

https://repository.uaeh.edu.mx/revistas/index.php./MJMR/issue/archive

Mexican Journal of Medical Research ICSa

Biannual Publication, Vol. 11, No. 21 (2023) 14-18



ISSN: 2007-5235

Fear in the COVID-19 context Miedo en el contexto de la COVID-19

Ana G. Olvera-Cruz, a

Abstract:

The COVID-19 pandemic has affected the entire population worldwide, defined by the World Health Organization as an "infectious disease" caused by a new SARS-CoV-2 coronavirus, which has managed to spread unexpectedly, causing high morbidity and mortality rates and negatively impacting multiple aspects of human life, not only physical health but also mental health. In this regard, psychosocial factors such as fear, depression, stress, and anxiety are common manifestations in any situation that puts the life of the individual at risk, since, according to the National Survey of Mental Health, 18% of the population between 15 and 64 years of age suffers from some mood disorder. In view of this, the objective of this article is to carry out a literature review on the affectations that the world population has suffered as a response to the COVID-19 pandemic, specifically, on fear, which is an experience that produces an unstable emotional effect derived from the valuation of a potentially dangerous situation and that one has no control over it, as well as on its affectations that the world population has suffered as a response to the COVID-19 pandemic.

Keywords:

COVID-19, fear, psychological impact

Resumen:

La pandemia por la COVID-19 ha afectado a toda la población en el mundo, definida por la Organización Mundial de la Salud como una "enfermedad infecciosa", causada por un nuevo coronavirus SARS-CoV-2, mismo que ha logrado propagarse de forma imprevista, formando elevadas tasas de morbimortalidad e impactando negativamente múltiples aspectos de la vida humana, no solo en la salud física sino también en la salud mental; al respecto factores psicosociales como el miedo, la depresión, el estrés y la ansiedad son manifestaciones comunes ante cualquier situación que pone en riesgo la vida del individuo, ya que, de acuerdo a la Encuesta Nacional de Salud Mental, un 18% de la población entre 15 a 64 años de edad, sufre algún trastorno del estado de ánimo. Ante esto, el objetivo del presente artículo es realizar una revisión literaria sobre las afectaciones que ha padecido la población mundial como respuesta a la pandemia por COVID-19, en específico, sobre el miedo, el cual es una experiencia que produce un efecto emocional inestable derivado de la valoración de una situación potencialmente peligrosa y que no se tiene control sobre ella, así mismo también sobre sus afectaciones que ha padecido la población mundial como respuesta a la pandemia por la COVID-19.

Palabras Clave:

COVID-19, miedo, impacto psicológico

INTRODUCTION

The outbreak of COVID-19 has prompted many countries to ask people potentially exposed to the virus to isolate themselves at home or in a dedicated quarantine facility and to take the necessary measures to avoid infection. The pandemic has primarily affected the entire population, negatively impacting multiple aspects of human life, physically, psychologically, economically, socially, and culturally. COVID-19 has not only a high case fatality rate, but, according to official data, the differences between countries are tremendously different: 0.1% in Singapore, 9.3% in Peru, 8.9% in Mexico, 1.8% in the United States, 3% in Italy, 2.8% in Brazil, 4.7% in China, and 1.9% in Spain, to mention a few countries. It has also generated psychological distress, chaos and unrest around the world. The

possibilities of contagion that the virus has confirmed to have and the large number of confirmed cases and deaths reported daily, affect the mental health of the population worldwide, forming negative emotions and thoughts, fear of death and feelings of sadness, loneliness and irritability.³

According to the World Health Organization, mental health problems have increased during the COVID-19 pandemic. In the general population, increased levels of anxiety and stress have been observed, with several instruments showing that about one-third of adults report high levels of distress. Among the younger population, that figure is as high as 1 in 2 people.⁴

^a Corresponding author, Private practice, https://orcid.org/0000-0003-4439-7743, Email: olvera.gb@gmail.com

Thus, psychosocial factors such as fear, among others, are common manifestations in any situation that puts the individual's life at risk.⁵ The COVID-19 pandemic represents a health emergency that affects several aspects of people's lives, such as the increase of psychosocial factors, it is known that these can have repercussions not only in the short term, but also in the long term, making this a public health problem that must be detected and addressed immediately in order to curb the psychological impact.⁶

