



Factors associated with coping with the COVID-19 pandemic by older adults with comorbidities

Fatores associados ao enfrentamento da pandemia da COVID-19 por pessoas idosas com comorbidades

Factores asociados al afrontamiento de la pandemia COVID-19 por adultos mayores con comorbilidades

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ABSTRACT

Objective: to identify factors associated to coping with the COVID-19 pandemic by older adults with and without comorbidities.

Method: a descriptive, cross-sectional study with older adults (n=569), aged between 60 and 80 years old, with or without comorbidities, in the five Brazilian regions. Data collection with virtual questionnaire and analysis based on descriptive and inferential statistics. **Results:** the results show that 351 (61.68%) refer to comorbidity. There was a significant association between the groups in the following variables: age group (p=0.017), performing some work activity (p≤0.001), thinking about the possibility of being infected by the new coronavirus (p≤0.001), agreeing with prevention measures adopted for social distancing (p≤0.001), informing yourself by other means of communication besides television (p≤0.001). **Conclusion and implications for the practice:** the older adults with comorbidities think about the possibility of being infected by the new coronavirus, agree more with the social distancing measures and get more information. To such an effect, it is recommended to carry out research studies with an emphasis on the older adult without comorbidity, to better target health care in pandemic times.

Keywords: Aged; Pandemics; Coronavirus infections; Cross-sectional; Social distancing.

RESUMO

Objetivo: identificar fatores associados ao enfrentamento da pandemia da COVID-19 por pessoas idosas com e sem comorbidades.

Método: estudo descritivo, transversal, com pessoas idosas (n=569), entre 60 e 80 anos, com ou sem comorbidades, nas cinco regiões do Brasil. Coleta de dados com questionário virtual e análise com base na estatística descritiva e inferencial. **Resultados:** os resultados mostram que 351, (61,68%), referem comorbidade. Houve associação significativa entre os grupos nas variáveis: faixa etária (p=0,017), realizar alguma atividade laboral (p≤0,001), pensamento da possibilidade de ser infectado pelo novo coronavírus (p≤0,001), concordar com medidas de prevenção adotadas para o distanciamento social (p≤0,001), se informar por outro meio de comunicação além da televisão (p≤0,001). **Conclusão e implicações para a prática:** os idosos com comorbidades pensam na possibilidade de ser infectado pelo novo coronavírus, concordam mais com as medidas de distanciamento social e se informam mais. Nesse sentido, indica-se a realização de pesquisas com ênfase nos idosos sem comorbidade, para direcionar melhor os cuidados de saúde em tempos de pandemias.

Palavras-chave: Idoso; Pandemias; Infecções por coronavírus; Estudos transversais; Distanciamento social.

RESUMEN

Objetivo: identificar factores asociados al afrontamiento de la pandemia COVID-19 en adultos mayores con y sin comorbilidades.

Método: estudio descriptivo, transversal con personas mayores (n=569), entre 60 y 80 años, con o sin comorbilidades, en las cinco regiones de Brasil. La recolección de datos se realizó con cuestionario virtual y el análisis mediante estadística descriptiva e inferencial. **Resultados:** los resultados muestran que 351 personas, (61,68%), refieren a comorbilidades. Hubo asociación significativa entre grupos en las variables: grupo de edad (p=0,017), realizar alguna actividad laboral (p≤0,001), pensar en la posibilidad de estar infectado por el nuevo coronavirus (p≤0,001), acuerdo con las medidas preventivas adoptadas para el distanciamiento social (p≤0,001), informarse por otros medios de comunicación además de la televisión (p≤0,001). **Conclusión e implicaciones para la práctica:** los adultos mayores con comorbilidades piensan en la posibilidad de estar contagiados por el nuevo coronavirus, están más de acuerdo con las medidas de distanciamiento social y obtienen más información. En este sentido, se recomienda realizar una investigación con énfasis en los adultos mayores sin comorbilidades, para orientar mejor la atención sanitaria en tiempos de pandemia.

Palabras clave: Adulto mayor; Pandemias; Infecciones por coronavirus; Estudios transversales; distanciamiento social.

