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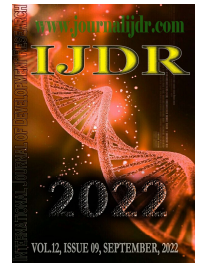
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RESEARCH ARTICLE

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HEALTH CARE FOR THE ELDERLY AND WORKER IN A HOME: AN EXPERIENCE REPORT

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ABSTRACT

The current approach to the interpretation of anthropometric measurements in the elderly is extremely relevant for the health care of the elderly. Since these parameters contribute to the interpretation of the health status of the elderly. Thus, the objective of this work was to report an experience of health care for the elderly and employees of a Home for the elderly assisted by the Basic Health Unit Benedito Arthur de Carvalho. Elderly people and employees of this Home participated in the activities, whose activities were carried out in May 2022 in the city of Fortaleza. This is an experience report developed from a practical activity carried out through a visit by medical students to the elderly vulnerable social conditions of a nursing home. Body mass index, waist circumference, oxygen saturation, heart rate and blood pressure were evaluated. The cutoff points proposed by the IDF were used for the body mass index. For data analysis, the Shapiro Wilk normality test and the Mann Whitney test were used. The results show that there is no statistically significant difference between the ages and length of stay of the elderly when compared with employees of the long-stay institution ($p > 0.05$). Regarding the anthropometric parameters, it was found that some elderly people had mild hypertension and visceral obesity. Among the social activities were the donation of geriatric diapers and a playful gymkhana. It was found that the elderly in the long-stay institution demonstrate adequate body mass indices with discrete cardiovascular changes. In addition, we can conclude that the social interventions carried out contributed to improving the health care of the elderly in the long-stay institution.

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INTRODUCTION

Brazil for years was known as a country of young people, we are currently experiencing an epidemiological transition, due to a significant increase in the elderly population. It is estimated that there will be approximately 34 million elderly people in 2025, taking Brazil to the 6th place among the countries with the most elderly people. With population aging, chronic diseases such as diabetes, hypertension, stroke and obesity predominate, which in turn shows an ever-increasing prevalence in different age groups, including the elderly, and due to their complications, either alone or associated with other events. morbid diseases contributing to mortality in this age group (MARQUES *et al.*, 2007). One of the ways to assess obesity is through the body mass index (BMI). The body mass index (BMI) has been used for decades to assess overweight, obesity and cachexia being an important marker of the body's metabolic activity. Anthropometry has been identified as the most suitable parameter to assess the collective nutritional status of

patients, mainly due to the ease of obtaining measurements that can be valid and reliable (GOMES *et al.*, 2010; QUADROS *et al.*, 2017). Due to body changes that occur with age, such as height reduction due to vertebral compression, increase in body fat, loss of muscle tone and decrease in body water, the BMI classification for people over 60 years old is different from others. In Brazil, the Ministry of Health adopts and recommends the so-called Lipschutz standard (1994), in which values below 21.9 are underweight, between 22 and 26.9 are ideal, and values from 27 are considered overweight. According to a study among 20,114 participants, in which the evaluated population consisted of all individuals aged 60 years or older, participants in the Family Budget Survey (POF), 2008/2009, of the Brazilian Institute of Geography and Statistics (IBGE), the prevalence of overweight was higher in female elderly (41.9%), residents of the urban state (39%) and a directly proportional relationship with the increase in per capita income. (PEREIRA *et al.*, 2016). The assessment of body composition is important in the study of human energy and protein metabolism, as there are methods available to quantify energy stores and protein content at a single point in time; energy-protein balance can be

monitored over time; and dynamic measures of energy and protein metabolism can be referenced to body mass and related measurable components for comparisons between individuals (HEYMSFIELD *et al.*, 2000). This experience report was carried out at O Lar Francisco de Assis, an association founded on June 22, 1962 that develops a Social Assistance Program for the Elderly at risk, located in regional II in the area covered by UBS BAC. The experience report presents the experiences acquired by medical students who actively participated in the design of health care actions and social activities for the elderly and workers at an institution that cares for the elderly. Based on these premises, the objective of this study was to report the experience of health care for the elderly in a nursing home assisted by UBS BAC.

