

## **Social isolation and quarantine in the COVID-19 pandemic: impacts on mental health and quality of population life**

**Isolamento social e quarentena na pandemia da COVID-19: impactos na saúde mental e qualidade de vida populacional**

**Aislamiento social y cuarentena en la pandemia COVID-19: impactos en la salud mental y la calidad de vida de la población**

Received: 02/01/2021 | Reviewed: 02/05/2021 | Accept: 02/09/2021 | Published: 02/16/2021

### **Gabriel Kiaro Leite Nunes**

ORCID: <https://orcid.org/0000-0002-6054-6748>  
Euro American University Center, Brazil  
E-mail: [gabrielkiaro@outlook.com](mailto:gabrielkiaro@outlook.com)

### **Karinne Alice Santos de Araújo**

ORCID: <https://orcid.org/0000-0002-5966-9935>  
Euro American University Center, Brazil  
E-mail: [karinne34842@unieuro.com.br](mailto:karinne34842@unieuro.com.br)

### **Thais Ranielle Souza de Oliveira**

ORCID: <https://orcid.org/0000-0003-1135-7729>  
Euro American University Center, Brazil  
E-mail: [ammyni@gmail.com](mailto:ammyni@gmail.com)

### **Marcelina da Conceição Botelho Teixeira**

ORCID: <https://orcid.org/0000-0002-0693-626X>  
Euro American University Center, Brazil  
E-mail: [marcelinabteixeira@gmail.com](mailto:marcelinabteixeira@gmail.com)

### **Ieler Ferreira Ribeiro**

ORCID: <https://orcid.org/0000-0002-0765-4897>  
Euro American University Center, Brazil  
E-mail: [ielanf@gmail.com](mailto:ielanf@gmail.com)

### **Jéssica Caroline da Silva e Santos**

ORCID: <https://orcid.org/0000-0001-5125-2062>  
Euro American University Center, Brazil  
E-mail: [jessicacaroline.nutri@gmail.com](mailto:jessicacaroline.nutri@gmail.com)

### **Yan Vinicius Torres**

ORCID: <https://orcid.org/0000-0001-6502-6517>  
University Center of the Federal District, Brazil  
E-mail: [yanvtorresmed@gmail.com](mailto:yanvtorresmed@gmail.com)

### **Abstract**

The COVID-19 pandemic brought about major changes in the lifestyle of the world population. Due to the lack of vaccines or a definitive treatment for disease, governments around the world have adopted social isolation and quarantine as methods to control the spread of the virus. Objective: Thus, the objective of this study was to discuss how social isolation and quarantine periods affected people's mental health and quality of life during the COVID-19 pandemic. Methods: An integrative literature review was carried out during the COVID-19 pandemic between March and September 2020, establishing the following guiding question: How did social isolation and quarantine affect the mental health and quality of life of the population in the COVID-19 pandemic? Results: The final sample consisted of nineteen (19) articles, two (2) addressed depression during the pandemic period, three (3) presented the pandemic and the relationship with sociodemographic aspects, five (5) analyzed mental health in the pandemic, four (4) reported the impact of COVID-19 on the population's style and quality of life and the last five (5) demonstrated the quality of human relationships and emotional aspects in the face of the pandemic. Conclusion: It was demonstrated that isolation and the quarantine period had a negative impact on the population's quality of life and long-term mental health.

**Keywords:** Alcohol drinking; COVID-19; Social isolation; Pandemic; Mental health.

### **Resumo**

A pandemia da COVID-19 trouxe grandes mudanças nos hábitos de vida da população mundial. Devido à ausência de vacinas ou um tratamento definitivo para doença, governos ao redor do mundo adotaram o isolamento social e a quarentena como métodos para controlar a propagação do vírus. Objetivo: Desta forma, o objetivo deste estudo foi discutir como o isolamento social e os períodos de quarentena afetaram a saúde mental e a qualidade de vida das

peessoas durante a pandemia de COVID-19. Métodos: Realizou-se uma revisão integrativa de literatura durante a pandemia de COVID-19 entre março e setembro de 2020, estabelecendo seguinte pergunta norteadora: Como o isolamento social e a quarentena afetaram a saúde mental e a qualidade de vida da população na pandemia da COVID-19? Resultados: A amostra final foi composta por dezenove (19) artigos, dois (2) abordaram a depressão no período da pandemia, três (3) apresentaram a pandemia e a relação com os aspectos sociodemográficos, cinco (5) analisaram a saúde mental na pandemia, quatro (4) relataram o impacto da COVID-19 no estilo e qualidade de vida da população e os últimos cinco (5) demonstraram a qualidade dos relacionamentos humanos e aspectos emocionais frente a pandemia. Conclusão: Foi demonstrado que o isolamento e o período de quarentena impactaram de forma negativa na qualidade de vida e na saúde mental a longo prazo da população.

**Palavras-chave:** Consumo de álcool; COVID-19; Isolamento social; Pandemia; Saúde mental.

### Resumen

La pandemia de COVID-19 provocó cambios importantes en el estilo de vida de la población mundial. Debido a la ausencia de vacunas o de un tratamiento definitivo para la enfermedad, los gobiernos de todo el mundo han adoptado el aislamiento social y la cuarentena como métodos para controlar la propagación del virus. Objetivo: Por lo tanto, el objetivo de este estudio fue discutir cómo el aislamiento social y los períodos de cuarentena afectaron la salud mental y la calidad de vida de las personas durante la pandemia de COVID-19. Métodos: Se realizó una revisión integradora de la literatura durante la pandemia de COVID-19 entre marzo y septiembre de 2020, estableciendo la siguiente pregunta orientadora: ¿Cómo afectaron el aislamiento social y la cuarentena la salud mental y la calidad de vida de la población en la pandemia de COVID-19? Resultados: La muestra final constó de diecinueve (19) artículos, dos (2) abordaron la depresión durante el período pandémico, tres (3) presentaron la pandemia y la relación con aspectos sociodemográficos, cinco (5) analizaron la salud mental en pandemia, cuatro (4) reportaron el impacto del COVID-19 en el estilo y calidad de vida de la población y los últimos cinco (5) demostraron la calidad de las relaciones humanas y aspectos emocionales ante la pandemia. Conclusión: Se demostró que el aislamiento y el período de cuarentena tuvieron un impacto negativo en la calidad de vida y la salud mental a largo plazo de la población.

