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# QUALITY OF FAMILY RELATIONSHIPS AND THE PREVALENCE OF DEPRESSION IN THE ELDERLY DURING THE COVID-19 PANDEMIC: study of correlations

## CALIDAD DE LAS RELACIONES FAMILIARES Y PREVALENCIA DE LA DEPRESIÓN EN EL ANCIANO DURANTE LA PANDEMIA DEL COVID-19: estudio de correlación

## QUALIDADE DAS RELAÇÕES FAMILIARES E PREVALÊNCIA DE DEPRESSÃO EM IDOSOS DURANTE PANDEMIA DA COVID-19: estudo de correlação

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**ABSTRACT**:
**Objective:** To test the relationship between the quality of family relationships and the prevalence of depressive symptoms in the elderly, in times of the covid-19 pandemic. **Method:** An exploratory-descriptive study, of a quantitative nature with a cross-section, carried out in a Center for Coexistence and Strengthening of Bonds to the Elderly, in a city in the interior of Maranhão, carried out between August and October 2021. Data collection took place with application of: sociodemographic questionnaire, Geriatric Depression Scale and Family APGAR Scale, to, respectively, identify the profile, prevalence of depressive symptoms and the quality of the elderly's family relationships. For correlation between two numerical variables, Pearson's coefficient was used, adopting a reliability index of 95% and p 0.005. The study was approved by the Human Research Ethics Committee under protocol number 4,002,145. **Results:** The sample included 52 elderly people, with a mean age of 71.6 years, with a prevalence of females (75%). The Geriatric Depression Scale identified (37%) elderly people with depressive symptoms. Regarding the family APGAR, (78.8%) of the elderly considered their families to have good functionality. There was a significant negative correlation of moderate degree (r= -0.5686; p<0.0001) between the results obtained from the family APGAR and the Geriatric Depression Scale. **Conclusion:** Elderly people who have a good family functionality are less likely to have depression. Thus, further research is needed to correlate family functionality with the prevalence of depression.
**Keywords**: Seniors; Family Functionality; Geriatric Depression; Covid-19.

**RESUMEN:**
**Objetivo:** Probar la relación entre la calidad de las relaciones familiares y la prevalencia de síntomas depresivos en adultos mayores, en tiempos de la pandemia del covid-19. **Método:** Estudio exploratorio-descriptivo, de naturaleza cuantitativa con corte transversal, realizado en un Centro de Convivencia y Fortalecimiento de Vínculos con los Ancianos, en ciudad del interior de Maranhão, realizado entre agosto y octubre de 2021. La recolección de datos se realizó con la aplicación de: cuestionario sociodemográfico, Escala de Depresión Geriátrica y Escala APGAR Familiar, para, respectivamente, identificar el perfil, la prevalencia de síntomas depresivos y la calidad de las relaciones familiares de los ancianos. Para la correlación entre dos variables numéricas se utilizó el coeficiente de Pearson, adoptando un índice de confiabilidad del 95% y p 0,005. El estudio fue aprobado por el Comité de Ética en Investigación con Seres Humanos bajo el protocolo número 4.002.145. **Resultados:** La muestra estuvo compuesta por 52 ancianos, con una edad media de 71,6 años, con predominio del sexo femenino (75%). La Escala de Depresión Geriátrica identificó (37%) ancianos con síntomas depresivos. En cuanto al APGAR familiar, (78,8%) de los ancianos consideraron que sus familias tienen buena funcionalidad. Hubo una correlación negativa significativa de grado moderado (r= -0,5686; p<0,0001) entre los resultados obtenidos del APGAR familiar y la Escala de Depresión Geriátrica. **Conclusión:** Los adultos mayores que tienen una buena funcionalidad familiar tienen menor probabilidad de presentar depresión. Por lo tanto, se necesita más investigación para correlacionar la funcionalidad familiar con la prevalencia de la depresión.
**Palabras clave:** Mayores; Funcionalidad Familiar; Depresión Geriátrica; Covid-19.

**RESUMO**:
**Objetivo**: Testar a relação entre a qualidade das relações familiares e a prevalência de sintomas depressivos em idosos, em tempos da pandemia do covid-19. **Método**: Estudo exploratório-descritivo, de natureza quantitativa com corte transversal, realizado em um Centro de Convivência e Fortalecimento de Vínculos aos Idosos, de uma cidade do interior do Maranhão, realizado entre agosto a outubro de 2021. A coleta de dados ocorreu com aplicação de: questionário sociodemográfico, Escala de Depressão Geriátrica e Escala de APGAR familiar, para, respectivamente, identificar o perfil, prevalência de sintomas depressivos e a qualidade das relações familiares dos idosos. Para correlação entre duas variáveis numéricas foi utilizado o coeficiente de Pearson, adotando um índice de confiabilidade de 95% e um p 0,005. O estudo aprovado por Comitê de Ética em Pesquisa com Seres Humanos sob parecer nº 4.002.145. **Resultados:** A amostra contou com 52 idosos, com idade média de 71,6 anos, com prevalência do sexo feminino (75%). A Escala de Depressão Geriátrica identificou (37%) idosos com sintomas depressivos. Em relação ao APGAR familiar, (78.8%) dos idosos consideraram suas famílias com boa funcionalidade. Houve correlação significativa negativa de grau moderado (r= -0,5686; p<0,0001), entre os resultados obtidos do APGAR familiar e da Escala de Depressão Geriátrica. **Conclusão**: Idosos que possuem uma boa funcionalidade familiar, têm menos chances de ter depressão. Assim, faz-se necessária novas pesquisas que correlacionem a funcionalidade familiar com a prevalência da depressão.
**Palavras-chave:** Idoso; Funcionalidade Familiar; Depressão Geriátrica; Covid-19.

## INTRODUÇÃO

In December 2019, cases of pneumonia emerged in Wuhan, Hubei, China. After the respiratory system of infected people was analyzed, a new coronavirus was identified, which was named Severe Acute Respiratory Syndrome Coronavirus-2 (Sars-Cov2)[1].

