## ACESSIBILIDADE DOS EDIFÍCIOS DESTINADOS À PRÁTICA DE DESPORTO NAS PESSOAS COM DEFICIÊNCIA - INTERVENÇÃO DOS/AS ENFERMEIROS/AS ESPECIALISTAS EM REABILITAÇÃO

Accesibilidad de edificios para deportes para personas con discapacidad: intervención de Enfermeras de Rehabilitación

ACCESSIBILITY OF SPORT BUILDINGS FOR PEOPLE WITH DISABILITIES - INTERVENTION OF REHABILITATION NURSES

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## RESUMO

**Enquadramento:** O/A enfermeiro/a especialista em enfermagem de reabilitação tem um papel fundamental no envolvimento da pessoa com deficiência em práticas desportivas. O seu papel é intervir em desvios de saúde da pessoa e ainda avaliar as acessibilidades do edificado.

**Objetivos:** Analisar barreiras arquitetónicas no edificado e analisar as diferenças tendo em conta a tipologia do edifício e a localização dos mesmos.

**Metodologia:** Paradigma quantitativo de natureza descritiva e transversal. Universo composto por 9 edifícios desportivos públicos dum Município Português. O instrumento de colheita de dados é uma grelha de observação construída a partir da legislação em vigor. O tratamento de dados fez-se com recurso a estatística descritiva simples e qui-quadrado.

**Resultados:** Existem barreiras arquitetónicas nos edifícios como escadas com degraus e corrimãos inadequados, instalações sanitárias com lavatórios e sanitas sem alturas corretas, entre outras, mas não se verificaram diferenças significativas relativamente às condições de acessibilidade entre edifícios com piscina e com campos nem entre edifícios localizados na cidade ou periferia.

**Conclusão:** No município em estudo as pessoas com deficiência têm dificuldades de acesso a locais adequados para a prática de algumas atividades desportivas. As/os enfermeiros/as de reabilitação devem avaliar os recintos relativamente às barreiras arquitetónicas para fazer o devido aconselhamento e sensibilização junto da autarquia, a fim de a tornar mais inclusiva.

Descritores: Estruturas de acesso; Exercício; Pessoas com deficiência; Enfermagem em Reabilitação.

### RESUMEN

**Enmarcado:** El enfermero especialista en enfermería de rehabilitación es imprescindible en la participación de la persona con discapacidad en prácticas deportivas. Su papel es intervenir en desvíos de salud de la persona y aún evaluar las accesibilidades del edificado.

**Objetivos:** Analizar las barreras arquitectónicas y comprobar si la tipología del edificio (con piscina y con campo) el la ubicación de los pueblos (ciudad y periferia) interfiere en las condiciones de accesibilidad.

**Metodología:** Paradigma cuantitativo de naturaleza descriptiva y transversal. Universo compuesto por 9 edificios deportivos públicos de un Municipio. El instrumento de recolección de datos es una rejilla de observación construida a partir de la legislación vigente. El tratamiento de datos con la estadística descriptiva simple y chicuadrada

**Resultados:** Existen barreras arquitectónicas en los edificios, pero no se observaron diferencias significativas con respecto a las condiciones de accesibilidad entre edificios con piscina y con campos ni entre edificios ubicados en la ciudad o periferia

**Conclusión:** En el municipio en estudio las personas con discapacidad tienen dificultades de acceso a lugares adecuados para la práctica de algunas actividades deportivas. Las enfermeras de rehabilitación deben evaluar los recintos sobre las barreras arquitectónicas para hacer el debido asesoramiento y sensibilización ante el municipio, a fin de hacerla más inclusiva.

Palabras clave: Estructuras de Acceso; Ejercicio; Personas con Discapacidad; Enfermería en Rehabilitación.

### ABSTRACT

**Background:** The specialist nurse in rehabilitation nursing is essential in the involvement of people with disabilities in sports practices. Their role is to intervene in deviations of health of the person and to evaluate the accessibility of the building.

**Objectives:** To analyze architectural barriers in the building and to analyze the differences taking into account the typology of the building and their location.

**Methodology:** Quantitative paradigm of descriptive and transversal nature. A universe composed of 9 public sports buildings of a Portuguese Municipality. The data collection instrument is an observation grid built from the legislation in force. The data treatment was carried out using simple descriptive statistics and chi-square.

**Results:** There are architectural barriers in buildings, such as stairs with inadequate steps and handrails, sanitary facilities with washbasins and toilets without correct heights, among others, but there were no significant differences regarding the accessibility conditions between buildings with swimming pools and with courts or between buildings located in the city or suburbs.

**Conclusion:** In the municipality under study, people with disabilities have difficulty accessing suitable places to practice some sports activities. Rehabilitation nurses should evaluate the enclosures in relation to architectural barriers to make proper counseling and sensitization to the local authority in order to make it more inclusive.