**Palabras clave:** Consumo de alcohol; COVID-19; Aislamiento social; Pandemia; Salud mental.

## 1. Introduction

On March 11, 2020, the World Health Organization (WHO) characterized the COVID-19 outbreak as a pandemic, recognizing that the disease was not only a public health crisis, but a problem that would affect all sectors and, concerned with the alarming levels and severity of patients, reaffirmed that countries should adopt a strategic approach to preventing infections, saving lives and minimizing impact (World Health Organization [WHO], 2020). The Sars-CoV-2 virus that causes COVID-19 has brought major changes to the health of the population since its discovery in December 2019 in Wuhan, China, causing a highly contagious and infectious disease, most often causing fever, fatigue, dry cough, muscle pain and shortness of breath (Malta et al., 2020; Chodkiewicz et al., 2020; Baud et al., 2020).

The current pandemic is different from previous ones, because it propagates rapidly and presents a relative risk of death. By mid-March 2020, cases had already been reported in 135 countries, covering all continents, approximately three months after the first case recorded in China (Baud et al., 2020).

In Brazil, the first case was registered in February 2020, in a Brazilian recently arrived from Italy and was widely reported by the Ministry of Health. By the end of March, the country had 2915 confirmed cases and 77 deaths due to coronavirus (Rodriguez-Morales et al., 2020; Prazeres et al., 2020). As of November 9, 2020, Brazil had 5,590,025 confirmed cases and 161,106 deaths (Ministry of Health, 2020).

Knowing that human transmission occurs from person to person, mainly through contact or the coughing and / or sneezing of an infected person, preventive measures have been established: control and isolation of cases, encouragement of hand hygiene, of the use of masks, and especially measures of social distancing through the closure of universities and schools, prohibition of events with agglomerations, restrictions on travel and public transport and awareness of the population to remain in confinement / social isolation (Aquino et al., 2020). Thus, Brazil and other countries have implemented a series of interventions to reduce the spread of the virus and minimize the rapid evolution of the pandemic (Kupferschmidt & Cohen, 2020).

Some states in Brazil, for example Maranhão, Amapá and Pará took a more defensive action of containment and decreed lockdown, an extreme case of social isolation and blockade that prohibits individuals from leaving home. This whole process of social isolation has had a great impact on the lives of the population (Ornell et al., 2020). Isolation affected people's mental health, well-being, sleep quality, mood, relationship and behaviors (Pieh et. al., 2020).

Recent studies reinforce possible negative effects resulting from restrictive measures, demonstrating that quarantined individuals were more prone to symptoms of anxiety, psychological distress and use of psychoactive substances such as alcohol and cigarettes. Specific stressors such as fear of one's own health or infecting others, frustration by loss, boredom and confinement can produce an individual negative psychological response in the population (Amerio et. al., 2020; Chodkiewicz et al., 2020).

Given the risk to mental health caused by social isolation during the pandemic, the objective of this integrative literature review was to discuss how social isolation and quarantine period affected the mental health and quality of life of the world population during COVID-19 pandemic between March and September 2020.

## **2. Methodology**

It is an integrative literature review on how social isolation and the quarantine period affect the mental health and quality of life of the population during the COVID-19 pandemic. Is a review designed to answer a specific question and that uses explicit and systematic methods to identify, select and critically evaluate studies, and to collect and analyze data from these studies included in the review (Rother, 2007; Pereira et al., 2018).

A survey of articles was conducted from March to September 2020, obtained by EBSCO, using the bases, MEDLINE complete, Academic Search Elite, Dentistry & Oral Sciences Source and Pubmed. The following combinations of keywords in English and their correspondents in Portuguese were used: alcohol and covid 19, alcohol drinking and social isolation (PubMed) Pandemic and Mental Health, pandemic and social isolation, mental health - social isolation, mental health - covid - 19 or coronavirus or 2019-ncov, pandemic, mental health and social isolation, alcohol drinking - pandemic (EBSCO). The Boolean AND operator was used, combining the keywords, avoiding an inaccurate search result.

