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# COVID-19 and psychological repercussions during quarantine and social isolation: an integrative review

**ABSTRACT** | Objective: to analyze the main psychological impacts resulting from quarantine and social isolation. Method: this is a bibliographic search, carried out through an integrative literature review in the SciELO, LILACS, Medline and World Wide Science databases. The inclusion criteria were articles published in Portuguese, English and Spanish, from 2010 to 2020. To facilitate the identification of the articles, the End Note X5 software was used. Results: 94 articles were found, 12 of which were selected for analysis of the study. The research revealed a prevalence of negative psychological repercussions such as: loneliness, depression, stress, fear of falling ill and death, anxiety, anger, frustration, boredom, insomnia, sadness, irritability. The strategies to minimize these impacts are: physical exercise, watching movies, reading books, listening to music. Conclusion: it is necessary that public health measures are implemented, such as educational activities and actions that can help people in facing isolation.

**Keywords:** Pandemics; Social Isolation; Quarantine; Psychological Phenomena.

**RESUMEN** | Objetivo: analizar los principales impactos psicológicos resultantes de la cuarentena y el aislamiento social. Método: se trata de una búsqueda bibliográfica, realizada a través de una revisión bibliográfica integradora en las bases de datos SciELO, LILACS, Medline y World Wide Science. Los criterios de inclusión fueron artículos publicados en portugués, inglés y español, de 2010 a 2020. Para facilitar la identificación de los artículos, se utilizó el software End Note X5. Resultados: se encontraron 94 artículos, 12 de los cuales fueron seleccionados para el análisis del estudio. La investigación reveló una prevalencia de repercusiones psicológicas negativas como: soledad, depresión, estrés, miedo a enfermarse y morir, ansiedad, ira, frustración, aburrimiento, insomnio, tristeza, irritabilidad. Las estrategias para minimizar estos impactos son: ejercicio físico, mirar películas, leer libros, escuchar música. Conclusión: es necesario que se implementen medidas de salud pública, como actividades educativas y acciones que puedan ayudar a las personas a enfrentar el aislamiento.

**Palabras claves:** Pandemias; Aislamiento Social; Cuarentena; Fenómenos Psicológicos.

**RESUMO** | Objetivo: analisar os principais impactos psicológicos decorrentes da quarentena e do isolamento social. Método: trata-se de uma pesquisa bibliográfica, realizada através da revisão integrativa da literatura nas bases de dados SciELO, LILACS, Medline e World Wide Science. Os critérios de inclusão foram artigos publicados em português, inglês e espanhol, durante o período de 2010 a 2020. Para facilitar a identificação dos artigos foi utilizado o software End Note X5. Resultados: foram encontrados 94 artigos, sendo selecionados 12 para a análise do estudo. A pesquisa revelou uma prevalência de repercussões psicológicas negativas como: solidão, depressão, estresse, medo de adoecer e da morte, ansiedade, raiva, frustração, tédio, insônia, irritabilidade. As estratégias para minimizar esses impactos são: exercícios físicos, assistir filmes, ler livros, ouvir música. Conclusão: é necessário que medidas de saúde pública sejam implementadas, como atividades educativas e ações que possam auxiliar as pessoas no enfrentamento do isolamento.

**Palavras-chaves:** Pandemias; Isolamento Social; Quarentena; Fenômenos Psicológicos.

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## INTRODUÇÃO

The world is experiencing a pandemic situation due to the emergence of a new coronavirus. The first case identified had pneumonia and was reported in Wuhan, Hubei province, People's Republic of China (PRC), in late December 2019<sup>1</sup>. The International Virus Taxonomy Committee (ICTV) named the virus SARS-CoV-2 and the disease COVID-19<sup>2</sup>. In history, SRAS-CoV (2003) infected 8,098 individuals with a mortality rate of 9% in 26 countries worldwide, on the other hand, the new corona virus (2019) infected

120,000 individuals with a mortality rate of 2.9% in 109 people by mid-March 19, 2020. This shows that the transmission rate of SARS-CoV-2 is higher than SARS-CoV<sup>3,4</sup>.

