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Impact of social isolation on the elderly: a review

Impact of social isolation on elderly people: review

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SUMMARY

Isolation is a complex phenomenon that can compromise the quality of life of the elderly.
The effects of this social isolation can be alleviated through group or individual interventions, addressing factors that may contribute to or hinder the nutritional status of older adults. This integrative review aims to analyze the complex relationship between isolation and malnutrition in older adults. We are currently experiencing periods of isolation, especially among older adults, as they are the most vulnerable group to the current COVID-19 pandemic. Nutritionists must adopt a multidisciplinary approach to caring for these patients. Developing a treatment plan and providing proactive care should be a shared responsibility between the nutritionist, their patients, and their families. Elderly patients at risk of malnutrition should be identified and monitored. The conclusion is that the effects of isolation will persist over time, affecting the social, physical, and psychological aspects of the situation, but also correlate some coping strategies with the nutritional needs of older adults.

Keywords: Isolation, elderly, nutritionist, malnutrition.

ABSTRACT

Isolation is a complex phenomenon that can compromise the quality of life of the elderly. The effect of this social isolation can be alleviated through group or individual interventions, observing the factors that can contribute or hinder the nutritional status of the elderly. This is an integrative review with the aim of analyzing the complex relationship between isolation and malnutrition in elderly patients. At the moment we are going through moments of isolation and mainly the elderly, as they are the most vulnerable group to the current COVID-19 pandemic.
The nutritionist must have a multidisciplinary approach in the care of these patients. The development of a treatment plan and the positive provision of care must be a shared responsibility between the nutritionist, his patients and the family members. Elderly patients at risk of malnutrition should be identified and supervised. It is concluded that the effects caused by isolation will extend over time, in a social, physical and psychological way, but also to correlate some coping strategies in view of the elderly's nutritional needs.

Keywords: Isolation, elderly, nutritionist, malnutrition.

1. INTRODUCTION

Data from IBGE (Brazilian Institute of Geography and Statistics) on the growth of elderly population showed that Brazil will become, in 2025, the country with the sixth largest population in this age group with 31.8 million elderly people. With the growing population rate elderly, institutions are, in most cases, a unique option for a better quality of life for these individuals. Aging, despite being a natural process, subjects the organism to several anatomical and functional changes, with repercussions on health and nutritional conditions of the elderly. Many of these changes are progressive, resulting in effective reductions in functional capacity, changes in taste (low sensitivity to primary tastes such as salt and sweet), changes in the body's metabolic processes and modification of body composition. Associated with changes resulting from aging, the use of multiple medications is common, which influences food intake, digestion, absorption and use of various nutrients, which can compromise the state health and nutritional needs of the elderly individual.

Busnello (2007) states that the nutritional status of the elderly is not determined solely by preferences or physiological changes, but also by issues of social integration such as loneliness, social isolation, access to transportation, financial condition and meal suppression. These factors predispose the elderly to a lack of concern for themselves, causing them to feed inadequately in terms of quantity and quality. According to Fidelix (2013) emotional factors also induce malnutrition in the elderly, as isolation and death of loved ones favors the onset of anorexia. Health and quality of life of the elderly are influenced by several physical, psychological, social, cultural and nutritional. Thus, assessing and promoting the health of the elderly means considering variables of different fields of knowledge, in a multidisciplinary approach. This change in behavior food can affect the adequacy of nutrients in the elderly's body and put them at risk of malnutrition. Poverty and isolation are the biggest nutritional risk factors. The present study aims to analyze the complex relationship between isolation and malnutrition in elderly patients.

2 METHODOLOGY

The present study is an integrative review and according to Roman & Friedlander "is a method that aims to synthesize results obtained in research on a delimited theme or issue, in a systematic and orderly manner, with the aim of contributing for the knowledge of this topic or issue" (ROMAN & FRIEDLANDER, 1998, p. 109).