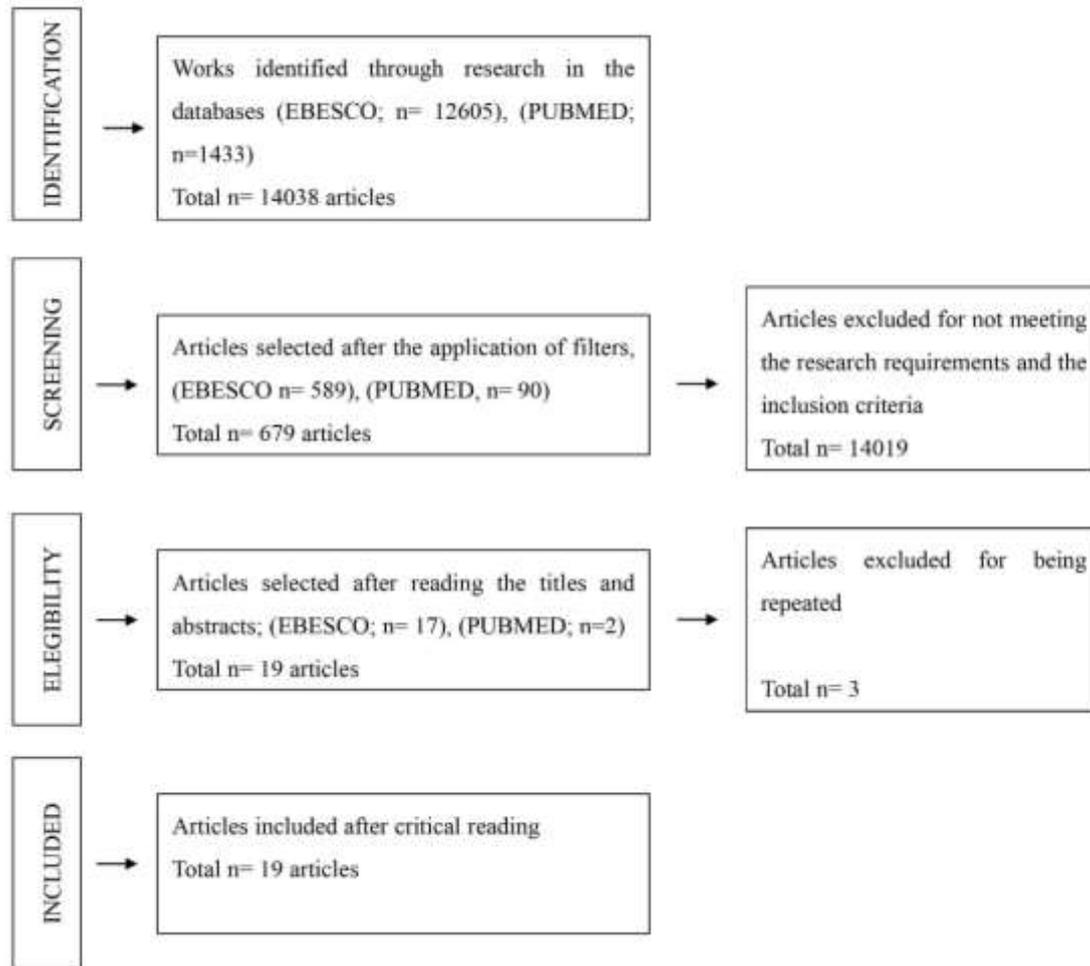
### **Data analysis**

In the identification phase, all combinations of keywords without the use of filters were used, obtaining the following results: EBSCO 12,605, PubMed 1,433, totaling 14,038 articles.

Subsequently, in the screening phase, the following filters were used: full text, PDF text, academic journals, period of 2020, scientific journal, academic journals, languages Portuguese and English, and it is possible to find 589 EBESCO platform articles. In Pubmed, full text filters, free full text, last year, Portuguese and English languages were used, and 90 articles were obtained. The total number of articles obtained was 679.

In the eligibility phase, the titles and abstracts were read to verify those who addressed the chosen theme, and repeated articles that did not meet the inclusion criteria were excluded. In this stage, 17 articles from EBSCO and 2 from PubMed were selected. The final sample consisted of 19 articles (Figure 1).

**Figure 1.** Diagram of identification methods adapted from Dornelas Neto et al. (2015).

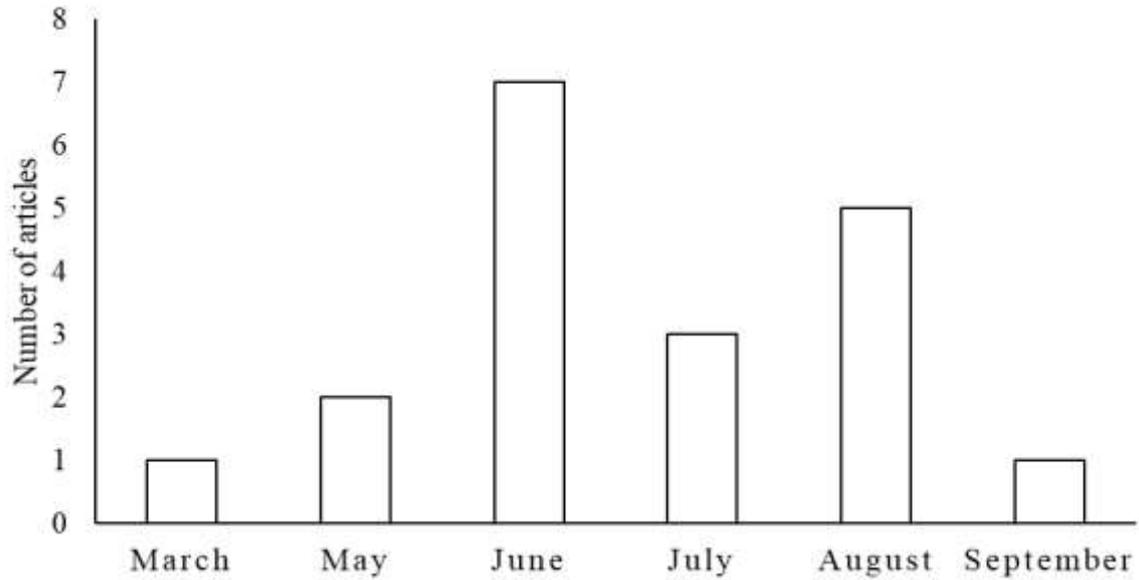


Fonte: Autores.

### 3. Results and Discussion

At the end of the critical reading, 19 articles published between March and September 2020 were selected. Of this total, 17 articles were selected from the EBSCO database and the other 2 from PudMed (Graph 1).

**Graph 1.** Distribution of articles in the period from March to September 2020.



Fonte: Autores.

For better organization and understanding of the data, all articles were separated into thematic category according to the guiding question of the research. Of the selected articles, two (2) addressed depression during the pandemic period, three (3) presented the pandemic and the relationship with sociodemographic aspects, five (5) analyzed mental health in the pandemic, four (4) reported the impact of COVID-19 on the population's lifestyle the and the last five (5) demonstrated the quality of human relationships and emotional aspects in the face of the pandemic (Table 1).

**Table 1.** List of included articles, model adapted from Romano et al. (2014), according to origin, article title, authors, journal, approach and considerations of the theme.

