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ANXIETY IN THE ELDERLY AND ITS RELATION WITH SOCIODEMOGRAPHIC AND CLINICAL ASPECTS

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ABSTRACT

Objective: To identify the occurrence of anxiety in the elderly and to verify the relations between anxiety and clinical and sociodemographic variables. Methods: An exploratory descriptive study with a quantitative approach conducted in the geriatric outpatient clinic in the university hospital located in João Pessoa, Brazil. Data were collected using an instrument with sociodemographic and clinical variables, brief history of mental health and Geriatric Anxiety Inventory, applied to a sample of 80 elderly people. Results: The participants' profile was female (77.5%), pardo (56.25%), Catholic (58.75%), incomplete basic education (47.5%), retired (90%) and living with relatives (58.75%). They presented severe anxiety (8.75%), mild/moderate anxiety (25.00%) and no anxiety (66.25%). Only the gender variable presented statistical significance in relation to the total score of the GAI, showing that women were more anxious with p-value = 0.0104. Conclusion: Most of the elderly presented low total score in the GAI, being classified as without anxiety. However, almost half of the participants used psychotropic drugs. This study identified a profile of elderly individuals more susceptible to the occurrence of anxiety, namely: low schooling, retired, low income and residing with their family members.

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INTRODUCTION

Population aging has been acquiring significant proportions throughout the world. The World Health Organization (WHO) estimates that, between 2015 and 2050, the dimension of elderly people will double from 12% to 22%, which corresponds, in absolute terms, to an increase from 900 million to two billion people above 60 years, being projections on a worldwide level (WHO, 2017). In Brazil, between the years 2005 and 2015, there was an increase from 9.8% to 14.3% of elderly people in the country (IBGE, 2016). These data reflect the technological advances, especially in the field of health and quality of life, which lead to increased life expectancy of people, generating changes in national epidemiological profile; however, this reality has produced major challenges for public health services, which needed to adapt to the demands and specific health needs in the aging process, mainly by the increased prevalence of various diseases and health problems (Oliveira *et al*., 2018). In this sense, the epidemiological profile of diseases among the elderly has also suffered modifications, showing a growth of mental disorders in this population, and among them is anxiety. Anxiety is a situation that accompanies the entire life cycle, not being a concern until it has emotional, somatic or well-being consequences (Wolitzky-Taylor *et al*., 2010). Late-life anxiety is a highly prevalent mental health disorder (Baxter *el al.,* 2013). With growing number of elderly worldwide, anxiety will become a widespread problem in late life, namely, a matter of quality of life, elevating numbers accessing health

care services (Wolitzky-Taylor *et al*., 2010). Prevalence rates of anxiety disorders among older adults are 1.2% –15% in community samples and 1% –28% in clinical samples of older adults (Wolitzky-Taylor *et al*., 2010; Fernandes *et al*., 2015; WHO, 2017). Anxiety can impair the emotional reaction to the successive deficits that the elderly experience and impair memory and cognition; moreover, it can worsen the signs and symptoms related to other syndromes that the elderly person has (El-Gabalawy *et al*., 2013). However, these conditions are still under-identified by health professionals and the elderly themselves, as the stigma that makes people reluctant to seek help persists, even though mental health has a significant impact on physical health and vice versa (WHO, 2017). Given the above, geriatric health professionals need to be alert to the early identification of psychiatric morbidity, using validated instruments suitable for the screening of anxiety in the elderly, in order to know the mental health status of this population, even in the face of the complexity and difficulties related to the presence of other pathologies, polypharmacy and consequent drug interactions, as well as sensory and cognitive deficits associated with the aging process (Edelstein *et al*., 2008; Miranda-Castillo, 2019). In this perspective, and given the magnitude of the reality of mental health in the elderly, in particular about the anxiety, the geriatric outpatient clinic constitutes as an important scenario of interprofessional and interdisciplinary care capable of promoting opportunities for transformation of clinical practice to this clientele in the areas of promotion, prevention and rehabilitation, in addition to deployment of therapeutic health projects guided on co-responsibility of the elderly and family for their health care process, aiming to promote an active, healthy and happy aging. Thus, the objectives of this study are: to identify the occurrence of anxiety in the elderly and to verify the relationship between anxiety and clinical and sociodemographic variables.

