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## ACTIVE AGING AND ITS RELATIONSHIP TO FUNCTIONAL INDEPENDENCE<sup>1</sup>

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**ABSTRACT:** This study's objective was to analyze the factors determining active aging and its relationship to functional independence. It was conducted with a hundred elderly individuals cared for in a Family Health Unit in João Pessoa, PB, Brazil. The Functional Independence Measure and a socio-demographic questionnaire were used to assess the elderly participants. Data were analyzed using the SPSS. According to the results, all the participants were functionally independent for the performance of the studied activities. Data also showed that functional independence promotes greater integration of elderly individuals within the community, through strengthening social and family bonds, friendship and leisure, factors considered to be determinants of an active aging process.

**DESCRIPTORS:** Aging actively. Independence. Functionality.

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## ENVELHECIMENTO ATIVO E SUA RELAÇÃO COM A INDEPENDÊNCIA FUNCIONAL

**RESUMO:** O objetivo da presente pesquisa foi analisar os fatores determinantes de um envelhecimento ativo e sua relação com a independência funcional. A pesquisa foi realizada com 100 idosos de uma Unidade de Saúde da Família, em João Pessoa-PB. Como instrumentos para a avaliação dos idosos foram utilizados a Medida de Independência Funcional e um questionário sociodemográfico. Os dados foram analisados através do *software* SPSS. De acordo com os resultados, todos os idosos apresentaram independência funcional para a realização das atividades analisadas. Os dados mostraram também que a independência funcional promove uma maior inserção dos idosos na comunidade, através do fortalecimento dos vínculos sociais e familiares, da amizade e do lazer, sendo estes fatores considerados como determinantes para um envelhecimento ativo.

**DESCRIPTORIOS:** Envelhecimento ativo. Independência. Funcionalidade.

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## ENVEJECIMIENTO ACTIVO Y SU RELACIÓN CON LA INDEPENDENCIA FUNCIONAL

**RESUMEN:** El objetivo del presente estudio fue analizar los factores determinantes del envejecimiento activo y su relación con la independencia funcional. La investigación se realizó con 100 personas mayores de una Unidad de Salud de la Familia, en João Pessoa-PB, Brasil. Como instrumentos para la evaluación de personas mayores se utilizó la Medida de Independencia Funcional y un cuestionario sociodemográfico. Los datos fueron analizados a través del *software* SPSS. Según los resultados, todos los sujetos presentan la independencia funcional para llevar a cabo las actividades analizadas. Los datos también demostraron que la independencia funcional promueve una mayor integración de las personas mayores en la comunidad, mediante el fortalecimiento de los lazos sociales y familiares, de amistad y de ocio, y esos factores se consideran como determinantes del envejecimiento activo.

**DESCRIPTORIOS:** Envejecimiento activo. Independencia. Funcionalidad.

## INTRODUCTION

Aging is a dynamic and progressive process, characterized both by morphological, functional, and biochemical alterations and also by psychological alterations. These changes determine the progressive loss of the ability to adapt to the environment, causing greater vulnerability and a greater incidence of pathological processes that can lead to death.<sup>1</sup>

One of the consequences of aging is the gradual decrease of one's functional capacity, which is progressive and increases with age. Hence, the most important adversities facing health associated with age are functional capacity and dependence. These lead to the restriction/loss of one's abilities or difficulty/inability in the performance of functions and daily living activities. Such difficulties are caused by physical and cognitive limitations, so that the health conditions of the elderly can be determined by various specific indicators, among them the presence of physical and cognitive deficits.<sup>2-3</sup>

Functional capacity is defined as the maintenance of one's ability to perform Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs), necessary and sufficient for an independent and autonomous life. Being able to perform ADLs is something necessary for an elderly individual's survival, keeping the individual active in the management of his/her own health and self-care and in the performance of household chores.<sup>4-5</sup>

Therefore, the study of functional capacity has become a key component to evaluating the health of elderly individuals and is usually directed to the analysis of their ability to perform certain routine activities. Hence, the health of elderly individuals is closely linked to their functional independence, which is measured through functional evaluations.<sup>2-6</sup>