ARTICLE TITLE	AUTHORS	PERIODIC (vol., nº, p., year)	APPROACH	FINAL CONSIDERATIONS
Factors associated with people's behavior in social isolation during the COVID-19 pandemic	Anselmo Cesar Vasconcelos Bezerra, Carlos Eduardo Menezes da Silva, Fernando Ramalho Gameleira Soares, José Alexandre Menezes da Silva	Ciência & Saúde Coletiva, v. 25, p. 2411-2421, 2020.	Observational Qualitative	It assesses people's perception of social isolation during COVID-19: economy, isolation, unemployment, stress and financial.
Covid-19 and the impacts on mental health: a sample from Rio Grande do Sul, Brazil	Michael de Quadros Duarte, Manuela Almeida de Silva Santo, Carolina Palmeira Lima, Jaqueline Portella Giordani, Clarissa Marceli Trentini	Ciência & Saúde Coletiva, v. 25, p. 3401-3411, 2020.	Exploratory Quantitative	Verifies the factors associated with indicators of symptoms of disorders in residents of Rio Grande do Sul during the initial period of social distancing.
Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland	Timon Elmer, Kieran Mepham, Christoph Stadtfeld	PloS one, v. 15, n. 7, p. 1-23, 2020.	Exploratory Qualitative	Investigates social networks and students' mental health before and at the time of the COVID-19 pandemic. Concludes that students' levels of stress, anxiety, loneliness and depressive symptoms worsened compared to pre-crisis measures.
Subjective ratings of emotional stimuli predict the impact of the COVID-19 quarantine on affective states	Hector Lopez-Carra, Klaudia Grechuta, Paul F. M. J. Verschure	PloS one, v. 15, n. 8, p. e0237631, 2020.	Exploratory Quantitative	Indicates that quarantine negatively impacts mood, resulting in a negative perception of emotional stimuli.

COVID-19 no estado do Ceará, Brasil: comportamentos e crenças na chegada da pandemia	Danilo Lopes Ferreira Lima, Aldo Angelim Dias, Renata Sabóia Rabelo, Igor Demes da Cruz, Samuel Carvalho Costa, Flavia Maria Noronha Nigri, Giovanna Rabelo Neri	Ciência & Saúde Coletiva, v. 25, p. 1575-1586, 2020.	Experimental Quantitative	It indicates that the system of local beliefs and behaviors demonstrated that men, people with low education, elderly people over 80 years old and those living in cities in the interior of the state are more vulnerable to infection by the coronavirus.
Mental Health Problems during the COVID-19 Pandemics and the Mitigation Effects of Exercise: A Longitudinal Study of College Students in China	Yao Zhang, Haoyu Zhang, Xindong Ma, Qian Di	International Journal of Environmental Research and Public Health, v. 17, n. 10, p. 3722, 2020.	Observational Qualitative	Evaluates the adverse impact of the outbreak of COVID-19 mental health of Chinese college students. Concludes that the severity of coronavirus epidemic has an indirect effect on negative emotions, affecting the quality of sleep. The present study also shows that people's aggressiveness was reduced, a positive side of COVID-19 that made people perceive the fragility and preciousness of life.
Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study	Yingfei Zhang, Zheng Fei Ma	International journal of environmental research and public health, v. 17, n. 7, p. 2381, 2020	Cross-sectional Quantitative	Investigates the immediate impact of the COVID-19 pandemic on mental health and quality of life among Chinese residents aged $\geq 18$ . It is noticed that the COVID-19 pandemic was associated with a slight degree of stress.
Effects of Covid-19 Lockdown on Mental Health and Sleep Disturbances in Italy	Maria Rosaria Gualano, Giuseppina Lo Moro, Gianluca Voglino, Fabrizio Bert, Roberta Siliquini	International journal of environmental research and public health, v. 17, n. 13, p. 4779, 2020.	Cross-sectional Quantitative	Estimates the prevalence of depressive symptoms, anxiety symptoms and sleep disorders in the Italian population during the lockdown.
COVID19 Lockdown: Housing Built Environment's Effects on Mental Health	Andrea Amerio, Andrea Brambilla, Alessandro Morganti, Andrea Aguglia, Davide Bianchi, Francesca Santi, Luigi Constatini, Anna Odone,	International journal of environmental research and public health, v. 17, n. 16, p. 5973, 2020.	Cross-sectional Quantitative	Concludes that students with less housing conditions are more likely to develop depressive symptoms during the lockdown period.

	Alessandra Costanza, Carlo Signorelli, Gianluca Serafini			
Depression, Anxiety and Stress during COVID-19: Associations with Changes in Physical Activity, Sleep, Tobacco and Alcohol Use in Australian Adults	Robert Stanton, Quyen G. To, Saman Khalesi, Susan L. Williams, Stephanie J. Alley, Tanya L. Thwaite, Andrew S. Fenning, Corneel Vandelanotte	International Journal of Environmental Research and Public Health, v. 17, n. 11, p. 4065, 2020.	Observational Quantitative	Examines the associations between psychological distress and changes in selected health behaviors since the beginning of COVID-19 in Australia. Among the changes in selected behaviors are: depression, anxiety, stress, physical activity, sleep, alcohol intake and smoking.
Relationship quality and mental health during COVID-19 lockdown	Christoph Pieh, Teresa O'Rourke, Sanja Budimir, Thomas Probst	Plos one, v. 15, n. 9, p. e0238906, 2020.	Cross-sectional Quantitative	It assesses the differences in various measures of mental health and well-being according to the quality of the relationship during the COVID-19 pandemic and related to the blockade measure.
Alcohol Consumption Reported during the COVID-19 Pandemic: The Initial Stage	Jan Chodkiewicz, Monika Talarowska, Joanna Miniszewska, Natalia Nawrocka, Przemyslaw Bilinski	International Journal of Environmental Research and Public Health, v. 17, n. 13, p. 4677, 2020	Longitudinal Qualitative	Researches alcohol consumption during the pandemic to investigate the factors considered most relevant. The research shows a relationship between the increase in alcohol consumption and people who had an affected mental health.
Psychological Resilience And Depression During The Covid-19 Pandemic In Turkey	Burcu Karasar, Derya Canli	Psychiatria Danubina, v. 32, n. 2, p. 273-279, 2020.	Observational Qualitative	It notes that psychological adaptability was found in male participants, educators, university graduates and mental health groups. Depression was found in women, college students, high school and lower graduates, with mental health problems.
Psychological Status of Healthcare Workers during the Covid-19 Pandemic	Tuba Talo Yildirim, Osman Atas, Azad Asafov, Kadir Yildirim, Hakan	Age, v. 20, n. 30, p. 31-40, 2020.	Cross-sectional Analytical	Studies the levels of anxiety and depression in health professionals, women being more affected compared to men, and young workers more affected than older

