



RESEARCH ARTICLE

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## PROMOTION OF HEALTH AND QUALITY OF LIFE OF ELDERLY RESIDENTS IN A LONG-TERM INSTITUTION OF A CITY OF THE NORTH OF MINAS GERAIS

\*Joselane Ferreira da Silva and Talita Antunes Guimarães

Faculdade Vale do Gurutuba-FAVAG

### ARTICLE INFO ABSTRACT

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**Objective:** To promote the health and quality of life of elderly residents in a long-term care facility in a city in northern Minas Gerais. **Methods:** This is a field research, with a quantitative-descriptive approach, having as its starting point the bibliographic research. The research was conducted at the long-stay institution São Vicente de Paulo, located in the city of Janaúba / MG. Ten elderly people participated in this research. For data collection, questionnaires and tables developed and validated were used. **Results:** The nutritional status of the elderly was assessed through the Body Mass Index (BMI) and found that 71% of the elderly are underweight and 29% overweight, and in the nutritional assessment only 7 elderly out of 10 participated. It was found that the elderly eat four to five meals a day, which is adequate, but have a lower caloric intake than necessary. In applying the international physical activity questionnaire, it was observed that the elderly practiced physical activity, however it was not enough proposed by the world health organization. The geriatric depression scale was applied to 10 elderly, in the first application 1 elderly presented severe depression, 5 mild depression and 4 did not have depression, in the second application after interventions, no severe depression was identified, 4 presented mild depression and 6 did not have depression. **Conclusion:** Human aging, brings with it many changes, losses, and insecurity that develop many problems in the elderly. Through this study, it was possible to assess the nutritional status, assess the degree of sedentary lifestyle and identify the depressed elderly, interventionist practices were developed, to promote health and quality of life.

\*Corresponding author: Joselane Ferreira da Silva

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### INTRODUCTION

The growth of the elderly population is a worldwide phenomenon. In recent years this increase in developed countries has occurred slowly, while in developing countries it has been accelerating (SOARES, 2015). For Nóbrega, Fernandes and Costa (2012), this aging population is a reflection of the increase in life expectancy, resulting from the decrease in fertility and mortality in all countries. Thus, the number of older people began to have a greater representation in relative and absolute numbers, starting to live longer, reaching older ages. Long Term Nursing Home (ILPI) is a term used in Brazil in recent years to replace the terms asylum, shelter, nursing home, nursing home, geriatric clinic and other similar terms (CREUTZBERG *et al.*, 2012). According to Kumpel *et al.* (2011), one of the main determinants associated with the aging process, which can even contribute to a healthy aging is food consumption and the eating practice of the elderly, has several influences of psychological, sociocultural

and social factors. biological. There is a tendency to increase the risk of developing nutritional disorders, due to peculiar changes in aging, such as obesity and malnutrition (PAZ, FAZZIO and SANTOS, 2012). Nutritional status directly influences health preservation and morbidity and mortality associated with numerous chronic processes, being of great importance in maintaining the quality of life in old age (MACHADO, COELHO and COELHO, 2010). According to scientific research, physical activity can benefit anyone and any age, helping to reduce obesity, cardiovascular disease, diabetes, depression, among others. Elderly people who remain physically active throughout their lives show good psychological health, flexibility, balance, muscle strength, independence and, consequently, a better quality of life (SOARES, ALABARSE and RAMOS, 2011). According to Galhardo (2009), depression is the most common mood disorder in the elderly, leads to loss of autonomy and aggravates pre-existing pathological conditions. Depression is associated with a higher risk of morbidity and mortality, increased health service use, neglect in self-care, lower