As SARS-CoV-2 spreads worldwide, many governments in most countries have established contingency plans, adopting measures of social isolation, in addition to restricting travel at the local, national and international levels, in order to avoid the spread of the virus. In the United States, thousands of people have been subjected to legally enforceable quarantines or are in self-quarantine. As well as Italy, Germany, France, among others. Some countries

are more discerning and have published punishment measures for people who leave home, as in France.

In Brazil, most cities are following the recommendations of the World Health Organization - WHO and the Ministry of Health, for people to stay at home as a form of social isolation, in order to reduce the spread of the virus and not cause a collapse in the Public Health System, especially in places where health care is most precarious. Since each state and municipality are creating their own strategies to try to reduce the transmission of the disease.

Social isolation serves to separate symptomatic and asymptomatic people, in clinical and laboratory research to prevent the spread of infection and transmission. In this case, isolation is used in the home environment, which can be done in public or private hospitals. Also according to the norm of the Ministry of Health, the isolation is done for a period of 14 days, in which time the virus takes to manifest itself in the body, and can be extended, depending on the results of laboratory tests<sup>5</sup>. The term quarantine refers to the separation and restriction of movement of people who were potentially exposed to a contagious disease to check whether they have symptoms of the disease, thus reducing the risk of infecting other people<sup>6</sup>.

Faced with this pandemic scenario, in which many people had to stop working and live a phase of isolation, the question arises: what psychological repercussions can arise in people who are experiencing quarantine and social isolation? Considering that epidemics of great magnitude can cause psychological impacts for the population. This research aimed to analyze the main psychological impacts resulting from quarantine and social isolation.

#### METHODOLOGY

This is a bibliographic research,

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In Brazil, most cities are following the recommendations of the World Health Organization - WHO and the Ministry of Health, for people to stay at home as a form of social isolation, in order to reduce the spread of the virus and not cause a collapse in the Public Health System, especially in places where health care is most precarious. Since each state and municipality are creating their own strategies to try to reduce the transmission of the disease.

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carried out through an integrative literature review about the psychological repercussions resulting from social isolation and quarantine. Initially, the guiding question of the research was outlined according to the problem of the pandemic of COVID-19, which imposed on society a new way of living with the quarantine. In elaborating the question: what psychological repercussions can arise in people who are experiencing quarantine and social isolation? Then, a survey and selection of the most relevant scientific productions was carried out, according to the databases available on national and international websites.

SciELO, LILACS, Medline and World Wide Science databases were used. The descriptors were redefined as: “pandemics”, “social isolation”, “quarantine” and “psychological phenomena” in the SciELO database and “pandemics”, “social isolation”, “quarantine” and “psychological phenomena” in the databases LILACS, Medline and World Wide Science. The use of descriptors was made according to the Health Sciences Descriptors (DeCS) available in the VHL.

For the selection of scientific articles, the inclusion criteria were defined as: articles published in Portuguese, English, and Spanish, available in full, from 2010 to April 2020. The search resulted in 94 articles, which were excluded those who had no theme causally related to the research objective and did not fit the inclusion criteria. Thus, a total of 12 articles were made available online. To facilitate the identification of the articles, the End Note X5 software was used and the search for the articles followed the PRISMA recommendations.

Initially, the texts of the articles found were selected by the titles, from the reading of the titles and abstracts of the articles, research that did not have an association bias between communicable diseases, social isolation,

quarantine and psychological impacts was excluded. A total of 82 excluded articles, then a critical and accurate reading of the 12 selected articles was

made, a synthesis of the complete texts was organized for analysis and the results were interpreted and synthesized by comparing the data.

