

# Functional Capacity in Elderly People'S Day-to-Day Basic Activities

ORIGINAL

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## Abstract

**Objective:** Assessing the functional capacity in day-to-day basic activities of elderly people attended to in a Family Health Unit.

**Methodology:** Current transversal study with 76 elderly people was undertaken between September and November 2014 in a Family Health Unit in the town of Nova Russas CE Brazil. The elderly people were interviewed and information on socio-demographic characteristics, health status and the performance of daily basic activities was collected. Data were described and analyzed with EpiInfo 7 and R v2.10.0.

**Results:** The population studied was mostly composed of females (63.1%), aged between 70 and 79 years old (68.4%), widows or widowers (63.2%), with 3-4 dependent people at home (60.6%); 96% of the elderly people may be considered independent.

**Conclusion:** Results show that most elderly people are independent in their daily basic activities.

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## Keywords

Elderly people; Primary Health Cares; Family Health Strategy; Nursing.

## Introduction

Aging in humans is a universal, dynamic and irreversible process which is affected by biological, social, psychological and environmental factors. Although normally associated with developed countries, aging is currently a worldwide phenomenon. Demographic estimates reveal that most of the population in developed country in 2025 will consist of elderly people and that by 2050 there will be two billion elderly people on the planet. There will be approximately

34 million elderly people in Brazil by the year 2025, or rather, the country will rank sixth in elderly population [1, 2].

The biological phenomenon of aging, as a natural process in the evolution of living beings, may occur in elderly persons in a unique and particular manner. Elderly people are not disabled due to old age. In other words, people do not require total functional capacity to live a healthy life with quality. Aging should not be considered an illness since common diseases at this stage of life may be prevented, diagnosed and treated [3].

The aging process is accompanied by a decrease in functional ability, associated with a decline in the capacity to do day-to-day activities (DDA)[4]. Functional capacity boils down to the subject's autonomy to perform basic and instrumental activities, such as, taking a bath, putting on cloths, taking care of personal hygiene, moving from one place to another, eating, urinating, preparing food, controlling one's money, taking medicine, cleaning the house, going to the grocer, riding buses, phoning and walking certain distances [5].

Population studies show that about 40% of elderly people over 65 years require some type of aid for their DDAs, which may include controlling one's money, preparing food and cleaning the house; a lower percentage (10%) need help to perform basic tasks as taking a bath, putting on cloths, going to the toilet, feeding and even sitting on a chair or bed [6, 7].

Consequently, studies on the functional capacity are relevant to evaluate elderly people's health status since it is a good indicator of their autonomy. Further, the functional capacity may be evaluated by basic and instrumental activities performed, also called mobility abilities and self-care activities [5]. The assessment of functional capacity may be perceived as an indispensable tool for nurses in care-giving to the elderly. It is actually a strategy to elaborate care planning to people who already have some type of disability or for the prevention of inability [8].

It must be underscored that elderly people's functional capacity identifies possibilities and impairments in the development of their day-to-day basic activities (DDBA) at this age bracket. Further, the individual evaluation of the functional capacity by DDBA may be a tool by the family health team to plan and implement activities for health enhancement, prevention and treatment of diseases and rehabilitation for the elderly.

Current research evaluates the functional capacity in day-to-day basic activities of elderly people attended to in a Family Health Unit.

## Methodology

Current transversal and descriptive study was undertaken with elderly people attended to in a Family Health Unit in the town of Nova Russas, Ceará, Brazil.

### Place, population and study sample

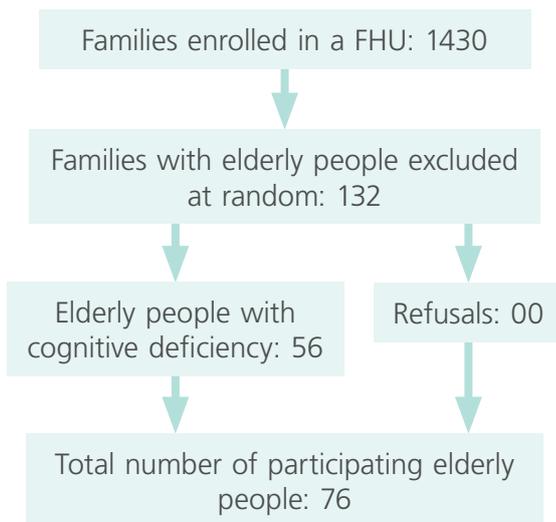
The town of Nova Russas lies in the western region of the state of Ceará, Brazil, with an area of 742.76 km<sup>2</sup>, distant some 300 km from the state capital Fortaleza, population of 30,960 inhabitants [2]. Its Basic Health Care comprises 11 Family Health Units (FHU) in the six health districts, according to data retrieved from the Municipal Secretary [9].