adherence to treatment regimens and an increased risk of suicide. Characteristic symptoms of age and multiple drug use make both diagnosis and treatment more complex. Lucca and Rabelo (2011) point out that the situation of the institutionalized elderly is even more serious, as they experience greater losses, are deprived of their home, their natural environment, often abandoned by their families, being forced to live with different people, losing their lives. individuality and privacy, experiencing the death of their close associates, leading the elderly to constantly think about their own end. To minimize and prevent depression, there are interventions such as physical activity, recreation practices using ludotherapy aimed at the elderly and art therapy, which when used correctly present satisfactory results. Ramos (2014) states that Ludotherapy is a form of psychotherapy, with the purpose of promoting or restoring the individual's psychological well-being through games. Art therapy for Reis (2014) is an area of professional practice that uses various artistic resources for therapeutic purposes. It is a way of working using artistic language as the basis of communication between client and professional. Art therapy has as its essence aesthetic creation and artistic elaboration in favor of health. Obesity, malnutrition, physical inactivity and depression are serious problems common in old age that need special attention. Institutionalized elderly are subjected to all the factors that trigger these problems, and activities that prevent or minimize these ills need to be developed. This study aimed to promote the health and quality of life of elderly residents of the São Vicente de Paulo ILPI in the city of Janaúba / MG, through interventionist activities such as nutrition training for asylum cooks and / or those responsible for food, presenting recommended foods / portions for the elderly, physical exercise, recreation practices using elderly-oriented playful therapy and art therapy to promote physical and mental health and a better quality of life for the elderly, providing happier days, increasing independence, autonomy, self-esteem and socialization, thus occupying idle and boring time.

## METHODS

This is a field research, with a quantitative-descriptive approach, starting from the bibliographic research. It was developed at ILPI São Vicente de Paulo, located in the city of Janaúba Norte de Minas Gerais. Currently the institution houses 36 elderly, 19 male and 17 female. From the survey of the inclusion and exclusion criteria, of the 36 elderly, 10 were able to participate in this research, aged 60 to 92 years, being 6 males and 4 females. The participants were presented with the Informed Consent Form (TCLE), containing all the information necessary for their decision to participate or not, it was duly signed by the elderly before the application of the questionnaires and the development of activities. The study was approved by the Human Research Ethics Committee, under number 2,402,045. For this study we used the elderly's BMI, daily consumption record according to the RDA (1989), the international questionnaire of physical activity and the geriatric depression scale of Sheykh and Yesavage GDS-15. The international physical activity questionnaire is presented in its short and long form, and for this research the short form was used. According to Matsudo *et al.* (2001), the International Physical Activity Questionnaire has an advantage in its short form because it is practical and fast and allows data collection from large population groups, both short and long form. According to Galhardo (2009), the Geriatric Depression Scale is a practical way and one of the most used instruments

in the world for screening for depression. It contains 15 questions, where the respondent has a choice between yes or no to answer, scores up to 5 indicate normality, 6 to 10 mild depression and > 10 indicate severe depression. Activities such as: physical activity practices, recreational moments using art therapy and play therapy, performing activities such as: music, dance, paintings, drawings, readings, conversations, stories, games, among others, in order to occupy idle time, increase independence, autonomy, socialization, self-esteem and consequently minimize and / or prevent depression, promoting health and quality of life. The activities were supervised by the research assistants and physiotherapist of the institution, which took place three times a week, lasting three months. At the end, the Geriatric Depression Scale was reapplied to verify the results of the interventions used.

## RESULTS

Participated in this study 10 elderly residents of ILP São Vicente de Paulo, who signed the Informed Consent Form (ICF), of the 10 studied 6 (60%) are male (60, 63, 65, 69, 72, and 74 years old) and 4 (40%) female (60, 76, 77 and 92 years old).

### Importance of nutrition in old age

The nutritional status (eutrophy, malnutrition and obesity) of the elderly was assessed through the Body Mass Index Calculation (BMI) and the survey was conducted in relation to their food intake. For this, it was necessary to know the nutritional profile of the elderly and to verify the food intake made by the elderly. Seven elderly aged 60 years and over participated in the nutritional assessment from a random sample. Of these, 57.1% were male and 42.9% female. Due to physical limitations, only 7 of 10 seniors participated. Exclusion criteria were the elderly unable to stand, for weighing and determination of anthropometric measurements. Body Mass Index (BMI) is the ratio of body weight to height squared; weight was measured on a digital display scale, two hundred (200 kg) capacity with 100 gram scale, glass platform, non-slip solid rubber feet. The elderly were weighed without shoes, wearing clothes, discarding heavier objects. According to table 1, we observe the cutoffs adopted for the BMI of the elderly, according to Brazil (2004).