MATERIALS AND METHOD

This is a descriptive-exploratory, cross-sectional study, with a quantitative approach, performed in the Geriatric outpatient clinic in a public teaching hospital in João Pessoa, Paraiba, Northeastern Brazil. The population was composed of 530 elderly patients enrolled in the service and the sample size was calculated by means of statistical software R, version 3.5.2 for Windows. The sampling was simple random to estimate the population average of scores of geriatric anxiety, calculating the variance of this score with a confidence level of 95% and a sampling error of 2%, by means of a pilot test with 20 elderly people, obtaining the value of 6.64. The minimum sample size resulted in 40 participants, but the final sample of the study was 80 participants. The elderly were included in the study from the following criteria: individuals of both genders aged from 60 years and enrolled in the Geriatric outpatient clinic. There was exclusion of the elderly diagnosed with dementia syndrome and/or psychiatric diseases with cognitive repercussions. Data were collected from October 2019 to January 2020, with the elderly in the waiting room of the Geriatric outpatient clinic, who were randomly selected and invited to participate in the study.With their acceptance, they were taken to a reserved office and interviewed, guided by an instrument structured into two sections: 1) participants' characterization questionnaire regarding sociodemographic and clinical variables, and brief history of mental health; 2) Geriatric Anxiety Inventory (Pachana *et al*., 2007). The Geriatric Anxiety Inventory (GAI) was developed to evaluate signs of anxiety in the elderly, contains 20 items and can be self-responded. As it is a brief inventory, with dichotomous responses (I agree/disagree), its application is feasible in situations of fatigue, low educational level or mild cognitive impairment. Furthermore, few items assess symptoms that could also result from frequent clinical diseases in the elderly (Pachana *et al*., 2007). Although it has not been developed to specifically diagnose anxiety disorder, it was effective in distinguish individuals with and without anxiety disorder and those with and without Generalized Anxiety Disorder (Pachana *et al*., 2007). Its cutoff note is >10 to consider case, in which 0-10 shows no signs of anxiety, 11-15 mild or moderate anxiety and 16-20 severe anxiety (Barreto, 2019). For the characterization of the sample regarding sociodemographic aspects,the variables used were gender, age, ethnicity, religion, marital status, education, labor activity, income, degree of kinship of the person who resides with the elderly person. The clinical variables addressed the consumption of alcohol and tobacco, degree of dependence, underlying disease, and mental health variables were related to the follow-up by psychiatrist/psychologist, use of psychotropic drug and presence of psychiatric morbidity. Data analysis used a statistical software in order to characterize the sample through descriptive and exploratory analysis. For the quantitative variables, position (mean, median, minimum, maximum) and dispersion (standard deviation) statistics were calculated. For comparisons of medians, the Wilcoxon test for independent samples was used. The assumption of data normality was assessed using the Shapiro-Wilks test. Once the data did not follow a normal distribution, U-Mann-Whitney and Kruskal-Wallis nonparametric tests were used for two and three groups, respectively, for the evaluation of possible differences between groups. The statistical evidence was considered significant in cases in which p-value < 0.05. The present study respected the ethical and legal aspects recommended by the resolution of the National Health Council n. 466/2012, which regulates researches involving human beings in Brazil and was approved by the ethics committee with opinion n. 3.522.101 and CAAE n. 18466919.5.0000.5183.

RESULTS

The analysis of results showed a sociodemographic profile with a predominance of females (77.5%), *pardos* (56.25%), Catholic (58.75%), married (43.75%), widowed (33.75%), incomplete basic education (47.5%), retired (90%), income between 1 and 2 minimum wages (1,045.00 and 2,090.00 R$), (68.75%), living with relatives (58.75%). The mean age was 72.12 ± 7.22 years. The median age was 70 years, indicating that 50% of the sample patients are over 70 years. The minimum and maximum values observed were, respectively, 61 and 90 years (Table 1). The clinical profile of the elderly unveiled ex-smokers (16.25%) and ex-alcoholics (5%), independent regarding activities of daily life (83.75%), with cardiovascular disease (93.75%), followed by metabolic disease (38.75%) and osteoarticular disease (18.75%). In relation to the brief history of mental health, the elderly reported follow-up with psychiatrist (21.25%) and psychologist (17.5%), 17.5% have some type of psychiatric diagnosis, being anxiety (46.67%) and depression (26.67%). Of the 80 patients analyzed, 41.25% use psychotropic drugs. The measurement of the total scores of the GAI showed levels of anxiety in the population of interest of 7.78 (Table 2) and classified the majority of patients without anxiety (66.25%) (Table 3). The relationship between the total score of the GAI and the sociodemographic and clinical variables showed that women had a higher level of anxiety in relation to men, confirmed by the Mann-Whitney U-test with no significant difference in the level of anxiety between genders, considering a significance level of 5% (p-value = 0.0104) (Table 4).