Current study includes elderly people within the 60-year-old age bracket, featuring no cognitive deficit, and who were enrolled in one of the FHUs in the municipality of Nova Russas CE Brazil. The FHU was chosen due to its easy localization and to the great population of elderly people attended there. Elderly people with cognitive deficiencies were excluded from current analysis.

Prior to sampling, it was verified that 1430 families were enrolled in the FHU and the families' clinical charts revealed 318 elderly people. One hundred and thirty-two elderly people were randomly selected (42% of charts indicating elderly people in the family) for the sample.

Elderly people with cognitive deficiency were detected by the Mini-mental State Examination (MMSE) composed of 30 categorical questions with the following scores: 30-26 scores (preserved cognitive functions); 26-24 scores (non-significant alteration of mental deficiency) and 23 scores or less (cognitive deficiency) [10]. Since 56 elderly people were excluded due to some cognitive deficiency and none of the others refused to participate in the study, 76 elderly people participated in current research. **Figure 1** shows the selection scheme.

**Figure 1:** Stages for obtaining study sample for the research “Functional capacity in elderly people’s day-to-day basic activities” (Nova Russas, 2014).



### Collection and analysis of data

Data were retrieved from structured interviews with the elderly people, featuring information on their socio-demographic characteristics, health conditions and the performance of daily basic activities. Collection occurred between September and November 2014 by a trained researcher who visited the home of all the elderly chosen for current study, accompanied by Health Community Agents (HCAs).

Katz Index widely used in research work [12] evaluated daily basic activities [11]. Six self-care activities were investigated (taking meals, taking a bath, put-

ting on cloths, going to the toilet, lying on and rising from bed or chair and urinating-evacuating). Three response alternatives with categories independence, need for partial aid and need for total aid/helpless to execute the task, were proposed for each activity evaluated. Function inability for basic activities was defined as the need for partial or total aid for at least one of the daily activities analyzed [13].

Retrieved data were digitized and fed into an electronic database, compared, and corrected for mistakes and inconsistencies. They were then analyzed descriptively by EpiInfo 7 and R v2. 10.0.

From the normative point of view, current study complies with Resolution 466 of 2012 published by the Brazilian Health Council [14]. The project was approved by the Committee for Ethics in Research of the Universidade Federal do Ceará (Protocol 660.902). The relevance and aims of current research were duly explained to all the participating people and the required Term of Free Consent was signed.

### Results

The socio-demographic characteristics of the 76 elderly revealed that most (68.4%) were in the 70-79 years age bracket, 63.1% were females and widows/widowers and married/common law were predominant with 63.2% and 25%, respectively (**Table 1**).

**Table 1.** Socio-demographic characteristics and health conditions of elderly people attended to at the FHU (Nova Russas, 2014).

Variables	N	%
Age bracket		
60-69 years old	07	9.2
70-79 years old	52	68.4
80 and over	17	22.3
Gender		
Female	48	63.1
Male	28	36.9

Variables	N	%
Civil status		
Married/common law	19	25.0
Single	07	9.2
Divorced	02	2.6
Widow/widower	48	63.2
Current job		
Yes	22	28.9
No	54	71.1
Occupation prior to retirement		
Farming	27	35.5
House wife	48	63.1
Foreman	01	1.4
Schooling		
Illiterate/Incomplete basic education	62	81.57
Fundamental schooling	05	6.57
High schooling	09	11.86
Family wage*		
1 Brazilian minimum wage	27	35.6
1-2 minimum wages	26	34.2
Over 3 minimum wages	23	30.2
Dependents		
Up to 2 people	22	28.9
3-4 people	46	60.6
5 or more	08	10.5
Illnesses		
Yes	63	82.9
No	13	17.1
Type of disease		
Systemic Arterial Hypertension - SAH	48	63.15
Diabetes Mellitus	18	23.6
HAS/DM	09	11.8
Other diseases	17	22.3
Self-definition of their health		
Excellent	00	0.0
Good	00	0.0
Fair	59	77.7
Bad	17	22.3

Variables	N	%
Recreation		
Watching TV and chatting	72	94.7
No type of recreation	04	5.3
Care giver		
Spouse	19	25.0
Son	42	55.3
Brother	02	2.6
Grandchildren	07	9.2
Others	06	7.9
*: Minimum wage at the time of the interview was BRL 722.00.		

All the interviewed elderly people were retired, with previous occupations in agriculture (35.5%), housewife (63.1%) and foremen (1.4%). Further, 81.57% of the interviewed were illiterate or incomplete basic schooling. Most of the elderly people (35.6%) received a pension corresponding to one Brazilian minimum wage. Current study also revealed that there were 2 dependent people in their homes (for 28.9% of the elderly), 3-4 dependent people (for 60.6% of the elderly) and five or more dependent people (for 10.5% of the elderly) (**Table 1**).

