

PHYSICAL ACTIVITY FOR ELDERLY PERSONS IN PUBLIC SPACES: AN INTEGRATED REVIEW

Atividade física para pessoas idosas realizada em espaços públicos: uma revisão integrativa

Actividad física para personas idosas realizada en espacios públicos: una revisión integrativa

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How to cite this article:

Souto HC, Costa SB, Ferreira OGL. Physical activity for elderly persons in public spaces: an integrated review 2021 jan/dez; 13:342-348. DOI: <http://dx.doi.org/0.9789/2175-5361.rpcfo.v13.8604>.

ABSTRACT

Objective: to analyze scientific production in online journals on physical activity for the elderly in public spaces. **Method:** integrative review, of 21 articles in the BDENF, Index Psychology, LILACS and MEDLINE in the period from 2008 to 2018. The following categories emerged: Benefits of physical activity performed by the elderly; and Difficulties of elderly people to perform physical activity in public spaces. **Results:** elderly people practicing physical activity in gymnasiums and in squares presented better performance in physical fitness test and better functional capacity than the sedentary elderly. Among the main difficulties encountered by the elderly: health problems and unavailability of public spaces suitable for the practice of physical activity. **Conclusion:** the relevance of physical activity for the elderly in public spaces was demonstrated, due to its benefits and low cost, however, its actions and strategies to reduce difficulties encountered by the elderly to perform physical activity in public spaces are still necessary.

Keywords: Physical activity; Elderly; Health promotion; Urban spaces.

RESUMO

Objetivo: identificar as evidências disponíveis na literatura científica publicada sobre atividade física para pessoas idosas realizada em espaços públicos. **Método:** revisão integrativa, mediante 21 artigos na BDENF, Index Psicologia, LILACS e MEDLINE no período de 2008 a 2018. Emergiram as categorias: Benefícios da prática de atividade física realizada por idosos e Dificuldades de pessoas idosas para a realização de atividade física em espaços públicos. **Resultados:** pessoas idosas praticantes de atividade física em academias e em praças apresentaram melhor desempenho em teste de aptidão física e melhor capacidade funcional do que os idosos sedentários. Dentre as principais dificuldades encontradas pelos idosos: problemas de saúde e inviabilização de espaços

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públicos adequados para a prática de atividade física. **Conclusão:** mostrou-se a relevância da atividade física para idosos realizada em espaços públicos, a partir dos benefícios de sua realização e por se tratar de uma atividade de baixo custo, no entanto, ainda é preciso a implementação de ações e estratégias para diminuir as dificuldades encontradas pelos idosos para a realização da atividade física em espaços públicos. **Descritores:** Acolhimento; Triagem; Emergências; Enfermagem; Serviços de saúde.

Descritores: Atividade física; Idoso; Promoção da saúde; Espaços urbanos.

RESUMEN

Objetivo: analizar la producción científica sobre actividad física para personas ancianas realizada en espacios públicos en periódicos en línea. **Método:** revisión integrativa, mediante 21 artículos en la BDNF, Index Psicología, LILACS y MEDLINE en el período de 2008 a 2018. Resultados: personas mayores practicantes de actividad física en gimnasios y en plazas presentaron mejor desempeño en prueba de aptitud física y mejor capacidad funcional que los ancianos sedentarios. Entre las principales dificultades encontradas por los ancianos: problemas de salud e inviabilización de espacios públicos adecuados para la práctica de actividad física. **Conclusión:** se mostró la relevancia de la actividad física para ancianos realizada en espacios públicos, a partir de los beneficios de su realización y por tratarse de una actividad de bajo costo, sin embargo, todavía es necesaria la implementación de acciones y estrategias para disminuir las dificultades encontradas por los ancianos para la realización de la actividad física en espacios públicos.

Descriptor: Actividad física; personas de edad avanzada; Promoción de la salud; Espacios urbanos.

INTRODUCTION

The growth rate of the world's elderly population is approximately 3% per year.¹ World Health Organization data indicate that between 2015 and 2050, the proportion of people aged 60 and over will increase from 12% to 22%. By 2050, the world's population will reach 2 billion elderly people.²

In the national scenario, the projections of the Brazilian Institute of Geography and Statistics (IBGE)³ reveal that the number of the elderly in Brazil will increase as well. Statistical data show that by the year 2025, the number of older people will exceed 32 million, which will place Brazil as sixth in the world in terms of the number of elderly.