**RESULTS**

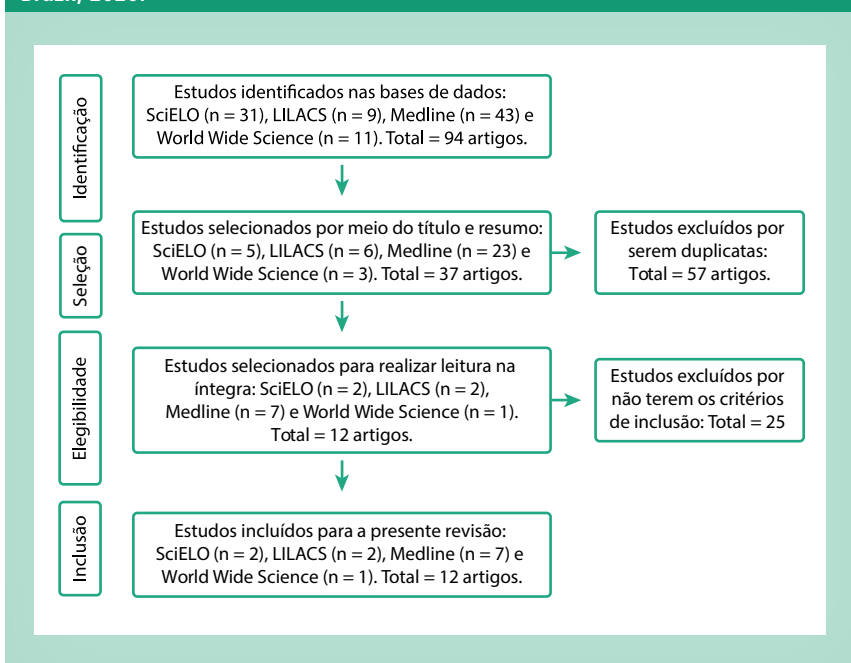
The results point to a greater number of researches in international journals targeting the COVID-19 pandemic, until the time of this research. It should be noted that there was a predominance of 9 international research in the English language, and only 3 in the national literature.

For a better compression of the integrative review carried out, a flowchart, figure 1, was prepared with the results of the articles found. And to describe the results of the articles, there were two tables with data on the psychological repercussions and the main measures to reduce these repercussions.

Chart 1 shows the 12 articles analyzed in this integrative review, they are distributed according to the most recent chronological order of publication, title of each research, authors, year of publication and the results of the psychological repercussions found in each article.

Regarding the interventions and measures to minimize the psychological repercussions that may arise du-

**Figure 1 – Flowchart of article selection for the integrative review, São Paulo, Brazil, 2020.**



**Chart 1 – Main psychological repercussions resulting from social isolation and quarantine.**

| Artigo | Título  | Autores e ano de publicação                             | Repercussões psicológicas do isolamento social e quarentena  |
|--------|---|---|--|
| 01     | Fases psicológicas e sentido da vida em tempos de isolamento social por pandemia COVID-19 uma reflexão a luz de Viktor Frankl | Medeiros AYBBV, Peireira ER, Silva RMCRA, Dias FA; 2020 | Apatia, solidão, irritação, insônia, alterações na alimentação, sensação de tédio, temor, falta de esperança, ansiedade, depressão, estresse.  |
| 02     | Pandemia, isolamento social e colapso global  | Bittencourt RN, 2020                                    | Monotonia, sentimento de estar enclausurado, ansiedade, estresse, angústia, solidão, exaustão.   |
| 03     | Online mental health services in China during the COVID-19 outbreak   | Liu S, Yang L, Zhang et al, 2020                        | Depressão, transtorno de ansiedade, insônia, estresse.   |
| 04     | Telemental Health in the Context of a Pandemic: the COVID-19 Experience   | Whaibeh E, Mahmoud H, Naal H, 2020                      | Frustração, medo, raiva, desesperança, confusão, ansiedade, depressão, transtorno de estresse pós-traumático, estresse financeiro e interações pessoais limitadas.   |
| 05     | The psychological impact of quarantine and how to reduce it: rapid review of the evidence                                     | Brooks SK, Webster RK, Smith LE et al, 2020             | Efeitos psicológicos negativos, estresse pós-traumático, confusão, raiva, medos de infecção, frustração, tédio, suprimimentos inadequados, informações inadequadas, perda financeira e estigma, relatos de suicídio, irritabilidade, insônia, baixa concentração, tristeza, aborrecimento, nervosismo. |
| 06     | Social distancing in covid-19: what are the mental health implications?   | Venkatesh A, Edirappuli S, 2020                         | Depressão, ansiedade, frustração, tédio, mau humor, medo do contágio e da clareza inadequada em torno das diretrizes de distanciamento social, muitas vezes agravadas por fontes menos confiáveis da mídia.  |

