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ORIGINAL ARTICLE

ASSESSMENT OF FEAR AND STRESS BY THE ELDERLY IN THE NEW CORONAVIRUS PANDEMIC: A CROSS-SECTIONAL STUDY

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ABSTRACT

Objective: to identify the main fears and level of stress regarding the New coronavirus pandemic in the aged. Method: cross-sectional, analytical study based on a non-probability sample by convenience composed of 25 elderly users of a public square in the municipality of Belém, Pará, Brazil, conducted from January to June 2021. The sociodemographic questionnaire, New coronavirus fear scale, and perceived stress scale were applied. The parametric t-test ($p<0.05$) was used. Results: the average age was 67.6 years, predominantly female (72%). It was evidenced that the elderly presented a moderate level of fear (p0.001) related to the fear of COVID-19 (t=0.26). Moderate level of perceived stress (p0.001) related to irritability caused by the out-of-control situation (t=0.00) prevailed. Conclusion: perceiving fear and stress in the elderly contributes to the development of actions by professionals to promote mental health in times of pandemic.

DESCRIPTORS: COVID-19; Aged; Pandemic; Social Isolation; Fear.

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INTRODUCTION

The pandemic caused by the New Coronavirus (SARS-CoV-2), identified, in China, in late 2019 surpasses several Severe Acute Respiratory Syndromes (SARS), and its consequences are compared to those of the Spanish Influenza[1]. Thus, measures for the diagnosis, screening, monitoring, and containment of COVID-19 have been adopted and targeted at people considered to be in the risk groups, with the elderly being the group with the highest risk of death. Despite all the established measures, there are still no exact epidemiological data on the disease-related psychiatric implications or their impact on public health[1-2].

In the aging process, the "old age phase", among other aspects, corresponds to the beginning of retirement and the decrease in work obligations, which result in more free time, and which are generally used in leisure activities, rest, or personal development. Among such activities are those that involve social interactions, either through physical activities in groups, or through walks, meetings and conversations with friends and family, which contribute both to well-being and mental health[3].

Thus, although death is a known possibility, several feelings arise among them, such as the feeling of fear of dying, and in a pandemic scenario with the expansion of geographical borders by COVID-19, populations were subjected to a fear of the unknown, anguish, and death3. In 2020, with the New coronavirus pandemic, isolation and social distancing were established as preventive practices to contain the dissemination of the new coronavirus, practices that were necessary and accentuated in the cases of the elderly, considered a risk group, restricting social interactions only with people from the home environment and routine outings from home[3-4].

In a pandemic scenario, there are consequences not only to people's physical health, but also to the psychological health of the non-infected population, since the social distancing and isolation implemented by government authorities cause anxiety and fear, besides manifestations of post-traumatic stress symptoms. Other aggravating factors to mental health, such as uncertainty about the control, severity, and unpredictability of the pandemic's duration, financial losses, and failures in the dissemination of information, cause fear in the population and, consequently, increase the level of stress, anxiety, and more intense feelings of panic[5].

Recent studies[5-6] in the general population have demonstrated the already existing negative psychological impacts because of the new coronavirus pandemic, revealing that the main stressors are related to the duration of social withdrawal, fear of contamination, feelings of frustration and boredom, inadequate information about the disease and its care plus the socioeconomic impacts and stigma of the disease.

Thus, the study is justified by the need to know if the social distancing imposed on the population over 60 years old, to reduce the risk of contamination of COVID-19 inevitably also interferes in the well-being of the elderly, besides bringing implications to mental health, which can be significantly high, overloading the emergency services and the health system. In this sense, we sought to identify the main fears and the level of stress regarding the New coronavirus pandemic in the elderly.

METHOD

This is a cross-sectional and analytical study, carried out with 25 elderly people who frequented a public square in the central region of the city of Belém, Pará. The public

square was chosen because it was an open place frequented by the elderly during the COVID-19 pandemic. Data collection occurred from January to June 2021. The research instruments were applied by the researcher with an average duration of 15 to 25 minutes in person, following the WHO recommendations2: correct use of masks, minimum distance of one meter, and frequent hand washing.