The integrative review provides the feasibility of defining, examining, and qualifying the data obtained from research into individualized studies on physiological changes in the apparatus digestive system in aging and its implications. The methodology used is represented in:

> a) Organize, in a methodical and consistent manner, characteristics of the research work carried out on a well-defined issue; b) raise the resolvability of nursing interventions and the symptomatology associated with nursing diagnoses; and c) prepare a synthesis of existing research for use in professional practice (SMITH & STULLENBARGER apud ROMAN & FRIEDLAN-DER, 1998, p. 110).

Searches were carried out through the abstracts of the main indexed articles PubMed, Scopus, Researchgate, Google Scholars, SciELO and corresponding books, BVS was conducted to collect articles examining the topic, "Impact of social isolation on the elderly" in the years 1984 to 2020. The articles were selected following the established criteria based on the objective of this review. Data were extracted from the articles by members of the group.

3 RESULTS AND DISCUSSION

3.1 Physiological changes in the elderly's digestive system

With aging, physiological fluctuations in pharyngeal abilities and mobility esophageal reflux can occur and cause dysphagia and reflux. In the intestine, several factors contribute to changes in the microbiota, making the elderly more prone to edema, pain and bacterial infection. There is also a drastic increase in the incidence of several pathologies intestinal diseases, such as colon cancer. Food intake decreases due to a

series of complex reasons. Including physiological changes and changes in circumstances psychosocial and pharmacological. This affects appetite. Appetite is controlled primarily by sensors in the gastrointestinal tract, which detect the physical presence of foods and induce the gastrointestinal (GI) tract to produce a variety of hormones (Ghrelin, Peptide YY, CCK, Insulin, Leptin). These are released before, during and after food. Therefore, they control eating behaviors, including the amount consumed. We prioritize what we consume based on the smell and taste of the food; however, the number of olfactory receptors decreases with age, thus decreasing the sense of smell. Bibliographies suggest that about half of people aged 65-80 and about Three-quarters of people over 80 have a proven loss of smell (DOTY) et al., 1984).

The gradual reduction of smell and taste, and therefore of appetite, leads to a decrease of food intake, possibly resulting in weight loss and malnutrition, while that the inability to taste and enjoy food can lead to anxiety. The ability of tasting salt also decreases and can lead to increased consumption of meals rich in salt, which can aggravate health conditions such as hypertension. It is recommended to use herbs or mild spices instead of salt if flavoring is needed (MAUK, KRISTEN, 2010).

Some authors indicate that in the oral cavity there are modifications such as the retraction of the age-related reduction in bone calcium and maxillary and mandibular bones cause erosion slowing of tooth cavities, leading to gum recession and an increased risk of tooth decay root canal, edentulous people or those with inadequately fitted dentures may have difficulty chewing and, therefore, becoming malnourished. As an alternative, they choose highly refined and easy-to-chew foods, therefore, consume less dietary fiber; this will affect bowel function and may cause dysfunctions such as constipation (KOPPOLU et al, 2012).

The bolus of food reaches the posterior wall of the pharynx and the muscles contract around it. around; swallowing occurs and food travels through the upper esophageal sphincter to the esophagus. With age, the muscle contractions that initiate swallowing decrease, increasing pharyngeal transit time. This can result in dysphagia, which

in turn can increase the risk of choking. In general, the motor function of the gastrointestinal tract is relatively well preserved in healthy elderly people, but there are significant changes in oropharyngeal and esophageal motility. In very elderly people, impaired esophageal motility is common; esophageal peristalsis depletes with age and peristalsis may no longer be initiated with each intake. The upper and lower esophageal sphincters lose tension; the lower in particular suffers a reduction in pressure, causing dysphagia, reflux and heartburn (GRASSI, CHRISTIAN, GUTSCHOW, 2011)

The stomach acts as a food reservoir, allowing us to eat in periodic intervals. As you age, you can no longer accommodate as much food, especially because its wall loses elasticity. As a normal part of digestion, this organ secretes juice gastric juice containing hydrochloric acid, pepsin and renin. Although, in general, elderly and young people produce gastric acid at a similar rate. With age, there is a reduction in cells mucus-producing goblets, which results in reduced secretion of protective mucus. Consequently, the stomach lining becomes subject to damage (KNOW and BAYUMI, 2016).