COVID-19

The World Health Organization declared on March 11, 2020, the disease COVID-19, caused by the SARS-CoV-2 virus, as a pandemic, two weeks later it had already spread to 114 countries, where most of them opted for some initiatives, such as the establishment of a quarantine or curfew. The disease has managed to spread throughout the world in an unforeseen manner, and has led to high morbidity and mortality rates. In such a way that, in a short time, it has altered most of the daily contexts of people and has collapsed the health systems and the economy. 8

The accelerated increase in COVID-19 cases, in conjunction with the various measures aimed at halting its spread, e.g., containment, has led to economic slowdowns in almost all countries. COVID-19 has caused the economy in the global context to grind to a halt generating uncertainty regarding the future of life, due to existing inequities in access to health care resources, loss of jobs, mandatory isolation for many countries, etc.⁹

Despite the development of strategies aimed at correcting the health and economic systems, these are not sufficient, due to the fact that several factors are related to the fragility of the health system and the existence of large sectors of the population and vulnerable regions. ¹⁰

To give a clear example, it is worth mentioning that 42% of Mexico's population is below the poverty line, and 25 million people are excluded from the right to health care, 11 all this, coupled with uncertainty about the economic downturn and concern about individual health and the well-being of those around them, constant exposure to information provided by the media can lead to increased levels of fear, stress, anxiety, depression, insomnia and other psychosocial factors... 12

FEAR AND PATHOLOGY

It is important to mention that fear has a biological principle, since it refers to a set of nervous structures designated as limbic system, which contain the hippocampus, the anterior thalamus, the convolution of the corpus callosum, and the amygdala. The latter is the main administrator of emotions, and any lesion it

suffers overrides the emotional capacity of the amygdala.¹³ The way of expressing emotions depends to a great extent on the socialization process received, in such a way that children are integrated into the world of adults through the education of emotions they receive in their family and sociocultural environments.¹⁴

Fear is a primary emotion that is stimulated by a risk situation, anticipated by foresight, awakened by memory or produced by fantasy, commonly followed by an organic reaction caused by the autonomic nervous system, which, in turn, prepares the organism for emergency situations, often resulting in fight or flight attitudes. ¹⁴ In particular, it is accompanied by insecurity, anxiety, anguish and distrust. It is a response or behavior of the organism, in an attempt to restore a state of equilibrium or homeostasis, which is about to end or has already ended, and which causes the person to be altered physically and psychosocially. ¹⁶

Thus, it can be inferred that fear is an adaptive set of behavioral responses that have been advanced to enable us to survive. As an emotion, fear is divided into three coordinated domains of response, which include physiological and behavioral changes, in addition to the characteristics named subjective "feelings" that are referred to when considering emotional states.¹⁷

Similarly, it is important to mention that anxiety disorders are the pathological expression of fear and are closely related to an irrational anxiety response to a non-existent danger. It is one of the reactions that produces the greatest number of mental, emotional, behavioral and psychosomatic disorders.¹⁸

When the frequency, intensity or the period of time (hours, days, weeks, months) of anxiety as an emotional response is excessive it can cause the appearance of affectations to the quality of life of the people. In this case one speaks of a pathological anxiety or of an anxiety disorder, the presence of strong reactions or states of anxiety will not simply be at the base of the mentioned anxiety disorders, but also frequently associated to disorders like depression and in general to the disorders considered proverbially as neurotic, to good part of the psychotic ones and to an extensive variety of the psychophysiological ones.¹⁹

Derived from the above, it is essential to clarify that anxiety and fear are closely related negative states, which are usually confused. Both involve characteristics such as uneasiness and tension, but there are contrasts between these two conditions, whose consideration allows differentiating between them.²⁰ Fear has a precise focus, it is eventual and is reduced or disappears when the risk moves away from the person, or vice versa. On the other hand, in anxiety, it is complicated to identify the cause of the tension and/or the nature of the anticipated

event; it would be to be afraid of something, without knowing exactly what that something is.²¹

FEAR IN THE COVID-19 CONTEXT

The COVID-19 has become a threat not only to physical health, but also to mental health, as previous research has similarly revealed a deep and wide range of psychosocial impact on the individual and the collective during previous infectious disease outbreaks. WHO warns that at least one third of the population exposed to a pandemic may suffer a psychological manifestation, depending on the magnitude of the event and the degree of vulnerability.⁷

Brooks et al. showed the psychological impact of quarantine in some epidemics that have struck humanity, such as SARS-CoV, MERS-CoV, influenza A/H1N1 and Ebola, pointing out that this preventive measure has had a negative effect on people's mental health. The authors reported a higher prevalence of psychological effects, such as fear, anxiety, sadness and insomnia, as well as the emergence of disorders such as depression, generalized anxiety, obsessive-compulsive disorder, and post-traumatic stress disorder.²²