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|----|---|---|--|
| 07 | Life in the pandemic: Social isolation and mental health  | Usher K, Bhullar N, Jackson D, 2020             | Problemas psicossociais especialmente para as pessoas vulneráveis, como os grupos de classe socioeconômicas mais baixa e em condições de saúde mental preexistentes, ansiedade, insegurança, irritabilidade, estresse emocional, insônia, transtornos de humor, tédio, solidão, medo, pânico, estresse pós-traumático. |
| 08 | Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study | Zhang Y, Feej, ZM, 2020                         | Estresse, tristeza, pânico, ansiedade, apreensão e temor devido a pandemia; sentimento de desamparo que pode estar relacionado ao aumento do uso das mídias sociais, como por exemplo assistir e ouvir notícias negativas.   |
| 09 | The Impact of COVID-19 Epidemic Declaration on Psychological Consequences: A Study on Active Weibo Users  | Li S, Wang Y, Xue J et al, 2020                 | Ansiedade, depressão, indignação, preocupação, raiva, insônia, incerteza, insegurança, estresse.   |
| 10 | Mental health status of people isolated due to Middle East Respiratory Syndrome   | Jeong H, Yim HW, Song YJ et al, 2016            | Transtorno de ansiedade generalizada, raiva, ansiedade.  |
| 11 | Psychosocial effects of an Ebola outbreak at individual, community and international levels   | Bortel TV, Basnayake A, Wurie F et al, 2016     | Medo da morte, ansiedade, sentimento de perda e pesar por perder entes queridos, angústia, tristeza, culpa ou desamparo por não serem capazes de confortar ou cuidar dos entes queridos.   |
| 12 | Repercussões psicológicas do isolamento de contato: uma revisão   | Duarte TL, Fernandes LF, Freitas MMC et al 2015 | Ansiedade, distúrbio do sono, agitação, angustia pela perda de liberdade, estresse, depressão, medo, solidão, baixa autoestima, raiva, tédio.  |

SANTOS; RODRIGUES (2020)

ring quarantine and social isolation, the studies analyzed in this integra-

tive review presented suggestions for support, Chart 2 shows some mea-

asures to reduce these psychological impacts.

