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Life in lockdown: Social isolation, loneliness and quality of life in the elderly during the COVID-19 pandemic: A scoping review

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ABSTRACT

Coronavirus disease-2019 (COVID-19) had an unprecedented effect all over the world, especially in older individuals. The aim is to evaluate the social isolation, loneliness and quality of life of elderly individuals during the COVID-19 pandemic and to map suggestions to reveal and improve the current situation. This was a scoping review. Articles since December 2019 to March 2021 published on PubMed, Scopus, ProQuest, Cochrane Library, CINAHL databases with the following MeSh terms ('COVID-19', 'coronavirus', 'quality of life' 'aging', 'older people', 'elderly', 'loneliness' and 'social isolation) in English were included. The research, by consensus, resulted in seven studies selected for full reading, including three descriptive and cross-sectional studies, a quasi-experimental study, a pre-post pilot program, an editorial note and a correspondence. In generally, these recommendations were grouped as evaluating the current state of loneliness and isolation in elderly people, making more use of technology opportunities, using cognitive behavioral therapies and different individual intervention components.

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Introduction

(K. Sayin Kasar).

The COVID-19, which was declared as an epidemic by the World Health Organization (WHO) on March 11, 2020, caused great concern all over the world; it spread rapidly, affecting more than 223 countries and regions.¹⁻³ In this pandemic disease, older people (especially older than 80 years old) are at higher risk of mortality.⁴ While 80% of deaths in the US are among adults aged 65 and over⁵, more than 95% in Europe and about 80% in China include those over 60.^{6,7} Therefore, health strategies such as quarantine and social distancing are important in the elderly to prevent the spread of coronavirus.^{8–10}

The risk of developing a serious and often deadly disease has led to numerous restrictions in many countries that can have a detrimental effect on the psychological functioning of the elderly.¹¹ However, with these restrictions, limited contact with other people can lead to the loss of social support, which is especially important for older people.^{12,13} Also, social isolation may result in loneliness, which is a factor significantly associated with depression in the elderly.¹⁴ Recent cross-sectional studies have reported higher levels of loneliness during the COVID-19 pandemic.¹⁵ In a study, it was stated that loneliness increased significantly among Dutch older adults during the epidemic compared to the end of 2019.¹⁶ Loneliness, which is a subjective condition that can

*Corresponding author. *E-mail addresses:* kadriye_syn_321@hotmail.com, kadriyekasar@aksaray.edu.tr be felt even in the presence of others¹⁷, has no different effects than objective social isolation measures.¹⁸ Loneliness is a strong risk factor for the development of a number of health conditions, such as coronary heart disease and stroke¹⁹, and is associated with a 26% -50% increased risk in mortality.^{18,20} These situations have been shown to predict worse disease outcomes and quality of life in older populations.^{21,22}

It is a fact that the world has to live with the new coronavirus. Therefore, in the ongoing COVID-19 pandemic, it is a necessity to examine social isolation, loneliness and quality of life in elderly people who are confined at home and isolated from social life. In this process, it is clear that understanding the social isolation, loneliness, and factors affecting the quality of life that the elderly are exposed to will actually facilitate the rehabilitation of elderly people. However, the effects of COVID-19 quarantine on the health of older adults have not yet been adequately studied. This scoping review gathers all available evidence on this topic and makes it possible to identify gaps in the literature for new primary studies. The aim is to evaluate the social isolation, loneliness and quality of life of elderly individuals during the COVID-19 pandemic and to map suggestions to reveal and improve the current situation.

Methods

We believe scoping review is most appropriate to present the current assessment and possible recommendations of the wide variety of study contents mentioned above. A scoping review allows a







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broader search and answers multiple questions while still performing a systematic search.²³ The conduct of this scoping review was based on the framework and principles reported by Arksey and O'Malley²⁴ and further recommendations provided by Levac, et al.²⁵ For scoping reviews, the PRISMA-ScR extension was developed to improve the quality and conduct of reporting of scoping reviews.²⁶ Appropriate adjustments were made to reflect the nature of the evidence examined, and the review included the following 5 main steps.²⁴

Stage 1: Identifying the research question

Stage 2: Identifying relevant studies

Stage 3: Study selection

Stage 4: Charting the data

Stage 5: Collating, summarising and reporting the results

The optional 'consultation exercise' recommended by Arskey and O'Malley²⁴ was not conducted.

Data sources and search strategy

A detailed summary of the literature search is provided in Fig. 1. First of all, on Google Scholar, to get an overview of the relevant literature, the discovery includes free text terms such as "elderly", "COVID 19", "quality of life", "social isolation", "loneliness" and "quarantine" a purposeful research was carried out. Later, a search strategy was developed to explore the current situation and assessments for quality of life assessment in the elderly during the COVID-19 pandemic process.