INTRODUCTION

A new viral infection was described for the first time in the city of Wuhan, province of Hubei, China.¹ The agent, previously unknown, was identified as a new coronavirus, causing the disease called COVID-19. The World Health Organization, concerned with the global spread of the outbreak, and its magnitude, announced the COVID-19 pandemic on March 11th, 2020.²

The conduction of studies that started quickly in many countries due to the emergency condition made it possible to verify the prevalence of comorbidities in patients with coronavirus infections, with emphasis on hypertension, diabetes, and respiratory and cardiovascular diseases. The aforementioned comorbidities were correlated as risk factors for serious patients admitted due to COVID-19, compared to non-severe patients.^{3,4}

In this context, it was verified that older adults are more likely to evolve to a serious condition, as well as to manifest the aforementioned comorbidities and, consequently, a high rate expressed in 5.56% of mortality related to coronavirus infection, when compared to the group of young and middle-aged patients, where it was 5.26%.⁴

A study conducted in the United States on the deaths due to COVID-19 pointed to 39 deaths in one-year-old children; 79 deaths in people aged from 1 to 14; 525 deaths in those aged from 15 to 24; 2,278 deaths in the age group of 25 to 34; 5,991 deaths in people aged from 35 to 44; 16,282 deaths in those aged from 45 to 54; 40,758 deaths from 55 to 64 years old; 73,856 deaths from 65 to 74 years old; 95,848 deaths in individuals aged from 75 to 84; and 111,475 deaths over 85 years old.⁵

International health authorities in several countries are warning that older adults are at risk of more serious complications and possible lethality in case of infection by the new coronavirus. It is pointed out that the risk of serious disease by COVID-19 and its evolution to death can worsen with age.⁶

In Brazil, by the end of epidemiological week 52 of 2020, on December 26th, 7,465,806 cases of coronavirus infections were confirmed, the third country with the highest number of cumulative cases, behind India (10,187,850) and the United States (18,982,634). In relation to the accumulated deaths, 190,795 were confirmed in Brazil, second only to the United States (331,909).⁷

This situation is aggravated when controversies about the prevention policies emerge, debating the issue of norms of social distancing and, often, raising doubts about which guideline to adopt, which can lead to failures and losses in the prevention modes, which are being adopted by city managers; dissemination of false information about treatment, prevention and ways of contagion; and measures not scientifically proven frequently found in the new coronavirus⁸ pandemic. These aggravations do not contribute at all to the collective and rational confrontation of the situation at hand.

The COVID-19 pandemic has affected people's daily lives, leading to disorganization, which is only experienced in the midst of uprisings and revolutions, which makes it possible to rethink the entire structure of current life.⁹

The bases for the justification of the research carried out are the changes in the behavior of older adults in facing the pandemic, emotional reactions, in addition to the identification of how they think and manifest themselves about the measures adopted in the cities for social distancing. Aged individuals are identified as a "risk group", and the main measures are indicated exactly for this population.

In this perspective, this study aimed to identify factors associated with coping with the COVID-19 pandemic by older adults with and without comorbidity.

METHOD

This is a descriptive and cross-sectional study, carried out with older adults in the five Brazilian regions. The research took place between April and June 2020. Data on people aged 60 years or older were analyzed, by sending an electronic form, inserted in *Google Forms*, made available by e-mail and/or *WhatsApp*.

Due to the context of the COVID-19 pandemic and the recommendations of social distancing, the pre-test of the instrument developed for the research was performed only by the team and professionals with expertise in the health of the older adult who have already carried out studies in partnership with the authors.

The composition of the sample of subjects in this study was supported by the snowball sampling technique, by non-probabilistic sampling, which allowed the initial participants to indicate the new subjects, and so on. The final sample consisted of 569 older adults, who voluntarily accepted to participate in the research, by accepting the Free and Informed Consent Form (FICF).

Regarding the dependent variable, the associated factors were analyzed based on the presence or absence of a clinical diagnosis of chronic comorbidities self-reported by the participants, considered at risk for COVID-19, such as: arterial hypertension, diabetes mellitus, neoplasms, asthma and hypothyroidism, in addition to other pulmonary, cardiovascular and musculoskeletal diseases.

The independent variables were of socioeconomic characterization such as: gender, age group, region where they live, and occupational activity. In addition to 14 subjective variables not directly observable that described the emotions of the older adults related to fear of COVID-19, such as sadness, panic, crying and thinking about the possibility of being infected by the new coronavirus; the adoption of prevention measures: compliance with the guidelines for social distancing, agreement with the distancing measures, perception of compliance with the measures for social distancing by the population, adherence to the measures established in the city of residence; and reception of information conveyed about COVID-19: doubts arising from the information circulating, alleviation of doubts with other people, monitoring information by using the TV or other communication means, and satisfaction with the information conveyed. A Likert-type scale was used to measure these variables.