METHODOLOGY

This is an experience report with a quantitative approach, carried out at Lar São Francisco in the area covered by a Family Health Unit of Regional II in the city of Fortaleza, Ceará. Experience reporting is an activity that precisely describes a given experience that can make a relevant contribution to your area of expertise. When considering the experience report as a written expression of experiences, capable of contributing to the production of knowledge on the most varied themes, the importance of discussing knowledge is recognized (MUSSI *et al.*, 2021). For Dalto and Farias (2019), O Relato de experiencia allows the possibility of creating a scientific narrative, especially in the field of research capable of encompassing subjective processes and productions, demonstrating the importance of social interventions carried out that go beyond this descriptive identity. In this way, the students performed some health interventions such as evaluation of anthropometric data such as BMI, abdominal circumference and vital signs such as saturation, heart rate. To evaluate the anthropometric data, we used the IDF parameters as a reference. The sample consisted of 10 elderly people and 4 employees of the Nursing Home.

Participants met the following inclusion criteria: Elderly people and caregivers at Lar São Francisco in the city of Fortaleza institutionalized for more than a year.

Anthropometric data collection and analysis. The collection was carried out by 5 medical students at Lar São Francisco in May 2022. Using scales as a tool. tape measure, pulse oximeter, stethoscope, tensiometer and watch. We use a schedule for data annotation and subsequent cataloging and data analysis. Data on body mass index were evaluated according to the guidelines of the IDF (International Diabetes Federation). The IDF published new criteria that are similar to the NCEP-ATP III, however, the IDF provides for the mandatory presence of the abdominal waist criterion, according to races. This considered abdominal obesity to be more strongly correlated with insulin resistance than the other criteria, with normal being up to 80 cm for women and 90 cm for men (KUBRUSLY *et al.*, 2015). The weight was performed using a Techline scale. The height of the patients was measured with a tape measure, with a graduation of 10 cm for height. The measurement of abdominal circumference was performed with a flexible measuring tape, placed in the middle of the distance between the iliac crest and the lower costal margin, in the narrowest section of the abdomen. While blood pressure (BP) was evaluated using a pressure device brand xxxx. Previous diagnoses of diabetes and hypertension and other comorbidities were recorded in the survey questionnaire.

Gymkhana: In order to analyze the experience and relationship between the elderly and their caregivers at Lar São Francisco de Assis. Lar São Francisco organized a competition. The action consisted of forming a circle of elderly people seated in chairs, and using an air balloon to pass the music, which contemplate the musical preferences of the group, were composed of religious chants and "fórrós pé de serra". At a certain moment, the sound interruption of the present music occurs, and the elderly person in possession of the

balloon, which remained being passed from hand to hand in the presence of the music, completes the lyrics of the song they were listening to, thus, again the balloon together with the music are passed on to another elderly person, and at a later time another individual from the circle is chosen to complete the song. In this case, caregivers stand among the elderly, in order to encourage them to participate and interact in the gymkhana, and organize and intervene during the action, so that it occurs in an organized and functional way.

Diaper Donation: Geriatric diapers were donated to a long-stay institution. The medical students organized themselves to promote a solidarity action for the donation of geriatric diapers. In this sense, the main objective was to provide support to the elderly in the long-stay institution who do not have the financial means to acquire this material, since they are more vulnerable people and who demand a certain amount of geriatric diapers every day. With the lack of this product, the donation demonstrates respect for the needs of the elderly and a concern to contribute to the quality of life and health of this population. To carry out this research, the practice recommended in Brazil in 2012, through Resolution 466/12, which deals with research involving human beings, which meets the ethical principle of autonomy, especially with regard to consent and clarification to the research participants (BRASIL, 2012). In accordance with the aforementioned resolution, it is emphasized that under no circumstances will the name of the people involved be disclosed in this research. Our study has no conflict of interest and we follow all the norms of bioethics in scientific research. The Shapiro Wilk test was performed to verify the normality of the data. Results were expressed as mean \pm standard error of the mean (S.P.M). Data that obey a parametric distribution were analyzed by the Mann Whitney test. Values of $p < 0.05$ were considered statistically significant.

RESULTS AND DISCUSSION

It was observed that there is no statistically significant difference between the ages of the elderly when compared with their caregivers $p > 0.05$. We can see that they are elderly people being cared for by more mature people and sometimes with the same same comorbidities as the elderly.