**Table 1. Body mass index cutoffs**

BMI	Nutritional diagnosis
≤ 22	Low weight
>22 ≤ 27	Normal or Eutrophic
≥ 27	Overweight

Source: BRASIL, (2004)

According to the analysis of anthropometric variables, it was found that the average weight was from 50 to 66 kg for women and 60 to 87 kg for men, which is low, according to the analysis of the ideal weight average that should be 69. Kg for men and 53Kg for women. As for height, we used the height method, where the average was higher for men, with 1.69m and 1.48m for women. Regarding the results obtained in table 1, it was found that 71% of the elderly were underweight and 29% overweight, the data described below are recorded in Graph 1. Given these values, care should be given regarding health and nutrition regarding the improvement of nutritional status, due to the elderly being overweight and underweight.

The daily intake record aimed to evaluate the consumption of specific foods and nutrients, collecting information on the current intake, through a descriptive analysis of three days, two of them referring to the day of the week (Tuesday and Thursday) and one to the weekend (Saturday), with direct weighing of the food through the home measure, and from these data the average consumption was identified, in order to enable the analysis of the menu offered and to adapt it respectively to the nutritional needs. of the elderly. The mini scale with a maximum capacity of 10 kg was used. From the results obtained, it was observed that the investigated population presented lower caloric intake than necessary, where it was observed an average of 1,800.7 Kcal for males and 1,611,3 Kcal for females, which occurs according to RDA (1989) recommendations are 1,900 Kcal for women and 2,300 Kcal for men, which may predispose the elderly to underweight. According to table 2, we observe the daily nutritional recommendations for the elderly, according to the RDA (1989).

it was found that the value is below the recommended for the age group studied, where measures must be taken to adapt it to food, avoiding deficiency and preventing overeating. The mean value of iron consumed was also below the recommended value with 6.5 mg and 5.2 mg for males and females respectively, which according to the standard established by the GDR (1989) is 8 mg / day.

**Table 3. Nutritional Recommendations for Male and Female**

Kcal	Reference value (VR)	Value found	Value found
	Male : 2.300 Kcal Female : 1.900 Kcal	Male 1.800,7 Kcal	Female 1.611,3 Kcal
Protein	10 a 35%	15,28%	13,48%
Lipid	20 a 30%	10,62%	11,97%
Carbohydrate	45 a 65%	46,44%	45,15%
Calcium	1.200 mg	416,1 mg	482,1 mg
Iron	8 mg	6,5 mg	5,2 mg