For the treatment of the data obtained, a database was organized in an Excel® spreadsheet, *Microsoft Office 365*, and analyzed using the *Stata* software, version 13.0. The categorical

variables were described by absolute and relative frequencies. The data were treated according to Pearson's chi-square bivariate test and, to verify the statistical difference between the outcomes, a $p\text{-value} \leq 0.05$ was adopted.

In order to verify the association between the study dependent and independent variables of the study, odds ratios by gross Odds Ratio (OR) were estimated from the binary logistic regression model with respective 95% confidence intervals (95% CIs). For the selection of the variables, a significance level of 20% ($p \leq 0.20$) was established. The overall fit of the model was checked using the likelihood ratio test.

The study was approved by the Research Ethics Committee of the Federal University of Amapá, in compliance with the recommendations of Resolution No. 466/12 of the National Health Council, Opinion No. 4,061,643.

RESULTS

A total of 569 older adults answered the form (Table 1), of which 351 (61.68%) stated that they had some type of comorbidity. Regarding the gender of the older adults, it is noteworthy that 72.26% ($n=414$) were female. It is pointed out that nearly 75% of the older adults in the age groups between 75 and 79 years old and of 80 or more years old presented comorbidities.

As for exercising work activities, it is highlighted that 77.78% of the people who declared they worked in household chores had some comorbidity, as well as 74.07% of the health professionals. There were statistically significant differences between the groups in the respective variables: age group ($p=0,017$) and performing some work activity ($p \leq 0.001$).

Table 2 presents the characteristics and the factors associated to the emotions felt by the older adults related to COVID-19, to

Table 1. Characterization of the sociodemographic profile of the older adults, Brazil, 2020.

Variables	With comorbidity n = 351	Without comorbidity n = 218	Total n=569	p-value*
	n (%)	n (%)	n (%)	
Gender				0.277
Male	90(58.06)	65(41.94)	155(27.24)	
Female	261(63.04)	153(36.96)	414(72.76)	
Age group				0.017
60-64 years old	142(55.04)	116(44.96)	258(45.34)	
65-69 years old	102(64.56)	56(35.44)	158(27.77)	
70-74 years old	50(64.10)	28(35.90)	78(13.71)	
75-79 years old	24(75.00)	8(25.00)	32(5.62)	
≥ 80 years old	33(76.74)	10(23.26)	43(7.56)	
Region of residence				0.813
North	91(59.48)	62(40.52)	153(26.89)	
Northeast	29(61.70)	18(38.30)	47(8.26)	
Midwest	23(62.16)	14(37.84)	37(6.50)	
Southeast	186(63.70)	106(36.30)	292(51.32)	
South	22(55.00)	18(45.00)	40(7.03)	
Activities				≤0.001
No activity	202(64.33)	112(35.67)	314(55.18)	
Professor	45(60.81)	29(39.19)	74(13.01)	
Housewife	35(77.78)	10(22.22)	45(7.91)	
Public server	12(66.67)	6(33.33)	18(3.16)	
Health professional	20(74.07)	7(25.93)	27(4.75)	
Retired, exercising some activity	1(33.33)	2(66.67)	3(0.53)	
Other activities	36(40.91)	52(59.09)	88(15.47)	

*Pearson's Chi-square test. SOURCE: Research date, 2020

Table 2. Characterization and factors associated to emotions, prevention measures, and information conveyed for the older adults to cope with the new coronavirus, Brazil, 2020.