The study used a non-probabilistic sample by convenience consisting of inclusion criteria, for which were considered: elderly aged equal to and/or over 60 years of both sexes, frequenters of the public square and with availability of time to participate in the interviews. The exclusion criteria were the elderly who could not answer the research instrument for any reason, such as: availability of time to conduct the interview and/or understanding of the questions of the data collection instruments. Thus, 27 elderly people were contacted, 25 of them answered completely to the research instruments, and two interviewees were excluded for answering incompletely to one of the questionnaires. Thus, the sample was composed of 25 elderly people.

Three instruments were used: first, a sociodemographic questionnaire covering gender, age, marital status, occupation, education, and monthly income, followed by the Covid Fear Scale-19 (CME-19) instrument whose version was adapted and validated for Portuguese and consists of seven Likert-type items where answers range from: "one. Strongly disagree"; "two. Disagree"; to "three. Neither agree nor disagree"; "four. Agree" and "five. Strongly agree", this is a more concise tool to specifically address the fear of COVID-19. To proceed with the evaluation and interpretation, the total sum of the items was obtained, ranging from seven to 35 points, in which higher scores indicate greater fear of COVID-19 [7].

Finally, the Perceived Stress Scale (PSS 14) was applied to evaluate the perception of stress. There are 14 items ranging from zero to four (zero=never; one=almost never; two=sometimes; three=almost always; four=always). The questions with a positive connotation (four, five, six, seven, nine, 10, and 13) have their scores added upside down as follows: zero=four, one=three, two=two, three=one, and four=zero. The other questions are negative and should be added directly. The total of the scale is the sum of the scores of these 14 questions and the scores can range from zero to 56, the elderly are asked about how often (in the last few months), for example, "have you managed to control irritation in your life", the higher the score, the higher the level of perceived stress[8].

The results of the interviews were double entered into an Excel® spreadsheet. Later, the BiosEst 5.0® statistical package was used, and descriptive statistics (frequency and percentage) and inferential analysis were performed; the parametric t-test was applied, which was chosen due to the small sample size. The significance level adopted was 0.05.

The research was approved by the Research Ethics Committee of the Federal University of Pará, under opinion number 4614222.

RESULTS

The sample was composed of 25 elderly individuals, mean age was 67.6 (±5.04) years. The elderly were predominantly female, 18 (72%), married, 12 (48%), retired, 13 (52%), with incomplete elementary school education, 10 (40%) with a monthly income of one minimum wage, 11 (44%) (Table 1).

Table 1. Sociodemographic profile variables of the elderly. Belém, PA, Brazil, 2021

Variables	n	%
Gender		
Female	18	72
Male	7	28
Age		
60 ┤ 64 years old	6	24
65 ┤ 69 years	12	48
≥70 years	7	28
Mean ± standard deviation	67.6 ±5.04 years old	
Marital Status		
Married 12		48
Divorced/Separated 6		24
Widowed		16
Single		8
Stable Union		4
Occupation		
Retired/Beneficiary		52
Unemployed/Without income		36
Self-employed		12
Education		
Incomplete elementary school	10	40
High School complete	7	28
E. elementary complete	5	20
High School incomplete	2	8
Literate	1	4
Monthly income		
One minimum wage	11	44
Less than one wage	8	32
Two to three minimum wages	6	24
Above four minimum wages	0	0

*Calculated based on the current minimum wage (R$ 1,100.00).
Source: Authors (2021)

Table 2 shows that the elderly interviewed presented a moderate level of fear, with a mean total score of the FCV-19 of 20.2 ($p<0.001$) and ranging from a minimum score of 13 to a maximum score of 30 points. Regarding the Perceived Stress Scale (PSS-14), the elderly presented a moderate level with a mean total score of 20.7 ($p<0.001$) and a maximum score of 43 points.

