



# Considerations or effects of the state of isolation in older adults during the COVID-19 pandemic

Consideraciones o efecto del estado de aislamiento en adultos mayores durante la pandemia del COVID-19

Considerações ou efeito do estado de isolamento em idosos durante a pandemia de COVID-19

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## ARTICLE INFORMATION:

Article received: January 17, 2022

Article accepted: March 6, 2024

DOI: <https://doi.org/10.29375/01237047.4361>

**How to reference.** Camargo-Rojas CM. Considerations or effects of the state of isolation in older adults during the COVID-19 pandemic. MedUNAB [Internet]. 2023;26(3):503-511. doi: <https://doi.org/10.29375/01237047.4361>

## ABSTRACT

**Introduction.** Social isolation resulted in the mitigation of COVID-19 cases, a disease that impacted the general population physically, emotionally and mentally, most specifically the elderly. Social isolation was identified as being associated with a 50% increased risk of dementia and other serious conditions. The present review aims to identify the scientific knowledge that has been built on the phenomenon of social isolation in the elderly as a preventive measure for COVID-19. **Methodology.** Integrative literature review. Search strategy: Web of Science, Medline, SCOPUS, EMBASE, CINAHL databases; MeSH and Emtree: “loneliness”, “elderly”, “Aged”, “Isolating”, “Social Isolation”, “COVID-19” and “Coronavirus Infections”. Inclusion criteria: primary and secondary research, with full text available online, languages: English, Spanish, Portuguese and French between the years 2015 to 2021. **Results.** Twenty-seven scientific articles were perused, including cross-sectional and longitudinal descriptive studies, as well as narrative and systematic reviews, which responded to the objective of the review. **Discussion.** In the literature found, different authors highlight the importance of recognizing social isolation as a public health issue, which has mental, social and physical repercussions in the elderly population. **Conclusions.** The review made it possible to identify the knowledge generated from the concept of isolation in the elderly, to recognize the mental repercussions of this isolation (especially in elderly people with a history of isolation), and to understand the interdisciplinary approach required.



### Keywords:

Aged; Social Isolation; Loneliness; Coronavirus Infections; Public Health

## Author Contributions

*CMCR. Initiated the study and consolidated the research question. Based on the above, she established the methodology and carried out the process of searching, reviewing, and analyzing the articles. The author wrote the article entirely.*

## RESUMEN

**Introducción.** El aislamiento social permitió la mitigación de casos por la COVID-19, enfermedad que impactó tanto físico como emocional y mentalmente a la población en general, pero específicamente a los adultos mayores. Se identificó que el aislamiento social se asoció con un aumento del 50% del riesgo de demencia y otras afecciones graves. La presente revisión pretende identificar el conocimiento científico que se ha construido a partir del fenómeno del aislamiento social en las personas mayores como medida de prevención de la COVID-19. **Metodología.** Revisión integrativa de la literatura. La estrategia de búsqueda: bases de datos Web of Science, Medline, SCOPUS, EMBASE, CINAHL; tesauros MeSH y Emtree: “loneliness”, “elderly”, “Aged”, “Isolating”, “Social Isolation”, “COVID-19” y “Coronavirus Infections”. Criterios de inclusión: investigaciones primarias y secundarias, con texto completo disponible en línea, idiomas: inglés, español, portugués y francés entre los años 2015 al 2021. **Resultados.** Se incluyeron 27 artículos científicos entre los cuales se encuentran estudios descriptivos transversales y longitudinales, así como revisiones narrativas y sistemáticas, los cuales daban respuesta al objetivo de la revisión. **Discusión.** En la literatura encontrada diferentes autores resaltan la importancia de reconocer el aislamiento social como una situación de salud pública, que tiene repercusiones mentales, sociales y físicas en la población mayor. **Conclusiones.** La revisión realizada permite identificar el conocimiento generado a partir del concepto de aislamiento en la persona mayor, reconocer las repercusiones a nivel mental de este aislamiento (especialmente en aquellas personas mayores con antecedentes), y comprender el abordaje interdisciplinario que se requiere.