The first person who died from covid-19 in Brazil was in March 2020, an elderly man of 62 years who had comorbidities, such as diabetes and hypertension. Due to the large number of infections, the Ministry of Health found and declared that there was a community transmission of covid-19 throughout Brazil and decreed distancing and social isolation for the entire population, with more restrictive measures for the elderly[2].

Most deaths due to covid-19 are associated with age, occurring more in the elderly, especially those with chronic diseases, being considered a risk group[3]. Brazil has more than 25 million elderly, that is, it represents about 13% of the country's population[4]. It is estimated that by 2050 this number may reach 58.4 million, corresponding to approximately 26.7% of the Brazilian population[5].

Aging can be understood as a multidimensional process that involves a series of factors, both biological and psychological, social and cultural[6]. Not all people reach old age in the same state, some are more vigorous, more autonomous and more developed than others, who cannot maintain their dynamism. Therefore, some elderly people are more susceptible than others to various pathological conditions[7].

In times of epidemics, the number of people with affected mental health is greater than the number of people affected by the virus infection[8]. The covid-19 pandemic has crossed the entire social fabric, sparing practically no area of collective or individual life, with repercussions in the sphere of mental health[9]. The absence of social interaction is also a health risk factor, which suggests that the deterioration of the health situation can also be caused by the reduction of the quantity or quality of social relations[10].

Social isolation or loss of social relationships trigger consequences such as cognitive decline, affected mood and sensitivity, as well as excess cortisol that worsens immune function, sleep interruption and leads to increased body weight[11]. Studies show that people who adhere to social isolation have depression, stress, bad mood, irritability and insomnia, and that in this phase of epidemic these diseases worsen[12].

Depression is the most common among mental changes and can be characterized as bad mood, frequent sadness, lack of interest, apathy, sleep disorders and disorders[13-14].

Under the constant threat of imminent contamination, families isolated themselves in small nuclei to protect their members[15]. In times of the covid-19 pandemic, physical withdrawal

reflects an act of love, affection and consideration, in addition to being a protection strategy[16].

Social distancing should not be seen as abandonment, and it is important that the elderly and their family seek strategies during the pandemic, because even if the elderly person does not depend on family members in the activities of daily life, the comfort established by the presence of close people leads to biopsychosocial well-being[17].

> Art. 3rd It is the obligation of the family, the community, society and the public power to assure the elderly, with absolute priority, the realization of the right to life, health, food, education, culture, sport, leisure, work, citizenship, freedom, dignity, respect and family and community life[18].

> Art. 229. Parents have a duty to assist, raise and educate their minor children, and older children have a duty to help and support their parents in old age[19].

Given the above, this study aims to test the relationship between the quality of family relationships and the prevalence of depressive symptoms in the elderly during the covid-19 pandemic.

**METHOD**

This is an exploratory-descriptive study of quantitative nature with cross-sectional. The research was conducted in the city of Imperatriz, in the Center for Coexistence and Strengthening of Bonds for the Elderly (*Casa do Idoso*), which is a social protection service of the Secretariat of Social Development (SEDES).

The place was chosen because it is the main public institution designed to welcome the elderly of the community to perform daily activities, such as: medical consultations, physiotherapeutic care, physical activities, dances among others.

According to the records of the center of coexistence, in 2021, 1,200 elderly were registered, but in the three months prior to data collection (May, June and July) only 72 elderly attended the services offered. It is believed that the reduction in the number of elderly frequenters was attributed to the need for prior social isolation, fear of contagion by covid-19 and the loss of the link with the institution, since it had its in person activities paralyzed in the year 2020.

The sample size was fixed according to a confidence level of 90%, for a sampling error of 5%. The sample consisted of 52 elderly (60 years or older), of both sexes, registered and frequenters of the center of coexistence during the months of data collection, which occurred between August and October 2021.

Initially, the elderly were invited to participate in the research voluntarily, receiving explanations related to the objectives of the study. Given the consent to participate, expressed through the signature of the Informed Consent Form (ICF), the data collection was initiated according to the availability of the elderly.

As inclusion criterion was established: age equal or superior to 60 years and cognitive ability to respond to the application of the form. The exclusion criteria were: auditory deficit, difficulties of verbal expression observed during the application and incomplete responses to the collection instruments.

For data collection, a sociodemographic and health information questionnaire was used, produced by the authors of this study, describing information such as age, sex, skin color, marital status, schooling, monthly income, with whom the elderly live, the number of people and had stopped receiving visits during the covid-19 pandemic. It also investigated self-reported physical health conditions such as chronic diseases, medications in use and physical activity.

The prevalence of depressive symptoms in the elderly was assessed by the Geriatric Depression Scale (GDS)[20]. The GDS is an instrument of easy understanding and can even be applied or applied by an interviewer, in this research was used the reduced version, composed of 15 questions (with yes/no answers)[21].

The quality of family relationships was assessed through the Family APGAR. This is a validated assessment instrument in Brazil, which is intended to assess subjective satisfaction with the care received from the family member through 5 (five) items that are: Adaptation, Companionship, Development, Affectivity and Problem-Solving Capacity, According to their results, families are classified as functional and moderately/severely dysfunctional[22]. The score of 0 to 4 indicates high family dysfunction, 5 to 6 indicates moderate family dysfunction and 7 to 10 indicates good family functionality. The application of the collection instruments had an average duration of 20 minutes.

The data were organized and tabulated in the Excel 2010 software, and analyzed using the statistical program BioEstat 5.0. Descriptive statistics were used, and for correlation between two numerical variables was used the Pearson coefficient, adopting a reliability index of 95% and a p 0.005.

The study was approved by the Human Research Ethics Committee of the Center for Higher Studies of Caxias of the State University of Maranhão-CESC/UEMA, registered under CAAE n. 30395720.0.0000.5554, and opinion n. 4.002.145. Therefore, the research met all the ethical and scientific requirements in force in Resolution 466/2012 and 510/2016, of the National Health Council that contains the guidelines and regulatory standards for research involving human beings.