According to a survey conducted by the Research Institute for Development with Equity of the Ibero-American University, ²³ revealed that, in the first months of the pandemic in Mexico, 32% of the population manifested severe symptoms of anxiety, and the Mexican Social Security Institute revealed that, in the first months of the pandemic in Mexico, 32% of the population manifested severe symptoms of anxiety, ²⁴ He pointed out that during consultations, a large number of patients express uncertainty about COVID-19, which causes states of anxiety and stress. It is also important to note that the fear of contracting COVID-19 in Mexico increased by 6 percentage points between June 20 and July 18, 2021, coinciding with the new wave of coronavirus infections in the country. ²⁵

The psychosocial consequences of the COVID-19 pandemic have been far-reaching and worldwide. Millions of people have become ill, have had to stay at home or have been unable to work, and consequently, have generated psychological disturbances, one psychological aspect of the COVID-19 pandemic is fear, unknown scenarios such as disease outbreaks and epidemics can induce fear among people, such fear has led people to commit suicide because they thought they had COVID-19.²⁶

Tomas-Sabado, mentions that people who experience fear of contamination, for example, have become complicated, since constantly going to wash their hands, leads them to resume rituals, habits and compulsions quickly, being a difficult situation for these people, since they must do what they were

avoiding, that self-isolation makes those with OCD, worsen their symptoms when they feel they have nothing to do.²⁷

On the other hand, the psychological predictors of behavior change and fear in response to the 2020 COVID-19 pandemic have been explored. It was found that there are relationships between behavior change and the new FCV-19S scale, ²⁸ using the recently developed Fear of COVID-19 Scale reported that the FCV-19S score was positively associated with behavior change assessing preventive behaviors, that people engage more in preventive behaviors when they perceive the threat as severe. There was no notable decrease in quality of life in relation to behavior change; however, fear of COVID-19 was associated with a decrease in physical and environmental well-being. ²⁹

In a study conducted in Ecuador, the results of the Mann-Whitney U test of independent samples showed the existence of significant differences between men and women in fear of COVID-19 scores, female university students suffer higher levels of fear of COVID-19 than their male peers; however, no significant gender differences were found for levels of anxiety, stress and depression, which is inconsistent with observations from some studies conducted during the pandemic showing that women are more vulnerable to these disorders.³⁰

70% of the literature review shows that the general population presents irrational ideas and obsessive traits, adopting excessive measures related to cleanliness, using masks without having flu symptoms, antibacterial products at home, washing their hands at all times, even when they have not come into contact with someone or have touched something, and some are afraid that the virus is in the environment and can be acquired.³¹

Tomas-Sabado, does not mention that people who experience fear of contamination, for example, have become more complicated, since constantly going to wash their hands, leads them to resume rituals, habits and compulsions quickly, being a difficult situation for these people, as they must do what they were avoiding, that self-isolation makes those with OCD, worsen their symptoms when they feel they have nothing to do.²¹

Thus, fear is an adaptive component of the response to constantly threatening stimuli, but excessive fear explains chronic psychiatric disorders such as post-traumatic stress disorder and phobias. For this reason, understanding the neurobiological basis of fear is essential to elucidate the mechanisms that improve the treatment of these fear-related pathologies.³²

In the current context of the global COVID-19 pandemic, there is an increasing amount of social scientific and medical research, but so far, few studies have examined the role of individual differences in personality-based emotional variables

in predicting virus mitigating behaviors. It is important to reflect on who is most vulnerable in the current situation, COVID-19 has the potential to impact everyone in a society, however, these impacts will be conceived differently, the way in which people prepare and protect themselves, must be viewed from a health equity perspective. It is paramount to recognize that pandemics, and health actions, influence and are influenced by the social, economic and political determinants of health.³³

FEAR TREATMENT

The impact of the pandemic on the mental health of society as a whole (fear of death, job instability, high levels of stress, anxiety, etc.) and the measures being taken to deal with it have not been considered, which is why in terms of the development of new and effective treatments for fear-related disorders, circuit-level approaches such as transcranial magnetic stimulation and transcranial magnetic resonance imaging have been used to treat fear-related disorders.³⁴ and deep brain stimulation³⁵ are promising, however, there are other strategies that are specifically aimed at addressing more specific aspects.