For the other sociodemographic variables, there is no statistical evidence to reject the hypothesis of equality in the level of anxiety among the different categories of variables (p-values > 0.05). Nevertheless, it is possible to identify the profile of patients more susceptible to anxiety. For example, *pardos*patients presented higher total score of the GAI when compared to the other categories, whose mean score was 7.89. Still, the elderly Catholics and Evangelicals had a lower average score for the GAI, 7.45 and 7.48 respectively, in relation to the elderly with other religions (10.60). In relation to marital status, divorcedelderly patients had higher mean score (11.90) than the married (6.49), the same occurred in the elderly with low schooling, without labor activity and with low income, because they showed the highest average values of the total score of the GAI (Table 4). Elderly individuals who live with a family member had a higher average value (8.91) than those who live alone (5.00) and only with the partner (6.81) (Table 4). Figure 1 shows the scatter plot that suggests a negative linear relationship between the variables age and the total score of the GAI, indicating that, the higher the age, the

smaller the total score of anxiety among the elderly, for the sample observed. This reality is confirmed through Pearson's correlation coefficient (-0,237) and the parametric t test with p-value = 0.0345, which suggests that the null hypothesis of correlation between the variables must be rejected, considering a significance level of 5%. Although the tests carried out for the other clinical variables did not demonstrate statistical significance, it is possible to infer about the trend to higher levels of anxiety among the elderly with partial or total dependence in activities of daily living (9.62), with metabolic and gastrointestinal diseases, 8.68 and 8.75, respectively, and lower levels of anxiety for those who indicated being an ex-smoker (7.38) and ex-alcoholic (6.50).

Table 1. Descriptive measures of the age of patients met by the geriatric service, HULW

Variable	n	Mean	Median	Minimum	Maximum	Standard deviation
Age	80	72.12	70	61	90	7.22

Source: Researcher's data, 2020.

Table 2. Descriptive measures of the total score of the geriatric anxiety inventory of patients met by the geriatric service, HULW

Variable	n	Mean	Median	Minimum	Maximum	Standard deviation
Total score	80	7.78	7.5	0	19	5.37

Source: Researcher's data, 2020.

Table 3. Classification of the anxiety level of patients met by the geriatric service, HULW

Classification	n(%)
Without anxiety	53(66.25)
Mild/moderate anxiety	20(25.00)
Severe anxiety	7(8.75)

Source: Researcher's data, 2020.

Table 4. Descriptive measures of the geriatric anxiety inventory in function if the sociodemographic variables of patients met by the geriatric service, HULW

Variable	n	Mean	Median	Standard deviation	p-value
Gender					
Female	62	8.60	9.00	5.29	0.0104
Male	18	4.94	3.00	4.80	
Ethnicity					
White	25	7.60	6.00	5.80	0.9820
Black	9	7.67	8.00	3.94	
Pardo	46	7.89	7.50	5.48	
Religion					
Catholic	47	7.45	6.00	5.64	0.2370
Evangelical	25	7.48	8.00	5.09	
Other	8	10.60	11.00	4.17	
Marital status					
Unmarried	11	8.64	8.00	4.78	0.1400
Married	35	6.49	6.00	5.14	
Divorced	7	11.90	11.00	6.57	
Widow(er)	27	8.04	9.00	5.24	
Schooling					
No education	11	8.73	11.00	5.06	0.6690
Incomplete basic education	38	8.05	9.00	5.17	
Complete basic education	7	5.71	4.00	6.47	
Complete secondary education	17	7.82	7.00	5.71	
Complete higher education	7	6.71	5.00	5.96	
Labor activity					
Yes	8	5.25	4.50	4.13	0.1850
No	72	8.06	8.50	5.45	
Income					
< 1 MW	6	10.50	10.50	3.94	0.0824
1 - 2 MW	55	8.33	9.00	5.36	
3 - 4 MW	15	5.73	5.00	5.3	
> 4 MW	4	3.75	1.50	4.86	
Lives with					
Alone	12	5.00	4.50	4.16	0.0507
Partner	21	6.81	6.00	5.63	
Family	47	8.91	10.00	5.29	

Source: Researcher's data, 2020.