## RESULTS AND DISCUSSION

For better understanding of the results, these were ordered in 5 stages. The first one describes the analysis of the sociodemographic profile of the elderly, as well as information about

the family dynamics during the covid-19 pandemic period. The second report on self-reported morbidities, medical history and physical activities. The third discusses the prevalence of depression in the elderly. The fourth stage describes the quality of the family relationship with the elderly (family APGAR) and the fifth and final stage correlates the prevalence of geriatric depression with family functionality.

## Sociodemographic profile and family dynamics during the COVID-19 pandemic

The sample included 52 elderly, frequenters of the Center for Coexistence and Strengthening of Bonds of the city of Imperatriz - MA. Where 75% were female, brown (48%), widowed (52%), with incomplete elementary school (44%) and mean age of 71.6 years (Table 1).

The female sex stood out in relation to the male sex in this study. Other studies also showed a higher prevalence of females who participate in centers of coexistence and that this is, for the most part, due to the prevalence of widowhood, women have a longer life expectancy than men, because they have a greater resistance to seek help, because they do not want to be exposed to the care of others[23-25].

This narrative about the prevalence of the female sex corroborates research, where women are more concerned with self-care and seek care services that improve their quality of life[26-28].

Regarding marital status, 27 (52%) were widowed, representing the highest percentage, of which 23 (85%) were female and 4 (15%) were male. With regard to race, most (48%) self-reported as brown.

Making a comparison with the marital status of the elderly who have depressive symptoms, most are widowers, standing out the female sex. Regarding the high demand of widowed women for centers of coexistence, it can be explained that this is due to many choosing not to want to marry again, while widowed men tend to want a new companion, so they find in centers of coexistence a support, to supply loneliness, and make new friends with problems similar to yours[29].

Regarding schooling, it is clear in this study that most of the elderly had low education (44%). During the application of the form, many elderly people portrayed how their youth was, explaining that they did not have great opportunities for study. This low level of education is a consequence of a past where the majority of the elderly lived at a time when there was no appreciation of teaching[26].

**Table 1** – Distribution of the sociodemographic profile and information on elderly relationships according to the prevalence of depressive symptoms during the COVID-19 pandemic. Imperatriz-MA, 2022.

| Sociodemographic profile and family dynamics | Symptoms of depression | | | | | |
|---|---|---|---|---|---|---|
| | Yes (n=19) | | None (n=33) | | Total (n=52) | |
| | Freq. | % | Freq. | % | Freq. | % |
| Age (mean) | 73.11 | - | 70.67 | - | 71.56 | - |
| Gender | | | | | | |
| Female | 15 | 79% | 24 | 73% | 39 | 75% |
| Male | 4 | 21% | 9 | 27% | 13 | 25% |
| Education | | | | | | |
| Illiterate | 0 | 0% | 3 | 10% | 3 | 6% |
| Complete elementary school | 4 | 21% | 6 | 18% | 9 | 17% |
| Incomplete elementary school | 10 | 52% | 12 | 36% | 23 | 44% |
| Complete high school | 2 | 11% | 7 | 21% | 9 | 17% |
| Incomplete high school | 2 | 11% | 1 | 3% | 3 | 6% |
| Complete higher education | 1 | 5% | 4 | 12% | 5 | 10% |
| Incomplete higher education | 0 | 0% | 0 | 0% | 0 | 0% |
| Marital status | | | | | | |
| Single | 2 | 11% | 4 | 12% | 6 | 12% |
| Married | 3 | 16% | 9 | 27% | 12 | 23% |
| Divorced | 2 | 11% | 5 | 15% | 7 | 13% |
| Widowed | 12 | 63% | 15 | 45% | 27 | 52% |
| Race | | | | | | |
| White | 10 | 53% | 10 | 30% | 20 | 38% |
| Brown | 8 | 42% | 17 | 52% | 25 | 48% |
| Black | 1 | 5% | 6 | 18% | 7 | 13% |
| Retiree | | | | | | |
| Yes | 19 | 100% | 31 | 94% | 50 | 96% |
| No | 0 | 0% | 2 | 6% | 2 | 4% |
| Monthly income | | | | | | |
| None | 0 | 0% | 1 | 3% | 1 | 2% |
| One minimum wage | 17 | 89% | 27 | 82% | 44 | 85% |
| Two minimum wages | 2 | 11% | 5 | 15% | 7 | 13% |
| Three to five minimum wage | 0 | 0% | 0 | 0% | 0 | 0% |
| Over six minimum wages | 0 | 0% | 0 | 0% | 0 | 0% |
| The elderly person lives with | | | | | | |
| With partner | 3 | 16% | 10 | 30% | 12 | 12% |
| With relative | 12 | 63% | 15 | 46% | 28 | 63% |
| Acquaintance | 0 | 0% | 0 | 0% | 0 | 0% |
| Alone | 4 | 21% | 8 | 24% | 12 | 25% |
| Others | 0 | 0% | 0 | 0% | 0 | 0% |
| How many people live with the elderly person | | | | | | |
| None | 4 | 21% | 8 | 24% | 12 | 25% |
| Only one | 7 | 37% | 10 | 30% | 17 | 31% |
| Two or more | 8 | 42% | 15 | 46% | 23 | 44% |
| No visit during the pandemic? | | | | | | |
| Yes | 13 | 68% | 18 | 55% | 31 | 60% |
| No | 6 | 32% | 15 | 45% | 21 | 40% |

Source: The authors

There was a predominance of retired elderly (96%), with monthly income equivalent to one minimum wage (85%). Most of the elderly, 33 (63%) lived with a family member and 13 (25%) lived alone. Most of the elderly (44%) lived with 2 people or more.

In this study, retirement is the main source of income for the elderly and, as shown in Table 1, most older adults received a minimum wage, which is similar to other studies[27]. Therefore, it was noticed during the study that retirement is considered by the elderly the peak of life, that is, stop working, which can lead the elderly to want to look for ways to supply their time in centers of coexistence.

In relation to family dynamics, the majority of the elderly (63%) lived with their relatives, being about 2 people or more, a fact that can be identified in research, where they have the idea that these relatives live with the elderly to support them, or for not being able to leave home[13]. It was also noted in this study that the prevalent kinship that lived with the elderly were grandchildren and children.