To this end, it is important to mention that the experiences of fear during the existing pandemic can be organized in a relationship of four interrelated dialectical domains: fear for the body, fear for significant others, fear of knowing/not knowing, and fear of taking or not taking action.³⁶

REFERENCES

- [1] Mukhtar S. Psychological health during the coronavirus disease 2019 pandemic outbreak. Int. J. Soc. Psychiatry. 2020;66(5):512–6.
- [2] Tasa de letalidad de la COVID-19. Empíreo Diagnóstico Molecular Diagnóstico de VIH y ETS. 2021. Available in: https://www.empireo.es/tasa-de-letalidad-de-la-covid-19/.
- [3] Huarcaya-Victoria J. Consideraciones sobre la Salud Mental en la pandemia de COVID-19. Rev. Peru Med. Exp. Salud Publica. 2020;37(2):327–34.
- [4] Organización Panamericana de la Salud. La OPS destaca la crisis de salud mental poco reconocida a causa de la COVID-19 en las Américas 2021. Available in: https://www.paho.org/es/noticias/24-11-2021-ops-destaca-crisis-salud-mental-poco-reconocida-causa-covid-19-americas.
- [5] Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 Coronavirus disease (COVID-19) epidemic among the general population in China. Int. J. Environ. Res. Public. Health. 2020;17(5):1729.
- [6] Xiang Y, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet. Psychiatry. 2020;7(3):228–9.
- [7] WHO Coronavirus (COVID-19) dashboard. Who.int. [cited 2022 Mar 30]. Available in: https://covid19.who.int/.
- [8] Larios-Navarro A, Bohórquez-Rivero J, Naranjo-Bohórquez J, Sáenz-López J. Psychological impact of social isolation on the comorbid patient: on the subject of the COVID-19 pandemic. Rev. Colomb. Psiquiatr. 2020;49(4):227–8.
- [9] Chertorivski-Woldenberg S, Córdova-Villalobos JA, Frenk-Mora J, Juan-López M, Narro J, Soberón-Acevedo G. La gestión de la pandemia en México: Análisis preliminar y recomendaciones urgentes. Ciudad de México, Pensando en México. 2020.

For each of the above domains, effective use of electronic and social media to communicate during the pandemic is recommended,³⁷ a healthy expression of emotions and focus on the positive and improve skills,³⁸ limiting exposure to pandemic-related news stories³⁹ and the regulation of the sleeping and eating habits.⁴⁰ In the dynamics of COVID-19 the relevance of people's behavior is appreciated, the importance of identifying their behavior allows for a more adequate understanding of the disease, as well as allowing for the design and planning of more effective interventions.

CONCLUSIONS

It is necessary that, at the level of the guilds, psychologists, and psychiatrists make visible the mental health problems caused by this pandemic, that they make recommendations, guidelines and protocols for care and communicate them to the authorities with decision-making power and to the community in general. For these reasons, it is important and of special relevance to know the impact of the pandemic on mental health, specifically talking about psychosocial factors such as fear, of people who seek care at a hospital or health center and, likewise, to know their associated characteristics.

- [10] De la Mora-De la Mora G. Aislamiento social para contener la pandemia por COVID y vigilancia algunas acciones de Gobiernos y actores sociales. UNAM. 2020;(26):1-6.
- [11] Instituto Nacional de Estadistica y Geografía. Org.mx. 2021. Available in: https://www.inegi.org.mx/.
- [12] Apaza P. CM, Santa-Cruz Arévalo JE, Seminario Sanz R. Factores psicosociales durante el confinamiento por COVID-19 Perú. Revista Venezolana de Gerencia. 2020;25(90):402-413. Available in: https://www.redalyc.org/articulo.oa?id=29063559022.
- [13] Gross PR. The emotional brain: The mysterious underpinnings of emotional life. Wilson. Q. 1997;21:92.
- [14] Lutz C. Parental Goals, Ethnopsychology, and the Development of Emotional Meaning. Ethos. 1983;11(4):246–62.
- [15] Galimberti U. Diccionario de Psicología. México Siglo XXI; 2007.
- [16] Valdez J, Torres Aristeo O, Arratia López Fuen N, López Romero I. Los tipos de miedo prevalentes por generación y por sexo. Rev Electrónica Psicol Iztacala. 2010;13(4).
- [17] Milton AL. Fear not: recent advances in understanding the neural basis of fear memories and implications for treatment development. F1000Res. 2019;8:1948.
- [18] Piqueras J, Ramos V, Martínez A, Oblitas L. Emociones negativas y su impacto en la salud mental y física. Suma Psicológica. 2009;16(2):85–112.
- [19] American Psychiatric Association. Diagnostic and Statiscal Manual of Mental Disorders, 5th edition, Revised. Washington, DC: American Psychiatric; 2013.
- [20] Tomás-Sábado J. Miedo y ansiedad ante la muerte en el contexto de la pandemia de la COVID-19. Rev. Enfermería y Salud Ment. 2020;(16):26–30
- [21] Tomás-Sábado J. Miedo y ansiedad ante la muerte: Aproximación conceptual, factores relacionados e instrumentos de evaluación. Herder Editorial; 2016.