Aging is a natural and universal process, therefore inherent to all living beings⁴. From a biological point of view, it refers to the progressive accumulation of changes at the molecular and cellular level, which leads to a gradual decline in physical and mental capacity, as well as an increased risk for illnesses.²

Due to the increase of the proportion of elderly in the society, there has been an increase in chronic degenerative

diseases⁵ that may lead to dependence and disability. Therefore, it is necessary to promote the quality of life of older people through changes in lifestyle and practice of physical activity, aiming to increase their survival. Regular physical activity decreases the risk of developing various chronic diseases.⁶

Broadly, "physical activity" can be understood as any kind of movement that results in caloric expenditure, while "physical exercise" is related to the sequence of these movements. Exercise can be classified into aerobic and anaerobic (metabolic activity); long or short (time) and low, moderate or high (intensity).⁷

In this context, the performance of physical activities or exercises should be encouraged, as they allow the delay, decrease or reversal of the loss of functional capacity, the recovery of structural components and physical strength, provide the elderly with autonomy in their daily activities and, consequently, improve the quality of life of this group.⁸

For the possible maintenance of functional independence, physical activity must be present in the lives of these individuals, as this practice provides physical, psychological and social benefits.^{9,10}

Considering health promotion and disease prevention strategies, the practice of physical activity is a very important tool for encouraging behavioral changes in the population and promoting physical activity and consequently reducing risk of developing pathologies.¹¹

Currently, some municipalities offer physical activity programs in squares and outdoor gyms to promote health through a more active and healthier life-style. Therefore, studies that aim to identify the impacts of physical activity for older people, provide information that can support policies and urban planning for the construction and / or maintenance of public spaces favorable to health promotion.

Given the relevance of the practice of physical activity in public spaces for the elderly, health professionals and community, we considered appropriate to explore the subject, using the integrative review method, in the national and international literature. Thus, this research sought to answer the following guiding question: What is the scientific production on the practice of physical activity by elderly people in public spaces?

Given the considerations presented, this study aimed to identify the evidence available in the published scientific literature on physical activity for older people taking place in public spaces.

METHODOLOGY

This was an integrative literature review, aiming to synthesize the published studies on physical activity for the elderly in public spaces, making it possible to present general conclusions, contributing to deeper analysis of the theme, pointing out gaps and suggesting new studies.

For the accomplishment of this study the following methodological steps were adopted: identification of the theme and elaboration of the guiding research question; establishment of literature search strategies; selection of studies based on inclusion and exclusion criteria; critical reading, evaluation and categorization of selected studies; analysis, interpretation and discussion of the results, ending with the presentation of the review.

Therefore, we searched the databases of Latin American and Caribbean Literature (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Nursing Database (BDENF) and Index Psychology - technical-scientific journals. To select the sample, the following inclusion criteria were listed: full-text studies addressing physical activity in public spaces by the elderly, published between 2008 and 2018, in Portuguese and English. We excluded: review articles and publications that were not in the format of scientific articles, such as books, theses, dissertations, reviews, letters and editorials.

Data were collected in January 2019 from the following combination of Health Sciences Keywords (DeCS) and Medical Subject Headings (MeSH) in Portuguese and English: "physical activity" and "elderly", "physical activity" and "aged", with 39 articles in LILACS, 23 in MEDLINE, 11 in BDENF and 9 in Psychology Index, totaling 82 titles.

Then, the selected articles were carefully read in order to locate those that addressed the theme in question. In this step, duplicates or those that did not meet the inclusion criteria listed above were excluded. After applying the inclusion and exclusion criteria, the sample consisted of 21 articles, which were read and cataloged according to a form that summarizes their general attributes.

The authors and data regarding the publication were identified: year, journal, research location, language, study objective, method employed (study participants, study type, data collection and analysis instrument) and main results, facilitating the analysis of studies. It is noteworthy that the data were grouped and from these emerged two thematic categories related to the focus of publications: Benefits of physical activity performed by the elderly; and

Difficulties the elderly face to perform physical activity in public spaces.

The results were systematized in order to highlight the contents on physical activities for the elderly performed in public spaces, summarizing the main findings of the publications in relation to the studied theme, seeking to outline perspectives for intervention and future research.

RESULTS AND DISCUSSION

The articles selected to compose the sample were published between 2008 to 2018. The studies were conducted in several countries, namely: Brazil, Norway, China, Australia, Poland, Germany and Portugal. The surveys included samples of elderly people ranging from 11 to 1,555 individuals. Interviews and questionnaires were used for data collection, with the questionnaire being the main method.