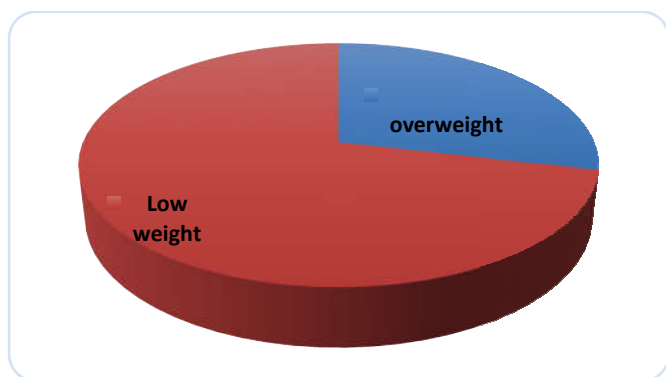
Source: Self elaboration, 2018

According to the table macronutrient values: Protein and Carbohydrate are adequate and the Lipid value is below the recommended range. Already the values of micronutrients Calcium and Iron are below the recommended value. The lack of calcium in the diet for a long period of time can lead to or aggravate osteoporosis when already established. Osteoporosis is defined by bone loss, and it installs in males and females; however, it affects females more than 5 years or more after menopause and the elderly. Iron deficiency anemia may be caused by low iron intake, this disease is a public health problem in Brazil. Several studies show that the iron intake consumed by the elderly is low (MENEZES, NUNES and HOLANDA, 2016). Poor nutrition in the elderly is related to a poor prognosis, as it is a risk factor for morbidity and mortality. Older people who already have a serious disease are more likely to develop protein-caloric malnutrition, whose probable reason is related to micronutrient deficiency (VENTURINI *et al.*, 2015). Through the amount of each food consumed and the TACO table, the values of Kcal, Carbohydrate, Lipid, Protein, Calcium and Iron were calculated individually and subsequently averaged for males and females. Low dietary lipid intake leads to low weight or malnutrition, and low calcium and iron intake carry risks of developing arthritis, arthrosis and anemia. A training was done with the cooks and those responsible for feeding the elderly of the LSIE, demonstrating the importance of the correct diet recommended for this age group. According to Bernardi, Maciel and Baratto (2017), it is of fundamental importance to advise on the correct diet, aiming to reduce health problems and improve the quality of life. In order to achieve changes in eating habits and proper eating behaviors, Nutrition Education is necessary.

**Physical activity and sedentary prevention**

The degree of physical inactivity was assessed through the International Physical Activity Questionnaire, which is a questionnaire proposed by the World Health Organization (1998). In December 2017 the questionnaire was applied, obtaining the following result:

Nine of the 10 elderly participated in the interview, 5 males and 4 females, aged 60 to 92 years, none of the elderly work in a paid way, of the nine, only 2 started the studies, but had no opportunity to study conclude. The data described below are recorded in the table below. Of the 09 respondents 7, they rate



Source: Self elaboration, 2018

**Graph 1. Elderly distribution regarding BMI classification**

**Table 2. Nutritional Recommendations**

Nutritional Recommendations	
Kcal	Male:2.300Kcal Female:1.900Kcal
Protein	10 a 35%
Lipid	20 a 35%
Carbohydrate	45 a 65%
Calcium	1.200mg
Iron	8mg

Source: Adapted: RDA (1989)

Regarding macronutrients, an average of 15.28% of protein was observed for males and 13.48% for females; 46.44% and 45.16% of glycidis for males and females respectively and an average intake of 10, 62% and 11, 97% of lipids for females and males respectively. Although the energy recommendations were below the recommended value, the macronutrients presented an adequate protein intake, where it was within the normal range considered from 10 to 35%, the percentage of glycidis was also within the normal range. ranging from 45 to 65%. The percentage of fat was below the normal range considered from 20 to 30% (RDA, 1989). The intake of complex and integral carbohydrates should be encouraged in dietary programs aimed at the elderly, as it presents adequate amount of vitamins, minerals and fiber for the prevention or treatment of various diseases (KUMPEL *et al.*, 2011). As for micronutrients, calcium and iron, there were reductions in their intake. The average value of calcium consumed was 416.1 mg for males and 482.1 mg for females, which according to the standard established by the RDA (1989) is 1200 mg / day, thus

their health in good condition and 2 in regular. As described in the chart below:

Of the 9 respondents, 7 point out that they have a good quality of life, as they have the support of nutritionist, psychologist, physiotherapist, social worker and other employees at the LSIE.

Regarding the performance of vigorous physical activities, and time spent per day, of the 9 elderly participants, 6 perform vigorous physical activities, from 1 to 5 days a week, lasting 10 to 30 minutes, and 3 of them, do not perform any kind of vigorous physical activity during the week.