The protective prostaglandin content of mucus also decreases, making elderly people more prone to gastromucosal lesions, ulcers, especially after taking anti-nonsteroidal inflammatory drugs (NSAIDs) commonly taken by the elderly. Gastric emptying decreases with age; this means that food stays in the stomach longer, prolonging satiety and reducing appetite (NIEUWENHUIZEN et al, 2009).

The intestine's main function is to digest and absorb food. It produces a variety of digestive enzymes, aided by the pancreas and liver. The absorption of Nutrient absorption occurs in the jejunum and ileum. The villi increase the area available for absorption. Although an age-related reduction in villus height has been exposed, the impact on nutrient absorption does not appear to be clinically significant (DROZDOWSKI & THOMSON, 2006).

Populations of certain bacteria residing in the small intestine increase as as we age, causing edema, pain and decreased absorption of nutrients such as calcium, folic acid and iron. This can have a negative effect on health. Fujimori (2015) and Merchant (2016) state that Ileal Lymph node clusters that are part of the defense system

immune system of the gut, control intestinal bacterial populations to prevent growth of pathogens. Nevertheless, there is a gradual reduction in the number of Peyer's patches in the small intestine, accompanied by a gradual loss of lymphoid follicles; this can result in an uncontrolled outbreak of microbiota. Microorganisms inhabit the lumen of the colon are prevented from entering the surrounding tissues by a single layer of cells epithelial cells that form an impermeable barrier. This barrier becomes tenuous with age. Now, the barrier function of the mucosal immune system is impaired, the incidence of infections by gastrointestinal pathogens rises. Becoming one of the main causes of morbidity and mortality in elderly people (MABBOTT et al, 2015).

In the previously referenced large intestine, esophageal peristalsis reduces with age, yet research has recently shown that bowel transit time thin does not appear to be affected (FISCHER & FADDA, 2016). Thus, there is a age-related slowing of colonic transit caused by a decline in activity colon propulsive, associated with a reduction in neurotransmitters and neuroreceptors. In addition In addition, peristaltic movements are also affected by age-related atrophy of the mucosa and muscle layers of the colon. The colon walls sag, leading to a inflammation of the inner wall of the intestine (diverticulitis). The literature indicates that aging induces changes in the DNA of intestinal epithelial cells, mainly in the colon; this process (DNA methylation) is believed to play a significant role in development of colorectal cancers (MASORO and AUSTAD, 2010).

3.2 How loneliness affects the immunity and food consumption of the elderly

Loneliness can occur at any time in life, from childhood to “old age”, where in this last age group there is a high prevalence (NETO, 2001). Although the majority of the elderly live in their own homes and independently, many do not have support adequate and available to support them when they need it (CAMARANO, 2010).

Many authors try to define what loneliness is, and according to Hossen (2012) it is something subjective, which ends up making adequate intervention difficult, so it is very important that

family members, health professionals and caregivers should pay attention to signs of loneliness, through verbal and non-verbal communication that can be done by these elderly people, who may be feeling alone even surrounded by many people.

It is natural that physiological and organic changes occur in the aging process. and metabolic, which can affect the intake, absorption and digestion of food, which influences directly on the bioavailability of nutrients, increasing the risk of inadequacy nutrition in the elderly (DE BOER, *et al.,* 2013).

Malnutrition in the elderly is a problem that occurs throughout the world, caused by insufficient food intake and can lead the individual to sarcopenia, which is the loss of muscle mass. This can affect elderly people who live in their own homes, elderly people hospitalized or in long-term care institutions (ROEDIGER, *et al.* 2014).