Descriptors: Architectural Accessibility; Exercise; Disabled Persons; Rehabilitation Nursing.

## INTRODUCTION

The rehabilitation nurse, in their practice, aim at ensuring that clients achieve their maximum health potential and, to this end, they shouold identify the architectural barriers that influence accessibility and social participation and the full exercise of citizenship, cooperate with community structures, aiming to promote a safe environment for the population in general and for the population with special needs and the promotion of measures aimed at preventing disability or minimizing its impact<sup>(1)</sup>.

The specialist nurse in rehabilitation nursing can lead new spaces of intervention and actively promote citizenship through a social practice and contribute to social development, becoming an important strategy of social inclusion, thus becoming great inducers of of social change with critical awareness and worldview, innovative strategies, projects or social organizations that create new methodologies of social intervention<sup>(2)</sup>.

The specialist nurse in rehabilitation incorporates in their care practice results from scientific research and good practice guidelines based on scientific evidence which are considered to be fundamental instruments with the aim of promoting continuous improvement in the quality of professional practice and quality of care provided<sup>(3)</sup>.

The person, the target of the care of the rehabilitation specialist nurse, can be in any of the phases of the life cycle and the care provided is intended to promote: their health project in relation to the prevention of risks of change in functionality that circumscribe activity limitations or disabilities; the re-adaptation processes whenever functionality impairments occur; the capacity for self-care of the person with special needs or disabilities<sup>(3)</sup>.

In addition to the maximum health potential, the rehabilitation specialist nurse intends to promote the

social inclusion of people with disabilities, enabling the community to respect and integrate people with disabilities, identifying situations which contribute to the stigmatization of people with disabilities, optimizing the resources of the person, family and community to promote inclusion in the community, adopting positive discrimination strategies and strategies promoting active inclusion, including housing conditions, improved access to employment, training and educational opportunities and developing anti-stigma campaigns to promote the integration of people with special needs<sup>(3)</sup>.

Having the awareness that rehabilitation encompasses a large number of dimensions, understood as a process, and that it goes beyond what is the recovery of lost functions, it can be said that it is a specialty, in the health area, in which the central focus is the person who is in constant interaction with society and their environment and it is therefore not possible to intervene without realizing the whole environment, being an integral part of the principles of rehabilitation, promoting the involvement of the person and their family in the planning and implementation of care that aims to maximize the capacity for self-care<sup>(4)</sup>.

For the results of the interventions to be positive, it is also necessary that the entire multidisciplinary team to collaborate and, essentially, involve the family and society in this process in order to be able to develop skills, improve functionality, satisfy the person's daily routines, reintegrate the family and socially and promoting the exercise of citizenship and greater autonomy<sup>(4)</sup>.

As far as the community is concerned, it is essential to be committed to working with it, showing attention, dedication, listening and helping to improve the quality of life in a humane way<sup>(5)</sup>.

For nurses, the environment has played a key role since the time of the precursor Florence Nightingale, due to her Environmental Theory, which is based on the notion that it is essential to control the environmentwhere the person is inserted, as we are always in interaction with the environment in which we operate, thus, we must integrate ecological practices, taking local attitudes that aim at global repercussions<sup>(6)</sup>.

Regular involvement with sports practice is a relevant factor for all people and, for that, it is important to be monitored by a health professional<sup>(7)</sup>. The rehabilitation specialist nurse can be responsible for this follow-up as one of the competencies is to design and implement motor and cardiorespiratory training programs<sup>(3)</sup>.

Sport for people with disabilities or adapted sport is the physical activity that promotes the integration of all people with disabilities into society and the state is responsible for adopting specific measures to ensure the accessibility of buildings intended for this practice<sup>(8)</sup>.

In our country there are about one million people with disabilities and sport is a way of integrating these citizens into society, in this sense, several international events have already been held in Portugal, of different modalities, in order to enhance the involvement in these practices<sup>(8)</sup>. We leave from here to a municipality where this study will be carried out.

Method: This study fits into the quantitative paradigm and is descriptive, cross-sectional.

The selection criteria for the building were being public and sports buildings. Exclusion criteria: buildings under construction and/or granted to private entities. The sample is composed of 9 sports buildings out of a total of 14 existing ones. Data were collected through an observation grid based on current legislation.

In order to operationalize the variables, we proceeded to the verification of the fulfilment of the specifications in the Decree-Law 163/2006, codifying with 1 for the "yes" indicator, 2 for the "no" indicator and 3 for the "doesn't exist" indicator and the adaptation of the accessibility classification<sup>(8)</sup> through the following codification: 1 - not accessible: physical barriers are difficult or impossible to overcome; 2 accessible only with assistance: the route or service is only possible with the help of a third person; 3 accessible with difficulty: includes accessibility conditions close to those required, even if it is not accessible; 4 - accessible without difficulty: all accessibility conditions are guaranteed for people with reduced mobility; 5 - not applicable or does not exist.