	Babiley			people.
The effect of COVID-19 lockdown on lifestyle and mood in Croatian general population: a cross-sectional study	Zoran Dogas, Linda Lusic Kalcina, Ivana Pavlinac Dolig, Sijana Demirovic, Katarina Madirazza, Maja Valic, Renata Pecotic	Croatian medical journal, v. 61, n. 4, p. 309, 2020.	Observational Quantitative	Confirms changes in lifestyle and mood swings during the lock COVID-19. Mood change prevails in women smokers, increased cigarette consumption per day, and the proportion of occasional alcohol drinkers of both sexes decreased during 7-day isolation, blockage was associated with mood changes in terms of more sadness, discouragement, and etc.
Depression and Anxiety in Health Care Workers during COVID-19	Muntazir Mehdi, Huhammad Waseem, Muhammad Hassam Rehm, Nauman Aziz, Sagheer Anjum, Muhammad Aslam Javid	Biomedica, v. 36, 2020. p. 233 – 238	Cross-sectional Quantitative	Evaluates the mental health of health professionals in Pakistan during the pandemic, showing that women were more affected than men and that anxiety affects more than depression. Depression affected married people more than single people.
COVID-19 Epidemic in Argentina: Worsening of Behavioral Symptoms in Elderly Subjects With Dementia Living in the Community	Gabriela Cohen, María Julieta Russo, Jorge A Campos, Ricardo F Allegri	Frontiers in Psychiatry    August 2020   Volume 11   Article 866	Longitudinal Quantitative	It studies how much COVID-19 affected the treatment of elderly people with mental problems in the first 8 weeks of quarantine in Argentina. There was increased anxiety, insomnia, depression and consumption of antidepressants in this profile of interviewed individuals.

<p>Mental Health in Elderly Spanish People in Times of COVID-19 Outbreak</p>	<p>Lorena García-Fernández, Verónica Romero-Ferreiro, Pedro David López-Roldán, Sergio Padilla, Roberto Rodriguez-Jimenez</p>	<p>The American Journal of Geriatric Psychiatry, v. 28, n. 10, p. 1040-1045, 2020.</p>	<p>Cross-sectional Qualitative</p>	<p>Evaluates the emotional symptoms related to the outbreak of COVID-19, identifies gender differences and studies the relationship between the emotional state and environmental characteristics in elderly over 60 years. The elderly showed less emotional distress, without differences between men and women.</p>
<p>Effect of lockdown following Alcohol use in Australia during the early days of the COVID-19 pandemic: Initial results from the COLLATE project</p>	<p>Erica Neill, Denny Meyer, Wei Lin Toh, Tamsyn Elizabeth van Rheenen, Andrea Phillipou, Eric Josiah Tan, Susan Lee Rossell</p>	<p>Psychiatry and Clinical Neurosciences, v. 74, n. 10, p. 542-549, 2020.</p>	<p>Cross-sectional qualitative</p>	<p>Tracks key issues of mental health. Using logistic regression, distal and proximal factors that were evaluated for their association with increased alcohol consumption since the beginning of the COVID-19 pandemic, where it was possible to see increased alcohol use during isolation.</p>

Fonte: Autores.

### **3.1 Impact of the pandemic on mental health and its relationship with sociodemographic aspects**

Gualano et al. (2020) demonstrated that anxiety disorder is less frequent in young Italians (n = 1515). They also reported that sociodemographic variables such as gender, marital status, education level and be a health professional are associated with a higher prevalence of anxiety. The authors state that the condition of being married or being in a relationship, having a job and not experiencing financial difficulties proved to be a protective factor for the presence of depressive symptoms. However, spending more time connected in the lockdown period (complete/restricted isolation) is associated with an increased risk of depression.

The study by Zhang et al. (2020) with Chinese (n = 66) demonstrated that regular exercise is a good treatment for mental health problems and can reduce negative emotions within a certain range, by improving mood stability and that, women present a significantly higher risk of suffering a psychological impact.

The use of different sources of information (radio, newspapers and the Internet) impacted the prevalence of anxiety among individuals in Italy, especially regarding the use of the Internet as an information source. Therefore, browsing different sites, accessing a large amount of information increases the likelihood of developing anxiety (Gualano et al., 2020).

García-Fernández et al. (2020) conducted a survey of Spanish elderly (n = 1639) and showed that those over the age of 60 were less vulnerable to suffering from depression and acute stress when compared to younger participants. In addition, the group of this age group did not demonstrate differences in anxiety levels during the peak of the pandemic raising the hypothesis that even having a greater physical vulnerability to the virus, emotional effects motivated by fear and forced isolation, could already be expected.

Another research addressing the worsening of behavioral symptoms in elderly people with dementia in Argentina indicated that neuropsychiatric symptoms during quarantine were more frequent in individuals with mild dementia and the explanation for this fact could be explained by the fact that these individuals have suffered more with the radical modification in their lifestyle habits during quarantine than individuals with severe dementia (n = 119), who are generally more restricted staying at home and are less active (Cohen et al., 2020).

Yildirim et. al. (2020) assessed the levels of anxiety and depression in healthcare professionals (n = 270) in Turkey using the HAI (Anxiety Assessment Questionnaire) and BDI (Beck Depression Scale) questionnaire. Each item was scored from 0-3 and the highest values were indicative of severe anxiety and depression. Younger health professionals have been shown to have higher HAI scores. The HAI and BDI scores were higher for women than men. This difference could be explained by the fact that women perform roles of mothers, professionals, and wives simultaneously. The authors also found that individuals with high knowledge about COVID-19 scored lower, indicating that people with more knowledge of the subject become aware and protect themselves more and they may be less vulnerable to unnecessary concerns. Women scored higher on knowledge of the disease than men in the health field, indicating that they are more aware of the topic.

### **3.2 Impact on the quality of human relationships**

Research conducted by Pieh et. al. (2020) in Austria demonstrated that individuals with good relationships during COVID-19 confinement (n = 1005) had better mental health than individuals with a low-quality relationship or no relationship at all. In addition, individuals without a relationship performed worse in all mental health scales. The authors add that individuals with low-quality relationships had worse mental health, even compared to people without relationships, which indicates that the increase in social isolation and lack of social interaction has a negative impact on their perceptions and emotions. The prevalence of depressive symptoms increased according to the quality of the relationship, from 13% to 35%. The relationship itself was not associated with better mental health, but the quality of the relationship was essential.