Variables	With	No	p-value*	OR [95% CI]	p-value
	comorbidity	comorbidity			
	n (%)	n (%)			
Fear of COVID			0.060		
Not once	71(65.74)	37(34.26)		1	
Sometimes	130(55.08)	106(44.92)		0.63 [0.39-1.02]	0.064
Indifferent	17(58.62)	12(41.38)		0.73 [0.31-1.70]	0.478
Many times	87(65.91)	45(34.09)		1.00 [0.58-1.72]	0.978
Always	46(71.88)	18(28.13)		1.33 [0.67-2.61]	0.405
Being sad			0.586		
Not once	87(64.93)	47(35.07)		1	
Sometimes	146(58.63)	103(41.37)		0.76 [0.49-1.18]	0.230
Indifferent	12(60.00)	8(40.00)		0.81 [0.30-2.12]	0.668
Many times	83(65.87)	43(34.13)		1.04 [0.62-1.73]	0.872
Always	23(57.50)	17(42.50)		0.73 [0.35-1.50]	0.394
Feeling panic			0.212		
Not once	225(61.48)	141(38.52)		1	
Sometimes	85(60.28)	56(39.72)		0.95 [0.63-1.41]	0.805
Indifferent	10(47.62)	11(52.38)		0.56 [0.23-1.37]	0.211
Many times	28(77.78)	8(22.22)		2.19 [0.97-4.94]	0.058
Always	3(60.00)	2(40.00)		0.94 [0.15-5.69]	0.946
Having cried			0.152		
Not once	204(60.71)	132(39.29)		1	
Sometimes	92(57.86)	67(42.14)		0.88 [0.60-1.30]	0.546
Indifferent	12(66.67)	6(33.33)		1.29 [0.47-3.53]	0.615
Many times	33(76.74)	10(23.26)		2.13 [1.01-4.47]	0.045
Always	10(76.92)	3(23.08)		2.15 [0.58-7.98]	0.250
Thinking about the possibility of becoming infected by the new coronavirus			≤0.001		
Not once	142(54.83)	117(45.17)		1	
Sometimes	124(61.69)	77(38.31)		1.32 [0.9-1.93]	0.140
Indifferent	28(71.79)	11(28.21)		2.09 [1.00-4.39]	0.050
Many times	24(70.59)	10(29.41)		1.97 [0.90-4.30]	0.086
Always	33(91.67)	3(8.33)		9.06 [2.71-30.30]	≤0.001
Observing social distancing			0.200		
Not once	1(33.33)	2(66.67)		1	
Sometimes	23(63.89)	13(36.11)		3.53 [0.29-42.88]	0.321
Indifferent	2(66.67)	1(33.33)		4.00 [0.13-119.22]	0.423
Many times	59(52.68)	53(47.32)		2.22 [0.19-25.26]	0.518

*Pearson's Chi-square test. SOURCE: Research data, 2020

Table 2. Continued...

Variables	With comorbidity n (%)	No comorbidity n (%)	p-value*	OR [95% CI]	p-value
Always	266(64.10)	149(35.90)		3.57 [0.32-39.70]	0.300
Agreeing with social distancing measures			≤ 0.001		
Not once	7(36.84)	12(63.16)		1	
Sometimes	70(51.09)	67(48.91)		1.79 [0.66-4.82]	0.249
Indifferent	4(50.00)	4(50.00)		1.71 [0.32-9.10]	0.527
Many times	80(62.02)	49(37.98)		2.79 [1.03-7.59]	0.043
Always	190(68.84)	86(31.16)		3.78 [1.44-9.95]	0.007
Perceiving the population's compliance with social distancing measures			0.189		
Not once	14(56.00)	11(44.00)		1	
Sometimes	210(63.83)	119(36.17)		1.38 [0.61-3.15]	0.435
Indifferent	11(78.57)	3(21.43)		2.88 [0.64-12.92]	0.167
Many times	72(54.14)	61(45.86)		0.92 [0.39-2.19]	0.864
Always	44(64.71)	24(35.29)		1.44 [0.56-3.66]	0.443
Adherence to prevention measures			0.158		
Not once	3(50.00)	3(50.00)		1	
Sometimes	24(54.55)	20(45.45)		1.20 [0.21-6.61]	0.834
Indifferent	3(60.00)	2(40.00)		1.50 [0.13-16.54]	0.741
Many times	59(53.15)	52(46.85)		1.13 [0.21-5.86]	0.880
Always	262(65.01)	141(34.99)		1.85 [0.37-9.32]	0.452
Feeling doubts about the diverse information that circulated			0.629		
Not once	105(63.25)	61(36.75)		1	
Sometimes	159(56.11)	110(40.89)		0.83 [0.56-1.25]	0.390
Indifferent	5(50.00)	5(50.00)		0.58 [0.16-2.08]	0.405
Many times	64(65.66)	34(34.34)		1.11 [0.65-1.87]	0.693
Always	17(68.00)	8(32.00)		1.23 [0.50-3.02]	0.645
Asking questions with other people			0.281		
Not once	61(62.89)	36(37.11)		1	
Sometimes	130(60.19)	86(39.81)		0.89 [0.54-1.46]	0.650
Indifferent	5(35.71)	9(64.29)		0.32 [0.10-1.05]	0.061
Many times	61(62.24)	37(37.76)		0.97 [0.54-1.73]	0.926
Always	94(65.28)	50(34.72)		1.10 [0.64-1.89]	0.704
Tracking information on TV			0.060		
Not once	9(39.13)	14(60.87)		1	
Sometimes	88(61.11)	56(38.89)		2.44 [0.99-6.02]	0.052
Indifferent	5(55.56)	4(44.44)		1.94 [0.40-9.24]	0.403
Many times	69(56.56)	53(43.44)		2.02 [0.81-5.03]	0.129

*Pearson's Chi-square test. SOURCE: Research data, 2020

Table 2. Continued...