There has been a lot of research in the field of COVID-19 in the last year. December 2019 to March 2021 published on PubMed, Scopus, ProQuest, Cochrane Library ve CINAHL databases with the following MeSh terms ('COVID-19', 'coronavirus', 'quality of life' 'aging', 'older people', 'elderly', 'loneliness' and 'social isolation) in English were included. Keywords and search terms were combined and edited to include topics such as "COVID-19 quality of life" or "quality of life improvement" and "elderly social isolation" or "elderly social isolation and loneliness". Articles were included or excluded according to pre-determined eligibility criteria. The selection of the studies included are showed in Table 1.

Data extraction

The data were obtained in line with the titles of authors, publication year, country, title, study design and type and content using a data extraction tool developed by the authors. The studies were examined by two independent reviewers. Finally, KSK and EK randomly cross-checked approximately 10% of each other's extractions to ensure correctness and completeness of the extracted data. No discrepancies were noted. See Table 2 for an overview of data from each article and synthesized study results.

Results

Literature search

The results are presented in a PRISMA-ScR diagram flow (Fig. 1). In the first evaluation, 1193 articles were obtained within the scope of the research. After scanning all article titles for eligibility and



Fig. 1. Adapted Preferred Reporting Items for Scoping Review flow Diagram of the Study Selection Process.

Table 1

Inclusion and Exclusion Criteria in This Study.

Inclusion	Exclusion
December 2019-March 2021	Published before December 2019
Trials, reviews, case studies or series, and other descriptive studies of any type on assessment and management of quality of life in the elderly social isolation, loneliness during pandemic process. We also included expert opinions, recom- mendations if they added additional insight to the current literature.	We excluded society and professional association statements, theses, dissertations, conference papers about COVID-19 if they did not add any new information.
Written in English	Not in English
Published (number, volume received)	Preprints were not considered.

eliminating duplicates in databases, the title and summary of the remaining articles were read. Since they did not meet the inclusion criteria, 1139 articles were initially excluded from the study. Fifty-four articles suitable for full reading were obtained. Finally, based on the inclusion criteria, a total of seven studies were included in this scoping review focusing on isolation, loneliness and quality of life in the elderly during the pandemic process, with the consensus of two researchers. These studies are three descriptive and cross-sectional studies, a quasi-experimental study, a pre-post pilot program, an editorial note and a correspondence (Table 2).

Table 2

Summary of the Studies Reviewed,

Characteristics of included articles

In an article by Armitage and Nellums (2020) (correspondence), the results of isolating older adults during the COVID-19 outbreak are discussed. At the same time, it is emphasized that social isolation among elderly adults is a "serious public health problem", increasing the risk of cardiovascular, autoimmune, neurocognitive and mental health problems. It is stated that social isolation will disproportionately affect elderly individuals, especially those whose only social contact is outside the home, and that older adults who have no close

N	o Author(s)(year)	Country	Title	Design and Type	Content
1	Armitage & Nellums, 2020 ¹³	, UK	COVID-19 and the consequences of isolating the elderly	Correspondence	Emphasize on COVID-19 and the consequences of isolat- ing the elderly. To draw attention to the impact of isola- tion on more disadvantaged and marginalized populations, which should be targeted urgently for the implementation of preventive strategies.
2	Berg Weger & Mor- ley, 2020 ²⁷	USA	Loneliness and social isolation in older adults during the COVID-19 pandemic: implications for geron- tological social work	Editorial	As the COVID-19 pandemic is forcing the world to change the way we live, it highlights assessment and sugges- tion to develop strategies and approaches to address loneliness and social isolation among seniors.
3	Bidzan-Bluma et al, 2020 ²⁸	Germany	A Polish and German population study of quality of life, well-being, and life satisfaction in older adults during the COVID-19 pandemic	Descriptive and cross-sectional	During the pandemic, it was stated that the quality of life, life satisfaction and well-being were affected by age, trait anxiety and the coronavirus threat. Seniors rated their quality of life, life satisfaction and well-being higher than younger people during the pandemic. They also experienced lower levels of persistent anxiety and coronavirus threats than younger age groups.
4	Joosten-Hagye et al, 2020 ²⁹	USA	Age-friendly student senior connec- tion: students' experience in an interprofessional pilot program to combat loneliness and isolation among older adults during the COVID-19 pandemic	Pre-post pilot program	A total of 115 graduate students have connected with older adults. Students had 30 to 60 minutes of phone calls with older adults 2 to 5 times a week for 6 weeks. Preliminary results showed that there were statistically significant changes in the reported benefits and out- comes of students participating in the program.
5	Stolz et al, 2021 ³⁰	Austria	The impact of COVID-19 restriction measures on loneliness among older adults in Austria	Descriptive and cross-sectional	In the study, it was stated that loneliness increased in 2020 compared to previous years, there was a moder- ate positive relationship between the number of restraint measures affecting older adults and loneliness, and loneliness was higher during lockdown, especially among those living alone.
6	Zurigat & Fattah, 2020 ³¹	Jordan	The effect of Holy Quran Voice on the quality of life among the elderly during Coronavirus Outbreak	Quasi-experimental	To achieve this, they used the quasi-experimental approach on a sample consisting of (N=64), divided into two groups (N=32) as a control group and (N=32) as the experimental group. Because of the home quarantine and to reduce face-to-face interaction, we used a ques- tionnaire to measure the quality of life using the Google form. The experimental group applied the experiment by listening to the Quran for (10) minutes and 3 times a day for 30 days, after completing the experiment the quality of life was measured for the two groups.
7	Macdonald & Hülür, 2021 ³²	Switzerland	Well-Being and Loneliness in Swiss Older Adults During the COVID-19 Pandemic: The Role of Social Relationships	Descriptive and cross-sectional (a)micro longitudinal study, (b)online survey study	This study examined data from a study on well-being, loneliness and social relationships with 120 older adults in Switzerland in 2019, and 99 older adults who participated in a weekly online survey for 4 weeks shortly after the COVID-19 lockdown.