**Chart 2 – Strategies to reduce the risks of psychological impacts according to the analyzed articles.**

| Artigo | Título  | Autores e ano de publicação                            | Estratégias para diminuir os riscos de impactos psicológicos   |
|--------|---|--|--|
| 01     | Fases psicológicas e sentido da vida em tempos de isolamento social por pandemia COVID-19 uma reflexão a luz de Viktor Frankl | Medeiros AYBBV, Pereira ER, Silva RMCRA, Dias FA; 2020 | Cantar, dançar, realizar atividades físicas nas varandas ou em outro lugar da casa, conversar com os vizinhos a distância, usar a criatividade para elaborar vídeos engraçados com as esposas e filhos.  |
| 02     | Pandemia, isolamento social e colapso global  | Bittencourt RN, 2020                                   | Planejar atividades lúdicas, manutenção da casa, exercícios físicos, fortalecer os laços familiares, aprofundar os estudos, iniciar novas leituras, ouvir música, assistir filmes, realizar orações e meditação.   |
| 03     | Online mental health services in China during the COVID-19 outbreak   | Liu S, Yang L, Zhang et al, 2020                       | Leitura de livros sobre prevenção, controle e educação em saúde mental, terapia comportamental cognitiva online para depressão, ansiedade e insônia, programas de inteligência artificial (IA) utilizados como intervenções para crises psicológicas durante a epidemia.                         |
| 04     | Telemental Health in the Context of a Pandemic: the COVID-19 Experience   | Whaibeh E, Mahmoud H, Naal H, 2020                     | Uso de tecnologias da informação e comunicação, incluindo videoconferência, para prestar assistência à saúde mental remotamente, incluindo avaliações, gerenciamento de medicamentos e psicoterapia.   |
| 05     | The psychological impact of quarantine and how to reduce it: rapid review of the evidence                                     | Brooks SK, Webster RK, Smith LE et al, 2020            | Fornecimento de suprimentos suficientes como: comida, água, roupa, garantir que as pessoas em quarentena tenham uma boa compreensão da doença em questão e os motivos da quarentena devem ser uma prioridade, uso de telefone e redes sociais para manter a comunicação com familiares e amigos. |
| 06     | Social distancing in covid-19: what are the mental health implications?   | Venkatesh A, Edirappuli S, 2020                        | São recomendadas rotinas diárias que incorporem um estilo de vida saudável, hobbies, interações sociais virtuais e atenção plena.  |

|    |   |   |  |
|----|---|---|--|
| 07 | Life in the pandemic: Social isolation and mental health  | Usher K, Bhullar N, Jackson D, 2020             | Criação de políticas de apoio, especialmente para os mais vulneráveis e assistência à saúde mental.  |
| 08 | Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study | Zhang Y, Feej, ZM, 2020                         | Práticas de exercício físico, relaxamento, meditação, apoio social e familiar.   |
| 09 | The Impact of COVID-19 Epidemic Declaration on Psychological Consequences: A Study on Active Weibo Users  | Li S, Wang Y, Xue J et al, 2020                 | Aproveitar o convívio familiar, realizar orações, meditação, apoio de profissionais da saúde: psicólogos, psiquiatras, assistentes sociais, fornecer mais serviços de entretenimento interno e prestação de serviços, como compras online. |
| 10 | Mental health status of people isolated due to Middle East Respiratory Syndrome   | Jeong H, Yim HW, Song YJ et al, 2016            | Apoio à saúde mental a indivíduos com saúde mental vulnerável, fornecimento de informações precisas e suprimentos adequados, incluindo alimentos, roupas e acomodações, uso de telefone e-mail e internet para comunicação.                |
| 11 | Psychosocial effects of an Ebola outbreak at individual, community and international levels   | Bortel TV, Basnayake A, Wurie F et al, 2016     | Comunicação, educação, engajamento da comunidade sobre a compreensão da doença, mobilização de recursos, apoio psicológico e atividades de prevenção com assistência à saúde mental.   |
| 12 | Repercussões psicológicas do isolamento de contato: uma revisão   | Duarte TL, Fernandes LF, Freitas MMC et al 2015 | Assistir televisão, ter acesso a informações confiáveis, ouvir música, ver imagens, intervenções de apoio à saúde mental.  |

SANTOS; RODRIGUES (2020)

**DISCUSSION**

An epidemic of great magnitude can imply psychosocial disturbance that exceeds the capacity of the affected population to cope. In general, the entire population suffers anguish and concerns. It is estimated that one third and half of the exposed population may suffer some psychopathological manifestation, according to the dimension of the event and the degree of vulnerability<sup>7</sup>.