Another study carried out in Spain (n = 112), showed that when compared to healthy people, patients with depression showed greater oscillations and negative changes in mood perception. The results interestingly suggested a positive relationship with the subjects who liked to work at home during confinement, that is, the individuals who were already working at home, better controlled their emotions for being isolated, while people who need more interaction social and being in contact with the outside world felt much more the fact of being in isolation. Regarding the experience of not having a normal life as before quarantine, it was highlighted that this has a significant impact on the negativity of emotional assessments, this fact could be related to a greater need for social interaction and freedom of the population. It was also observed that mood deviations are reflected in the perception of affective stimuli, demonstrating that quarantine can cause negative changes in the perception of individuals (López-Carral et al., 2020).

The study by Zhang and Ma (2020) that assessed the impact of the pandemic on the mental health and quality of life of some Chinese residents (n = 263) indicated that most participants were receiving greater support from friends and family. Most also experienced a greater closeness and care of family members and reported to be paying more attention to mental health after the pandemic, demonstrating positive changes in lifestyle related to mental health.

Elmer et al. (2020) evaluated the life of swiss students (n = 212) in containment before and during a pandemic, and indicated that, on average, more students were depressed, anxious and stressed solitary compared with prior pandemic. A worsening of mental health observed in this group was related to concerns about family, friends, concerns about the future career and living alone. Students at the end of the undergraduate semester showed greater nervousness because they need to pass the final exam to enter the job market.

### **3.3 Impact of COVID-19 on the quality of life of the population**

Dogaš et al. (2020) found (n = 3027) that women started to smoke more cigarettes per day in Croatia and the proportion of occasional alcohol users of both sexes decreased. However, the results showed that there was an increase in those individuals who consumed seven (7) drinks a week or more. Smoking and drinking were considered by the participants as ways to relieve stress. In addition, changes in mood, restlessness, fear, depression and sadness are associated with the lockdown.

A detailed study on alcohol use during the pandemic (n = 443) conducted in Poland suggested that alcohol is the most commonly used psychoactive substance (73%), followed by tobacco use (25%). In this study, more than 30% of respondents also changed their drinking habits during the pandemic, some of them consumed less alcohol and some increased slightly, 16% and 14%, respectively. People who substantially increased their alcohol consumption before the outbreak started worsened their mental health during the pandemic (Chodkiewicz et al., 2020).

Dogaš et al. (2020) in the course of their research (n = 3027), reported that a total of 939 of the interviewees reported weight gain. Female sex (OR = 2.726) and higher BMI (or = 1.116; both  $P < 0.001$ ) were associated with a higher probability of weight gain. Male individuals (71.6%) exercised more and for a longer time when compared to women (60.3%). It has been shown that the factors that increased the likelihood of gaining body weight were: being female, age between 30-49 years and be attending college or master's degree. The women interviewed who had a higher level of education had a better compliance with quarantine restrictions, indicating that their life habits may have been more affected. Women also reported a decrease in the frequency and duration of physical activities.

Regarding sleeping habits, isolation also affected the quality of sleep in the population (n = 16440) and recent studies show that family stress has been one of the influencers in the population's sleep pattern and that this factor is also responsible for the capacity of the individual to remain in social isolation for a longer time (Bezerra et al., 2020).

Gualano et al. (2020) showed in their study that 42.2% of the interviewees in the study reported having difficulties in sleeping (n = 1515). The authors reported that these findings may be related to excessive use of internet or fear of leaving home.

A similar result was recorded by Zhang et al. (2020) in China, in which the COVID-19 outbreak significantly reduced sleep quality in young adults (n = 66) by increasing negative emotions such as stress and anxiety. This fact may be associated with measures of distancing and lockdown, because at home people begin to adopt irregular lifestyles with poor quality of sleep and anxiety about their studies and future employment.

### **3.4 Pandemic and the relationship with sociodemographic aspects**

According to a survey (n = 2259) by Lima et. al. (2020) in the state of Ceará the level of education is directly related to the level of contamination of the population, indicating that people with higher education are less likely to be contaminated than people who only attended elementary school, as they consider themselves less vulnerable to contamination, leading to a smaller reduction in insulation.

In consideration of life habits (n = 2259), quality of life and understanding of the disease, people with low education and low social class suffered more from the disease, considering that people in this group used public transport more frequently., lived in places with a greater number of people, had less access to medical resources and greater difficulty in maintaining the preventive measures of the World Health Organization (Lima et. al., 2020).

Lima et. al. (2020) studied the behaviors and beliefs resulting from the pandemic in the Brazilian state of Ceará. It has been shown that elderly men, from the age of 80 and living in cities in the interior of the state are more vulnerable to infection by COVID-19, due to the difficulty of maintaining isolation due to their beliefs and lifestyle.

Karaşar and Canli (2020) assessment of depression during the pandemic (n = 518) concluded that men have a greater ability to return to normal life and women, as they are exposed to more stressors, have a higher risk to have depressive symptoms.

In a survey (n = 799), conducted with women in the state of Rio Grande do Sul, Brazil, the authors suggested that being a young, low-income woman, not a health professional, belonging to the risk group and being exposed to information about deaths and infected, can be factors related to damage to mental health. It was also indicated, through a binary logistic regression model, that women are twice as likely to suffer from mental illness. Regarding the profession, the work pointed out that, as a health professional, there is a 40% decrease in the probability of developing mental problems and disorders and that health literacy increases the mental health index (Duarte et al., 2020).

Still on the health area, Mehdi et al. (2020) demonstrated in their studies (n = 237) that depression and anxiety predominate among professionals in Pakistan. Doctors and nurses showed similar results, but nurses presented a greater severity in the degree of depression. This fact could be associated with the time nurses spend with patients in the ward, which would increase the risk of disease contagion and may favor the emergence of psychological problems.

The work of Amerio et al. (2020) with students from Italy (n = 8177) showed that people who are in quarantine are more likely to report psychological problems and that the environment is one of the factors that impacts the decline in quality of life. It was analyzed that precariousness in housing, less comfort and financial instability were assessed as specific stressors that can contribute to a negative psychological response during or after quarantine. This set of factors can affect physical health, becoming a risk factor if there is contamination by the virus.