Brazil has attained the highest levels of elderly population ratios in the world context. However, being able to live longer is not always synonymous with living better. Aging may be associated with suffering, increased physical dependence, functional decline, social isolation, depression and a lack of productivity, among other negative factors. It is, however, possible to live with greater a quality of life through independence and autonomy, with good physical and mental health, so that the aging process is healthy and active.<sup>7-8</sup>

Autonomy can be defined as the freedom to act independently and make decisions concerning one's own life. It can also be seen as the ability to perform activities without the help of others, in light of the fact that motor and cognitive conditions are required to perform certain tasks. However, autonomy and independence are not inter-dependent concepts, since an individual can be autonomous but not independent, as is the case with individuals with dementia. One can also be autonomous but not independent, as in the case of individuals with severe sequelae from cerebrovascular accidents but with no cognitive changes. In such a situation, the individual is autonomous in making decisions regarding his/her own life but is physically dependent of others.<sup>2</sup>

In the search for a better quality of life, which would be a result of aging with independence and autonomy, of a healthy and active aging process, investments have been made to develop social and health programs focused on the preservation of the independence and autonomy of elderly individuals, essential goals not only for the government but for all sectors of society. An important strategy to accomplish such a challenge is the Family Health Program, developed in Family Health Units of the Brazilian Unified Health System (SUS). This program has been efficient to achieve specific measures of health promotion and disease prevention, caring for elderly individuals living in the community.<sup>9-10</sup>

However, health workers have found elderly individuals with chronic health problems that lead to functional dependence at the various levels of healthcare delivery. When these conditions are identified belatedly, they hinder strategies that could reverse or at least minimize them. Therefore, it is important to conduct studies that enable the identification of factors that determine a healthier aging process through the implementation of health promotion and disease prevention.<sup>5</sup>

When viewed from this perspective, the aging process becomes very complex and a relevant concern, justifying studies addressing the relationship between functional capacity and factors determining a healthy aging process. Hence, this study aims to find answers for existing questions concerning a potential relationship between active aging and functional independence.

Based on the previous discussion, this study sought to analyze factors determining healthy aging, verifying the degree of functional independence of elderly individuals enrolled in a Primary

Health Care Unit. It is based on the assumption that functional independence promotes greater integration of elderly individuals into the community through possessing the autonomy to perform daily living activities and strengthening social and family bonds, friendship and leisure, factors considered to be determinants of an active aging process.

## METHOD

This study was conducted in the Nova Conquista Family Health Unit, located in the city of João Pessoa, PB, Brazil. The sample was a convenience sample and was composed of 100 elderly individuals; their ages ranged from 60 to 93 years old ( $M=68$ ;  $SD=7.53$ ), of both genders and varied educational levels. Inclusion criteria were being 60 years old or older, living in the community, and being cared for by the Family Health Program.

An instrument recommended by the Brazilian Ministry of Health<sup>11</sup>, the Functional Independence Measure (FIM), was used to evaluate the functional capacity of elderly individuals. FIM is a test that quantifies the help one needs to perform a set of 18 tasks. It has items addressing the performance of elderly individuals, taking into account six theoretical dimensions: (1) self-care (e.g. eating, personal hygiene, bathing, getting dressed); (2) sphincter control; (3) transferences (ability to transfer from bed to chair and other places); (4) mobility; (5) communication (comprehension and verbalization of ideas); and (6) social cognition (related to social interaction).

The tasks evaluated during application of the FIM were classified on a scale with seven degrees of dependence in which "1" refers to total dependence, while 2,3 and 4 refer to maximum, moderate and minimum assistance, respectively. Level 5 refers to supervision, stimulus or preparation, when the presence, control, suggestion, or encouragement of another is required, but there is no physical contact or when another person is needed to prepare the objects that will be used or help to put on an orthosis or prosthesis. Level 6 refers to modified independence in which activities require technical help, adaptation, prosthesis or orthosis, and/or when these are performance of activities requires excessive time. Finally, Level 7 refers to complete independence in which tasks are performed without technical help and within a reasonable time.

A socio-demographic questionnaire was applied after the FIM was administered. It addressed the individuals' gender, age, level of education,

religion, origin, living conditions, whom the individual lived with, physical activities, what type of physical activity, occupation and health condition.