Other conditions no less important is dehydration caused by low intake of water due to the reduced sensation of thirst. Obesity and excess weight have been growing among the elderly population, which can trigger an acute illness leading to the risk of malnutrition (ROEDIGER, *et al.* 2014).

Driven by these factors and the natural process of cellular aging that imposes irregular changes in cytokine production and secretion, among other functions cellular, the elderly's immune system ends up being one of the systems of the human organism most affected, which predisposes this individual to the risk of developing or worsening diseases chronic conditions, such as diabetes, rheumatological diseases, and high blood pressure. And in patients hospitalized patients increase the risk of infection, pressure ulcers and longer length of stay hospital (TONET & NOBREGA, 2008).

In addition to the natural physiological changes of aging, there are social factors such as social isolation, which can lead the elderly to feelings of sadness, loneliness and depression, which consequently compromises their food intake (ROEDIGER, *et al.* 2014).

Longevity does not mean well-being, because in old age the elderly face many challenges. changes in their family and social role, loss of family, spouses and friends. And when are unable to deal with these transformations, the risk of the occurrence of

isolation, loneliness, depression and even suicide (CARMONA, COUTO & SCORSOLINI-COMIN, 2014).

With urbanization, demographic evolution and changes in the age structure, through the growth of the aging population and the decrease in the birth rate, there is also a change in family patterns, where care for the elderly is becoming increasingly difficult within the family environment, and with that the elderly person who lived most of his life in family, needs to be institutionalized, increasing the risk of developing loneliness (CAMARANO, 2010).

Widowhood is another factor that leads to feelings of loneliness in the elderly, since after leaving of the children at home, the spouses tend to get closer and become more dependent on each other another. As with the death of your partner, especially in long-term marriages duration, the elderly person begins to have to face the pain of loss and their new status as a widower before their family and society (BENINCÁ, COSTELLA & VIVIAN, 2006).

Retirement also occurs at this stage of life, which means that the person who has passed most of his existence working, now he has free time, time that for years it was routinely filled with work, and many times these elderly people are left without knowing how to manage your life with pleasure without a professional occupation, which can lead this elderly person has the feeling of loss of social usefulness, which is a strong trigger for isolation and depression (BRUNS & ABREU, 1997).

In addition to these factors, on December 31, 2019, the first case of coronavirus, which has become a global pandemic, and which mainly affects elderly population, since most deaths from COVID-19 occurred in the elderly. In Brazil, The first case was reported in São Paulo on February 26, 2020, in a 61-year-old man. years old, who was in Italy, and the first death on March 17, 2020 of a 62-year-old man years old, with hypertension and diabetes (HAMMERSSCHIMIDT & SANTANA, 2020).

As it is an easily spread virus, it does not only need physical contact to be transmitted, it can be through coughing and sneezing, contaminated objects and surfaces. In the world throughout, preventive measures were adopted, such as hand hygiene, the use of alcohol 70% gel, social distancing and isolation (Ministry of Health, 2020). What affected

the habits and routines of elderly people who live alone or with their spouses, those who live with their family members, those who care for others (children, adolescents, adults or other elderly people), institutionalized people who are in direct contact with their caregivers, professionals, visitors and other elderly people, where they live in clusters (OLIVEIRA, *et al.,* 2020).

But this is an isolation that should be promoted and encouraged and not seen as a abandonment, so the family and society itself must not only maintain distance and isolation, but to form a support system for these elderly people who are suffering from these changes, with feelings of loneliness and increased fear of death. What they need to do is to demonstrate empathy and willingness, to strengthen their sense of belonging, and thus prevent them from being led to anxiety and depression. Let it be clear that this isolation goes beyond a preventive measure, it is an act of love and care (CARMONA, COUTO & SCORSOLINI-COMIN, 2014).