According to the results found through the analysis of the articles, as observed in Chart 1, there was a predominance of negative psychological repercussions in the face of the experience of cases of quarantine and social isolation. Note that the most reported repercussions were: loneliness, depression, stress, fear of becoming ill and death, anxiety, anger, frustration, boredom, insomnia, sadness, irritability<sup>8,9,10,11,12,13,14,15,16,17,18,19</sup>.

Studies show that social isolation implies a change in routine, such as the impediment to perform routine ac-

tivities, children all the time at home, parents who are non-essential workers, grandparents emotionally connected to their grandchildren in a significant way, among others. Others are in fact cause for much concern. In addition, the lack of occupation interferes in the daily routine and alters sleep time, the food is also modified, depending on the family context, children may be more irritated, parents less patient and the feeling of boredom may arise<sup>8</sup>.

The post-traumatic stress disorder that was reported in two studies stands out<sup>11,14</sup>, less frequently, when compared to other psychological repercussions. The authors reported that this disorder can happen after the end of the quarantine period, it is usually correlated with damages and losses that occurred during the epidemic period, as in the cases in which the death of family members occurs or financial problems due to the loss of job.

These results corroborate with research data on the impact of the SARS epidemic, which demonstrates that the effect of being quarantined was a predictor of post-traumatic stress symp-

toms in hospital staff, even three years later<sup>20</sup>. In another study, with data from the first outbreak of equine influenza in Australia, it shows that approximately 34% (938 of 2,760) of horse owners quarantined for several weeks, because of an outbreak of equine influenza, reported high psychological distress during the outbreak, compared to about 12% in the general Australian population<sup>21</sup>.

It is noted that there were reports of suicide, given this very worrying, but that was identified only in a research<sup>12</sup>. There were also studies that presented social media as negative points, which can influence and interfere in psychological behavior, as watching newspapers with negative news can generate feelings of helplessness and despair<sup>12,15</sup>. It is also worth mentioning that psychosocial problems arise more frequently in the most vulnerable people, such as low-income socioeconomic classes and people who already suffer from some mental health condition<sup>14</sup>.

Quarantine can be a necessary preventive measure during major outbreaks of infectious diseases. However,

it can also often be associated with a negative psychological effect. During the quarantine period, this negative psychological effect is not surprising, but there is evidence that the psychological effects of quarantine can still be detected months or years later, even from a small number of studies, a fact that is worrying and suggests the need to ensure that effective mitigation measures are implemented as part of the quarantine planning process<sup>15</sup>.

Regarding strategies to minimize the risks of psychological impacts, research that presented the following measures was more prevalent: physical exercise, watching movies, reading books, listening to music, taking the time to strengthen family bonds<sup>8,9,15,16,19</sup>. It is worth mentioning the study that addresses the use of in-

formation and communication technologies with health professionals to provide health care, as measures to reduce psychological risks<sup>11</sup>.

The provision of essential supplies to the most vulnerable people, such as food, water, clothing, are highlighted<sup>12,17</sup>. So too, how to create support policies for the most vulnerable populations and mental health assistance<sup>14</sup>. The use of the internet, social networks and news in the media is recommended when you have reliable sources and positive information<sup>19</sup>. The use of artificial intelligence programs was mentioned as interventions for psychological crises during the epidemic<sup>10</sup>.

#### CONCLUSION

The results demonstrate a greater

propensity for negative repercussions in the face of situations that require quarantine and social isolation, and these effects can be broad and lasting depending on the magnitude of the pandemic. It is concluded that it is necessary to carry out future research with this approach to assess the impacts of the COVID-19 pandemic. It is relevant that public health measures are implemented, such as educational activities, as well as actions that can assist people in coping with isolation, helping to maintain a good quality of life and mental health. It is important to emphasize that the practice of social isolation and quarantine are essential to control the spread of an infectious disease and that the psychological effect of not adopting this strategy can also be worrying. 🐦

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