Variables	With comorbidity	No comorbidity	p-value*	OR [95% CI]	p-value
	n (%)	n (%)			
Always	180(66.42)	91(33.58)		3.07 [1.28-7.37]	0.012
Getting information through communication means other than TV			≤ 0.001		
Not once	81(78.64)	22(21.36)		1	
Sometimes	107(58.79)	75(41.21)		0.38 [0.22-0.67]	≤0.001
Indifferent	6(60.00)	4(40.00)		0.40 [0.10-1.57]	0.192
Many times	78(53.06)	69(46.94)		0.30 [0.17-0.54]	≤0.001
Always	79(62.20)	48(37.80)		0.44 [0.24-0.80]	0.008
Being satisfied with the information provided			0.130		
Not once	19(43.18)	25(56.82)		1	
Sometimes	156(62.40)	94(37.60)		2.18 [1.14-4.17]	0.018
Indifferent	11(61.11)	7(38.89)		2.06 [0.67-6.33]	0.204
Many times	73(64.04)	41(35.96)		2.34 [1.15-4.75]	0.019
Always	92(64.34)	51(35.66)		2.37 [1.19-4.72]	0.014

*Pearson's Chi-square test. SOURCE: Research data, 2020

the prevention measures, and to the information conveyed for the older adults to cope with the new coronavirus.

According to the information presented in Table 2, the groups presented statistically significant differences in relation to the following variables: the thought of being infected by the new coronavirus ($p \leq 0.001$), agreeing to prevention measures taken for social distancing ($p \leq 0.001$), and being informed by communication means other than the TV ($p \leq 0.001$). There were no significant differences in the other variables.

There was a positive association in the emotions of the older adults with comorbidities as to having twice the chance of having cried many times during the pandemic (OR=2.13; 95% CI=1.01-4.47).

Regarding the prevention measures, differences were observed between the groups studied, pointing out that the older adults with comorbidities are three times more likely (OR=3.78; 95% CI=1.44-9.95) to agree with the social distancing measures or many times agree (OR=2.79; 95% CI=1.03-7.59) with these measures.

As for the coping actions related to the acquisition of information about COVID-19, it was observed that the older adults with comorbidities have a three times greater chance (OR=3.07; 95% CI=1.28-7.37) of always tracking the information conveyed on TV. And they also have the greatest chance of being always (OR=2.37; 95% CI=1.19-4.72) and often (OR=2.34; 95% CI=1.15-4.75) satisfied or even sometimes satisfied (OR=2.18; 95% CI=1.14-4.17) with the information conveyed about the new coronavirus.

Among the results obtained, it is worth noting that the use of other communication means to acquire information proved to be a protective factor among the older adults with comorbidities.

DISCUSSION

The presence of comorbidities among the older adults, observed in this study (61.68%), was lower than that observed in research studies conducted in Ceará (75%)¹⁰ and Florianópolis (93.2%).¹¹ In the context of the new coronavirus pandemic, existing comorbidities are a risk factor for populations over 60 years old. In a study conducted in Maranhão,¹² it was evidenced that, in the deaths due to COVID-19, the predominant age group was 60 years old or more and that, among the comorbidities related to the deaths registered due to coronavirus infections, there was a higher occurrence of chronic diseases in the cardiovascular and immune systems.

A study carried out in China,¹³ which evaluated 150 cases of laboratory-confirmed infection by SARS-CoV-2, evidenced that patients with cardiovascular disease associated with COVID-19 had a higher risk of death, in addition to that there was a statistically significant difference for advanced age in the patients who died ($p < 0.001$).

International studies^{14,15} state that the older adults are more susceptible to the psychological effects of a pandemic, and can manifest emotions such as sadness, anxiety, stress, anger, fear and crying. The results of this research also revealed that the older adults with comorbidities were twice as likely to have cried many times during the pandemic, when compared to those without

comorbidities, which can be explained by the uncertainty of cure and/or death of the older adult with the clinical progression of the disease if infected.