relatives or friends are more alone, isolated or out of sight, and are at great risk.¹³

In an editorial note, it is stated that social service experts serving the groups most defenseless against COVID-19 have developed creative practices to support efforts to keep them in contact with others in order to alleviate loneliness and social isolation in the elderly. In this process, face to face activities and contacts have started to be facilitated virtually by means of individual devices and video conferencing. Also, social distancing, personal protective equipment and virtual reality devices are introduced. The security of daily telephone calls, home delivery services, health visits either virtually or by telephone, health education and news sharing have become a part of social services. As a result, this study emphasizes that social service practices have brought about striking and rapid positive changes for older adults.²⁷

In a study conducted by Bidzan-Bluma et al, the writers examine predictors of quality of life, comfort and satisfaction with life in older adults in Germany and Poland during the pandemic, such as risky behavior, trait anxiety, a feeling of threat, sleep quality and optimism, and compare them between three different age groups. Research of quality of life in the pandemic in the >60 age group gave conflicting results. It was found that the older people assessed their quality of life, comfort, satisfaction with life and sleep quality higher than did the younger groups with whom they were compared.²⁸

The Keck Medical Faculty arranged a pilot scheme to combat loneliness and isolation in older adults living in California. A total of 115 postgraduate students from different professional fields made contact with the older adults. Students engaged phone calls with older adults 2 to 5 times per week for 6 weeks. On a web page prepared for the benefit of the students, there were articles on age awareness and communication strategies, age abuse knowledge pages, age abuse websites, consumer protection resources, personal care resources (empathy, stress management, COVID-19) and peer evaluation articles. Also, information was added on food help programs, healthy habits, financial assistance programs, family and caregiver support, COVID-19 resources, technical help and coping skills. A weekly news bulletin was sent to the students containing inspirational tips and stories. In this study, students completed Qualtrics surveys containing 18 questions before and 6 weeks after being matched with an older adult. The research questions were about the interests of the students in participating in the program, whether there was a perceived benefit for the students participating in the program, and what were the students' perceptions about the support system of older adults. The preliminary results of this study show statistically significant changes in the reported benefits and outcomes. It shows that such programs can reduce the social isolation and loneliness of older adults and students with stay-at-home restrictions.²⁹

Stolz et al. examined the effect of measures to restrict COVID-19 on loneliness in older adults in Austria. In this study, three different analyzes were made and pre-pandemic and pandemic loneliness levels were evaluated with the UCLA-3 scale. In this study, it was found that the loneliness levels of older adults increased in 2020 compared to previous years, they were affected by loneliness, there was a correlation between the restriction measures announced and loneliness, and loneliness rates were higher, especially in those living alone.³⁰

In the study by Zurigat and Fattah, the authors investigated the effect of the Quran reading voice on the quality of life of older adults. Because of the quarantine, the quality of life questionnaire was applied by means of Google Form. The experimental group listened to the Quran for ten minutes three times a day for 30 days; the quality of life of the experimental and control groups was measured, and it was concluded that there was an effect on the quality of life.³¹