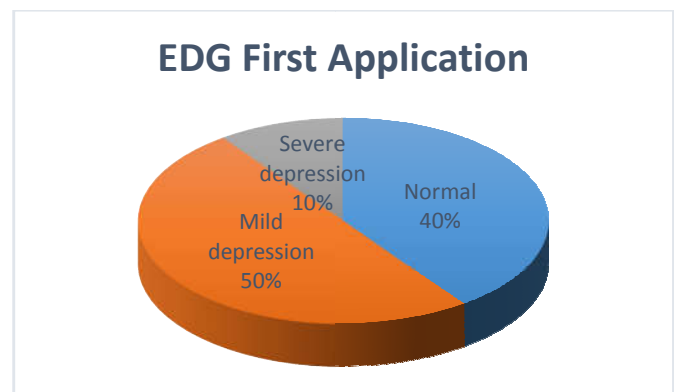
Of the 9 elderly participants, 8 engage in moderate physical activity from 1 to 5 days a week, lasting 10 to 30 minutes, and 1 of them does not engage in any moderate physical activity during the week. Of the 9 elderly participants, 7 walk for 1 to 5 days a week, lasting 10 to 20 minutes, and 2 do not walk during the week. The elderly are seated during the week, from 10 minutes to 5 hours. On the weekend the time spent sitting goes from 20 minutes to 3 hours. It was possible to identify that the elderly practice physical activities, however, not enough, the time spent per day and the frequency of performance is not enough for a good result. Based on these results, a physical exercise plan was created, together with the institution's physical therapist, aimed at improving the practice of physical activity within the institution. Functional exercise was adopted in order to improve the ability and health of the elderly. For Guimarães *et al.* (2004), physical activity is also a healthy way to deal with the changes that nature imposes especially on the elderly. It becomes a factor of preservation of functional capacity, since physical exercises promote decreased joint pain, improved strength and flexibility, self-confidence, improved aerobic capacity, improved thinking and motor coordination, among others. For the practice of physical activity, functional training was used, which according to Resende-Neto *et al.* (2016), is a systematized method of multifunctional exercises with the objective of improving the psychobiological system, which can bring numerous benefits to the elderly population. Due to age, the elderly develop a fragility that needs special attention and care. With this in mind, all physical activity practices were performed with the help of the physical therapist of the São Vicente de Paulo institution.

### Depression in the elderly

With aging, the human being presents a sequence of psychological changes, and these changes result in problems such as difficulty adapting and fulfilling new social roles, lack of motivation, self-esteem and low self-image, difficulty of rapid changes, organic and affective losses, somatizations, paranoia, hypochondria, depression and suicides (FECHINE and TROMPIERI, 2012). Sheykh Geriatric Depression Scale and Yesavage GDS-15 were used to identify depression. According to Galhardo (2009), the Geriatric Depression Scale is a practical way and one of the most used instruments in the world for screening for depression. It contains 15 questions, where the respondent has the choice (yes) or (no) to answer. The Geriatric Depression Scale was developed and validated in 1983, has a long version (30 questions) and a short version (15 questions). They are used internationally, used in the global geriatric assessment. The short version is more practical, requires less time and is efficient in screening for depression (RALDI, CANTELE and PALMEIRAS, 2016).

First Application of the Geriatric Depression Scale (EDG) - gds-15

The first application of the 15-question geriatric depression scale was on December 29, 2017, the application took place individually, respecting the privacy of the elderly, identity, data confidentiality, maintaining a good relationship between interviewer and interviewed, in order to obtain greater interaction and consequently more reliable data. Of the 10 elderly participants, 4 (40%), 3 male (63, 65 and 68 years old) and 1 female (75 years old) did not present depression, 6 (60%) presented a suggestive score of depression, 5 (50%), 3 females (60, 77 and 92 years) and 2 males (72 and 73 years) suggestive of mild depression, with scores from 6 to 10, and 1 (10%) males (60 years), reached 12 points, which suggests a picture of severe depression. The data described below are recorded in graph 2.



Source: Self Elaboration, 2018.

Graph 2. Result of the first application

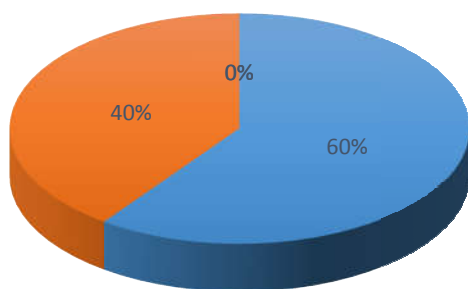
### Activity development

From studies of authors related to the theme, affirming the effectiveness of physical activity, play therapy and art therapy for the minimization and prevention of depression, in February 2018, after the first application of the scale, the intervention was started. The activities took place according to the schedule, being carried out 2 to 3 times a week, in the morning, lasting 3 months. The games were adapted according to the age of the elderly, with few rules, without losing the charm, always having the concern of not treating them as children, because, according to Marisco *et al.* (2012), they are not children.