## 4. Conclusion

Based on these studies, the guiding question was answered. It has been demonstrated that isolation and the quarantine period have a significant impact on the mental health and quality of life of the population. Some factors put women, senior students, and health professionals as the main affected during the pandemic.

However, it has also been suggested that having healthy relationships, not having financial problems, being literate in the health area and being older than 60 years, seems to be a protective factor against the appearance of symptoms of anxiety and depression during the isolation caused by the pandemic.

In view of the current situation, policies and programs that include attention to mental health required pandemic times are necessary, so that it does not become a problem for a population during COVID-19. It is suggested that further studies be carried out to monitor the social impact provided by the flexibilization actions. On the other hand, comparative studies to verify the different times of social isolation between countries can provide subsidies for decision-making by managers and health professionals in facing the pandemic.

## References

- Amerio, A., Brambilla, A., Morganti, A., Aguglia, A., Bianchi, D., Santi, F., Costantini, L., Odone, A., Costanza, A., Signorelli, C., Serafini, G., Amore, M., & Capolongo, S. (2020). COVID-19 Lockdown: Housing Built Environment's Effects on Mental Health. *Int. J. Environ. Res. Public Health*, 17(16), 5973. <https://doi.org/10.3390/ijerph17165973>
- Aquino, E., Silveira, I. H., Pescarini, J. M., Aquino, R., Souza-Filho, J. A., Rocha, A. S., Ferreira, A., Victor, A., Teixeira, C., Machado, D. B., Paixão, E., Alves, F., Pilecco, F., Menezes, G., Gabrielli, L., Leite, L., Almeida, M., Ortelan, N., Fernandes, Q., Ortiz, R., ... Lima, R. (2020). Social distancing measures to control the COVID-19 pandemic: potential impacts and challenges in Brazil. *Ciência & Saúde Coletiva*, 25(1), 2423–2446. <https://doi.org/10.1590/1413-81232020256.1.10502020>
- Baud, D., Qi, X., Nielsen-Saines, K., Musso, D., Pomar, L., & Favre, G. (2020). Correspondence Real estimates of mortality following Estimating case fatality. *The Lancet Infectious Diseases*, 20 (7), 773. [https://doi.org/10.1016/S1473-3099\(20\)30234-6](https://doi.org/10.1016/S1473-3099(20)30234-6)
- Bezerra, A.C.V., Silva, C.E.M., Soares, F. R.G., & Silva, J.A.M. (2020). Factors associated with people's behavior in social isolation during the COVID-19 pandemic. *Ciência & Saúde Coletiva*, 25(1), 2411-2421. <https://doi.org/10.1590/1413-81232020256.1.10792020>
- Chodkiewicz, J., Talarowska, M., Miniszewska, J., Nawrocka, N., & Bilinski, P. (2020). Alcohol Consumption Reported during the COVID-19 Pandemic: The Initial Stage. *Int. J. Environ. Res. Public Health*, 17(13), 4677. <https://doi.org/10.3390/ijerph17134677>
- Cohen, G., Russo, M. J., Campos, J. A., & Allegri, R. F. (2020). COVID-19 Epidemic in Argentina: Worsening of Behavioral Symptoms in Elderly Subjects With Dementia Living in the Community. *Frontiers in psychiatry*, 11, 866. <https://doi.org/10.3389/fpsy.2020.00866>
- Đogaš, Z., Lušić Kalcina, L., Pavlinac Dodig, I., Demirović, S., Madirazza, K., Valić, M., & Pecotić, R. (2020). The effect of COVID-19 lockdown on lifestyle and mood in Croatian general population: a cross-sectional study. *Croatian medical journal*, 61(4), 309–318. <https://doi.org/10.3325/cmj.2020.61.309>
- Duarte, M. Q., Santo, M. A. S., Lima, C. P., Giordani, J. P., & Trentini, C. M. (2020). Covid-19 and the impacts on mental health: a sample from Rio Grande do Sul, Brazil. *Ciência & Saúde Coletiva*, 25(9), 3401-3411. <https://doi.org/10.1590/1413-81232020259.16472020>
- Dornelas Neto, J., Nakamura, A.S., Cortez, L. E. R., & Yamaguchi, M.U. (2015). Doenças sexualmente transmissíveis em idosos: uma revisão sistemática. *Ciência & Saúde Coletiva*, 20(12), 3853-3864. <https://doi.org/10.1590/1413-812320152012.17602014>
- Elmer, T., Mephram, K., & Stadtfeld, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLoS one*, 15(7), e0236337. <https://doi.org/10.1371/journal.pone.0236337>
- García-Fernández, L., Romero-Ferreiro, V., López-Roldán, P. D., Padilla, S., & Rodríguez- Jimenez, R. (2020). Mental Health in Elderly Spanish People in Times of COVID-19 Outbreak. *The American journal of geriatric psychiatry: official journal of the American Association for Geriatric Psychiatry*, 28(10), 1040–1045. <https://doi.org/10.1016/j.jagp.2020.06.027>
- Gualano, M. R., Lo Moro, G., Voglino, G., Bert, F., & Siliquini, R. (2020). Effects of Covid- 19 Lockdown on Mental Health and Sleep Disturbances in Italy. *International journal of environmental research and public health*, 17(13), 4779. <https://doi.org/10.3390/ijerph17134779>
- Karaşar, B., & Canli, D. (2020). Psychological Resilience and Depression during the Covid-19 Pandemic in Turkey. *Psychiatria Danubina*, 32(2), 273–279. <https://doi.org/10.24869/psyd.2020.273>
- Kupferschmidt, K., & Cohen, J. (2020). Can China's COVID-19 strategy work elsewhere? *Science* (New York, N.Y.), 367(6482), 1061–1062. <https://doi.org/10.1126/science.367.6482.1061>
- Lima, D. L. F., Dias, A. A., Rabelo, R. S., Cruz, I. D., Costa, S. C., Nigri, F. M. N., & Neri, J. R. (2020). Covid-19 in the State of Ceará: behaviors and beliefs in the arrival of the pandemic. *Ciência & Saúde Coletiva*, 25(5), 1575-1586. <https://doi.org/10.1590/1413-81232020255.07192020>