Concerning the elderly who lived alone, only 21% had depressive symptoms, which contradicts research that states that single elderly individuals living alone had high scores of depressive symptoms[30].

The elderly were the highlights of the Covid-19 pandemic, as they are part of the population at risk, due to this, this group entered into the actions of social isolation strategies[16]. When asked if they had stopped receiving visits from relatives or friends during the pandemic, most (60%) answered yes. Many elderly people also reported that they stopped leaving home, for fear of being contaminated by Covid-19. Therefore, social isolation has an impact on the life of the elderly, restricting their mobility and social interaction with family members who do not have coexistence and with other people and places that they relate to and attend, For many elderly people it is outside the home that establish social relations and affective bonds[31]. With isolation, the elderly population that previously practiced outdoor activities, starts to leave their homes less and less, still because they want to prioritize their health and also for fear of the unknown[32]. This fact can also be observed in this research, because before the pandemic the number of visitors to the center of coexistence was much higher and today this number is reduced due to many elderly people still have this fear of physical contact.

**Self-reported morbidities, medical history, and physical activity**

According to Table 2, which addresses

aspects related to the health of the elderly, the most prevalent self-reported morbidities were Systemic Arterial Hypertension (SAH) cited by 31 elderly (60%), and Diabetes, cited by 12 elderly (23%). About 11 elderly reported having more than 1 comorbidity and 5 elderly reported having about 3 comorbidities.

The most used drugs were antihypertensive 27 (52%) and antidiabetic 6 (12%), and only 12 (23%) elderly reported not using any medication. Regarding physical activities, the majority (77%) of the elderly practiced and (23%) did not practice any. The most practiced modality was water aerobics (46%), followed by stretching, (38%) most practiced physical activities 3 times a week.

**Table 2** – Distribution of elderly participants in the study regarding health variables. Imperatriz, MA. 2022 (n=52)

| Health-related aspect | Symptoms of depression | | | | | |
|---|---|---|---|---|---|---|
| | Yes (n=19) | | None (n=33) | | Total (n=52) | |
| | Freq. | % | Freq. | % | Freq. | % |
| **Self-reported morbidities** | | | | | | |
| Diabetes | 5 | 26% | 8 | 24% | 12 | 23% |
| Hypertension | 13 | 68% | 18 | 55% | 31 | 60% |
| Hypercholesterolemia | 7 | 37% | 4 | 12% | 11 | 21% |
| Anxiety/depression | 2 | 11% | 1 | 3% | 3 | 6% |
| Heart problems | 0 | 0% | 2 | 6% | 2 | 4% |
| None | 1 | 5% | 11 | 33% | 12 | 23% |
| **Drugs in use** | | | | | | |
| Antihypertensive | 11 | 58% | 16 | 48% | 27 | 52% |
| Antidiabetic | 0 | 0% | 5 | 15% | 6 | 12% |
| Statins | 1 | 5% | 0 | 0% | 1 | 2% |
| Antiarrhythmics | 1 | 5% | 0 | 0% | 1 | 2% |
| Antidepressants | 1 | 5% | 0 | 0% | 1 | 2% |
| None | 2 | 11% | 9 | 27% | 12 | 23% |
| Unable to inform | 4 | 21% | 4 | 12% | 8 | 15% |
| **Physical activity?** | | | | | | |
| Yes | 15 | 79% | 25 | 76% | 40 | 77% |
| No | 4 | 21% | 8 | 24% | 12 | 23% |
| **If positive. Which one(s)?** | | | | | | |
| Water aerobics | 11 | 58% | 12 | 36% | 24 | 46% |
| Fitness | 3 | 16% | 9 | 27% | 13 | 25% |
| Walk | 3 | 16% | 4 | 12% | 5 | 10% |
| Cycling | 0 | 0% | 1 | 3% | 1 | 2% |
| Dance | 0 | 0% | 1 | 3% | 1 | 2% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aerobics | 1 | 5% | 2 | 6% | 3 | 6% |
| Academy | 0 | 0% | 1 | 3% | 1 | 2% |
| **How often?** | | | | | | |
| Once a week | 0 | 0% | 0 | 0% | 0 | 0% |
| Twice a week | 5 | 26% | 8 | 24% | 14 | 27% |
| Three times a week | 8 | 42% | 12 | 36% | 20 | 38% |
| Four times a week | 2 | 11% | 4 | 12% | 6 | 12% |

Source: The authors

Systemic Arterial Hypertension (SAH) and Diabetes Melitus (DM) are frequent morbidities in the elderly and in this study there was a great predominance of them, also resembling other studies[26,29,33].

Regarding medication, it is clear in this research that only 3 people consider themselves anxious/ depressed and that there is a prevalence of 19 elderly people with depressive symptoms assessed through the Geriatric Depression Scale (GDS) of these elderly who consider themselves anxious/ depressed only one makes use of some medicine. Which is worrying, given that such symptoms can go unnoticed by family members.

In relation to physical activities, the same when practiced by the elderly, reduces depression, in addition to bringing psychological well-being to it, resulting from the relationships and affectivity that are established during practice[34]. Water aerobics is the most practiced among the other physical activities described by the elderly during the application of the form. In a study on the importance of water aerobics in the mental and physical health of the elderly, it is concluded that water aerobics has beneficial effects for the psychosocial health of the elderly, since it is an activity that generates relationships, since most of the time it is practiced in groups[35]. This perception is also consistent with other literatures[36].

**The prevalence of depressive symptoms according to the Geriatric Depression Scale (GDS)**

As shown in Table 1, 19 elderly people who responded to the Geriatric Depression Scale (GDS), that is, 37% (19/52) had depressive symptoms, reaching more than five points in the score used. To determine the symptoms of depression in the elderly, through the 15 questions of the Geriatric Depression Scale, a cut-off score > 5 was used, that is, a high score, presented through the application of the questionnaire, reveals that this elderly person has symptoms of depression[20].