Further, 82.9% of the elderly people complained of some type of illness, or rather, 63.1% suffered from Systemic Arterial Hypertension (SAH) and 23.6% from Diabetes Mellitus. Most of the elderly people (77%) evaluated their health as fair and 94% reported that recreation activities consisted in watching TV and chatting with neighbors (**Table 1**).

**Table 2** describes each basic activity according to the dependence degree of the elderly. Current research shows that 96% are autonomous in taking a bath and putting on cloths; 97.4% are independent in going to the toilet, body care and putting on cloths; 98.6% are independent in displacements; 97.4% are independent in urinating and evacuating; 100% are independent in feeding themselves. Taking into account the functional capacity index of the elderly population investigated, 96% stated that they were independent in all activities.

**Table 2.** Dependence degree for daily basic activities of elderly people attended to in the FHU, Nova Russas CE Brazil, 2014.

Activity	Independent		Require partial aid		Require total aid or are helpless	
	n	%	n	%	n	%
Taking a bath	73	96.0	01	1.31	02	2.63
Putting on cloths	73	96.0	01	1.31	02	2.63
Going to the toilet	74	97.4	02	2.6	00	00.0
Lying on or rising up from bed	75	98.6	01	1.4	00	00.0
Eating	76	100	00	0.0	00	0.0
Urinating and/or evacuating	74	97.4	02	2.6	00	0.0

## Discussion

The number of elderly people in Brazil is on the increase. The proportion of elderly people (60 years old or over) between 1999 and 2009 increased from 9.1% to 11.3% within total population. Several factors, especially progress in health technology, have given a significant space to elderly people in Brazilian society [2].

Further, approximately 302 million elderly females and 247 million elderly males, aged 60 years or more, are extant worldwide, with a clear predominance of the former. The phenomenon may be called “the feminization of old age” [15]. Female longevity is common in all modern developed or underdeveloped societies. Early male mortality may be related to social differences and life-style and may be associated with more frequent risk factors, less frequent health visits due to lack of time and mainly to the false self-perception of their physical and mental superiority [16].

Current analysis reveals that most elderly people were illiterate, corroborating results in another study [17]. High illiteracy in the elderly is mainly due

to erstwhile difficulties to frequent school in the backlands of Brazil [18].

Most of the elderly have chronic diseases, mainly SAH and the fact that some have more than one illness affects life quality, such as the capacity for functional abilities [19].

Chronic diseases significantly affect the functional capacity of the elderly [20]. A research in the municipality of São Paulo, Brazil, showed that the elderly person with SAH had a 39% more chance in being dependent; the chance rises 59% if they also suffered from osteo-articulation diseases [21]. In fact, these illnesses have triggered a rise in morbi-mortality rates, affect life quality and limit the autonomy of the elderly population with financial impacts on society [22].

In current analysis nearly all the elderly people reported a fair health status. It may be perceived that elderly people with deficiencies in their functional abilities complain of bad health when compared to independent ones [21].

The interviewed elderly people reported watching TV or chatting to while the time. Human beings require a daily social conviviality. Salaried work and meeting with kin, friend and neighbors constitute their social relationships [22]. Functional inability has a deep link with not visiting friends and relatives, not meeting with friends at least once a month, and receiving scanty aid from friends [23].

Data reporting that at approximately 75 years, 10% of the elderly population lose control of one or more basic activities may be found in Brazilian literature and in that of other countries. Taking a bath, feeding and personal hygiene are among those most affected [24].

In current analysis, the frequency of independent elderly people was higher than that reported in other studies [18, 25]. This can be related to a number of contextual factors such as environment, lifestyle, and the family and social context, they can reflect positively in the elderly population investigated. A study in Belo Horizonte MG Brazil [24] showed that

dependence risks were higher in elderly people over 80 years old when compared to those aged between 60 and 69 years. This is due to the fact that the ability to undertake a task involves the integration of multiple physiological systems which gradually decline over the years [26].

The inability to perform DDBA not only affects negatively the elderly people's social life but also implies in impairments for themselves and their families [26]. In every context, caring for the elderly implies that health professional should give attention to this type of assessment so that problems could be identified and interventions could be duly applied.

## Conclusions

Results indicate that most elderly people are independent for all DDBA. Only a very small percentage under analysis was functionally jeopardized.

Similar studies are required to have an in-depth and true assessment of the health of elderly people attended to in FHUs. Further, the importance of the health team's capacity to aid elderly people in all their requirements should be underscored.

The development of activities to stimulate the population to adopt preventive activities, focused on the conditions and life style of this population for the prevention of functional inability is mandatory. It is also highly important to stimulate physical activities in the elderly and to elaborate care plans for the preservation and maintenance of the elderly people's autonomy.

The design of current research reveals its limitations. Since it is a transversal study, causes between the studied variables cannot be evaluated and studied. It may be suggested that more interviews have to be undertaken with other types of designs.

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