In the study by Macdonald and Hülür, how the COVID-19 epidemic affected the well-being and loneliness of older adults and the structural and functional characteristics of social relationships. The study was conducted using data from 99 older adults who participated in (a) a 3-week micro-longitudinal study on social relationships and well-being in 2019 and (b) a weekly online survey for 4 weeks of COVID-19 lockout. The main conclusions are that the global pandemic has had a significant negative impact on the emotional wellbeing and loneliness of older adults, and aspects of social relationships are associated with loneliness both before and during the pandemic.³²

Recommendations of the reviewed studies

The effects of social isolation and loneliness in the elderly during the COVID-19 pandemic and the literature recommendations for improving quality of life are summarized in Table 3. It is emphasized that during the pandemic, older adults in the worldwide, and especially those whose only social contact is outside the home such as in daycare venues, community centers and places of worship will be disproportionately affected. It is emphasized that social support networks and online technologies can be used to reduce the negative effects of the pandemic process. It is recommended that elderly people talk more frequently with people who are important to them, close family and friends, volunteer organizations or healthcare professionals on the phone, or social assistance projects that provide peer support during the isolation period. In addition to this, it is argued that cognitive behavioral therapy can be used to reduce loneliness and improve mental health.¹³

It is emphasized that older adults can use various strategies to combat the crisis during the pandemic. First of all, it is important for there to be an easy and quick means of evaluating loneliness and social isolation and evaluating whether an old person is alone or isolated with his or her social group. There are a number of instruments which may be used, but the ALONE scale has been developed and is recommended. After that, it is argued that evidence-based interventions can be developed and implemented in order to limit loneliness and social isolation, and that social service specialists can move beyond traditional support approaches by using innovative methods such as virtual or tele-health presentation methods and intervention components such as laughter, mindfulness, meditation, recall and gardening therapy, or body movement such as exercise, dance or yoga. In addition, it is stated that learning new skills, and learning the importance of technology and the importance of being prepared for different situations and how to establish relations with people in non-traditional ways can be a part of social service practices. It is recommended that social service experts, in adopting technology as a service provision option which can be applied, can provide it in a similar way to traditional interventions. Also, it is noticeable that COVID-19 triggers more age discrimination in society.²⁷

In the findings obtained from one study which was examined, it was recommended that while older adults had better psychological functioning than young adults during the pandemic²⁸, they could use breath meditation, autogenetic training and cognitive behavioral therapy methods to improve the psychological resources which support the quality of life.^{13,28} It is emphasized in a study in which a program was conducted which supported the development of social relations between older adults and postgraduate students from various postgraduate programs that social isolation and loneliness can be reduced in socially isolated older adults. At the same time, it is said that it is important to include the demography of older adults such as data on expectations, attitudes and perceived advantages in order to develop this kind of program in the future.²⁹

Stolz et al. reported that COVID-19 restrictions in Austria gave rise to increasing loneliness among older adults, but these effects were a short term, and therefore strongly negative results were not expected for their mental health. Against this, it is recommended that the effects of restrictions on longer or repeated social isolation in the

Table 3

Recommendations of the Reviewed Studies.

Author	Aim	Main recommendations
Armitage & Nellums, 2020 ¹³	Emphasizing COVID-19 and the consequences of isolating the elderly	On this topic, more use of online technologies in social support networks is proposed. Among them are community outreach projects that provide peer sup- port during more frequent phone calls or compulsory isolation with other people from close family and friends, volunteer organizations or health professionals. It was also highlighted that cognitive behavioral therapies can be used online to reduce loneliness and improve mental health.
Berg Weger &Morley, 2020 ²⁷	Presenting implications for gerontological social work in the process of loneliness and social isolation in older adults during the COVID-19 pandemic.	In this regard, the importance of easy and fast tools to evaluate loneliness and social isolation was emphasized. It is recommended to develop and adapt evidence-based interventions to address loneliness and social iso- lation. Innovative methods (eg virtual / tele-health delivery methods) and intervention components (eg laughter, mindfulness, meditation, recall and gardening therapy, body movement (eg exercise, dance, yoga) are recommended in this process.
Bidzan-Bluma et al, 2020 ²⁸	In the study, they studied the predictors of quality of life, well-being, and life satisfaction (including risky behavior, trait anxiety, feeling of threat, sleep quality, and optimism) during the pandemic in older people from Germany and Poland and compared them to three different age groups.	It was emphasized that despite the better psychological functioning of older adults compared to young adults during the pandemic, various types of assistance, including stress reduction, should be implemented to improve the psychological resources that promote quality of life in the elderly. Methods that focus on the body, such as breath meditation and Autogenic Training, and methods based on cognitive behavioral therapy were suggested.
Joosten-Hagye et al, 2020 ²⁹	California, the Keck School of Medicine collaborated with A program was created by linking 115 interprofessional grad- uate students with older adults.	In conjunction with this program implemented in this study, the next basic steps to develop future programs, it is suggested to include older adult demographics (expectations, attitudes, perceived benefits, etc.). It is emphasized that the inclusion of loneliness and isolation reports from such students and older adults will provide a stronger evidence base for similar programs.
Stolz et al, 2021 ³⁰	Evaluating the impact of COVID-19 containment measures on loneliness among older adults in Austria.	However, it was noted that the effects of social isolation and loneliness on the elderly are short-lived, and therefore strong negative consequences are not expected for the mental health of older adults. However, the effects on loneliness and subsequent mental health problems are said to be both longer lasting and severe if future restraint measures are imple- mented repeatedly and / or over longer periods
Zurigat & Fattah, 2020 ³¹	The study aimed to investigate the effect of the holy Quran voice on the quality of life among the elderly during Coro- navirus (COVID-19) Outbreak	The results of the study have shown that the level of quality of life came with a lower degree in the pre-measurement of the two groups, as well as the mental health domains that were the most affected in a positive way through listening to the Quran, additionally, there were statistically significant differences between the post-measurement of the two groups and favor of the experimental group. The researchers recom- mend that the regularity strategy should be used to hearing the Quran because of its positive effects on the various body systems.
Macdonald & Hülür, 2021 ³²	How the COVID-19 epidemic affected the well-being and loneliness of older adults and the role of structural and functional features of social relationships were examined.	Its key findings suggest that the pandemic has significant negative effects on the emotional well-being and loneliness of older adults. However, it is stated that maintaining social communication to a satisfactory level during this period reduces this effect. Therefore, it is emphasized that enabling older adults to stay in touch with their social environment according to their personal preferences can reduce the impact of any lockdown on their well-being in the future.