- [22] Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet. 2020;395(10227):912–20.
- [23] UNICEF México. Encuesta de Seguimiento de los Efectos del COVID-19 en el Bienestar de los Hogares en la Ciudad de México. 2020;1:1–35.
- [24] Instituto Mexicano del Seguro Social. Los problemas de salud mental a consecuencia de la pandemia son atendidos por el IMSS. Acercando el IMSS al Ciudadano. 2021. Available in: https://www.imss.gob.mx/prensa/archivo/202107/301.
- [25] Mitofsky International. Consulta.mx. 2022. Available in: http://www.consulta.mx/index.php/somos-mitofsky.
- [26] Pakpour AH, Griffith MD. The fear of COVID-19 and its role in preventive behaviors. J. Concurr. Disord. 2020;2(1):58–63.
- [27] La Organización Panamericana de la Salud. OPS insta a priorizar la prevención del suicidio tras 18 meses de pandemia por COVID-19 Paho.org. 2021. Available in: https://www.paho.org/es/noticias/9-9-2021-ops-insta-priorizar-prevencion-suicidio-tras-18-meses-pandemia-porcovid-19.
- [28] Ahorsu DK, Lin CY, Imani V, Saffari M, Griffiths MD, Pakpour AH. The Fear of COVID-19 Scale: Development and Initial Validation. Int. J. Ment. Health. Addict. 2020;1.
- [29] Harper CA, Satchell LP, Fido D, Latzman RD. Functional fear predicts public health compliance in the COVID-19 pandemic. Int. J. Ment. Health. Addict. 2021;19(5):1875–88.
- [30] Rodríguez-Hidalgo AJ, Pantaleón Y, Dios I, Falla D. Fear of COVID-19, stress, and anxiety in university undergraduate students: A predictive model for depression. Front. Psychol. 2020;11:591797.
- [31] Pinchak C. Pandemia por coronavirus (COVID-19); sorpresa, miedo y el buen manejo de la incertidumbre en la familia. Arch. Pediatr. Urug. 2020;91(1):76–7.

- [32] Garcia R. Neurobiology of fear and specific phobias. Learn. Mem. 2017;24(9):462–71.
- [33] Smith JA, Judd J. COVID-19: Vulnerability and the power of privilege in a pandemic. Health. Promot. J. Austr. 2020;31(2):158–60.
- [34] Kozel FA. Clinical repetitive transcranial magnetic stimulation for posttraumatic stress disorder, generalized anxiety disorder, and bipolar disorder. Psychiatr. Clin. North. Am. 2018;41(3):433–46.
- [35] Bina RW, Langevin J-P. Closed Loop Deep Brain Stimulation for PTSD, addiction, and disorders of affective facial interpretation: Review and discussion of potential biomarkers and stimulation paradigms. Front. Neurosci. 2018;(12):300.
- [36] Schimmenti A, Billieux J, Starcevic V. The four horsemen of fear: An integrated model of understanding fear experiences during the covid-19 pandemic. Clin Neuropsychiatry. 2020;17(2):41–5.
- [37] Padala SP, Jendro AM, Orr LC. Facetime to reduce behavioral problems in a nursing home resident with Alzheimer's dementia during COVID-19. Psychiatry Res. 2020;288(113028):113028.
- [38] Bhattacharjee B, Acharya T. The COVID-19 pandemic and its effect on mental health in USA A review with some coping strategies. Psychiatr Q. 2020;91(4):1135–45.
- [39] Ornell F, Schuch JB, Sordi AO, Kessler FHP. "Pandemic fear" and COVID-19: mental health burden and strategies. Rev. Bras. Psiquiatr. 2020;42(3):232–5.
- [40] Taub JM, Hawkins DR, van de Castle RL. Electrographic analysis of the sleep cycle in young depressed patients. Biol. Psychol. 1978;7(3):203–14