A study carried out with older adults with chronic comorbidities/diseases before the pandemic showed that the mere fact of having a chronic disease brought negative feelings and emotional distress to the aged participants of the study;¹⁶ it is therefore suggested that, with the pandemic, this may have aggravated. In addition, crying can be a manifestation of mental disorders, as can be seen in a study conducted with Chinese older adults, which showed that 37.1% of the participants experienced depression and anxiety during the COVID-19 pandemic.¹⁷

To understand the frailty in the older adult, it is necessary to pay attention not only to the physical and physiological changes resulting from the aging process, but also to possible changes in the emotional and social realms that a change in family dynamics and how the older adults feel within their context can cause, especially in times of pandemics, in which a situation of dependence and reduced functional capacity can have major repercussions in people's lives.¹⁸

The high adherence of the older adults with comorbidities to the prevention measures in the pandemic can have something to do with the fear of getting infected and suffering even greater harms to their health. This fear may have been generated by several situations: the pandemic, in addition to the serious problems of global supply, economic, social, environmental, labor, fiscal, and many other aspects, also generated a deepening of vulnerabilities in the lives of the older adults.¹⁹ In a research study conducted in the United States with 630 adults with some chronic disease, 62.7% were aged individuals aged 60 to 88 years old, and the study identified that one out of four participants (24.6%) was "very concerned" about being infected by the new coronavirus. The fear of the threat arising from the pandemic outbreak was most reported by older adults in their 70s, and 58.6% reported that the coronavirus infections made them change their routine and daily living activities "a lot".²⁰

Added to the already existing vulnerabilities in the aging process; the classification of the risk group in the context of the pandemic; social isolation and the greater risk of serious complications for the older adults with comorbidities, it is emphasized that the scarcity of health resources evidenced by the pandemic and the need to make choices due to the increase in hospitalizations in Intensive Care Units (ICUs) and access to respirators, have caused some locations, such as Italy, to set the age criterion in the resource allocation protocols, without many legal, philosophical and moral reflections taking place, to guarantee isonomic criteria and mitigate discriminatory biases; this may have generated a greater sensation of fear for this population, corroborated by the omission of the Brazilian State in relation to a clear definition of how the health units should manage the resources.²⁰

It was observed that the older adults with comorbidities are three times more likely to acquire information about the coronavirus infections, mainly on TV. It was also highlighted that they are

always and many times satisfied or even sometimes satisfied with the information conveyed about the new coronavirus.

In another study, participants had a mean of five chronic diseases, and a mean age of 59 years old. The participants reported using technology more frequently to search for health information (96%), communicate with health professionals (92%), track medical information (83%), track medications (77%), and support decision-making regarding the treatment (55%).²¹ Corroborating these studies, aged participants in a previous research study also reported their preference for receiving information about COVID-19 through traditional sources, in contrast, older and less educated people were identified as less attentive to news about the coronavirus, diverging from this research.²²

Of the participants in this study, 69% highlighted TV as the information means (always or many times); and it is noteworthy among the results that 48.15% use other means to acquire information. This aspect proved to be a protective factor among the older adults with comorbidities when compared to those without comorbidities.

Although other communication means were not mentioned, it is known about the changes in people's way of life caused by the technological advances that have occurred in the last decades. Known as the "information society", the use of digital tools such as computers and cell phones is quite common. Even if the generation aged 60 or over shows some distance or some difficulty in handling such tools, seeking this digital inclusion is important.²³ A study conducted with 407 older adults in Israel indicated that there was an increase in Internet use by older adults in the COVID-19 pandemic, where chat software (61.1%), online messages (41.7%) and online newspapers (40.8%) were the most used in leisure and online tasks to cope with the COVID-19 virus.²⁴

The digital inclusion of the older adults stimulates cognitive processing, provides information in real time and provides external services without the need for them to leave their homes, in addition to improving the processing speed ($t=3.939$; $p=0.001$) and the ability to plan tasks ($t=3.504$; $p=0.001$).²⁵

A study on the way in which information about the new coronavirus is transmitted to the society pointed out the prevalence of biological aspects of the pandemic from a negative point of view regarding the aged population, reasserting historical prejudices associated with aging but, on the other hand, it proves to be an important tool in the dissemination of information of public utility and assistance in the pandemic situation, such as the dissemination of reports on social support actions for the older adult. This also highlights the need to restructure the way in which communication is directed to the audience.²⁵

CONCLUSION AND IMPLICATIONS FOR THE PRACTICE

It is concluded that the older adults with comorbidities are considering the possibility of being infected by the new coronavirus, agree more with social distancing measures, and

get more information. The older adults without comorbidities, with less adherence to such factors, are more susceptible and vulnerable to the current pandemic scenario.