future should be monitored closely.³⁰ In the study of Zurigat and Fattah (2020), unlike the above suggestions, the authors recommend listening to Quran readings due to its positive effects on various bodily systems.³¹ Finally, Macdonald and Hülür recommended that social communication should be maintained to a satisfactory level in this process and that older adults should be kept in touch with their social environment according to their preferences.³²

In this review, a flowchart was created after evaluation of the studies, containing the main study recommendations. The authors generally emphasize the flowchart below to reduce loneliness and improve the quality of life of older adults isolated during the COVID-19 pandemic (Fig. 2).

Discussion

As to 4 March 2021, there have been 114.653.749 confirmed cases of COVID-19, including 2.550.500 deaths, reported to World Health Organization, from more than 223 countries and territories.³³ COVID-19 has changed the normal way of living in the worldwide, and has

had an unparalleled devastating effect on older adults in particular. This scoping review provides important information on improving the quality of life of older adults whose loneliness has increased with social restrictions during the COVID-19 pandemic.

Evaluation of loneliness and social isolation in older adults during the COVID-19 pandemic

Loneliness is a big problem in the coronavirus pandemic, especially for older adults. However, although it has been predicted that older adults would be at particularly high risk of the adverse psychological effects of COVID-19³⁴, emerging data show the opposite.^{15,28,35} Considering that this situation is still continuing and is likely to continue for some time, it is necessary to take urgent action. For this, there is a need for means to evaluate social isolation, loneliness and quality of life especially in older adults, and particularly those living alone, who are at greater risk.³⁰ In this regard, the ALONE scale, which evaluates loneliness quickly and easily, has been developed and is recommended.²⁷ Also, the revised UCLA Loneliness Scale is another scale



Fig. 2. Flowchart of the management of social isolation, loneliness and poor quality of life in older adults isolated during the COVID-19 pandemic (created by the authors).

which can be used as a standard scale to measure perceived loneliness.³⁶ The shortened version of this scale, the Three-Item UCLA Loneliness Scale, is widely used to identify lonely older adults.³⁷ In conclusion, it is thought that it will be a guide in managing the process of seeing the current situation with scales providing objective data.

Making greater use of the opportunities of technology in the COVID-19 pandemic

It is important to make greater use of the opportunities of technology in order to reduce the effect of isolation in older adults relating to the restrictions.^{13,27} Even before the pandemic, there was a steady increase in the number of older adults interested in technology with 75% of those over the age of 65 going online every day, and an increase of 24% between 2013 and 2017 in the number of adults over the age of 65 possessing a smartphone.³⁸ At the same time, it has been stated that there may be inequalities in access to digital sources or in literacy.¹³ In particular, the precondition to benefit from remote intervention is to have access to the necessary technology. However, certain technologies may not be accessible due to geographic location (eg rural residents) or socioeconomic status.³⁹ Also, it has been emphasized that reliance on technological solutions puts a greater burden on those without access to technology, such as older adults who are socially disadvantaged or those who are cognitively or sensorily impaired.⁴⁰ A qualitative study was conducted with the aim of determining older adult's first experiences of household isolation, social distancing and shielding in the pandemic, and the plans they made in the COVID-19 pandemic. It was concluded that people over 70 adapted to household isolation, social distancing and shielding by using social media and neighborhood resources.⁴¹ Differently however, it is reported in the literature that the evidence for the effect of video to reduce loneliness in older adults is very indeterminate.⁴² In conclusion, it is thought that