The observation grid built from current legislation is composed of three parts: overall characterization of the interior of the public buildings, characterization of the sports venues and characterization of the sanitary facilities.

This study is part of the +Saúde Famalicão project, in which the Porto College of Nursing and the

Municipality are partners, with authorization to carry out its implementation and technical monitoring in data collection.

## RESULTS

Regarding the atriums of public buildings and according to Table 1, it was found that it is possible to perform a 360° rotation maneuver without difficulty in 88.9% of the external side of the entrance door and in 77.8%, this same maneuver, of the internal side of the atriums.

| Dimension   | Indicator                                 | N | %    |
|---|---|---|------|
| 360°<br>rotation<br>maneuver on<br>the external<br>side of the<br>entrance<br>doors | It's not accessible.                      | 0 | 0.0  |
|   | It's accessible only with help.           | 0 | 0.0  |
|   | It's accessible with difficulty.          | 0 | 0.0  |
|   | It's accessible without difficulty.       | 8 | 88.9 |
|   | It's not applicable/It does not exist     | 1 | 11.1 |
| 360° rotation<br>maneuver on<br>the internal<br>side of the<br>entrance<br>doors    | It is not accessible.                     | 0 | 0.0  |
|   | It is accessible only with help.          | 0 | 0.0  |
|   | It is accessible with difficulty.         | 1 | 11.1 |
|   | It is accessible without difficulty.      | 7 | 77.8 |
|   | It is not applicable/it<br>does not exist | 1 | 11.1 |

Table 1 - Description of the "atriums" category of the variable: accessibility inside sports buildings

With regard to the routes in the building, only 11.1% have an accessible route to the entrance doors, 33.3% to service areas (such as the fields and pool tanks) and 55.6% to the sanitary facilities (Table 2).

| Dimension         | Indicator                              | N | %    |
|-------------------|--|---|------|
| Entrance<br>doors | It's not accessible.                   | 0 | 0.0  |
|                   | It's accessible only with help.        | 4 | 44.4 |
|                   | It's accessible with difficulty.       | 3 | 33.3 |
|                   | It is accessible without difficulty.   | 1 | 11.1 |
|                   | It is not applicable/it does not exist | 1 | 11.1 |
| Service<br>zone   | It's not accessible.                   | 0 | 0.0  |
|                   | It's accessible only with help.        | 4 | 44.4 |
|                   | It's accessible with difficulty.       | 1 | 11.1 |
|                   | It is accessible without difficulty.   | 3 | 33.3 |

|                        | Não aplicável/ Não existe              | 1 | 11.1 |
|------------------------|--|---|------|
| Sanitary<br>facilities | It's not accessible.                   | 1 | 11.1 |
|                        | It's accessible only with help.        | 1 | 11.1 |
|                        | It's accessible with difficulty.       | 1 | 11.1 |
|                        | It is accessible without difficulty.   | 5 | 55.6 |
|                        | It is not applicable/it does not exist | 1 | 11.1 |

Table 2 - Description of the "paths" category of the variable: accessibility inside sports buildings

The landings, galleries and corridors in 77.8% of the buildings are not less than 1.2 meters wide.

Buildings with stairs that overcome unevenness above 0.4m should have handrails on both sides, these handrails are at a height between 0.85m and 0.9m and be continuous along the various flights of stairs. However, in our study, this set of conditions did not apply to any of the buildings.



Graph 1 - Description of the "sanitary facilities" category of the variable: compliance with legislation on sports buildings

Regarding the sanitary facilities in the buildings, 44.4% had: toilets with the edge above the height of 0.45m; accessible sinks with a free area not less than 0.7 m wide, with a height of not less than 0.65 m and a depth measured from the front edge of not less than 0.5 m; mirrors placed over the sinks with adequate height. Only 22.2% had alarm equipment and 55.6% had access to the sanitary installation with a sliding or hinged door opening outwards (Graph 1).



Graph 2 - Description of the "sanitary facilities" category of the variable: compliance with legislation on sports buildings

The changing rooms had in 22.2% at least one set of accessible coat racks and lockers, 66.7% a bench fixed to the wall with dimensions of 0.40m by 0.80m, with a floor height of 0.45m and mechanical resistance (Graph 2)

Out of the total number of sports buildings with a swimming pool (four), only 25% had access to the water via a ramp, 50% had double handrails for access to the water and 100% had non-slip coating and finishing of the swimming pool edges. The access steps and other elements in the pool are rounded.