3.3 Nutritional status of the elderly population

Nutritional status has significant consequences in reference to the process of aging. Aging in Brazil today is increasing and the trend is this range age group is growing more and more as our life expectancy is increasing and with that a greater demand for health care as well as the well-being of this population.

According to the American Public Health Association, nutritional status is defined as the “health condition of an individual influenced by the consumption and use of nutrients and identified by correlating information obtained through physical studies, biochemical, clinical and dietary”. The elderly population has been taking better care of themselves, seeking a greater assistance and the demand for better living conditions is growing every day, the state nutritional status of this population has significant importance in the condition of aging, noted that the voluminous domain of chronic or infectious diseases and the prevention of similar resulting problems depend on nutritional status. And then at this stage of physiological changes occur in life, that is, throughout the elderly person's body and added to years of bad habits, poor diet, sleepless nights, risk factors such as hypertension, diabetes, alcoholism, and smoking can result in the onset of chronic diseases. This

nutrition plays an important role in recognizing risk factors for mortality and progression of various diseases among the elderly. In this circumstance the state nutritional status plays an important role in the quality of life and health of the population. Among everything, notably in this age group of the elderly, malnutrition is shown vigorously related to the growth of functional disability, decreased quality of life, increased in the number of hospitalizations, According to Otero (2002), the most important nutritional disorder observed among them is protein-energy malnutrition (PEM), associated with increased mortality and susceptibility to infections and reduced quality of life. Low weight excessive elderly population is identified as the factor most strongly associated with mortality than being overweight.

In relation to an assessment of the nutritional status of the elderly, we can mention some anthropometric measurements, we then come across the reserves of adipose tissue that stores fat in your fat cells and lean mass, the study of your nutritional status calf circumference and assessment of handgrip strength are the most common indicators vulnerable muscle mass when it comes to the elderly population. Since it is pointed out the changes in lean mass that occur with age in this population, whether due to decrease in regular physical activity or even never having practiced physical activity, Likewise, there are other anthropometric measurements that can be used and are indicated to verify this nutritional assessment, they are: height, weight, arm circumference and the triceps and subscapular skinfolds. These measurements analyze the amount of adipose tissue and muscular.

Among the various tools already mentioned, we cannot forget the mass index. body mass index (BMI), which is one of the most used and despite its limitations that do not predict the distribution of body fat and it is not possible to differentiate lean mass from fat mass. is still widely used because it quickly and basically produces physical variations of individual and thus enabling their classification into nutritional levels. BMI is a method low cost, quick to perform and a non-invasive method, it allows for good correlation with morbidity and mortality indicators.

According to the World Health Organization (WHO), worldwide, the proportion of population aged 60 and over is growing faster than

any age group. Between 1970 and 2025, the elderly population is expected to grow around 694 million, that is, 223%. In 2025, there will be a total of 1.2 billion people with age 60 or older. By 2050 there will be 2 billion, of which 80% will live in countries developed. Arteiro stated, in 1996, that 70% of elderly people change their habits food. The vicious cycle between disease and malnutrition, which is very present frequency in the geriatric population, is associated with poor prognosis and increased costs in health care.

According to the WHO, the elderly are a vulnerable group at risk of developing malnutrition. nutrition. Several factors inherent to aging contribute to poor nutrition and possible nutritional deficiencies.

As we can see in the data cited above by the WHO, the elderly population tends to grow more and more and that is why their nutritional status is so important, the search for a habit of a better life is growing every day, not giving space to a sedentary lifestyle and habits bad old days like: smoking, drinking, buying processed products among other things, health care such as routine exams are more frequent and not only women are looking, men who had some resistance are looking for a quality of life better.