Of these elderly people with symptoms

of depression, still according to Table 1, (79%) were female, and 21% were male, 12 (63%) had low education, 12 (63%) were widowed and only 3 (16%) were married and 8 (42%) lived with 2 people or more. It is noticed that there was a higher prevalence of women with depressive symptoms in relation to the male sex, which contradicts a research, where there was a higher prevalence of depressive symptoms in the male sex of elderly frequenters of centers of coexistence[37]. Regardless of country or culture, the prevalence of depression in females is twice as high as in men[38]. This is often because men deny their feelings and self-care.

## Quality of the family relationship with the elderly (APGAR)

The analysis of family functionality of the 52 elderly participants in the study identified only 11 (21.2%) families with family dysfunction (Table 3), while the majority 41 (78.8%) had good functionality.

**Table 3 -** Distribution of family functionality of elderly people who attend the Center for Coexistence and Strengthening of Bonds – Imperatriz, MA, 2022

| Family Functionality | N | % |
|---|---|---|
| Good functionality | 41 | 78.8 |
| Moderate/high dysfunction | 11 | 21.2 |
| **Total** | **52** | **100** |

Source: The authors

In this study, the majority of the elderly consider their families to have good functionality. In studies using the family APGAR scale with the elderly there was also this predominance[39-41]. The form of family interaction with each other and with others reflects the characteristic of what can be considered functional or dysfunctional families, that is, any change in one of the family members will have an impact on another member, since nothing happens in isolation[39].

Families with good functionality are prepared to resolve conflicts and deal with crisis situations[40-41].

## Correlation of the prevalence of geriatric depression and family functionality

Table 4 reflects on the correlation of geriatric depression and family functionality. It was observed that there was a significant negative correlation of moderate degree (r = -

0.5686; p <0.0001), between the results obtained from family APGAR and the Geriatric Depression Scale. This means that older people with well-functioning families have fewer depressive symptoms.

**Table 4 -** Correlation of family functionality, depressive symptoms of elderly people who attend the Center for Coexistence and Strengthening of Bonds – Imperatriz, MA, 2022

| Functionality | Elderly (n=52) | | | | Pearson coefficient (p<0,0001) |
|---|---|---|---|---|---|
| | With depressive symptoms | | Without depressive symptoms | | |
| | Freq. | % | Freq. | % | |
| Good functionality | 9 | 17 | 16 | 31 | |
| | 2 | 4 | 14 | 27 | r= -0.5686 |
| Moderate/high dysfunction | | | | | |
| | 4 | 8 | 2 | 4 | |
| | 4 | 8 | 1 | 2 | |

Source: The authors

It is noteworthy that among the elderly who do not have depressive symptoms most (58%) consider their families with good functionality. In a study conducted in this same perspective there was a prevalence of 72.6% of elderly who considered their families functional and 23.8% considered the functionality of moderate to severe. Among the functional families, 58.6% of the elderly did not have symptoms of depression resembling the results of this study[41].

This study can also be correlated with other research where the authors considered that a family with good functionality generates a better quality of life for the elderly[39]. The family represents the central unit for health care and plays a very important role in care, since it is responsible for its members[41]. The healthier the family relationships, the more the elderly will feel happy and socially inserted, the elderly at their best, need to live quietly and receive full attention and affection from their[42].

Taking into account the depressive symptoms of the elderly who have moderate/high family dysfunction, a family that has an elderly person with depression should adapt and organize to face behaviors of this elderly person[41]. It is known that depression can be considered as a risk factor to trigger other health problems[43]. Problems such as lack of interest in life, low self-esteem and even suicidal thoughts, among others[44-45].

During the Covid-19 pandemic, the elderly who adhered to social isolation, reported during the application of the form, who lost links with family members, especially those elderly who lived alone, and reported that they felt alone, because before they went out to shop and even to go to the lottery.

In studies carried out, the authors revealed that good social support for the elderly, during social isolation, would lead to less probability of these having depressive symptoms and that the isolation of family members and friends aroused helplessness and loneliness[46-47]. Through a survey conducted in 2020, it was revealed that about 300 elderly people committed suicide in India, for fear of being infected with covid-19, such elderly people were suffering from mental disorders. It is evident that the elderly are vulnerable to extreme attitudes due to lack of family and social support[48].

Currently, we still live in the scenario of the covid-19 pandemic, daily deaths are recorded by contamination, many Brazilian states have already made social contact and even preferential use of masks. However, it is evident that the elderly still fear infection, this is notorious in the continuous use of masks, in the concern to embrace and be embraced. This awakens a factor, emotional sequelae caused by covid-19 and that need to be treated.

## CONCLUSION

The present study disseminated about the correlation of family functionality and the prevalence of depression in the elderly during the covid-19 pandemic. It is understood that, with isolation and social distancing, many elderly people had their family ties affected, leaving them susceptible to depression.

Based on the results obtained by the sociodemographic questionnaire, a prevalence of women with depressive symptoms (21%), mean age of 71.56 years, widowers, low education and most (77%) practiced some type of physical activity was identified. The prevalence of depressive symptoms, assessed by GDS was 37% of the elderly and, of these, 15% were part of families with some degree of dysfunctionality, assessed by family APGAR. These data are significant, considering that even some of these elderly living with a family member, present dissatisfaction with life.

Most of the elderly participated in group activities, which may justify the low prevalence of depressive symptoms in this study, because often collective activities help to supply the absence of family affection.

This study concludes that families with good functionality and that in a certain way support more the elderly leave them less susceptible to having depressive symptoms. Therefore, it is necessary to search for strategies by the entire multidisciplinary team

of the Family Health Strategy (FHS), which assess the relationship of the elderly with their family, especially post-pandemic, because it is understood that the elderly will need support and many have lost contact with their families, and some have gone through the mourning of the pandemic. Moreover, strategies aimed at helping dysfunctional families are necessary, so that they know how to deal with the elderly. It is also worth mentioning the importance of new research that correlates depression with family functionality, thus aiming at the prevention of geriatric depression.