while the effects of the pandemic last, use of the various mostly free means of video communication such as Facebook, Whatsapp, Telegram, Google, Twitter and Skype by older adults under lockdown will be of benefit. It is also thought that methods such as daily telephone calls will help older adults who have limited access to technology to remain socially active.

The use of cognitive behavioral therapy during the COVID-19 pandemic

Chronically ill older adults are a defenseless population with lower quality of life in this COVID-19 crisis.⁴³ For this reason, it is important to provide online cognitive behavioral therapy online to reduce the loneliness of older adults during the pandemic and to improve mental health and thus the quality of life.^{13,28} Also, innovative methods such as virtual or tele-health presentation types, various intervention components such as laughter, mindfulness, meditation, recall and gardening therapy and bodily movements such as exercise, dance and yoga are recommended by social service experts.²⁷ It is thought that making older adults feel they have a place in social life and reaching them by different methods will help to reawaken the feelings of self-esteem or self-respect which they have forgotten as a result of the COVID-19 pandemic measures.

The use of various individual intervention components during the COVID-19 pandemic

Various individual interventions are having more frequent telephone conversations with important people, close family and friends, peers, volunteer organizations or health professionals, and social assistance projects contributing to this process.¹³ Also, it is reported that they can benefit from pilot applications which are created by matching old and young people.²⁹ Similarly, older adults experience lower levels of loneliness if they have a larger social network, have more social interactions before and during the pandemic, did not live alone, and report that social support was avaible to them.³² In addition, it is emphasized that interventions relating to older adult's religious beliefs are also important.³¹ Additionally, a study with elderly patients during the COVID-19 outbreak found that optimism, social support, and health-related quality of life were positively correlated. It is emphasized that optimism and social support can be effective in coping with difficulties and buffering depression, thus positively affecting the quality of life.⁴⁴ In conclusion, it is thought that positive results may be obtained with guidance and interventions to meet the needs of older adults with regard to the characteristics of their culture, value and beliefs.

Conclusions

The findings show that older adults experience social isolation in connection with the restrictions during the pandemic, and that their degree of loneliness and quality of life are negatively affected. Older adults who are staying outside the home in social service institutions, those who are living alone, and those who have a low socioeconomic level are at particularly greater risk. For this reason, it is important to rapidly evaluate the social isolation, loneliness and quality of life of older adults in this situation, to create awareness on this topic, and to carry out the necessary measures at a national and international level.

Disclosure statement

The authors have no potential conflicts of interest to disclose.

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Declaration of Competing Interest

The authors declare that they have no conflict of interest.

References

- Priyadarshini I, Mohanty P, Kumar R, et al. Analysis of outbreak and global impacts of the COVID-19. *Healthcare (Basel)*. 2020;8(2):148. https://doi.org/10.3390/healthcare8020148. Published 2020 May 29.
- Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. Acta Biomed. 2020;91 (1):157–160. https://doi.org/10.23750/abm.v91i1.9397. Published 2020 Mar 19.
- World Health Organization (WHO). Coronavirus disease (COVID-19) pandemic. [cited 4 March 2021]. Available from: https://www.who.int/emergencies/diseases/ novel-coronavirus-2019?gclid=Cj0KCQiA6Or_BRC_ARIsAPzuer_EFDouGeVvsxjB6 pinzNONyd6kLUjTkw7zAuA9ak-1cbBRtY-bCqwaAh6IEALw_wcB.
- World Health Organization (WHO). COVID-19 strategy up date. World Heal Organ. 2020. [cited 04 January 2021]. Available from: https://www.who.int/publicationsdetail/covid. 19-strategy-update-14-april-2020).
- CDC COVID-19 Response Team. Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19) - United States, February 12-March 16, 2020. MMWR Morb Mortal Wkly Rep. 2020;69(12):343-346. Published 2020 Mar 27. 10.15585/ mmwr.mm6912e2.
- World Health Organization (WHO). Statements, press and ministerial briefings. 2020. [cited 04 January 2021]. Available from: http://www.euro.who.int/en/ health-topics/health-emergencies/coronavirus-covid-19/statements.
- Epidemiology working group for NCIP epidemic response, chinese center for disease control and prevention. *Zhonghua Liu Xing Bing Xue Za Zhi*. 2020;41(2):145–151. https://doi.org/10.3760/cma.j.issn.0254-6450.2020.02.003.
- Rudolph CW, Zacher H. The COVID-19 generation": a cautionary note. Work Aging Retire. 2020. https://doi.org/10.1093/workar/waaa009. waaa009. Published 2020 Apr 16.
- Cudjoe TKM, Kotwal AA. Social distancing" amid a crisis in social isolation and loneliness. J Am Geriatr Soc. 2020;68(6):E27–E29. https://doi.org/10.1111/jgs.16527.
- Sepúlveda-Loyola W, Rodríguez-Sánchez I, Pérez-Rodríguez P, et al. Impact of social isolation due to COVID-19 on health in older people: mental and physical

