt to the new life<sup>24</sup>.

Thus, assistive technologies have promoted social inclusion of people with disabilities, especially regarding displacement and autonomy, and should be understood to expand the functional ability of the disabled, provide quality of life, in addition to facilitating the learning of new skills, given this condition of life<sup>24</sup>.

An invention or utility model guarantees, of course, to the inventor, security in negotiations between him and the party interested in buying the technology, stimulating the country's economic development<sup>25</sup>.

Many technological devices present solutions to several problems of different natures, bringing innovations to the most varied subjects and segments<sup>26</sup>.

Thus, it is likely that there are tools or devices that can be deployed in patients' homes, that can be replicated to minimize the problems related to home mobility for the physically handicapped and people with sequelae, and that this can be presented to our government officials to assist people with low income, making them have the right to quality of life and well-being even with their disability<sup>27</sup>.

Mobility is an intrinsic aspect of human beings and is linked to their sensations, perceptions, personal history, and sociocultural context. Accessibility enables people to use all services, including health services, available according to their needs, at all levels of care<sup>28</sup>.

Broadly considering Brazilian physical mobility, around 15% of the population has some type of disability. For every six people, one has some kind of disability or sequel, and of these 70% are not circulating on the streets and in society due to accessibility difficulties. Many use crutches or wheelchairs, but most cities do not have adequate infrastructure for the physically challenged or people with sequelae<sup>29</sup>.

Specifically considering the cases of stroke, about 40 to 50% of people affected by this disease die after six months, since most of them will suffer from neurological deficiencies and significant residual incapacities, which makes this pathology the first cause of functional incapacity in the Western world. Although epidemiological data show a decline in mortality, it is expected that the incidence of the



disease reverts to a prevalence of physical and mental disabilities related to stroke episodes, which allows us to state that stroke is a serious disease in Brazil, which generates chronic disability, such as loss of independence and, often, autonomy to perform daily activities<sup>30</sup>.

People with physical disabilities or reduced mobility must be in constant interaction with their socio-cultural environment, they have health rights guaranteed in the Federal Constitution of 1988 by the Organic Health Law No. 8.080/90. The implementation of the National Health Policy for Persons with Disabilities, established by MS/GM Ordinance No. 1.060, of June 5, 2002, established important principles of the Unified Health System (SUS) such as: universality, comprehensiveness, and equity, establishing guidelines and institutional responsibilities for the rehabilitation of people with disabilities<sup>28</sup>.

However, the more this population is in an environment that restricts mobility and accessibility, the greater the difficulty in achieving a full and autonomous life, placing them at a disadvantage<sup>28</sup>.

People with sequelae should be encouraged to move to move the joint and restore mobility and motor control, which means that, in addition to family care and assistance, it is essential to adapt the home environment, to remedy the main difficulties and help to reduce the high number of readmissions caused mainly by disability and daily limitation<sup>31</sup>.

One question, however, is transposed: where should a disabled patient or patient with sequelae live? Where should it be sent? Hospital beds have a limited number, therefore, the chronically ill must return to their homes, even to avoid the risk of cross infections by more resistant germs than those existing in the community. This assertion has found support since 1985, when the United Kingdom approved palliative medicine as a medical specialty, then the United States, Canada, Australia, New Zealand, South Africa, Turkey and even Brazil in 1990, when it started its first activities palliatives to alleviate the suffering of the sick and contribute so that they could enjoy a home atmosphere and with free visiting hours<sup>32</sup>.

The 1988 constitution instituted democratic principles of health guaranteeing the right to people with disabilities who are guaranteed in different fields, in view of this perspective of comprehensive health care, the Ministry of Health tries to enable, through various legal acts, the inclusion of Health Care of Population with Special Needs, outlining a care model marked by a multidisciplinary and multidisciplinary approach, emphasizing actions to promote health, rehabilitation and social inclusion<sup>33</sup>.