**REFERENCES**

1. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet [Internet]. 2020 feb 15 [cited 2021 mar 27];395(10223):497-506. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7159299/ doi: 10.1016/S0140-6736(20)30183-5.

2. Ministério da Saúde (BR). Portaria nº 454, de 20 de março de 2020. Declara, em todo o território nacional, o estado de transmissão comunitária do coronavírus (COVID-19) [Internet]. Brasília: Diário Oficial da União - Seção 1; 55-F:1. 2020 mar 20 [citado 2021 mar 27]. Disponível em: https://www.in.gov.br/en/web/dou/-/portaria-n-454-de-20-de-marco-de-2020-249091587.

3. Lloyd-Sherlock P, Ebrahim S, Geffen L, McKee M. Bearing the brunt of COVID-19: older people in low and middle income countries. BMJ [Internet]. 2020 mar 13[cited 2021 mar 27]; 368:m1052. Available from: https://www.bmj.com/content/bmj/368/bmj.m1052.full.pdf.

4. Instituto Brasileiro de Geografia e Estatística. Censo 2019 [Internet]. Brasília: IBGE; 2019 [citado 2021 Jun 21]. Disponível em: https://agenciade-noticias.ibge.gov.br/media/com_mediaibge/arquivos/d4581e6bc87ad8768073f974c0a1102b.pdf.

5. Silva ILC, Lima GS, Storti LB, Aniceto P, Formighieri PF, Marques S. Sintomas neuropsiquiátricos de idosos com demência: repercussões para o cuidador familiar. Texto Contexto Enferm [Internet]. 2018 Aug [citado 2018 Sep 12]; 27(3):e3530017. Disponível em: https://www.scielo.br/j/tce/a/8MR9MGqdxzHhrY9Jfw9n9Pr/?lang=pt&format=pdf doi: 10.1590/0104-07072018003530017.

6. Brito TDQ, Oliveira AR, Eulálio MC. Deficiência física e envelhecimento: estudo das representações sociais de idosos sob reabilitação fisioterápica. Avances en Psicología Latinoamericana [Internet]. 2015 [citado 2016 Jul 2]; 33(1):121-33. Disponível em: http://www.scielo.org.co/pdf/apl/v33n1/v33n1a09.pdf. doi: http://dx.doi.org/10.12804/apl33.01.2015.09

7. Soares MRP, Soares TP, Fernandes FG, Istoe RSC. A depressão no processo de senescência cognitiva e a fragilidade do suporte familiar. Interdisciplinary Scientific Journal. 2019;6(5):1-11.

8. Ornell F, Schuch JB, Sordi AO, Kessler FHP. ''Pandemic fear'' and COVID-19: mental health burden and Strategies. Braz J Psychiatry [Internet]. 2020 [cited 2021 mar 27]; 42(3):232-5. Available from: https://www.scielo.br/j/rbp/a/WGD9CnJ95C777tcjnkHq4Px/?lang=en. doi: https://doi.org/10.1590/1516-4446-2020-0008

9. Lima RC. Distanciamento e isolamento sociais pela Covid19 no Brasil: impactos na saúde mental. Physis: Rev Saúde Coletiva

[Internet]. 2020 [citado 2021 mar 27]; 30(2):e300214. Disponível em: https://www.scielo.br/j/physis/a/nyq3wrt8qpWFsSNpbgYXLWG/?lang=pt&format=pdf.

10. David CS, Cerezer JP, Moura LV, Flores MTFD, Machado VK, Rodrigues RFL, et al. The self-esteem of elderly women in a support association: experience report. RSD [Internet]. 2020 Jan 1 [cited 2022 Jul 28];9(3):e57932364. Available from: https://rsdjournal.org/index.php/rsd/article/view/2364.

11. Santini ZI, Jose PE, York Cornwell E, Koyanagi A, Nielsen L, Hinrichsen C, et al. Social disconnectedness, perceived isolation, and symptoms of depression and anxiety among older Americans (NSHAP): a longitudinal mediation analysis. Lancet Public Health. 2020; 5(1):e62-e70. doi: 10.1016/S2468-2667(19)30230-0

12. Barros MBA, Lima MG, Malta DC, Szwarcwald CL, Azevedo RCS, Romero D, et al. Relato de tristeza/ depressão, nervosismo/ansiedade e problemas de sono na população adulta brasileira durante a pandemia de COVID-19. Epidemol Serv Saúde [Internet]. 2020 [citado 2021 mar 27]; 29(4): e2020427. Disponível em: https://www.scielo.br/j/ress/a/nFWPcDjfNcLD84Qx7Hf5ynq/. doi: http://doi.org/10.1590/s1679-49742020000400018

13. Annes LNB, Mendonça HGS, Lima FM, Lima MAS, Aquino JM. Perfil sociodemográfico e de saúde de idosas que participam de grupos de terceira idade em Recife, Pernambuco. Rev Cuid [Internet]. 2017 [citado 2021 mar 27]; 8(1):1499-508. Disponível em: http://www.scielo.org.co/pdf/cuid/v8n1/2216-0973-cuid-8-01-01499.pdf.

14. Leão AM, Gomes IP, Ferreira MJM, Cavalcanti LPG. Prevalência e Fatores Associados à Depressão e Ansiedade entre Estudantes Universitários da Área da Saúde de um Grande Centro Urbano do Nordeste do Brasil. Rev Bras Educ Med [Internet]. 2018 [citado 2021 mar 27]; 42(4):55-65. Disponível em: https://www.scielo.br/j/rbem/a/kyYq35bwkZKHpKRTjyqjMYz/abstract/?lang=pt. doi: 10.1590/1981-52712015v42n4rb20180092

15. Nahas LF, Antunes AP. Pandemia, fraternidade e família: a convivência e a importância da manutenção dos laços familiares [Internet]. Belo Horizonte: IBDFAM; 2020 [citado 2021 mar 27]. Disponível em: https://ibdfam.org.br/artigos/1567/Pandemia%2C+fraternidade+e+fam%C3%ADlia%3A+a+conviv%C3%AAncia+e+a+import%C3%A2ncia+da+manuten%C3%A7%C3%A3o+dos+la%C3%A7os+familiares++.