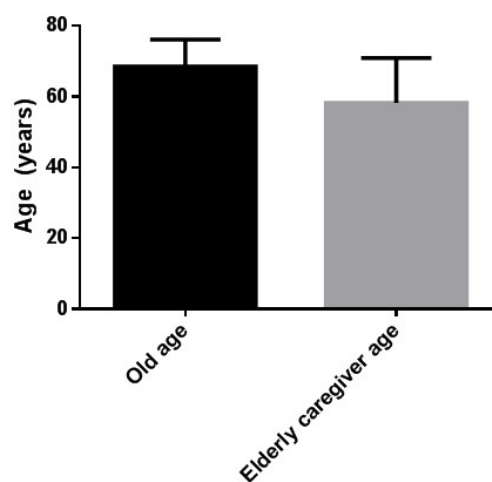


Figure 1. Comparison of the ages of the elderly between the elderly and the Home's employees. For statistical analysis, the Mann Whitney test was used, where the # $p > 0.05$ compared the groups

Regarding the length of stay of the elderly in the health care home when compared to the working time of their care, we can observe that there was no statistically significant difference between the ages of the elderly when compared to their caregivers $p > 0.05$. We can see that they are elderly people being cared for by older people and sometimes with the same comorbidities as the elderly. Visceral obesity was observed in 90% of the elderly who had an abdominal circumference above 80 cm for women or above 90 cm for

men according to the IDF criteria. Obesity, in any of its manifestations, increases the risk for cardiovascular diseases, DM, musculoskeletal diseases, erectile dysfunction, stroke and some types of cancer (WHO, 2014; COSTA 2016). In addition, the accumulation of fat in the abdominal region alters the metabolic profile, with decreased glucose tolerance, reduced insulin sensitivity and adverse lipid profiles (WHO, 2008). Despite all this importance, in the Brazilian context there are few population-based studies addressing this issue in the elderly population in the North and Northeast regions. Obesity, considered a public health problem, represents an additional risk of considerable importance for the elderly. Despite the multiple factors that determine food consumption, aspects related to the adoption of diets with high energy value, rich in animal fats, sugars, refined foods and low in fruit, vegetables and fiber, suggest a favorable contribution to the occurrence of obesity. (MARQUES *et al.*, 2007).

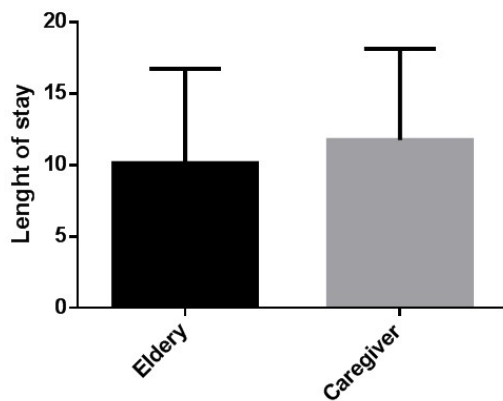


Figure 2. Comparison of the length of stay of the elderly and the working time of the Home's employees. For statistical analysis, the Mann Whitney test was used, where the # $p > 0.05$ compared the groups

mitigated with the practice of physical exercises, because with good physical conditioning, in addition to a healthy lifestyle, the performance of cardiac function can be expanded (GUANGSUO LIU *et al.*, 2022). Saturation is a measure that indicates the amount of oxygen circulating in the blood capillary, using a pulse oximeter with a tool. Low saturation occurs when oxygen cannot reach the alveoli of the lungs for gas exchange. The normal blood oxygen saturation level is always greater than 95% for a healthy person. When we have low levels of oxygen in the blood, that is, when there is low saturation, some clear symptoms are noticed, such as shortness of breath, shortness of breath, weakness, tiredness, high blood pressure, rapid heart rate, mental confusion, palpitations, irritation and etc. Saturation in elderly people may be lower, and may also be associated with some comorbidities or even with the SARS-CoV-2 virus. A doctor's evaluation is important in cases of low saturation. (LIMA *et al.*, 2021).

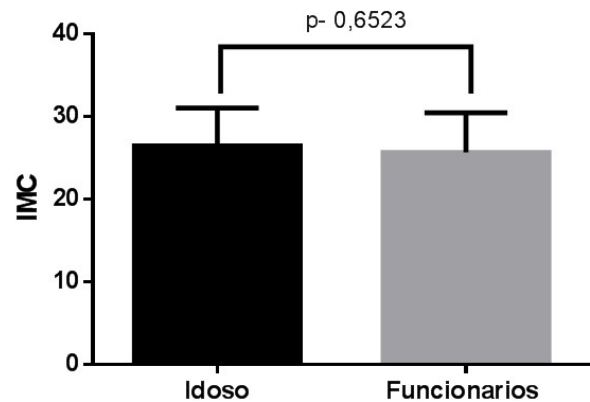


Figure 3. Comparison between the Body Mass Index (BMI) between the elderly and the home staff. For statistical analysis, the Mann Whitney test was used, where the # $p > 0.05$ compared the groups

Table 1. Anthropometric data and vital signs of the elderly

Parameter	Height	Weight	AC	SBP	DBP	Heart rate	Saturation %
Mean±SEM	1,485±0,03	61,31±2,75	93,4±4,0	130±66	76±4	80,2±0,4	97,33±3,8
Max	1,780	73,30	109	160	100	104	99
Min	1,44	48,5	66	110	110	60	95
Median	1,485	61,7	92	125	75	76,5	98

BMI: Body Mass Index; AC: Abdominal circumference; SBP: Systolic blood pressure; DBP: Diastolic blood pressure; HR Heart rate.