The participation of the elderly individuals was voluntary and complied with Resolution 196/96, Ministry of Health, National Council of Health/ National Committee of Ethics Research and was approved by the Ethics Research Committee from the Health Sciences Center at the Federal University of Paraíba, Brazil (protocol No. 0188\08). The instruments were individually applied at the participants' homes. All data collected were analyzed through descriptive statistics using SPSS version 15.

## RESULTS AND DISCUSSION

The sample's demographic profile indicated that most participants were women (73%). A prevalence of women was also observed in other studies including elderly individuals in Family Health Units, revealing that the number of female elderly individuals in Brazil has been higher than that of men for a long time. This aspect may be explained by differentiated mortality observed between genders, something very apparent in the Brazilian population.<sup>12-13</sup>

In terms of education, 40% of the individuals were illiterate and 48% reported incomplete primary school. This information seems to be coherent with what has been observed in other studies addressing the education of the elderly population in Brazil. According to these studies, access to education was much more difficult in the past, especially for women. These observations explain the large incidence of illiteracy or low levels of education among the elderly individuals addressed in this study.<sup>12</sup>

A total of 79% of the participants reported some pathology; hypertension was the most frequently reported. Hypertension does not impair one's functional capacity or socio-family integration when properly treated. Note that 21% of the elderly individuals did not report any chronic pathology, that is, they were healthy. According to the World Health Organization (WHO), being healthy during old age is the object of various studies and research, and should be considered from a broader perspective, as the result of an inter-sector and interdisciplinary work focused on the promotion of a healthy life.<sup>14</sup>

However, for the aging process to be successful, one should analyze not only the absence of

disease, but also the maintenance of the conditions that enable one to be autonomous and functionally independent, which were assessed in this study through the application of the FIM.<sup>15</sup> The average scores obtained by the participants in distinct age ranges are presented in Table 1.

**Table 1 - Average scores obtained by the elderly individuals in the dimensions of the Functional Independence Measure by age. João Pessoa - PB, Brazil. 2008**

Age range	Dimensions of Functional Independence					
	A	B	C	D	E	F
60 to 65	6.88	6.91	6.94	6.74	6.90	6.60
66 to 70	6.98	6.98	7.00	6.91	7.00	6.42
71 to 75	6.79	6.92	6.78	6.50	6.97	5.94
76 to 80	6.97	6.95	7.00	6.95	7.00	6.58
81 to 85	6.96	6.87	6.92	6.87	7.00	6.42
86 to 93	6.50	7.00	7.00	6.00	7.00	5.89

A=Self-care; B=Sphincter control; C=Transference; D=Mobility; E=Communication; F=Social Cognition.

Even though 58% of the studied individuals were older than 65 years of age and 7% of them were older than 85 years of age, 100% of the individuals were functionally independent, that is, they did not require the help of another person to perform ADLs. These individuals were classified in Levels 5, 6, and 7, which correspond to supervision, modified independence and complete independence, respectively. The individuals also obtained a lower average in Dimension 6, social cognition. This item assesses abilities in problem solving and memory, which demands more from one's psychological and intellectual functioning. Despite the results in this dimension, we conclude that, in general terms, all the elderly individuals in the sample were functionally independent.

A relevant piece of information concerns the participants' level of exercise. Even though most individuals (83%) did not report physical activity and only 17% practiced walking, the instrument's results show that 100% of the interviewees were functionally independent. Such a condition was presented even among those who did not report any exercise but who remained active performing their household chores and religious tasks. Note that the individuals considered physical activity not only to be the practice of exercise but

also the performance of household chores, which can characterize a situation of non-sedentariness, corroborating other studies in the field. These studies state that exercise is a complex process, which, regardless of being a sport or linked to one's professional work, can be used to delay or even reverse a pathological problem already in process. Hence, it can benefit elderly individuals in terms of socialization, self-esteem, creativity, to fight insomnia, and promote a healthy and active aging process, among other benefits.<sup>12</sup>