### Palabras clave:

Anciano; Aislamiento Social; Soledad; Infecciones por Coronavirus; Salud Pública

## RESUMO

**Introdução.** O isolamento social permitiu a mitigação dos casos decorrentes da COVID-19, doença que impactou tanto física quanto emocional e mentalmente a população em geral, mas especificamente os idosos. O isolamento social foi identificado como estando associado a um aumento de 50% do risco de demência e outras condições graves. Esta revisão tem como objetivo identificar o conhecimento científico que vem sendo construído a partir do fenômeno do isolamento social em pessoas idosas como medida preventiva contra a COVID-19. **Metodologia.** Revisão integrativa da literatura. A estratégia de busca: bases de dados Web of Science, Medline, SCOPUS, EMBASE, CINAHL. Tesauros MeSH e Emtree: “loneliness”, “elderly”, “Aged”, “Isolating”, “Social Isolation”, “COVID-19” e “Coronavirus Infections”. Critérios de inclusão: pesquisas primárias e secundárias, com texto completo disponível online, idiomas: inglês, espanhol, português e francês entre 2015 e 2021. **Resultados.** Foram incluídos 27 artigos científicos, dentre eles estudos descritivos transversais e longitudinais, além de revisões narrativas e sistemáticas, que responderam ao objetivo da revisão. **Discussão.** Na literatura encontrada, diferentes autores destacam a importância de reconhecer o isolamento social como uma situação de saúde pública, que tem repercussões mentais, sociais e físicas na população idosa. **Conclusões.** A revisão realizada permite identificar o conhecimento gerado a partir do conceito de isolamento em idosos, reconhecer as repercussões mentais deste isolamento (especialmente em idosos com histórico) e compreender a abordagem interdisciplinar necessária.

### Palavras-chave:

Idoso; Isolamento Social; Solidão; Infecções por Coronavirus; Saúde Pública

## Introduction

The process of populational aging is a worldwide problem that is dictating guidelines in the economic, social and health sectors, creating major challenges for both governmental entities and health institutions and their professionals (1). As predicted by the World Health Organization (WHO), from 2015 to 2050, the percentage of people over 60 years of age will increase from 12% to 22% (1,2).

This population dynamic was impacted by the onset of a pandemic caused by the SARS-CoV-2 virus, which generates respiratory, digestive and systemic manifestations (3). This pandemic has affected the world's

population, causing high mortality rates, regardless of age, pathological background and social context (4). In Colombia it behaved similarly, with an incidence rate of 12,108 cases per 100,000 inhabitants and a mortality rate of 499.27 per 100,000 inhabitants in people over 80 years of age, 56.5% of whom are men (5,6).

Within the epidemiology of the disease, also known as Coronavirus Disease 2019 (COVID-19) in some European countries it was found that the population with the highest risk of mortality and hospitalization are those over 60 years old (7), as evidenced by statistics from the Center for Disease Control and Prevention (CDC), which shows

that, as of June 2020 worldwide, the hospitalization rate in those over 85 years old was 513.2 per 100,000 inhabitants (8).

The rapid appearance of cases led national governments to adopt measures to contain COVID-19, including social distancing, hand washing, social isolation and the use of masks (7,9). These measures proved to be effective in reducing infection and emphasis was placed on their implementation in the elderly population due to their risk of death in the presence of the virus (10).

Social isolation led the elderly to develop feelings of loneliness (11) which in the literature has a prevalence of 40% in older adults. Implications were found at the physical, mental and social levels (12,13). It is worth mentioning that loneliness in old age is prevalent due to the increase of chronic diseases, the decrease of social networks and social rejection (14,15).

This phenomenon of loneliness in the elderly was influenced by the measure of social isolation which, in turn, was associated with a 50% increase in the risk of dementia and other serious conditions (16). According to several authors, isolation has been linked to an increase in mental health illnesses following epidemic scenarios because of separation from family members and support networks, as well as the risk of exposure to the disease (4,17,18).

This is known as the “old person syndrome”, which some authors denote as an “apocalyptic” concept that should not be generalized to all elderly people (19). At present, the academic society and especially the health sciences are questioning the consequences of social isolation in the elderly population (20).

The present integrative review aims to identify the scientific knowledge that has been built on the phenomenon of social isolation in the elderly as a preventive measure for COVID-19, and the consequences thereof.

## Methodology

The methodological design used is called integrative literature review. According to Whittermore et al. (21), and in order to apply methodological rigor, this model consists of the following steps: formulation of the problem or question, search and data collection, data evaluation, data analysis and presentation or interpretation of results. The review question was: What is the scientific knowledge that has been built on the phenomenon of social isolation in the elderly as a preventive measure for COVID-19, and the consequences thereof?

Twenty-seven articles were analyzed, including cross-sectional and longitudinal descriptive studies, as well as narrative and systematic reviews (Table 1).