None of the buildings had the minimum number of spaces specially designed for people in wheelchairs and those that did, although below, were not distributed in various parts of the room, nor were they located next to at least one place for a companion.

After analyzing the descriptive statistics, we verified the possible existence of significant differences between the sports buildings located in the center of the municipality or in the periphery was verified. Of the sports buildings, 44.4% are located in the center and 55.6% are located in the periphery. There are no significant differences in buildings that are located in the center or periphery.

We also checked the possible existence of significant differences between sports buildings with swimming pool and those that only have a field for sports activities. Out of the sports buildings, 44.4% are made up of a swimming pool and 55.6% are composed of a field. There are no significant differences in these buildings.

#### DISCUSSION

In quantitative studies, the results offer various interpretive opportunities, and it is therefore essential to carefully reflect on the possible meanings found in the numbers<sup>(10)</sup>. That said, it is now necessary to compare and even compare the results that it was possible to obtain by referring to works and/or theories previously carried out on the subject<sup>(11)</sup>.

In each of the spaces evaluated, according to Decree-Law  $163/2006^{(12)}$ , there should be at least one route

that is accessible, safe and comfortable for people with reduced mobility; however, it is possible to verify that in these buildings the reality is 11.1% with accessible access to the entrance doors, 33.3% to the service areas (such as the fields and swimming pool tanks) and 55.6% to the toilets.

Stairs are also integrated into accessible paths since there are people with reduced mobility who use them<sup>(13)</sup>. However, in none of the buildings assessed is the set of conditions necessary to be able to affirm that the stairs are accessible are met.

With regard to the sanitary facilities, it was found that the toilet is not at a height of 0.45m in 55.6%, a value higher than that of another study which found that 35% of the sanitary facilities are not at the proper height<sup>(14)</sup>.

In addition to the height of the toilets, it was also found that 44.4% of the buildings had sinks at a height of 0.80m. This data is lower than the value found by researchers Gallo, Orso and Fiório, in 2011, where 76.92% of the sinks were suspended between 0.78 m to 0.80 m<sup>(15)</sup>.

The changing rooms of the sports venues are an essential place to prepare the person for the activity they are going to perform and the inadequacy of the height of the different equipment found there is identified as one of the problems<sup>(16)</sup>. Another essential structure in the changing rooms is the hangers and lockers. However, it was found that in the evaluated spas only 22.2% have an accessible set of lockers and hangers. Also in a study of accessibility of sports venues carried out in Oeiras, it was found that in 23% of the venues did not contain lockers and in 43% did not contain accessible hangers<sup>(17)</sup>.

The practice of sport for citizens with disabilities is highlighted in the Basic Law for the Prevention and Rehabilitation and Integration of People with Disabilities<sup>(18)</sup>. This practice, if the disabled person wants to use the swimming pools, will quickly find difficulties, as of the four sports buildings with swimming pools, only 25% (one) has access to water by ramp, which prevents them from being able to transfer to the tank independently if they are wheelchair users. Only 50% had double handrails for access to water, which is also difficult for those with reduced mobility.

People with disabilities have, in addition to the transversal rights of all, the right to accessibility to the venue as a spectator<sup>(19)</sup>. Although it was possible to verify that 22.2% of the buildings had places specially destined for the stay of people with disabilities, none of the buildings had the minimum number of places specially destined; and those that presented, even if below, were not distributed in several parts of the room, they were together with at least one place for a companion.

In view of these results, it is up to the Nurse Specialist in Rehabilitation Nursing to find alternative solutions for places that have less accessibility conditions and manage the counseling of sports practices taking into account the characteristics of the buildings and that each person with reduced mobility attends or attended these spaces before the event that determined the disability situation.

## CONCLUSION

The rehabilitation nurse has the skills to assess architectural barriers and it is essential to do this before making the recommendation of places for the person to attend. The results showed that nurses, before advising people with reduced mobility on sports activities or accompanying the person in exercise training, have to assess the buildings destined for these practices.

The conditions of places intended for the practice of sports activities and sanitary facilities demonstrate the need for increased work for the rehabilitation nurse, considering that in addition to advising the people they care for, they will have to train them in less favorable conditions for engage in sporting activities.

The assessment of buildings covers not only architectural barriers but also the type of sport it allows to be practiced, so that, together with the person with a disability, adequate counseling is provided in view of their mobility limitations, but also in relation to sport that the person intends to practice.

Once this assessment has been made, it is up to the nurse specialist in rehabilitation nursing the mission of presenting technical-scientific opinions based on the sports structures and social facilities of the community, as well as raising the awareness of political decision-makers for respect for equality in accessibility to practices of healthy lifestyles.

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