This fact is related to one's occupation. Retirement was reported by 91% of the interviewed individuals. Retirement may be defined as inactivity after some time of service or remuneration while being inactive. However, the fact one is retired does not imply total inactivity or complete sedentariness. The results show that even retired, elderly individuals continue performing house chores and experiencing leisure, which implies social-family integration, which can be a differential in the maintenance of one's functional capacity and healthy aging.<sup>16</sup>

In terms of housing, 88% of the participants lived in their own houses and 75% lived with their spouses and/or close family members, such as children and grandchildren. This is positive considering that for elderly individuals, living alone has been associated with decreased quality of life and aggravated morbidity, even indicating a risk of mortality.<sup>9</sup>

These findings confirm that for the aging process to be successful, it should not only be free of disease, but should also present conditions of autonomy and functionality.<sup>15</sup> The more active an individual, the fewer physical limitations exist. Therefore, an independent life, having a house, occupation, affection and communication are recommended for one to be healthy and keep active.<sup>5</sup>

The experience of keeping well and dealing with disease are constants in the lives of those facing aging; promoting health and behaviors that enable one to maintain autonomy and a successful aging process are needed. A successful aging process should be considered a goal to be achieved by those who deal with the changes inherent to age. This kind of aging is more than absence of disease and the maintenance of functional capacity. Combining it with active engagement with life represents a broader concept of a good aging process.<sup>17</sup>

In addition to these results, we also observed during data collection that the elderly participants



who were classified as functionally independent also presented the five factors recommended for good aging (independent life, housing, occupation, affection and communication). Based on these results, we conclude that dependence can be prevented or mitigated if an appropriate environment and assistance are provided.

## FINAL CONSIDERATIONS

The increase in the elderly population generates the need to develop the means to better deal with the difficulties that arise from it. Even though there are losses during the aging process, aging actively should be encouraged among the elderly, because it means living life fully and with quality. An active aging process corresponds to bio-psychosocial balance, integrality from being inserted into a social context, and also refers to the elderly individual being able to develop his/her potential. Therefore, the importance of support being provided from policies, family, society, networks of friends, and groups of common interests, all together to fight the discrimination and prejudice that permeates aging in our culture.

It is necessary to promote changes in social structures so that when elderly individuals lives are prolonged, they do not stay apart from the social space, in relative alienation, inactivity, physical impairment and dependence, but seek their well being and better quality of life. For that, policies and social programs focused on active aging are needed to prevent and delay deficiencies and chronic diseases associated with this period of human life.

The practice of any activity – not only physical exercise – is a way to maintain and/or improve functional capacity. Additionally, an activity can enable greater integration in the community, through strengthening family bonds, friendship, leisure and social bonds, as well, promoting changes in daily life such as seeking improved quality of life. It is not surprising that exercise is currently considered one of the main achievements of public health, as public health is seen as the science and art of avoiding disease, prolonging life, and developing a good physical and mental disposition in human beings.

Keeping elderly individuals functionally independent is the first step to achieving a better quality of life. For that, one needs to plan specific intervention programs aiming to eliminate risk factors related to functional incapacity. At the same

time, actions related to health promotion, prevention of diseases, recovery and rehabilitation should be devised to directly impact the maintenance of these individuals' functional capacity. One should keep in mind that functional capacity also depends on demographic, socioeconomic, cultural and psychosocial factors, in addition to lifestyle.

In accordance with these observations, this study highlights the importance of actions directed to the elderly population seeking primary health-care. Each Family Health Unit should provide professionals concerned with humanized and conscious care aimed to awake in each citizen-user the importance of exercise for active and healthy aging.

The current National Policy of Primary Health Care describes the delivery of healthcare to the elderly population encompassed by the Family Health Units, taking place in the scope of the health unit as well as the houses of these individuals and in the other spaces within the community (schools and associations, among others). Actively listening to the needs of users enables humanized care and the establishment of bonds between health workers and elderly individuals, actions that are common to all members of the Family Health team.

To meet these requirements, we understand that nurses and other health workers within the Family Health Program need to develop more actions focused on elderly individuals. While implementing such actions, the professionals should be attentive not only to physical and physiological alterations, inherent to the aging process, but also to changes in the social-family dynamics, which are determinant factors for one's functional capacity and, consequently, of healthy aging.

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