Worldwide, the use of auxiliary resources for rehabilitation and health care, in the beginning of the 19th century, was concomitant with industrialization and its relation to the increase in cases of work accidents. However, rehabilitation services only gained their importance in the beginning of the 20th century, with the treatment of people with post-war sequelae and the polio epidemic in the United States. At this stage, the health protection laws were conquered by the workers, together with the need to obtain the workforce of those suffering from war sequelae, this

being an important milestone for rehabilitation throughout the world<sup>33</sup>.

Poliomyelitis marked the 1940s and 1950s, when there were many surviving children, suffering from neurological disorders and mental retardation, and, in this way, treatment techniques focused on the rehabilitation of these people emerged. A little later, in 1960, in the United States, the early stimulation program for children appeared, based on three premises: social responsibility, commitment to special needs and the sense that prevention is better than treatment<sup>34</sup>.

In Brazil, rehabilitation actions are still precarious and disjointed, there is difficulty in communicating in the network, and this does not include a comprehensive policy for attending to disabilities. There is a discontinuity between the actions of the public and private spheres, the assistance provided reaches a small number of people<sup>34</sup>.

Among the spheres in charge of services provided for rehabilitation in the Unified Health System are hospital services, where, however, there is a great deficit of organization and management. Professional improvement to manage the complexity of a hospital system strongly marked by technological innovation and entrepreneurial practices is one of the great challenges of public management, seeking, as a result, to reduce the number of beds, create more adequate economic scales for services with greater complexity, concentration technological, both in equipment and in processes and new forms of financing<sup>33</sup>.

In Primary Care, in turn, a model of access to health goods and services is necessary, through broader public policies, capable of providing quality of life, in a way that completely associates prevention actions and not curative actions. In 1994, the Ministry of Health created the Family Health Strategy (ESF) with a focus on comprehensive and multidisciplinary care, centered on the vulnerable community. In 2008, the Family Health Support Centers (NASF) emerged with the aim of assisting the ESF teams and extending the provision of care at the primary level, reaffirming the system's completeness, quality, and resolvability, relying on several professionals in its composition<sup>35</sup>.

Among the professionals who can help support the family's health are: acupuncturist, physical education professional, physiotherapist, speech therapist, homeopath, nutritionist, psychologist, psychiatrist, occupational therapist, geriatrician, veterinarian, sanitary health professional and others, whose composition will be defined by the municipal managers, according to the priority criteria identified from the epidemiological data of local needs, aiming at the rehabilitation, care and health promotion of domiciled patients who are the most critical and need multiple care, but in a way that does not need the intervention of medium and high complexity of the network<sup>35</sup>.

The SUS is one of the largest and most complex public health systems in the world, ranging from simple procedures to the most complex procedures, ensuring full, universal, and free access for the entire population of the country, however, in contrast, several situations worsen



health, also in primary care, considering the need for new changes. Based on this, several debates have already been held and currently permeates the need to implement Health Care Networks (RAS)<sup>35</sup>.

The RAS, in turn, comprise the set of health services, linked together by a single, cooperative, and interdependent mission, which allow offering continuous and comprehensive care to a given population. However, this network itself is faced with excessive bureaucratization of the referral and counter-referral system, creating obstacles to the access of users to the services provided, and thus including the difficulty of access for the elderly or disabled population to the places where the health promotion actions are offered<sup>35</sup>.

Managers and health professionals face daily challenges in their work practice, they face a disorganized health system, where points of care remain isolated and without communication. In a field research carried out with ESF teams, locomotion was identified as a contributor to exclusion from health care and social life, low-income families have even greater difficulty in accessing it, and even prevention ends up being a failure, as, in addition, from the lack of structure for support, to the acute conditions attended by the family health units, to the transport of urgencies and emergencies to the hospital is a problem in 80% of the focus groups<sup>36</sup>.

The difficulty of working for patients with functional decline transferred the sphere of care to a negative context of assistance in the FHS. The difficulty of caring for a physically restricted patient or a patient with sequelae can spontaneously generate an increase in maltreatment or other socio-sanitary risks, as the lack of family structure focused on this moment when the patient returns to the home improved, ends up being a triggering factor. of maltreatment or family abandonment, linked to the lower social value of this patient associated with the loss of productive capacity, dependence, and uselessness from a social point of view<sup>36</sup>.