**Table 1.** Characterization of studies included. Integrative review

Authors (reference)	Study Objective	Country (year)	Type of study
Camargo-Rojas CM et al. (12)	Highlight the importance of including validated instruments in the routine assessment of loneliness in the elderly in order to generate interventions focused on this phenomenon.	Colombia (2020)	Topic Review
Chaparro-Díaz L et al. (14)	Provide a detailed understanding of the aspects that influence feelings of loneliness in older adults	Colombia (2019)	Systematic Review
Shankar A et al. (23)	Examine associations of isolation and loneliness, both individually and simultaneously	United Kingdom (2017)	Descriptive longitudinal study
Gené-Badia J et al. (11)	Determine the prevalence of loneliness and social isolation in the population over 65 years of age covered by an urban primary care team and identify its main characteristics.	Spain (2020)	Cross-sectional descriptive study
Ong AD et al. (22)	Recognize the relationship between loneliness and health in the elderly population.	United States (2016)	Topic review
Gené-Badia J et al. (24)	Identify loneliness in older people and recognize interventions based on scientific evidence at both the individual and community levels in cooperation with other community resources.	Spain (2016)	Topic review
Mehra A et al. (25)	Present two cases of elderly patients, who sought emergency services due to relapse of depressive disorder that was associated with fear of contracting COVID-19.	India (2020)	Descriptive case series study
Donovan NJ (26)	Relationship between social isolation and loneliness in the context of COVID-19	United States (2020)	Topic review

<b>Santini ZI et al. (27)</b>	Recognize the relationship between social disconnection and perceptions of social isolation and how they contribute to the severity of anxiety and depression symptoms in community-dwelling older adults.	United States (2020)	Descriptive longitudinal study
<b>Lei L et al. (28)</b>	Evaluate and compare the prevalence and associated factors of anxiety and depression among the public affected by quarantine.	China (2020)	Cross-sectional descriptive study
<b>Rajkumar RP (29)</b>	Disseminate existing literature regarding the outbreak of COVID-19 as pertains to mental health.	India (2020)	Literature review
<b>Frances-Wand AP et al (30)</b>	Examine the links between suicide in the elderly and the COVID-19 pandemic.	China (2020)	Topic review
<b>Gao J et al. (31)</b>	Identify the prevalence and distribution of two main mental disorders: anxiety and depression and their exposure to social networks.	China (2020)	Cross-sectional descriptive study
<b>Jawaid A (32)</b>	Review Protection of older adults during social distancing.	Switzerland (2020)	Topic review
<b>Macleod S et al. (33)</b>	Identify emerging evidence on the types of leisure and recreational activities (LRA) that adults aged 60 years and older engage in for their mental health during the COVID-19 pandemic.	United States (2021)	Scope review
<b>Ahmed MZ et al. (18)</b>	Recognize the psychological morbidity induced by the current COVID-19 epidemic and also systematically review the prevalence of psychological problems due to prolonged confinement.	China (2020)	Cross-sectional descriptive study
<b>Rivera-Torres S et al. (34)</b>	Examining effects related to social connectedness among older adults.	United States (2021)	Scope review
<b>Gerst-Emerson K et al. (35)</b>	Determine if loneliness is associated with increased health care utilization among older adults in the United States	United States (2015)	Cross-sectional descriptive study
<b>Fatke B et al. (19)</b>	Mental health causes in the COVID 19 pandemic.	Germany (2020)	Descriptive case series study
<b>Armitage R et al. (36)</b>	COVID-19 and the consequences of social isolation.	United Kingdom (2020)	Topic review
<b>Tyler CM et al. (37)</b>	Examine the relationships between demographics, life impacts of COVID-19, depression and anxiety in older adults internationally.	Multicentric (2021)	Cross-sectional descriptive study
<b>Qiu J et al. (17)</b>	Study is the first large-scale national survey of psychological distress in China's general population during the COVID-19 epidemic.	China (2020)	Cross-sectional descriptive study
<b>Huarcaya-Victoria J (4)</b>	To summarize the current evidence, we present a narrative review of the effects of the COVID-19 pandemic on mental health.	Peru (2020)	Narrative review
<b>Duan L et al. (39)</b>	Psychological interventions for the population affected by the COVID 19 epidemic.	China (2020)	Literature review
<b>Bermeja AI et al. (38)</b>	Present a systematic review of programs to combat loneliness aimed at institutionalized older adults.	Spain (2018)	Systematic Review
<b>Fan Q (40)</b>	Trace the state of the art of knowledge on the use of ICT in the care of the elderly	Finland (2016)	Literature review
<b>Noone C et al. (41)</b>	Videoconferences to reduce social isolation and loneliness.	Ireland (2020)	Systematic Review