effects and recommendations [published online ahead of print, 2020 Sep 25]. J Nutr Health Aging. 2020:1–10. https://doi.org/10.1007/s12603-020-1469-2.

- Mukhtar S. Psychological health during the coronavirus disease 2019 pandemic outbreak. Int J Soc Psychiatry. 2020;66(5):512–516. https://doi.org/10.1177/ 0020764020925835.
- Gerst-Emerson K, Jayawardhana J. Loneliness as a public health issue: the impact of loneliness on health care utilization among older adults. *Am J Public Health*. 2015;105(5):1013–1019. https://doi.org/10.2105/AJPH.2014.302427.
- Armitage R, Nellums LB. COVID-19 and the consequences of isolating the elderly. Lancet Public Health. 2020;5(5):e256. https://doi.org/10.1016/S2468-2667(20)30061-X.
- Adams KB, Sanders S, Auth EA. Loneliness and depression in independent living retirement communities: risk and resilience factors. Aging Ment Health. 2004;8:475–485. https://doi.org/10.1080/13607860410001725054.
- Bu F, Steptoe A, Fancourt D. Who is lonely in lockdown? Cross-cohort analyses of predictors of loneliness before and during the COVID-19 pandemic. *Publ Health*. 2020;186:31–34. https://doi.org/10.1016/j.puhe.2020.06.036.
- Van Tilburg TG, Steinmetz S, Stolte E, Van Der Roest H, De Vries DH. Loneliness and mental health during the COVID-19 pandemic: a study among Dutch older adults. J Gerontol: Ser Bibliogr. 2020:1–7. https://doi.org/10.1093/geronb/gbaa111.
- Cacioppo JT, Cacioppo S. The growing problem of loneliness. *Lancet.* 2018;391 (10119):426. https://doi.org/10.1016/S0140-6736(18)30142-9.
- Holt-Lunstad J, Smith TB, Baker M, Harris T, Stephenson D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspect Psychol Sci*. 2015;10(2):227–237. https://doi.org/10.1177/1745691614568352.
- Valtorta NK, Kanaan M, Gilbody S, Ronzi S, Hanratty B. Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and meta-analysis of longitudinal observational studies. *Heart.* 2016;102(13):1009– 1016. https://doi.org/10.1136/heartjnl-2015-308790.
- Holt-Lunstad J, Smith TB, Layton JB. Social relationships and mortality risk: a metaanalytic review. *PLoS Med.* 2010;7:(7) e1000316. https://doi.org/10.1371/journal. pmed.1000316.
- Handayani S, Ratnasari NY, Husna PH, et al. Quality of life people living with HIV/ AIDS and its characteristic from a VCT centre in Indonesia. *Ethiop J Health Sci.* 2019;29:759–766.
- Tomaka J, Thompson S, Palacios R. The relation of social isolation, loneliness, and social support to disease outcomes among the elderly. J Aging Health. 2006;18 (3):359–384. https://doi.org/10.1177/0898264305280993.
- 23. Munn Z, Peters MDJ, Stern C, Tufanaru C, McArthur A, Aromataris E. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Med Res Methodol*. 2018;18(1):143.
- Arksey H, O'Malley L. Scoping studies: towards a methodological framework. Int J Soc Res Methodol. 2005;8(1):19–32. [cited 01 January 2021]. Available from: http:// www.tandfonline.com/doi/abs/10.1080/1364557032000119616.
- Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci.* 2010;5(1):69. [cited 01 January 2021]. Available from: http://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-5-69.
- McGowan J, Straus S, Moher D, et al. Reporting scoping reviews-PRISMA ScR extension. *J Clin Epidemiol*. 2020;123:177–179. https://doi.org/10.1016/j.jclinepi.2020.03.016.
- Berg-Weger M, Morley JE. Editorial: loneliness and social isolation in older adults during the COVID-19 Pandemic: implications for gerontological Social Work. J Nutr Health Aging. 2020;24(5):456–458. https://doi.org/10.1007/s12603-020-1366-8.
- Bidzan-Dluma I, Bidzan M, Jurek P, et al. A Polish and German population study of quality of life, well-being, and life satisfaction in older adults during the COVID-19 pandemic. Front Psychiatry. 2020;11: 585813. https://doi.org/10.3389/fpsyt.2020.585813. Published 2020 Nov 17.
- 29. Joosten-Hagye D, Katz A, Sivers-Teixeira T, Yonshiro-Cho J. Age-friendly student senior connection: students' experience in an interprofessional pilot program to combat loneliness and isolation among older adults during the COVID-19 pandemic. *J Interprof Care*. 2020;34(5):668–671. Sep-Oct10.1080/13561820.2020.1822308.
- Stolz E, Mayerl H, Freidl W. The impact of COVID-19 restriction measures on loneliness among older adults in Austria. Eur J Public Health. 2021;31(1):44–49. https://doi.org/10.1093/eurpub/ckaa238.
- Zurigat AA, Fattah OMA. The effect of holy quran voice on the quality of life among the elderly during coronavirus outbreak. *Int J Psycho Rehabil*. 2020;24(08):4984– 4993.
- Macdonald B, Hülür G. Well-being and loneliness in swiss older adults during the COVID-19 pandemic: the role of social relationships. *Gerontologist*. 2021;61 (2):240–250. https://doi.org/10.1093/geront/gnaa194.
- WHO Coronavirus Disease (COVID-19) Dashboard, Data last updated: 2021/01/22, 10:15am CEST. [cited 4 March 2021]. Avaible from: https://covid19.who.int/? gclid=Cj0KCQjw59n8BRD2ARIsAAmgPmKMRmOrQXvMkgeMaY3RNtxgIRQhQHscr XiSoCtSRGPizI5ugZqCvvwaAjZ_EALw_wcB Avaible date: 26.10.2020.
- Meng H, Xu Y, Dai J, 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;289: 112983. https://doi.org/10.1016/j.psychres.2020.112983.
- Luchetti M, Lee JH, Aschwanden D, Sesker A, Strickhouser JE, Terracciano A, Sutin AR. The trajectory of loneliness in response to COVID-19. *Am Psychol.* 2020;75 (7):897–908. https://doi.org/10.1037/amp0000690.
- Russell DW. UCLA loneliness scale (version 3): reliability, validity, and factor structure. J Pers Assess. 1996;66(1):20–40. https://doi.org/10.1207/s15327752jpa6601_2.
- Hughes ME, Waite LJ, Hawkley LC, Cacioppo JT. A Short scale for measuring loneliness in large surveys: results from two population-based studies. *Res Aging*. 2004;26(6):655–672. https://doi.org/10.1177/0164027504268574.