Based on the data collected, the year 2018 had the highest number of publications (37.1%). In terms of research scenarios, studies on health programs for the elderly (65.8%) and gyms for the elderly (14.2%) dominated. Quantitative studies were prominent among the research approaches of scientific productions accounting for 81%, while qualitative research accounted for 19% of publications only.

The quantitative approach, based on the positivist school, establishes patterns of behavior and proves theories, the logic that has been predominant in publications for many years, although there has been a small increase in qualitative and mixed research. Therefore, recognizing the changing nature of science indicates the need to continue to employ quantitative research whenever necessary, but other approaches can be added to quantitative research to provide further scientific evidence, thereby contributing to the health of the researched population.¹²

We observed that studies on physical activity in public spaces by the elderly are carried out by researchers from various areas of health sciences, especially Physical Education, with 60.7% of the studies. In addition, we observed that nurses also published a significant portion of studies on the subject, with 24% of publications.

Regarding the academic title of the authors of the studies, most have a doctorate (60.7%), followed by master's degree (34.6%). With the demand of the job market, professionals have sought higher and higher qualifications. Health sciences follow the same pattern, mainly because science brings constant updates; consequently, graduate professionals seek

improvement in their field and publish more, especially those with PhDs.¹³

Among national publications majority were from the states of Paraná (28.5%) and Santa Catarina (21.4%). Both are states located in the southern region that has excelled in research on aging. Internationally, the country that presented the most scientific productions was China with 28.5% of the research. Norway, Portugal, Poland, Australia and Germany accounted for 14.3% of the studies each.

Based on the analysis of the objectives and main results of the studies, two thematic groups were identified regarding the performance of physical activity in public spaces by the elderly: (1) Benefits of physical activity performed by the elderly; and (2) Difficulties for the elderly to perform physical activity in public spaces.

DISCUSSION

Benefits of physical activity performed by the elderly

Most studies have shown that older people who practice strength training in gyms and exercise in squares demonstrated better performance on physical fitness test and greater life satisfaction than sedentary elderly. We also found that physical activity improves functional capacity of the elderly.

In addition to maintaining functional capacity, physical activity can bring benefits related to body balance in older people. However, we observed that there may be differences in body balance between genders and research developed in Third Age (elderly) Academies (ATI) with 600 elderly women and men demonstrated that men had better balance than elderly women.¹⁴

The difference in balance gain between genders can be explained by the results of another study that pointed out that women show a greater functional decline with advancing age, both in strength tests, and in flexibility and locomotion tests, while men show more significant decrease in upper limb strength only.¹⁵

Some studies evaluated the perception of the elderly about their health and physical activity and concluded that those who are active and very active perceived their health as good and very good and considered physical exercise as important for maintaining health.

Regarding the perception of functional capacity of older people, some studies have shown that there is a negative relationship between self-assessment of functional capacity and age, i.e., the older the age, the lower the functional capacity of the respondents.¹⁶

The decrease in functional capacity of some elderly people may be due to the evolution of a basic pathology, sequelae or inadequate care received, whether family, social or institutional, and can be considered an indicator of health and a risk factor for mortality, even more than the very illnesses that led to dependency, since not all sick people become dependent.¹⁷

Dependence is not a permanent state, but a dynamic process the evolution of which can change and even be prevented or reduced with adequate environment and care.¹⁸ Thus, physical activity stands out as a relevant factor in maintaining functional independence of the elderly.

Among the factors that favored the adoption of physical activity among the elderly, the following stand out: attention and respect by the physical education professional; accessible time and place for performing physical activity and choosing exercises adequate for the elderly.¹⁹ The studies emphasize the importance of health professionals, especially physical educators, in prescribing physical exercises adequate for the elderly considering their abilities and limitations, guidelines for their performance and other health actions that may promote their health and quality of life.

When older people receive attention and guidance from a health professional, they feel more welcomed and more easily adhere to a change in lifestyle, such as regular physical exercises.²⁰ Thus, the role of the educator is important for providing proper orientation for the physical activities in the various spaces, from the gyms to public squares.

In sum, the results of the selected articles reveal that regular physical activity provides health benefits for the elderly, favoring a better quality of life and well-being.

Difficulties of the elderly to perform physical activity in public spaces

Most studies identified the following difficulties encountered by elderly people in performing physical activities: health that can lead to decreased functional capacity, especially visual and lower limb pain; lack of interest, low willingness to perform activities; presence of depressive symptoms; low income and education; unfeasibility or lack of adequate public spaces for regular physical activity; lack of human resources and professional qualification; lack of support from managers and involvement of professionals.