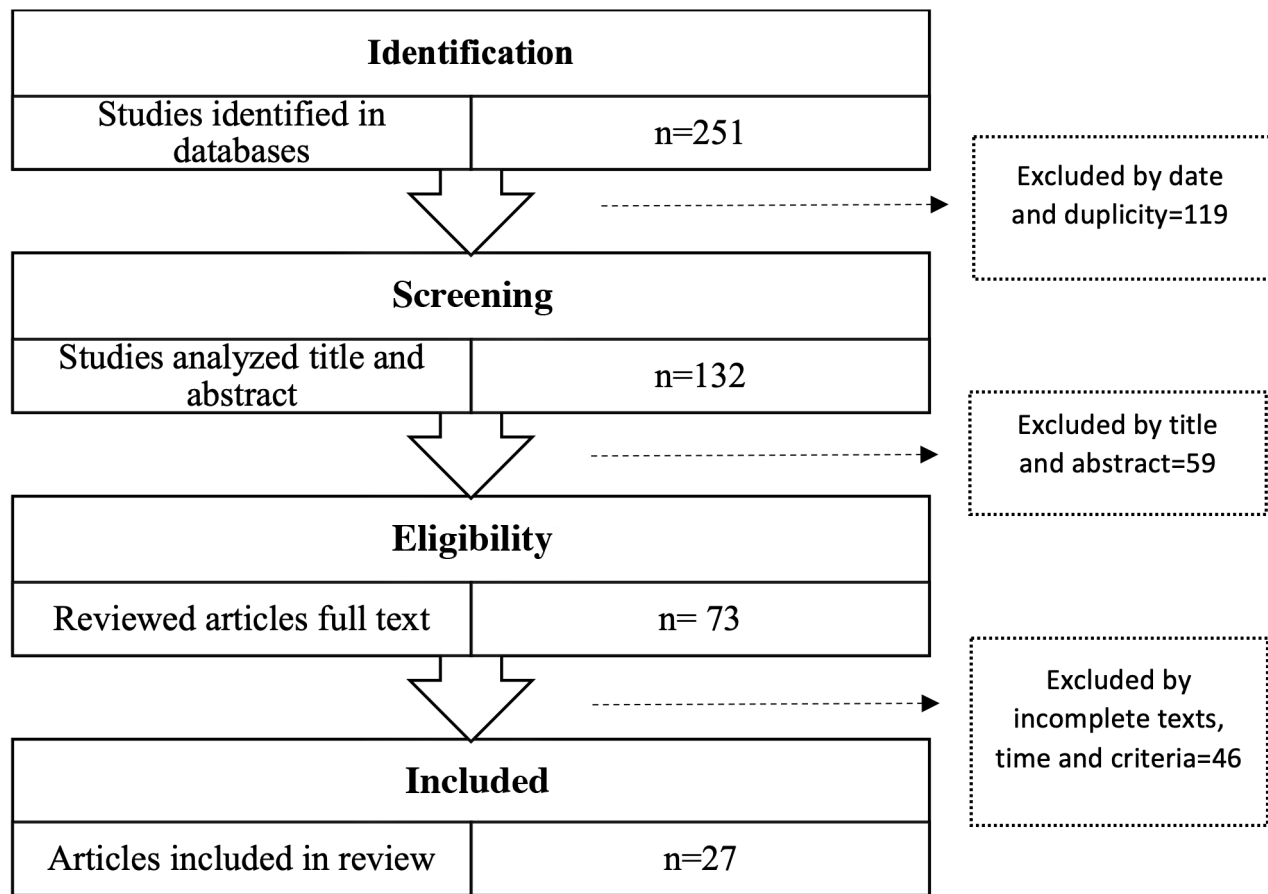
Source: prepared by authors.

As part of the eligibility process, the abstracts of the articles were read, where fulfillment of the inclusion criteria was recognized: original articles and reviews, with full text available online, written in English, Spanish, Portuguese and French between 2019 and 2021. The following were considered as exclusion criteria: abstract, book chapters and editorials.