DISCUSSION

The present study identified the occurrence of anxiety in the elderly and found a relationship between anxiety and sociodemographic and clinical variables. In this sense, the participants presented a profile predominantly female, *pardo*, Catholics, married, low schooling, retired, income from one to two minimum wages and living with relatives. The profile identified corroborates the phenomenon of feminization of longevity as a pattern of aging in Brazil and in the world, which has been linked to better self-care behavior, physiological differences between the sexes and widowhood (Almeida, 2015; Oliveira, 2018; Ferreira, 2020).

The other sociodemographic variables were similar to studies of Miranda-Castillo (2019) and Oliveira (2018), except by the self-reported color, because the whites were the majority in the study by Oliveira (2018). Concerning the clinical profile of the study participants, the elderly were independent in activities of daily life, among the basic diseases, there stood out cardiovascular diseases, the majority stated being ex-smoker and/or ex-alcoholics. The brief history of mental health showed that almost half of the interviewees are in therapy with psychotropic drugs, but are not followed-up by psychiatrist and/or psychologist, nor do they have any type of

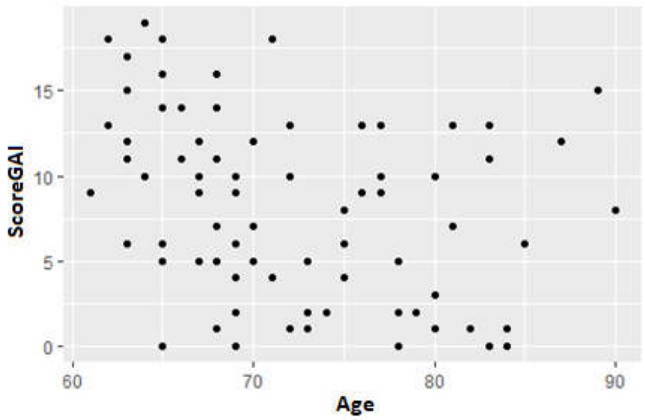

Figure 1. Scatter plot of age and geriatric anxiety inventory score of patients met by the geriatric service, HULW.

psychiatric diagnosis. The prescription of psychotropic drugs and the global prevalence of anxiety (3.8%) and depression (7%) among the elderly constitute important aspects of public health (WHO, 2017). The present study demonstrated that, even without psychiatric care, the elderly reported a high use of these medications, corroborating another study in which the benzodiazepines and antidepressants were the most used (Ferreira, 2020). In contrast, most of the elderly studied showed no signs suggestive of anxiety, thus, the use of psychotropic drugs might be included as a confounding bias as it interferes in the participants' behavior of anxiety.

Other studies also found high percentages of elderly people without anxiety according to the GAI, 76.5% (Oliveira, 2018) and 40% (Rossi, 2016), which converges to the results of the present study. However, there are studies that showed a high frequency of anxiety in this public (Machado *et al*., 2016; WHO, 2017), thus being important to understand the complexity of this situation, the losses, demands and health needs related to anxiety in the elderly in order to maximize the actions of psychosocial care and support to this population. The anxiety has the potential to cause a further deterioration of functionality, aggravation of other neuropsychiatric disorders, increased disease burden, in addition to the worst results in various health treatments for the elderly, such harmful effects have been associated with the adoption of risk behaviors such as excessive alcohol consumption, smoking and the development of depression, which when occurring simultaneously with anxiety, increase the risk of suicide among the elderly (Pachana and Byrne, 2012; Taylor *et al*., 2014; Barreto *et al*., 2015). In relation to the statistical association between the total score of the GAI and sociodemographic data, only the variable gender showed to be significant, pointing out that women presented higher levels of anxiety than men, as verified in studies by Oliveira (2018) and Barreto *et al*. (2019). Nonetheless, given the complexity of anxiety disorders and how it manifests in people's life, it is important an approach that considers all the sociocultural context, focused on individuality and subjectivity of the person being cared for, thus, although the other sociodemographic variables did not show statistical evidence for this association, it was possible to identify a profile of the patients more likely to develop anxiety, once they showed borderline total scores of the GAI.