- López-Carral, H., Grechuta, K., & Verschure, P. F. M. J. (2020). Subjective ratings of emotive stimuli predict the impact of the COVID-19 quarantine on affective states. *PLOS ONE*, 15(8), e0237631. <https://doi.org/10.1371/journal.pone.0237631>
- Malta, D. C., Szwarcwald, C. L., Barros, M. B. A., Gomes, C. S., Machado, I. E., Souza Júnior, P. R. B., Romero, D. E., Lima, M. G., Damacena, G. N., Pina, M. F., Freitas, M. I. F., Werneck, A. O., Silva, D. R. P., Azevedo, L. O., & Gracie, R. (2020). A pandemia da COVID-19 e as mudanças no estilo de vida dos brasileiros adultos: um estudo transversal, 2020. *Epidemiologia e Serviços de Saúde*, 29(4), e2020407. <https://doi.org/10.1590/s1679-49742020000400026>
- Mehdi, M., Waseem, M., Rehm, M. H., Aziz, N., Anjum, S., & Javid, M. A. (2020). Depression and anxiety in health care workers during COVID-19. *Biomedica*, 36, 233-238. [https://www.researchgate.net/publication/344254905\\_Depression\\_and\\_Anxiety\\_in\\_Health\\_Care\\_Workers\\_during\\_COVID-19](https://www.researchgate.net/publication/344254905_Depression_and_Anxiety_in_Health_Care_Workers_during_COVID-19)
- Ministério da Saúde. (2020). *Secretarias Estaduais de Saúde: Coronavírus no Brasil*. <https://covid.saude.gov.br/>
- Neill, E., Meyer, D., Toh, W. ., Rheenen, T. E., Phillipou, A., Tan, J. E., & Rossell, S. L. (2020). Alcohol use in Australia during the early days of the COVID-19 pandemic: Initial results from the COLLATE project. *Psychiatry and Clinical Neurosciences*, 74, 542–549. <https://doi.org/10.1111/pcn.13099>
- Oliveira, M., & Mello, I. (2020, 15 Maio). Saiba em que estados e cidades já foi decretado o lockdown no Brasil. <https://noticias.uol.com.br/saude/ultimas-noticias/redacao/2020/05/09/saiba-onde-ja-foi-decretado-o-lockdown-no-brasil.htm>
- Ornell, F., Schuch, J. B., Sordi, A. O., & Kessler, F. (2020). “Pandemic fear” and COVID-19: mental health burden and strategies. *Brazilian Journal of Psychiatry*, 42(3), 232-235. Epub April 03, 2020. <https://dx.doi.org/10.1590/1516-4446-2020-0008>
- Pieh, C., O'Rourke, T., Budimir, S., & Probst, T. (2020). Relationship quality and mental health during COVID-19 lockdown. *PLoS one*, 15(9), e0238906. <https://doi.org/10.1371/journal.pone.0238906>
- Prazeres, L., Mariz, R., & Souza, A. (Março). Coronavírus: Brasil tem 2.915 casos confirmados e 77 mortes. <https://oglobo.globo.com/sociedade/coronavirus/coronavirus-brasil-tem-2915-casos-confirmados-77-mortes-1-24330514>
- Pereira, A. S., Shitsuka, D. M., Parreira, F. J., & Shitsuka, R. (2018). *Metodologia da pesquisa científica*. [eBook]. Santa Maria. Ed. UAB / NTE / UFSM. [https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic\\_Computacao\\_Metodologia-Pesquisa-Cientifica.pdf?sequence=1](https://repositorio.ufsm.br/bitstream/handle/1/15824/Lic_Computacao_Metodologia-Pesquisa-Cientifica.pdf?sequence=1)
- Romano, A. P. M., Costa, Z. G. A., Ramos, D. G., Andrade, M. A., Jayme, V. S., Almeida, M. A. B., Vettorello, K. C., Mascheretti, M., & Flannery, B. (2014). Yellow Fever Outbreaks in Unvaccinated Populations, Brazil, 2008–2009. *PLOS Neglected Tropical Diseases*, 8 (3), e2740. <https://doi.org/10.1371/journal.pntd.0002740>
- Rodriguez-Morales, A. J., Gallego, V., Escalera-Antezana, J. P., Méndez, C. A., Zambrano, L. I., Franco-Paredes, C., Suárez, J. A., Rodriguez-Enciso, H. D., Balbin-Ramon, G. J., Savio- Larriera, E., Riquez, A., & Cimerman, S. (2020). COVID-19 in Latin America: The implications of the first confirmed case in Brazil. *Travel medicine and infectious disease*, 35, 101613. <https://doi.org/10.1016/j.tmaid.2020.101613>
- Rother, E. T. (2007). Revisão sistemática X revisão narrativa. *Acta Paulista de Enfermagem*, 20(2), v-vi. <https://dx.doi.org/10.1590/S0103-21002007000200001>
- Stanton, R., To, Q. G., Khalesi, S., Williams, S. L., Alley, S. J., Thwaite, T. L., Fenning, A. S., & Vandelanotte, C. (2020). Depression, Anxiety and Stress during COVID-19: Associations with Changes in Physical Activity, Sleep, Tobacco and Alcohol Use in Australian Adults. *International journal of environmental research and public health*, 17(11), 4065. <https://doi.org/10.3390/ijerph17114065>
- World Health Organization. (2020). Timeline: WHO's COVID-19 response. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/interactive-timeline>
- Yildirim, T. T., Atas, O., Asafov, A., Yildirim, K., & Balibey, H. (2020). Psychological Status of Healthcare Workers during the Covid-19 Pandemic. *J Coll Physicians Surg Pak*, 30(2), 26- 31. <https://doi.org/10.29271/jcpsp.2020.Supp1.S26>
- Zhang, Y., Zhang, H., Ma, X., & Di, Q. (2020). Mental Health Problems during the COVID- 19 Pandemics and the Mitigation Effects of Exercise: A Longitudinal Study of College Students in China. *International journal of environmental research and public health*, 17(10), 3722. <https://doi.org/10.3390/ijerph17103722>
- Zhang, Y., & Ma, Z. F. (2020). Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. *International journal of environmental research and public health*, 17(7), 2381. <https://doi.org/10.3390/ijerph17072381>