The decrease in functional capacity and its implications for the health of the elderly, their families and the health system should be a warning sign to be faced as the population ages.²¹ Thus, the importance of the stimulus by professionals as well as managers in maintaining functional capacity of the elderly. Therefore, the attention of the

elderly to the maintenance of functional capacity necessary for basic and instrumental activities of daily living, in addition to performing physical activities, such as walking, becomes relevant. Functional capacity is understood as the ability to perform life activities independently.²²

Physical activity is any body movement produced by skeletal muscles that requires energy expenditure, such as walking, cycling, and sports, and physical inactivity is identified as the fourth risk factor for global mortality.²³ Thus, regular training limits functional decline and promotes an improvement in the autonomy of the elderly, in addition to making it possible to perform activities of daily living.²⁴

Regarding depressive symptoms, they may interfere with functional capacity and impair the necessary effort to maintain functionality as well as the willingness to perform an activity²¹. Thus, regular physical activity is important for the improvement of physical and mental health condition, especially for the elderly.

The studies also pointed out that elderly people who still performed some work activity devoted less time to physical activity and to leisure. In the national context older people need to continue working, even after retirement, to maintain a reasonable family income and to continue to provide a more dignified life for themselves and their children and grandchildren, which means that work hinders the practice of physical exercise by the elderly.

Statistical data shows that the percentage of Brazilian elderly in the labor market in 2013 was 27.4% and there was an increase to 29.1% in 2014.²⁵ The need to be a family provider, associated with the loss of purchasing power caused by the low levels of social security benefits may explain why the elderly continue in the labor market.²⁶

The difficulty in performing physical activities due to the absent or limited involvement of health professionals in monitoring these activities by the elderly, impacts motivation to perform the activity as well as security. Considering that each person has individual characteristics and needs, the health professional, especially physical educator, will be able to strategize to achieve the goals in a safe and healthy manner, correct inadequacies, prevent possible injuries and motivate the target group to take part in the activities.

Elderly study participants reported receiving guidance from the health team, especially from the physician, however, without daily monitoring by a physical educator.²⁷ The lack of follow-up by the professionals and without physical evaluation before and after exercises, increases the difficulty in verifying the results and impacts that physical activity has on the life and health of the elderly.²⁸

Factors considered important to encouraging physical activity by the elderly were: perception of safety in the places of physical activity; presence of courts and exercise grounds; walking time as physical exercise, such as walking to a bank branch or health center; invitation by friends to do physical activity; and proximity of gyms. However, the situations that do not offer, for example, safety, it is difficult for the elderly to adopt a regular physical activity.

The practice of outdoor physical activity is considered as one of the best strategies to exert a positive impact on the health of the population. Accessibility, safety perception, quality, cleanliness and tranquility are relevant factors associated with the use of urban environments.^{29,6}

Physical activity can also provide several social benefits, since during exercise in public spaces, people usually interact socially whether directly or indirectly.³⁰

Hence, the importance of implementing physical exercise programs in public spaces, such as squares, in order to enable physical exercise in urban areas, free of charge and accessible to all.

Given the above, it is important that public managers ensure public safety, appropriate spaces, adequate equipment and its maintenance to encourage physical activity by the elderly.

FINAL CONSIDERATIONS

This study aimed to analyze scientific publications on physical activity for elderly people in public spaces in online journals from 2008 to 2018. We observed a growing interest in research related to elderly people who perform physical activity, with emphasis on public spaces based on original research reports in national and international journals, especially in the field of physical education.

Among the benefits of physical activity for the elderly are: improved health conditions, maintenance of functional capacity and consequently better quality of life. As for the difficulties encountered by the elderly in relation to physical activity we identified the following: physical and psychological limitations; lack of appropriate and accessible places for the elderly to exercise, and absence of adequate professional guidance. Hence, the importance of physical education professionals to monitor and provide guidance to the elderly who perform physical activities in public spaces.

Based on the findings of this research, we suggested further studies to broaden the knowledge on the practice of physical activity by the elderly in public spaces and to identify actions and strategies that increase accessibility and adherence of a greater number of older people to health

promotion programs that encourage them to stay active, providing quality of life and well-being.

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Received in: 18/03/2019

Required revisions: 13/08/2019

Approved in: 22/08/2019

Published in: 15/03/2021

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Disclosure: The authors claim to have no conflict of interest.