16. Hammerschmidt KSA, Santana RF. Saúde do idoso em tempos de pandemia COVID-19. Cogitare Enferm [Internet]. 2020 [citado 2022 Jul 28]; 25:e72849. Disponível em: https://revistas.ufpr.br/cogitare/article/view/72849.

17. Azevedo PAC, Modesto CMS. A (re) organização do núcleo de cuidado familiar diante das repercussões da condição crônica por doença cardiovascular. Saúde Debate [Internet]. 2016 [citado 2022 abr 8]; 40(110):183-94. Disponível em: https://www.scielo.br/j/sdeb/a/L7CWFGhsQsCmzTZYxb8KLXS/abstract/?lang=pt. doi: https://doi. org/10.1590/0103-1104201611014

18. Presidência da República (BR) Lei nº. 10.741, de 1º de outubro de 2003. Dispõe sobre o Estatuto do Idoso e dá outras providências [Internet]. Brasília: Diário Oficial da União - Seção 1. 2003 out 3 [citado 2022 abr 8]. Disponível em: https://legis.senado.leg.br/norma/552617/publicacao/34620865.

19. Presidência da República (BR) Casa Civil.

Constituição da República Federativa do Brasil de 1988 [Internet]. Brasília: Diário Oficial da União - Seção 1:1. 1988 out 5 [citado 2022 abr 8]. Disponível em: https://www.planalto.gov.br/ccivil_03/constituicao/constituicao.htm.

20. Almeida OP, Almeida AS. Confiabilidade da versão brasileira da Escala de Depressão em Geriatria (GDS): versão reduzida. Arq Neuropsiquiatr [Internet]. 1999 [citado 2022 jul 29]; 57(2B):421-6. Disponível em: https://www.scielo.br/j/anp/a/Bdpjn6hWZz45CbmLQTt95pw/abstract/?lang=en.

21. Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, et al. Development and validation of a geriatric depression screening scale: a preliminary report. J Psychiat Res. 1983;17(1):37-49.

22. Smillkstein G. The family APGAR: a proposal for a family function test and its use by physicians. J Fam Pract. 1978; 6(6):1231-9.

23. Silva DAS. Perfil Sociodemográfico E Antropométrico De Idosos De Grupos De Convência. Estud. Interdiscip Envelhec [Internet]. 2011 jan 4 [citado 2022 jul 29];16(1). Disponível em: https://www.seer.ufrgs.br/index.php/RevEnvelhecer/article/view/8114.

24. Lima CLJ. Perfil sociodemográfico e clínico de idosos institucionalizados. Rev enferm UFPE [Internet]. 2013 out [citado 2022 Jul 28]; 7(10):6027-34. Disponível em: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/12231.

25. Fukuyama AC, HUBIE AP. Prevalência da depressão em idosos que frequentam um centro de convência no município de Cascavel-PR. Fag J Health [Internet]. 2020 [citado 2022 Jul 28]; 2(4):419-23. Disponível em: https://fjh.fag.edu.br/index.php/fjh/article/view/255.

26. Freire GV, Silva IP, Moura WB, Rocha FCV, Madeira MZA, Amorim FCM. Perfil de idosos que frequentam um centro de convência da terceira idade. Rev Interdisciplin. 2015; 8(2):11-9.

27. Barbosa LR, Silva TDCS, Santos MF, Carvalho FR, Marques RVDA, Matos Júnior EM. Perfil sociodemográfico e clínico dos idosos de um Centro de Convência. Rev Kairós-Gerontol [Internet]. 2018 [citado 2022 Jul 28]; 21(2):357-73. Disponível em: https://revistas.pucsp.br/index.php/kairos/article/view/40968. doi: 10.23925/2176-901X.2018v21i2p357-373

28. Brandão BMLS, Silva AMB, Souto RQ, Alves FAP, Araújo GKN, Jardim VCFS, et al. Cognition and quality of life relationship among the elderly community: a cross-sectional study. Rev Bras Enferm [Internet]. 2020 [cited 2022 Jul 28]; 73(Suppl 3). Available from: https://www.scielo.br/j/reben/a/zshHQQBWNfPvzmwC6bmbH8R/doi: 10.1590/0034-7167-2019-0030.

29. Batista NNLAL, Vieira DJN, Silva GMP. Caracterização de idosos participantes de atividade física em um centro de convência de Teresina-PI. Enferm Foco [Internet]. 2012 [citado 2022 Jul 28]; 3(1):7-11. Disponível em: http://revista.cofen.gov.br/index.php/enfermagem/article/view/212/133.

30. Pereira-Ávila FMV, Lam SC, Goulart MCL, Góes FGB, Pereira-Caldeira NMVP, Gir E. Factors associated with symptoms of depression among older adults during the COVID-19 pandemic. Texto & Contexto Enferm [Internet]. 2021 [cited 2022 Jul 28]; 30:e20200380. Available from: https://www.scielo.br/j/tce/a/4y7pZxLbhnwk5sDnczhxrMf/?format=pdf&lang=en. doi: https://doi.org/10.1590/1980-265XTCE-2020-0380

31. Mazuchelli LP, Soares MFP, Noronha DO, Oliveira MVB. Discursos sobre os idosos,

desigualdade social e os efeitos das medidas de distanciamento social em tempos de Covid-19. Saúde Soc [Internet]. 2021 [citado 2022 Jul 28]; 30(3):e200885. Disponível em: https://www.scielo.br/j/sausoc/a/dkJwsGRvFs3tqC75gRkczxc/?lang=pt. doi: http://dx.doi.org/10.1590/s0104-12902021200885

32. Silva MVS, Rodrigues JA, Ribas MS, Sousa JCS, Castro TRO, Santos BA, et al. O impacto do isolamento social na qualidade de vida dos idosos durante a pandemia por COVID-19. Enfermagem Brasil [Internet]. 2020 [citado 2022 Jul 28]; 19(4 Suplemento COVID):34-41. Disponível em: https://portalatlanticaeditora.com.br/index.php/enfermagembrasil/article/view/4337.