The main limitation of this study is related to its cross-sectional design, which does not allow establishing a cause and effect relationship. Another limitation was the failure to conduct a pre-test of the instrument with the older adults.

It is noteworthy that studies in Brazil that identify the ways of coping with the COVID-19 pandemic by older adults are still scarce.

This study points out to the challenge of expanding, in this sense, the production of Nursing knowledge, so that it contributes to the understanding of the specificities of the older adult's way of life facing measures such as social distancing and isolation. The conduction of research studies with emphasis on the older adults without comorbidities is advised, so as to better target health care.

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REFERENCES

1. Hui DS, Azhar E, Madani TA, Ntoumi F, Kock R, Dar O et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health – The latest 2019 novel coronavirus outbreak in Wuhan, China. *Int J Infect Dis.* 2020;91:264-6. <http://dx.doi.org/10.1016/j.ijid.2020.01.009>. PMID:31953166.
2. World Health Organization. Coronavirus disease 2019 (COVID-19) Situation Report – 51. Geneva: WHO; 2020.
3. Yang J, Zheng Y, Gou X, Pu K, Chen Z, Guo Q et al. Prevalence of comorbidities in the novel Wuhan coronavirus (COVID-19) infection: A systematic review and meta-analysis. *Int J Infect Dis.* 2020;2020(94):91-5. <http://dx.doi.org/10.1016/j.ijid.2020.03.017>. PMID:32173574.
4. Liu K, Chen Y, Lin R, Han K. Clinical features of COVID-19 in elderly patients: A comparison with young and middle-aged patients. *J Infect.* 2020;80(6):E14-8. <http://dx.doi.org/10.1016/j.jinf.2020.03.005>. PMID:32171866.
5. Centers for Disease Control and Prevention. National Center for Health Statistics (NCHS). Weekly Updates by select demographic and geographic characteristics. Provisional Death Counts for Coronavirus Disease 2019 (COVID-19). [Internet] CDC; 2021 [citado 2021 jan 27]. Disponível em: https://www.cdc.gov/nchs/nvss/vsr/covid_weekly/index.htm
6. Centers for Disease Control and Prevention. Increased Risk of Hospitalization or Death Age Increases Risk for Severe Illness. [Internet] CDC; 2021 [citado 2021 jan 27]. Disponível em <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html>.
7. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Boletim epidemiológico especial - Doença pelo Coronavírus COVID-19. *Semana Epidemiológica* 52 (20/12 a 26/12). [Internet] 2020 [citado 2021 jan 23]. Disponível em: https://www.gov.br/saude/pt-br/media/pdf/2020/dezembro/30/boletim_epidemiologico_covid_43_final_coe.pdf
8. Associação Brasileira de Saúde Coletiva. Bolsonaro, inimigo da saúde do povo - Nota das entidades da saúde coletiva e da bioética a respeito do pronunciamento do Presidente da República em cadeia nacional de rádio e TV, em 24 de março. [Internet]. [citado 2020 mar 25]. Disponível em: <https://abrasco.org.br/hotsites/nota-covid19/>
9. De Troi M, Quintilio W. Coronavírus: lições anti-negacionistas e o futuro do planeta. *SciELO em Perspectiva* [Internet]. 2020 [citado 2020 jun 25]. Disponível em: <https://blog.scielo.org/blog/2020/03/31/coronavirus-licoes-anti-negacionistas-e-o-futuro-do-planeta/>
10. Pereira DS, Nogueira JAD, Silva CAB. Qualidade de vida e situação de saúde de idosos: um estudo de base populacional no Sertão Central do Ceará. *Rev Bras Geriatr Gerontol.* 2015;18(4):893-908. <http://dx.doi.org/10.1590/1809-9823.2015.14123>.
11. Confortin SC, Schneider IJC, Antes DL, Cembranel F, Ono LM, Marques LP et al. Condições de vida e saúde de idosos: resultados do estudo de coorte EpiFlórida Idoso. *Epidemiol Serv Saude.* 2017 jun;26(2):305-17. <http://dx.doi.org/10.5123/S1679-49742017000200008>. PMID:28492772.
12. Almeida JS, Cardoso JÁ, Cordeiro EC, Lemos M, Araújo TME, Sardinha AHL. Caracterização epidemiológica dos casos de covid-19 no maranhão: Uma breve análise. [Internet]. 2020 [citado 2020 set 2020]. Disponível em: <https://preprints.scielo.org/index.php/scielo/preprint/view/314/377>
13. Ruan Q, Yang K, Wang W, Jiang L, Song J. Clinical predictors of mortality due to COVID-19 based on an analysis of data of 150 patients from Wuhan, China. *Intensive Care Med.* 2020;46(5):846-8. <http://dx.doi.org/10.1007/s00134-020-05991-x>. PMID:32125452.