Second application of the Geriatric Depression Scale - gds-15

The scale was reapplied on May 3, 2018 after the interventionist activities, for the same elderly of the first application, following the same conduct of the first, performed on December 29, 2017. Of the 10 elderly participants, 6 (60%), 4 males (63, 65, 68 and 73 years old), and 2 females (60 and 75 years old) did not have depression, 4 (40%) had a score suggestive of mild depression, 2 males (60 and 72 years) and 2 females (77 and 92 years). The data described below are recorded in Graph 3. Values were identified as normal, mild depression and severe depression. The first application obtained 40% normality, 50% mild depression and 10% severe depression. In the second application, 60% presented normality, 40% mild depression and no elderly presented severe depression. The results were satisfactory, thus suggesting a positive result about the interventions performed.

### Result of the second application



Source: Self elaboration, 2018.

Graphic 3 - Resultado da segunda aplicação

## DISCUSSION

Through this study, it was possible to identify the profile of the elderly participants regarding gender and age, work, education and quality of life. It provided a little more knowledge about the nutritional and food situation, where nutritional and health conditions deserve more attention, thus avoiding greater predisposition to weight gain, low weight and disease risks. This research investigated the nutritional status of the elderly through BMI and found that 71% of the elderly are underweight and 29% overweight, requiring a balance with food not to aggravate the health and nutrition of the elderly. In this same context we also analyzed the food intake through the food register and it was found that the elderly eat four to five meals a day, which is appropriate, but have a lower caloric intake than necessary, where the lipid below, which contributes to weight loss and bone problems and deserving caution in this age group, the calcium and iron minerals are also below recommended, where dietary adjustments should be made to prevent diseases such as osteopenia, immunosuppressant and worsening of morbid states in general among others. In view of these results, it was concluded that the diet of the elderly needs greater care in relation to the quantity and quality of food, and can be controlled with the appropriate dietary and nutritional aspects, in order to enable the maintenance and health promotion, ensuring the elderly longevity and improving the quality of life. The elderly practiced physical exercises, but according to the international physical activity questionnaire, it was not enough proposed by the world health organization. It was possible to perceive through the accomplishment of the activities the increase of coexistence among the elderly, the exchange of experiences, the self-esteem and how much they adhered to the physical activity practices proposed by this work. Regarding the depression scale, in the first application 6 elderly presented scores indicating depression, 5 suggestive of mild depression and 1 severe depression. In the interval between one application and another, the activities of artherapy, ludotherapy and physical exercises were developed. The scale was reapplied to verify the results of the interventions performed. In the reapplication the number of depressed elderly fell to 4 suggestive of mild depression, 2 males and 2 females, verifying the positive result in the use of the interventions used. Complaints such as loss of family life, loved ones, social life, privacy and inability to perform activities of daily living were reported by most interviewees, possible risk factors, which may be associated with the

suggestive results of depression, presented by the elderly of the elderly. ILPI São Vicente de Paulo.

## Conclusion

The present study expanded the knowledge about the health of the elderly and the reality they experience in an LSIE. Given this result, it was possible to realize the importance of nutritional assessment and proper nutrition for this age group, avoiding problems with weight gain, low weight and disease risks. It is suggested that the use of physical activity is essential for both physical and mental health. Emphasizes the importance and effectiveness of art therapy and play therapy for the treatment and prevention of depression, making it necessary to implement these practices in LSIE, in order to help with psychotropic drugs and psychotherapy in the treatment of depression, as the institutionalized elderly are more vulnerable factors causing depression and other cognitive changes. The continuity of this work at ILPI São Vicente de Paulo is relevant, as it may have positive results in the quality of life of the institutionalized elderly.

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