33. Mélo MCS, Silva Júnior JA, Silva JRL, Monte NL, Araújo HSP, Lucena NC, et al. Cognitive and health profile of elderly of a Coexistence Center. RSD [Internet]. 2021 set 25 [cited 2022 Jul 28]; 10(12):e418101220512. Available from: https://rsdjournal.org/index.php/rsd/article/view/20512.

34. Ramos FP, Silva SC, Freitas DF, Gangussu LMB, Bicalho AH, Sousa BVO, et al. Fatores associados à depressão em idoso. REAS [Internet]. 2019 jan 9 [citado 2022 jul 28]; (19):e239. Disponível em: https://acervomais.com.br/index.php/saude/article/view/239.

35. Silva CV. A importância da hidroginástica na saúde mental e física de idosos. Trabalho de Conclusão de Curso [Trabalho de Conclusão de Curso em Educação Física na Internet]. Brasília: Faculdade de Ciências da Educação e Saúde. Centro Universitário de Brasília; 2019. [citado 2022 jul 28]. 27 p. Disponível em: https://repositorio.uniceub.br/jspui/bitstream/prefix/13861/1/21604028.pdf.

36. Salicio MA, Salicio MM, Luz IS, Fett CA. Hidroterapia como recurso para melhora da qualidade de vida de idosos. Movimento & saúde: Revistainspirar [Internet]. out/nov/dez 2018 [citado 2022 jul 28]; 18(48). Disponível em: https://inspirar.com.br/wp-content/uploads/2018/12/HIDROTERAPIA-.pdf.

37. Campos LPF, Manhães CB, Nunes MP, Souza VR. Depressão Entre Idosos Atendidos em um Centro de Convivência do Município de Campos dos Goytacazes - RJ. POBS [Internet]. 2019 dez 17 [citado 2022 jul 28]; 9(31):46-4. Disponível em: https://ojs3.perspectivasonline.com.br/biologicas_e_saude/article/view/1872.

38. Magalhães JM, Carvalho ADMB, Carvalho SM, Alencar DDC, Moreira WC, Parente ADCM. Depression among the elderly in the family health strategy: a contribution to primary care. Rev Min Enferm [Internet]. 2016 [cited 2022 jul 28]; 20:e947. Available from: https://www.scielo.br/j/rsp/a/gnJkK3phHHKQgDcswdvmt7J/?lang=en doi: http://www.dx.doi.org/10.5935/1415-2762.20160016

39. Andrade AINPA, Martins RML. Funcionalidade familiar e qualidade de vida dos idosos. Millenium [Internet]. 2011 jun [citado 2022 jul 28]; 40:185-99. Disponível em: https://revistas.rcaap.pt/millenium/article/view/8227.

40. Silva DM, Vilela ABA, Souza AS, Alves MR, Silva DM, Souza TO. Avaliação da funcionalidade familiar de idosos. Rev Enferm UFPE On-Line [Internet]. 2013 set [citado 2022 jul 28]; 7(9):5550-6. doi: 10.5205/reuol.3529-29105-1-SM.0709201324.

41. Souza RA, Costa GD, Yamashita CH, Amendola F, Gaspar JC, Alvarenga MRM, et al. Funcionalidade familiar de idosos com sintomas depressivos. Rev Esc Enferm USP [Internet]. 2014 [citado 2022 jul 28]; 48(3):469-76. Disponível em: https://www.scielo.br/j/reeusp/a/TWvCnjydDCvYR8LjvTQqfZg/?format=pdf&lang=pt.

42. Porto I. O idoso no microssistema familiar: uma análise das relações intergeracionais. Rev Ambiente & Educação [Internet]. 2010 jan [citado 2022 jul 28]; 14(1):189-207. Disponível em: https://seer.furg.br/ambeduc/article/view/1145.

43. Ramos FP, Silva SC, Freitas DF, Gangussu LMB, Bicalho AH, Sousa BVO, et al. Fatores associados à depressão em idoso. REAS [Internet]. 2019 jan [citado 2022 jul 28]; (19):e239. Disponível em: https://acervomais.com.br/index.php/saude/article/view/239.

44. Barbosa FO, Macedo PCM, Silveira RMC. Depressão e o suicídio. Rev SBPH [Internet]. 2011 [citado 2014 out 17]; 14(1):233-43. Disponível em: http://pepsic.bvsalud.org/pdf/rsbph/v14n1/v14n1a13.pdf.

45. Oliveira DVD, Pivetta NRS, Oliveira GVDND, Silva DAD, Nascimento Júnior JRAD, Cavaglieri CR. Fatores intervenientes nos indicativos de depressão em idosos usuários das unidades básicas de saúde de Maringá, Paraná, 2017. Epidemiol Serv Saúde [Internet]. 2019 [citado 2014 out 17]; 28(3):e2018043. Disponível em: https://www.scielo.br/j/ress/a/Tmm4B8WYHWxg7V3pQ3NPYZN/abstract/?lang=pt.

46. Cai X, Hu X, Ekumi IO, Wang J, An Y, Li Z, et al. Psychological distress and its correlates among COVID-19 survivors during early convalescence across age groups. Am J Geriatr Psychiatry [Internet]. 2020 [cited 2022 out 14]; Oct;28(10):1030-39. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7347493/pdf/main.pdf. doi: 10.1016/j.jagp.2020.07.003. Epub 2020 Jul 10

47. Chen AT, Ge S, Cho S, Teng AK, Chu F, Demiris G, et al. Reactions to COVID-19, information and technology use, and social connectedness among older adults with pre-frailty and frailty. Geriatr Nurs [Internet]. 2021 [cited 2022 out 14]; 42(1):188-95. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7416746/.

48. Rana U. Elderly suicides in India: an emerging concern during COVID-19 pandemic. Int Psychogeriatr [Internet]. 2020 [cited 2022 out 14];32(10):1251-2. Available from: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/2CF169B59AFB47A2881F197F4CBD1C01/S1041610220001052a.pdf/elderly-suicides-in-india-an-emerging-concern-during-covid-19-pandemic.pdf.