Table 2. Presentation of the means, standard deviation, stratification of the Covid Fear Scale-19 (CME-19) and Perceived Stress Scale (PSS) scores of the elderly. Belem, PA, 2021

Scales	Total Score Average	Standard Deviation (± SD)	Standard Deviation (± SD)	Minimum score (points)	P value
Fear Scale	20.2	±0.17	30	13	<0.001*
Perceived Stress Scale	20.7	±1.20	43	0	<0.001*

*Test t
Source: Authors (2021).

Regarding the stratification of the Covid-19 Fear Scale scores, most of the elderly report "moderate fear" 13 (52%) followed by "little fear" 10 (40%) and, lastly, with the lowest score of "very afraid" two (8%) as presented in Table 3.

Table 3. Stratification of the scores of the Fear Scale (EMC-19) of the elderly. Belém, PA, 2021

Scores	Fear Scale score stratification	n	%
7 ┤ 19	Little fear	10	40
20 ┤ 26	Moderate fear	13	52
≥ 27	Very afraid	02	8

Source: Authors (2021).

Table 4 shows the highest total means of the items of the Fear of Covid-19 Scale: item one - I am very afraid of COVID-19 (3.56; ±1.12); item two - Thinking about covid-19 makes me uncomfortable (3.44, ±0.86); item four - I am very afraid of dying because of COVID-19 (3.16 ±1.10). The result pointed out statistical relevance in item five - I get nervous or anxious when I see news in newspapers and social media about COVID-19 (p0.05) and item six - I can't sleep because I am worried about being infected with COVID-19 (p0.00).

Table 4. items of the Covid-19 Fear Scale applied in the elderly. Belém, PA, Brazil, 2021

Items	Average	Standard Deviation (± SD)	P value*	T-test**
1. I am very afraid of COVID-19	3.56	1.12	0.07	0.26
2. Thinking about COVID-19 makes me uncomfortable	3.44	0.86	0.07	0.22
3. My hands get wet/cold when I think about COVID-19	2.56	1.08	0.08	0.27

4. I am afraid of dying because of COVID-19	3.16	1.10	0.08	0.27
5. I get nervous or anxious when I see news in newspapers and on social media about COVID-19.	2.92	1.11	0.05*	0.08
6. I can't sleep because I'm worried about being infected with COVID-19.	2.20	0.86	0.00*	0.00**
7. My heart races or flutters when I think about being infected with COVID-19.	2.44	1.04	0.06	0.19

**Test t
Source: Authors (2021).

As for the results of the items of the Scale of Perceived Stress, it was possible to observe statistical relevance in the averages of the items: four, five, nine, 11 and 12 (p0.03), seven and 13 (p0.04), and eight (p0.05). The positive connotation responses for items four, five, six, seven, nine, 10 and 13 had averages between (0.76 ±1.23) and (2.12 ±1.20) (Table 5).

Table 5 - Items of the Scale of Perceived Stress. Belém, PA, 2021

Items	Average	Standard Deviation (± SD)	P value*	T-test**
1. Have you been sad because of something that happened unexpectedly?	2.12	1.09	0.46	0.09
2. Have you felt unable to control the important things in your life?	1.24	1.45	0.44	0.13
3. Have you been feeling nervous and "stressed"?	1.72	1.40	0.47	0.07
4. Have you been dealing successfully with life's difficult problems?	1.00	1.32	0.03*	0.00**
5. Do you feel that you are coping well with important changes taking place in your life?	0.80	0.95	0.03*	0.00**
6. Have you felt confident in your ability to solve personal problems?	0.76	1.23	0.24	0.07
7. Do you feel that things are happening according to your will?	2.12	1.20	0.04*	0.08
8. Do you feel that you couldn't handle all the things you have to do?	2.04	1.45	0.05*	0.13
9. Have you been able to control the irritations in your life?	1.20	1.22	0.03*	0.00**
10. Do you feel that things are under your control?	1.36	1.31	0.07	0.22
11. Do you get irritated because things that happen are out of your control?	2.20	1.35	0.03*	0.00**
12. Do you find yourself thinking about the things you should do?	1.80	1.58	0.03*	0.00**
13. Have you been able to control the way you spend your time?	0.92	1.32	0.04*	0.07