Table 2. Anthropometric data and vital signs of employees

Parameter	Height	Weight	AC	SBP	DBP	Heart rate	Saturation %
Média±EPM	1,64±0,49	69,6±7,2	89,25±5,3	125±8,6	77,50±6,2	80,7±5,8	97±0,4
Max	1,78	88,80	100	150	90	98	98
Min	1,55	52,20	75	110	60	72	96
Mediana	1,63	69,6	89,25	125	77,50	80,75	97

BMI: Body Mass Index; AC: Abdominal circumference; SBP: Systolic blood pressure; DBP: Diastolic blood pressure; HR Heart rate.

Regarding the Body Mass Index (BMI) of the elderly in the home when compared with that of the employees, we can observe that there was no statistically significant difference between the BMI of the elderly when compared with their employees at the Home $p = 0.6523$. We can also observe that there are elderly people who are overweight and need a diet and prescription of physical activity to adjust their weight and reduce the risk of developing metabolic syndrome and obesity. In view of the data, it was not possible to make a diagnosis of metabolic syndrome, because most of the elderly did not have laboratory tests during the visit, leaving only the assessment of the body mass index. In relation to heart rate and saturation, both in the elderly and in the employees group remained within the normal range. The heart rate when altered in the elderly can occur due to several causes, such as atherosclerosis, heart failure or infarction. The clinical manifestations of tachycardia tend to be more expressive in the elderly, due to the advent of comorbidities. Such factors can be

It was found that the most prevalent diseases in the elderly assisted by the Home for the elderly were Hypertension 40%, Diabetes Mellitus 30%, Dyslipidemia 20%, among others (Table 3). There was no statistically significant difference between the disease prevalence between employees and elderly $p > 0.05$. In this scenario, repeated estimates of prevalence and incidence inform disease trajectory trends and guide the decision-making process related to control measures and resource allocation and improvement of the quality of the affected population to guide the discussion of public health policies. for a given disease (LIPSITCH *et al.*, 2009; PIZZICHINI *et al.*, 2020). According to PIZZICHINI *et al.* (2020), prevalence and incidence estimates can be misleading if the number of cases is underestimated due to barriers in accessing information about diagnosis and health care practices or if only patients with severe disease undergo diagnostic tests and associated with this, several regions may have a high number of underreporting, contributing to

failures in the organization of public health policies. Diabetes Mellitus is a comorbidity that can cause several complications such as Nephropathy, Angina, Infarction, Diabetic Retinopathy and Diabetic Autonomic Neuropathy (NAD), which results in functional changes in the cardiovascular, digestive, glandular and pupil motor systems (FREITAS *et al.*, 2019). Systemic Arterial Hypertension can trigger several serious complications, especially in elderly individuals who have other comorbidities, especially DM, such as falls with significant fractures, traumatic brain injury, cerebrovascular accident (CVA) that can be hemorrhagic or ischemic, acute or chronic heart and renal failure. , Acute myocardial infarction, retinopathy that can lead to blindness (FRANCISCO *et al.*, 2019; DA COSTA, 2019). Chronic autoimmune thyroiditis, also known as Hashimoto's thyroiditis, is the most frequent reason for hypothyroidism, being characterized by a decrease in T3 and T4 hormones with an increase in the thyroid gland, and affects mainly young or middle-aged women (BRENTA *et al.*, 2013; OLIVEIRA *et al.*, 2014). The relevance of this study consists in the analysis and reflection on the data collected to understand the experience of care and the reality among the elderly and the employees of the Home for the elderly assisted by UBS Benedito Arthur de Carvalho. Thus, after collecting and observing the data obtained, some conclusions were made regarding the assessment of age, BMI, saturation, heart rate and waist circumference of the elderly and employees. The small age difference among the elderly can be interpreted as adequate, as well as the similarity of the comorbidities presented by them. Regarding the employees of the institution, the average age was lower. However, there was no significant difference when compared to the ages and comorbidities observed by the elderly $p>0.05$.