The search strategy developed in the databases Web of Science, Medline (PubMed), SCOPUS, EMBASE, CINAHL, considered the thesauri MeSH and Emtree and the Boolean connectors (AND/ OR): “loneliness”, “elderly”, “Aged”, “Isolating”, “Social Isolation”, “COVID-19” and “Coronavirus Infections”. The CASPe (Critical Appraisal Skills Programme español) templates were implemented to verify the methodological quality of the articles.

As a secondary strategy, the bibliographic references of the articles retrieved were reviewed to identify possible relevant studies that were not recovered from the electronic databases and institutional documents.

The selected articles were included in the Mendeley program, and an Excel database was constructed that included the following variables: types of study, authors, countries, languages, population, discipline, social isolation and loneliness, measurements and COVID-19. A systematic analytical method was implemented that facilitated an unbiased review of the data, the result of which is reflected in Figure 1 by means of the PRISMA statement diagram.



**Figure 1.** Search flowchart

**Source:** prepared by authors.

For the development of the review, resolution 8430 / 1993 was analyzed, and it was deemed, since a retrospective document review was performed. Similarly, law 1915 / 2018 on copyright and law 1032 / 2006, which recognize plagiarism as a crime in Colombia, were considered.

## Results

According to the literature, the following categories were established, from which the results were developed. The impact of social isolation due to COVID-19 on the elderly is noteworthy.

### ***Knowledge of loneliness and social isolation***

Loneliness is understood as the lack of interaction with others, which is classified as objective (lack of social networks) and subjective (emotional characteristics of the person.) It represents between 20% and 40% of prevalence in the elderly (12,13) and is associated with biological and psychosocial factors. Biological factors include: increased age, the female gender and the presence of chronic illnesses. Psychosocial aspects include marital status (widowhood, divorce or separation), educational level, loss of family members and isolation (14).

Now, it is understood that isolation is a risk factor associated with loneliness (11), and some authors define social isolation as an objective situation of having minimal contact with other people, including family members and support networks (22,23). It is worth noting that living alone does not imply suffering from loneliness or social isolation, since it should be understood that social isolation is totally involuntary (24).

Faced with the pandemic situation caused by COVID-19, the measure of compulsory isolation had an impact on the physical, mental and emotional health of the elderly, since this involuntary act triggered pejorative actions in terms of old age on the part of health personnel and the population in general (discriminatory behavior towards the elderly), establishing the “old person syndrome” and creating situations that diminished the quality of life, just for belonging to the group of people over 60 years of age (25,26).

### ***The COVID-19 pandemic and implications of isolation***

Mehra et al. (25), posited that social isolation among older adults is a serious public health problem, due to the risk of cardiovascular, autoimmune, neurocognitive and mental health problems. The aforementioned is evident in the longitudinal study conducted by Santini et al. (27), which demonstrated that social disconnection exposes older adults to an increased risk of depression and anxiety. According to the study by Lei et al. (28), the prevalence of anxiety and depression was approximately 8.3% and 14.6%, a situation that peaks in the elderly population with a history of mental disorders due to the stress associated with COVID-19 (29,30).

The uncertainty of developing or not developing the disease, misinformation or excess of information through mass media and social isolation are considered stressors that increase mental health morbidity (29,31). For this reason, it is of vital importance that during a pandemic, health personnel and family members and/or caregivers participate in the process by creating spaces for listening and support (32,33).

### ***Factors associated with loneliness and mental illness due to COVID-19***

According to Lei L et al. (28) factors associated with mental illness during the time of the COVID-19 pandemic included: lower income, lower educational levels, concerns about the risk of contagion, lack of psychological support or health and support networks, and a lack of a health care provider, among others.

In a descriptive cross-sectional study conducted in China, the highest rate of anxiety and depression were found to be related to alcohol use or abuse and a history of low mental well-being, indicating that in order to address the mental health crisis during an epidemic, a multi-faceted approach must be implemented (18). As discussed, loneliness is related to isolation (24,34) and is deemed a problem that increases the risk of adverse mental health outcomes (35) and even more so when considering imminent death for this age group in the face of SARS-CoV-2 infection (25).

In a case study undertaken by Fatke et al. the authors underscored the consequences caused by the measures applied in the context of COVID-19. First: increased anxiety in people with pre-existing psychiatric illnesses, second: increased domestic violence associated with the consumption of psychoactive drugs, and third: the prohibition to visit the sick elderly patient, generating catastrophic effects such as the “apocalyptic syndrome” (imminent death of the elderly person in the presence of the virus) (19). Armintage et al. (36) noted that the adverse effects of isolation may stand out in the elderly and in people with pre-existing mental health conditions (37). Another problem related to mental health is suicide among the elderly, which is related to social isolation (30).