In this perspective, the self-reported elderly*pardos*, with low schooling, retired, with monthly income between one and two minimum wages, and the divorced had a total score of the GAI close to the cutoff note, drawing attention to a greater probability of the occurrence of anxiety, similar to other studies (Massignam, 2015; Frank and Rodrigues, 2016). The low schooling among the elderly in Brazil is high and, especially in the Northeast region, and has been related to deficits in health maintenance and use of medicines, due to lack of knowledge and trend for self-medication, in addition to the identification of acquired diseases and their consequences (Dutra *et al*., 2016). On the other hand, the high schooling, the high socioeconomic level and residing with the spouse and/or relative are considered protective factors for the occurrence of affective disorders, moreover, they are also perceived as social determinants in health and imply directly on the mental health of individuals, however, they are not always evaluated in studies that seek to identify the occurrence of affective disorders in the elderly (Costa and Nogueira, 2014; Barreto *et al*., 2019). The retirement can cause some concerns for the elderly, because their monthly income often reduces, which is inversely proportional to the progressive financial expenditures that arise from the needs of the aging process,in addition to having a less productive working life, and these financial aspects and awareness of productivity can interfere in the quality of life lived, because they interfere in their economic independence and daily life activities (Alvarenga *et al*., 2009), and, the more independent, the lower the risk of developing anxiety (Camarano and Kanso, 2010). To overcome this reality, it is important to take health actions that promote the transition in the lifestyle of the elderly between active life and future retirement, in order to prepare them and adapt them better to the new context of life, from which they can plan. other activities that fulfill their routine, such as physical and social activities, which proved to be protective for the Mental Health of these elderly people (Georg Henning, 2020).

The family has been considered an important network of social support and protection factor for the elderly and can prevent the occurrence of mental disorders (Oliveira; Neri; Delboux, 2016). However, the present study showed that elderly people who live with their relatives had higher scores in the GAI, proving to be more predisposed to the development of anxiety. This reality leads to reflections on the quality of the relations between the elderly and their relatives. Many seniors become the wage earner, absorbing the problems of relatives and the family becomes a risk factor for the development of anxiety, in which the role of the elderly person relates to his/her usefulness in detriment of affective bonds. In this sense, the characteristics of the network of social support of the elderly, regarding the size, level of proximity and frequency of contacts, can affect their physical, cognitive and mental health (Cornwell and Laumann, 2015; Wu, 2019). In addition, it is important to consider the influence of culture on the characteristics of the network of social support of the elderly. In Canada, it is constituted mainly by partners and friends, while in Latin America, including Brazil, it is constituted mainly by family members, both associated with better physical and emotional health (Bélanger *et al*., 2016; Wu, 2019). Religion and the maturity gained with old age have shown as protective factors for the development of anxiety in the elderly, reality evidenced in this study, in whichCatholics/evangelicals and the older had lower scores in the GAI.Higher levels of spiritual intelligence have been associated with lower levels of depressive symptoms and anxiety and a higher level of psychological well-being in the elderly, suggesting the importance of promoting the spiritual intelligence for these individuals (Pereira, 2016). In addition, Xavier and colleagues (2015)affirm that, surprisingly, the more time lived, the better the quality of life and health shown by the older adults.

Conclusion

The present study envisioned to identify the occurrence of anxiety in the elderly and to check its relationship with clinical and sociodemographic variables through the Geriatric Anxiety Inventory, unveiling that only the variable gender presented statistical significance, indicating that women presented higher levels of anxiety when compared to men. In this sense, this study showed that the elderly with low schooling, retired, with low economic power and those who live with their relatives were more likely to develop anxiety; on the other hand,the older elderly were less anxious, and health professionals are responsible for being attentive to such variables in their clinical practice. Another important point was the high consumption of psychotropic drugs among the elderly without even being under follow-up with psychiatrist and/or psychologist, requiring the promotion of a culture of rational prescription of these drugs, once polypharmacy is a recurrent phenomenon among this population, moreover, this high consumption may have influenced the behavior of anxiety among the elderly who comprised the study sample. Regarding the classification of levels of anxiety for the study sample, it was possible to verify that the majority of the elderly had

total scores of the GAI below the cutoff note to be considered anxious, but with borderline values that suggest a subtle threshold between the values of classification. This information is useful for health professionals who care for the elderly, since it is important to understand which factors can influence the mental health of these individuals, so that they can plan a basic health care for prevention and promotion of the elderly's health, since anxiety can influence other aspects of the general health of older adults. Furthermore, it present study is expected to subsidize reflections on clinical practice in the care with the elderly patient concerning mental health, because not only physical health deserves attention among the elderly, but also the affective/emotional aspects, which increasingly occupy a place in the world scientific interest due to the constant evidence of losses arising out of mental disorders for the general health status of the elderly, mainly for their autonomy and independence. It also aims to contribute to the scientific production, for the academic community and for the teaching, once the provision of such reflections for health professionals in training promotes the construction of professionals more aware and sensitized to the health care with the elderly.

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