The SUS still needs to overcome important obstacles in its process, although it is a decentralized system, which has evolving democratic mechanisms, considering the instances of agreement between managers and social control mechanisms; the search for producing new technologies for health care; implementation of lines of care in the management of the system, increasingly breaking the isolation of primary care and bureaucratic hierarchy, so that it can produce quality health care, meeting the expectations of users in consolidation with the SUS policy<sup>37</sup>.

To define the quality of an individual's life, it can be based on the favorable situation of taking advantage of something, accepting it or refusing it. The term life associated with it, on the other hand, refers to the set of properties that maintain the individual's metabolic activity and organic functions, and their physiological capacity for adaptation or reproduction in the different phases of life<sup>13</sup>.

Thus, added together, the concept of quality of life would be related to an individual's perception of their position in life, in culture, their value system related to their goals, anxieties and concerns<sup>38</sup>.

It can also be said that quality of life comprises the sum of factors that interact between society and environment, meeting the biological and psychological needs of the individual. Involving the organic, psychological, social, material, behavioral and structural levels, related to health, work, leisure, self-image, sexuality and social adaptation<sup>13</sup>.

The health context encompasses a broad definition, initially the term salute comes from the Latin and means salvation, conservation, a phase in which the organic, physical, and mental functions are in a desirable situation, and when a condition of injury causes a deficiency, this health situation may be unfavorable, making the individual and their family must adapt to the changes that have occurred<sup>13</sup>.

Many individuals with physical disabilities improve their quality of life and well-being through the practice of sports activities, this practice began in Ancient Greece, and, after World War II, sports practice received adaptations with greater advances focused on disease prevention and physical, psychological, and social rehabilitation<sup>39</sup>.

In this modality, the physically handicapped enjoy positive effects on their health through the regular practice of this activity, relying on assistive technologies for this purpose, whether the practice is competitive or not<sup>39</sup>.

Physical disability brings changes that require adaptations in the individual's life due to lack of favorable aging conditions and changes appearance. Joint sclerosis often impairs locomotion<sup>38</sup>.

The elderly population is more vulnerable to degenerative diseases and cardiovascular problems such as stroke, cancer, mental disorders, these diseases often cause sequelae that affect the locomotor system and the person's senses, which consequently causes a restriction in social life<sup>38</sup>.

These elderly people with sequelae are more likely to have depression and end up being more exposed to negligence on the part of their families<sup>38</sup>.

Parallel to this, there is the predicted fact of the increase in population aging of Brazilians, thus it is estimated that the number of elderly people with physical disabilities or sequelae, and dependent on some assistive technology, will grow by the same proportion, to this it is directly related to the quality of life of these elderly people, seeking less dependence on their families and caregivers, increasing the individual's ability to live fully<sup>38</sup>.

In this context, acquiring greater autonomy and quality of life, both for a physically disabled person and for a person with sequelae, increases the degree of satisfaction with their own existence<sup>38</sup>.

Research shows that most people with disabilities become sedentary, or change their lifestyle habits, bringing even greater chances of complications and risks for Diabetes Mellitus, Obesity, sleep disorders<sup>39,40</sup>.

It should be taken into account that the person affected by a physical disability may have been surprised by this condition, not getting the psychological preparation to "suddenly" assume a dependent role, whether of a family



member or caregiver, which causes a negative feeling of the quality of life experienced by both<sup>13</sup>.

## Conclusion

This study showed that only a small number of publications dealt with the issues of psychological adaptation and coping with patients with physical disabilities, few works available in the literature still concentrate their focus and interventions on issues of rehabilitation of patients with sequelae or disabilities.

In general, although the policy aimed at the disabled has made great progress, this scope was limited to the private sector or service outsourcing and on the imposition of laws to adapt environments, buses, or public places, but we still do not have laws or support to help adapt the daily life of people with disabilities or people with sequelae, in their homes.

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