### ***Gerontological approach to social isolation***

Recognizing the impact of social isolation as a risk factor for loneliness and the multidisciplinary approach required, both from the different healthcare sectors and from the social sciences, this paper presents the gerontological approach according to the literature reviewed.

Authors such as Huarcaya et al., recommend the creation of multidisciplinary teams that include psychiatrists, psychologists, nurses and other mental health workers (4,17,18), who should focus their actions on educating people on the mental health effects of isolation and encouraging mentally healthy behaviors (38,39).

Some of the activities that should be included in gerontological interventions are assessing the accuracy of the information being provided, strengthening social support, reducing the stigma associated with the disease towards the elderly, continuation of daily activities, and the use of available psychosocial services (internet or telephone services) (29).

The use of information and communication technologies (ICT) (40,41) made it possible to address and accompany the elderly during the time of the pandemic, as mentioned by Duan et al. Zhu in relation to the experience in China, where universities opened online platforms to provide advice and support regarding mental health (39). Other helpful tools included telephone monitoring and scheduling safe outings in public, the latter being one of the most effective measures to reduce signs and symptoms of mental illness, as well as guaranteeing monitoring of chronic diseases and planning the supply of medicines (7,14).

## Discussion

In the context of the pandemic, different views have been proposed regarding the amount of social isolation. Of the articles included in the review, the majority were from Chinese literature, where the authors referred to the situation of isolation in the elderly.

In the results found, the difference between the concept of loneliness and that of isolation was evident. Author like Gene-Badia et al. and Ong AD et al. (11,22) point out that social isolation is a risk factor for loneliness and that it has great implications on the functionality of the elderly person, this consideration is also contemplated in a review study that found that social isolation often results in loneliness, which is a factor significantly associated with depression in older adults since the triad between loneliness, isolation and depression has been demonstrated (42).

Moreover, authors such as Santini et al. and Lei et al. (27,28) agree in their research on the evidence that exists of the relationship between the measure of isolation and the risk of cardiovascular, autoimmune, neurocognitive and mental health problems. These findings are highlighted by Irmak A, et al. (43), who found that social isolation measures and curfews for more than three months have generated inevitable changes at a physiological and psychosocial level, being considered a public health problem. Also in this study, the authors assessed adherence to treatment, where 21.6% of the elderly population is between low knowledge of the treatment and low motivation regarding their treatment-disease process (43).

On the other hand, in two studies carried out among the Chinese population (17,28), loneliness and social isolation were identified as risk factors for the mental health of the elderly, as Chen et al. point out (44). The authors emphasize that people who feel lonely or isolated, and those who experience stress in relationships, are more likely to develop symptoms of depression. It is at this point where the information provided by the media (29,31) can increase mental health symptoms since, as Irmak et al. point out, the preferred activity of older people during quarantine is watching television, or 84.3% (43).

Among the variables associated with older people, isolation and loneliness are the preexistence of psychiatric illness, domestic violence, isolation from family members (17,18). This is evident in a study carried out by Hao et al. (45) where the preexistence of mental illness was evaluated, noting the severity of the negative psychological impact in psychiatric patients. It is worth highlighting the “apocalyptic syndrome of the elderly” reported by Fatke et al. (19) and shared by Mehra A et al. (25), where the imminent death of the elderly person due to the presence of the virus has generated feelings of anguish and uncertainty in the elderly and their families.

Martins Van (42) stated that the population most affected by these measures has been the elderly, and the use of health technologies has contributed to combating the effects of loneliness resulting from isolation. (43). For this reason, different studies highlight the importance of the gerontological approach with a multidisciplinary team and the use of health technologies (40,44,46).

## Conclusions

Social isolation as a measure to prevent infection with COVID-19 has shown consequences on the physical, social and emotional health of older people. The implications that social isolation had in the development of loneliness and mental illness in COVID-19 were evident in the review undertaken. For this reason, the use of health technologies becomes an ideal tool to address the elderly, strengthening adherence to treatment, control and monitoring of chronic non-communicable diseases.

## Conflicts of interest

The authors declare that they have no conflicts of interest.

## Funding

No external funding was provided to the authors for this study.

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