- Nash S. Older adults and technology: moving beyond the stereotypes. Stanford Center of Longevity. 2019. [cited 12 January 2021]. Avaible from:; http://longevity. stanford.edu/2019/05/30/older-adults-and-technology-moving-beyond-the-stereotypes/.
- Yoon H, Jang Y, Vaughan PW, Garcia M. Older adults' internet use for health information: digital divide by race/ethnicity and socioeconomic status. J Appl Gerontol. 2020;39(1):105–110. https://doi.org/10.1177/0733464818770772.
- Donovan NJ, Blazer D. Social isolation and loneliness in older adults: Review and commentary of a national academies report. *Am J Geriatr Psychiatry*. 2020;28 (12):1233-1244. https://doi.org/10.1016/j.jagp.2020.08.005.
- Brooke J, Clark M. Older people's early experience of household isolation and social distancing during COVID-19. J Clin Nurs. 2020;29:4387–4402. https://doi.org/ 10.1111/jocn.15485.
- Noone C, McSharry J, Smalle M, Burns A, Dwan K, Devane D, Morrissey EC. Video calls for reducing social isolation and loneliness in older people: a rapid review. *Cochrane Database Syst Rev.* 2020;5(5). https://doi.org/10.1002/14651858. CD013632. 21CD013632.
- Nguyen HC, Nguyen MH, Do BN, et al. People with Suspected COVID-19 Symptoms were more likely depressed and had lower health-related quality of life: the potential benefit of health literacy. J Clin Med. 2020;9(4):965. https://doi.org/10.3390/ jcm9040965. Published 2020 Mar 31.
- 44. Levkovich I, Shinan-Altman S, Essar Schvartz N, Alperin M. Depression and healthrelated quality of life among elderly patients during the COVID-19 pandemic in Israel: a cross-sectional study. J Prim Care Commun Health. 2021;12: 2150132721995448. https://doi.org/10.1177/2150132721995448.