14. Have you felt that difficulties have been piling up to the point that you believe you can't overcome them?	1.44	1.22	0.06	0.16

T-test**

Source: Authors (2021).

DISCUSSION

In the current scenario of the New Coronavirus pandemic, it is necessary to know the main fears and the level of stress in the elderly to promote health actions. The results of this study revealed that most of the interviewees are elderly, corroborating the feminization of old age, a result like that found in another national studies[9-10].

Regarding marital status, most were married, retired, with incomplete elementary school education, and monthly income of one minimum wage, confirming the data from the National Household Sample Survey (PNAD)[11]. It is noteworthy that socio-demographic indicators (marital status, occupation, education, and income) influence living conditions, and they must be analyzed when promoting preventive and interventional policies and actions, so that the elderly can not only live longer, but also live with quality[12].

The elderly with less education and income are even more subject to becoming ill due to the need to use public transportation, informal transportation, living in small homes with many people, and living in more populated neighborhoods with a higher number of people infected with the coronavirus, showing the vulnerability of this group. Besides the risk of suffering losses of family members, in the female public there is a greater overload of domestic activities, subjecting these individuals to an increased level of fear and stress[9].

The results of the FCV-19 and PSS-14 scales, respectively, applied to the elderly show a moderate level of fear and stress. It is known that fear is a central emotional reaction to elevated threats, in this case by Covid-19, characterized by causing an unpleasant emotional state that is triggered by threatening stimuli. Studies[12-13] pointed out that fear intensifies in a large part of the population in a pandemic scenario, potentiating the levels of stress and anxiety, even higher in patients diagnosed with Covid-19 or with suspicion of the disease, among them, those who are part of risk groups that, in addition to these emotions, may experience other anxieties such as guilt, melancholy, anger, loneliness, insomnia, among others.

The highest FVC-19 scores were on the items: one. "I am very afraid of COVID-19"; two. "Thinking about COVID-19 makes me uncomfortable"; four. "I am afraid of dying because of COVID-19" (table 3), which show fear, corroborating a national study that points out the feeling of fear in elderly women[14]. Thus, with high levels of fear, the elderly may not think clearly and rationally when reacting to the pandemic of COVID-19.

In this context, the afflictions that relate to the fear that emerges in individuals during a pandemic are characterized as:

A characteristic nature of infectious diseases compared to other conditions is fear. Fear is directly associated with its rate and means of transmission (rapidly and invisibly), as well as its morbidity and mortality. It further leads to other psychosocial challenges, including stigmatization, discrimination, and loss[15:2].

Given this finding, such individuals with very and moderate fear should prioritize mental health care. Studies show that mental disorders such as anxiety and depression are related to fear in severe public health crises such as the one concerning covid-19, besides that people with a lot of fear may have an erroneous perception of the threat, and may have undesirable behaviors, as well as in cases of low fear, in which they do not reflect a greater

capacity for protection in the face of the crisis[7-14].

All countries should aim, in addition to reducing the transmission of COVID-19, to pay attention to individual fears, so that they can serve the population holistically to have a society cured of COVID-19[15]. A study revealed high levels of stress, anxiety, and depression in the Chinese population in the first outbreak without significant reductions in anxiety and depression levels after four weeks. In another survey of elderly Indians, a significant increase in stress, anxiety, and depression levels was noted during the Covid-19[16] pandemic.