14. Banerjee D. 'Age and ageism in COVID-19': Elderly mental health-care vulnerabilities and needs. *Asian J Psychiatr*. [Internet]. 2020 jun [citado 2020 set 14];51:02154. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/32403024/>
15. 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 jan;5(1):e62-70. [http://dx.doi.org/10.1016/S2468-2667\(19\)30230-0](http://dx.doi.org/10.1016/S2468-2667(19)30230-0). PMID:31910981.
16. Rocha ACAL, Ciosak SI. Chronic Disease in the elderly: spirituality and coping. *Rev Esc Enferm USP*. 2014;48(spe2):87-93. <https://doi.org/10.1590/S0080-623420140000800014>
17. Meng H, Xu Y, Jiali X, Zhang Y, Liu B, Yang H. Analyze the psychological impact of COVID-19 among the elderly population in China and make corresponding suggestions. *Psychiatry Res*. 2020 jun;289:112983. <http://dx.doi.org/10.1016/j.psychres.2020.112983>.
18. Oliveira LPBA, Menezes RMP. Representações de fragilidade para idosos no contexto da estratégia saúde da família. *Texto Contexto Enferm*. 2011;20(2):301-9. <http://dx.doi.org/10.1590/S0104-07072011000200012>.
19. Dadalto L, Mascarenhas II, Matos ACH. Salvem também os idosos: etarismo e a alocação de recursos na realidade brasileira de combate à COVID. *civilistica.com* [Internet]. 2020 ago [citado 2020 set 14];9(2):1-19. Disponível em: <http://civilistica.com/wp-content/uploads/2020/08/Dadalto-Mascarenhas-e-Matos-civilistica.com-a.9.n.2.2020-1.pdf>
20. Wolf MS, Serper M, Opsasnick L, O'Connor RM, Curtis L, Benavente JY et al. Awareness, attitudes, and actions related to COVID-19 among adults with chronic conditions at the onset of the U.S outbreak: a cross-sectional survey. *Ann Intern Med*. 2020;173(2):100-9. <http://dx.doi.org/10.7326/M20-1239>. PMID:32271861.
21. Zulman DM, Jenchura EC, Cohen DM, Lewis ET, Houston TK, Asch SM. How can ehealth technology address challenges related to multimorbidity? Perspectives from patients with multiple chronic conditions. *J Gen Intern Med*. 2015;30(8):1063-70. <http://dx.doi.org/10.1007/s11606-015-3222-9>. PMID:25691239.
22. Chen X, Gao H, Zou Y, Lin F. Changes in psychological wellbeing, attitude, and information-seeking behavior among people at the epicenter of the COVID-19 pandemic: a panel survey of residents in Hubei province, China. *Epidemiol Infect*. 2020;148(e201):1-10. <http://dx.doi.org/10.1017/S0950268820002009>. PMID:32873358.
23. Banhato EFC, Silva KCA, Magalhães NC, Mota ME, Guedes DV, Scoralick NN. Inclusão digital: ferramenta de promoção para envelhecimento cognitivo, social e emocional saudável? *Psicol Hosp*. 2020;5(2):2-20.
24. Nimrod G. Changes in internet use when coping stress: older adults during the COVID-19 pandemic. *Am J Geriatr Psychiatry*. 2020 out;28(10):1020-4. <http://dx.doi.org/10.1016/j.jagp.2020.07.010>. PMID:32771312.
25. Leão LRB, Ferreira VHS, Faustino AM. O idoso e a pandemia do Covid-19: uma análise de artigos publicados em jornais. *Braz J Develop*. 2020;6(7):45123-42. <http://dx.doi.org/10.34117/bjdv6n7-218>.