Thus, a degree of homogeneity of factors presented by the groups was observed. In addition, in relation to the durability of individuals in the institution, there was a longer bonding time of employees when compared to the elderly, evidencing a discontinuous monitoring of the elderly, which can lead to a delay in the progress of the development of social life, such as memory, physical conditioning and communication (MACHADO *et al.*, 2022) Furthermore, after collecting and analyzing the BMI, there was a similarity in the results found between the elderly and employees, with the median of both classified as overweight (ANJOS *et al.*, 1992). In this context, there is a need to monitor this parameter, due to its alteration. Through studies on anthropometric assessment in the elderly carried out in the municipality of Zona da Mata (MG) and Vitória (ES), published on the scielo platform, a high prevalence of overweight was observed in the groups studied, similar to that found in our research (TINOCO *et al.*, 2006.; ANDRADE *et al.*, 2012). However, an investigation carried out with institutionalized elderly people in Uberlândia (MG) showed a predominance of low-weight elderly people, which is, therefore, adverse to the data collected through our research. (SOUSA *et al.*, 2014) Regarding the age of the individuals, a study was carried out in the municipality of Iguatu (CE), an average age of 69.8 years was observed among the elderly, a result similar to that of this work (SILVA *et al.*, 2011). The gymkhana activity was carried out with a playful activity for the entertainment of the elderly. It is noted, therefore, that the sound, motor and interactive activity between the elderly and their caregivers is extremely important for the development of elderly people, since it provides sensory stimuli, through the touch with the balloon, the response of the nervous system, by inducing attention and inciting the memory to correspond to music, and social, as it allows the interaction of the elderly with the environment and with other people who often share the same age experience. Despite the efforts made in data collection, the present study has some limitations: small sample, a single day of collection and not all registered elderly were present, little interaction during the competition.

The relevance of this study consists in the analysis and reflection on the data collected to understand the experience of care and the reality among the elderly and the employees of the Home for the elderly assisted by UBS Benedito Arthur de Carvalho. Thus, after collecting and observing the data obtained, some conclusions were made

regarding the assessment of age, BMI, saturation, heart rate and waist circumference of the elderly and employees.

Table 3. Prevalence of comorbidities in the elderly and Home staff

Comorbidities	Eldery	Rmpleoyees	p
	n	n	
Hipertensão	4	1	0,1608
Diabetes Mellitus	3	-	
Dislipidemia	2	-	
Osteoporose	1	-	
Depressão	1	-	
Pré-diabetes	1	1	
Tromboembolismo pulmonar	1	-	
Prolapso mitral	-	1	
Tireoidite de Hashimoto	-	1	
Angina Pectoris	-	1	
Sem comorbidades	2	-	

For statistical analysis, the Mann Whitney test was used, where the # $p>0.05$ compared the groups.

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FINAL CONSIDERATIONS

Aging and multiple chronic diseases affect the health of the elderly, contributing to a possible worsening of the quality of life. The elderly population becomes more vulnerable mainly due to the physiological changes promoted by aging. The anthropometric data of the investigated population was within normal parameters and the data found in the shelter referring to hypertension, the most prevalent amenity, were slightly below the national average according to the VII Brazilian Hypertension Guideline. Healthy eating and the correct

and rational use of medicines are essential for maintaining blood pressure and glycemic values in addition to weight control, thus complementing an important link in the prevention of the disease and new comorbidities. Routine assessment and health education activities for the elderly and caregivers are essential to reinforce these points. Aging and multiple chronic and degenerative morbidities affect the health of the elderly, contributing to a poor quality of life. The elderly population becomes more vulnerable mainly due to the physiological changes promoted by aging. The anthropometric data of the investigated population was within normal parameters and the most worrying factor was the mild hypertension presented by some elderly people, but all of them were undergoing therapeutic treatment. The risk of developing overweight/obesity or obesity in the elderly with unbalanced diets with comorbidities such as diabetes mellitus. It appears that the interventions carried out in the Home for the elderly were of extreme social importance for contributing to the improvement of health care for the elderly and improvement of the quality of life. In addition, it provided the academic intervention of medical students. Our perspectives that in the next experiences the number of interventions will increase in the Living Home with the objective of promoting the improvement of care and quality of life for the elderly assisted by the Elderly Lara within the scope of the Benedito Arthur de Carvalho basic health unit.

Conflict of Interest: There is not.

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