The elderly population goes through several changes, and these changes are linked to their nutritional, metabolic, and immune status, we already know that today the elderly are more active, but also more vulnerable due to their emotional, physical or mental state. And the nutrition is an important aspect when referring to nutritional status or quality of life of this elderly person, amidst the chaos we are experiencing due to COVID 19, since the elderly person is included in the risk group, this concern with this age group is so important and care began to be redoubled, physical exercises were left aside, going to the square to play cards with friends or going to the market had to be stopped they could not work the contact with the family no longer being able to exist and fear began to take over this population that already was considered fragile even before the pandemic.

3.4 What is the role of the nutritionist in improving the nutritional status of elderly people with social isolation?

Even with the aging population, unfortunately there is little perception and valuing this age group. With the COVID-19 pandemic and social isolation, care with the health of the elderly having greater prominence (Ministry of Health, 2020).

With this we can see the nutritional vulnerability of the elderly and how social isolation along with feelings of loneliness bring significant harm directly related to the elderly's diet, which can result in poor nutrition. Where this greater longevity leads us to greater concern regarding nutritional status and development of chronic diseases in these individuals throughout the process aging (PEREIRA; *et al,* 2006).

Nutritional status highlights health conditions related to recommendations dietary and energy needs, because when the individual has a balance between his energy expenditure and the foods consumed, is considered adequate. According to evidence scientific, changes in the nutritional status of the elderly, such as obesity and malnutrition, stimulates an increase in morbidity and mortality (ALAM, *et* al.; 2012).

Through these and a series of other biopsychosocial conditions that occur during the aging process and which consequently interfere with nutritional status of the elderly (FLORENTINO, 2002), nutritional assessment becomes very important, as contributes to a nutritional diagnosis that enables adequate nutritional intervention, therefore it must be done carefully, by a qualified nutritionist who is capable of carrying out this function (BARBOSA, 2002).

Another tool that can be used in this process is the dietary technique, which studies the best methods to preserve food nutrients and optimize presentation of food during its preparation, making it possible, according to Philippi (2000):

- Adapt the way food is prepared to the individual's pathophysiological needs or the population.

• Modify foods through culinary processes in order to facilitate digestion.

• Select the best food preparation methods for optimization and preservation maximum of its nutritional value.

• Prevent the action of external factors that may harm the quality of food and, simultaneously extend its useful life.

• Present food in a way that awakens all the senses, not just the palate.

• Choose the techniques to be used in food preparation, considering costs and available human, material and financial resources.

In this sense, to improve the nutritional status of the elderly, and to put together a plan adequate food according to the recommendations for the age group, with foods energetic, regulatory and constructive, the nutrition professional must understand the particularities related to the natural physiological changes of aging, in addition to analyze other factors such as pharmacological complications linked to the numerous diseases that influence food consumption and nutrient absorption, economic factors and psychosocial (CAMARGOS, 2009).

The nutritionist must also provide guidance on simple measures that can be taken by family members or professional caregivers for the elderly, such as serving meals in a quiet, clean, airy environment with adequate furniture, sit the elderly at the table in company of family or friends, offer smaller, smaller meals times a day, establish meal times, offer attractive, colorful meals and tasty, encourage the use of natural seasonings such as parsley, chives, chives, garlic, onion, cumin, oregano, among others, to avoid excessive use of salt (MARUCCI, *et al.;* 2011).

Acquiring these behaviors will lead to health professionals, family members and caregivers to interventions that will contribute to improving the food consumption of these elderly people, and as a consequence, they will positively help improve the nutritional status of this population (MARTINS, 2014).

FINAL CONSIDERATIONS

Older people often experience social isolation, which in turn can lead to profound negative effects on their health. The results of this review suggest that the impact social isolation along with the aging process can actually increase the risks of develop chronic non-communicable diseases, the incidence of intestinal pathologies, decrease in olfactory and taste receptors, rheumatological diseases, disorders nutritional, in addition to subjective prognoses such as loneliness and depression. This review distinguished the subjective effects of social isolation and the effects that aging causes in this population, and also suggested ways to improve the nutritional status of this population elderly.

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