Fear is one of the central factors to produce high levels of stress and anxiety during the pandemic, which are further intensified by being infected or infecting loved ones[17]. In this scenario, the population most at risk, the elderly, is isolated from family members, receiving news of the disease's progress, being susceptible to such afflictions, and/or being the target of stigmatization and discrimination for being part of the larger group of people affected by the virus[14].

On the other hand, there is the perception of stress that reflects psychic suffering and the need for active coping, changes in mood and well-being, and the urgency for emotional support. The highest scores on the PSS-14 were item one. "Have you been sad because of something that happened unexpectedly?", which reflect the pandemic state, the stress generated by dealing with the unpredictable, and with the losses of close people and family members; item seven. "Have you been feeling that things are happening according to your will?"; where it demonstrates the stress in dealing with the uncontrollable, and item 11. "Have you been getting angry because things that happen are out of your control?", which reflects the stress in dealing with the overloads of activities, demonstrating the difficulty of adaptation in a pandemic scenario.

Stress is characterized by the body's reaction to being exposed to several demands, where, according to how it reacts, the stress level will increase, leading to psychological and biological risks to the individual's health. The PSS 14 measures the level of perceived stress, that is, it measures the degree to which the elderly perceive situations as stressful, considering the current pandemic period[8]. Stress is directly related to physiological imbalances, with high levels of cortisol, triglycerides, interleukin-6, adrenaline, among others, which help human survival to stressors, generating escape and fight behavior; however, in excess, they can cause diseases such as hypertension and gastritis[18].

The possible causes for the perception of stress may be related to the triggers-stressors due to the experience of a period of uncertainty in face of socioeconomic and emotional issues such as the fake news in the media, the separation from family members, friends, and/or caregivers, the interruption of daily activities, and especially the fear of getting sick and the need for hospitalization and, in sequence, the fear of death[19].

We have the need for specialized attention from nursing and other health areas in the care of the elderly. The risk of morbidity and mortality increases with age, especially in those with chronic diseases. Therefore, gerontological nursing education has undergone great changes after the pandemic due to the emerging and re-emerging needs and for having experienced in practice the urgency of a prepared and robust care[18].

The emotions of fear and stress are strongly linked because fear tends to trigger stress responses that consequently influence the ability of humans to cope with it. In a pandemic scenario, the perception of fear can increase stress levels in healthy individuals and intensify symptoms in those who have some psychiatric disorder, being an essential predictor of health and well-being[7].

In the current moment in which we live, despite the advance of immunization of the population in general and, specifically, of the elderly population, uncertainties about the pandemic period still prevail. Social distancing, including the closing of public spaces, schools, workplaces, leisure areas, gyms, among others, the use of masks and alcohol gel, economic insecurity, and the characteristics and modifications of COVID-19 contribute to

explain the feeling of fear and stress in the elderly, in addition to the difficulty of gradually returning to the routine before the pandemic[6].

The limitation of the study was the difficulty in collecting data during the pandemic period due to mobility restrictions. In addition, the research site was restricted to only one public square, making it impossible to increase the sample. No studies were available in the national literature that allowed us to discuss fear in Brazilian elderly people, and this research was the pioneer in the application of this instrument. It is suggested the implementation of research and further studies on the theme using specific scales to measure fear and stress in the elderly, to prioritize mental health in this population.

CONCLUSION

The New Coronavirus pandemic has affected the world in many ways, leading us to adapt and survive in this scenario. It was evidenced that most of the elderly presented a moderate level of fear and stress. This specific, at-risk population had their psychological well-being directly affected, since the virus and its consequences on the body cause, at a certain level, fear, and tension.

Thus, feelings of fear, limited space and activities, distance from friends and family, and loneliness possibly trigger diseases that affect the mental health of the elderly.

The study contributes to the short term, to better evaluate the levels of fear and stress in the group of higher risk for COVID-19 by health professionals. In addition to subsidizing the development of future research, and of channels that can combat misinformation, stigma, fear and, consequently, reduce the stress of this pandemic period that we are still experiencing.

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