CLINICAL PSYCHOLOGY DURING THE COVID-19 PANDEMIC: EXPERIENCES FROM SIX FRONTLINE HOSPITALS IN MEXICO

PSICOLOGÍA CLÍNICA DURANTE COVID-19: EXPERIENCIAS DE SEIS HOSPITALES DE PRIMERA LÍNEA EN MÉXICO

Edgar Landa-Ramírez 1,2

ORCID: https://orcid.org/0000-0001-8378-8670

Cintia Tamara Sánchez-Cervantes³

ORCID: https://orcid.org/0000-0001-9365-6233

Sofía Sánchez-Román⁴

ORCID: https://orcid.org/0000-0001-8619-6398

Eryka del Carmen Urdapilleta-Herrera⁵

ORCID: https://orcid.org/0000-0002-4981-9047

Jorge Luis Basulto-Montero⁶

ORCID: https://orcid.org/0000-0001-9822-9820

Lucía Ledesma-Torres⁷

ORCID: https://orcid.org/0000-0002-0955-622X

1. Programa de Psicología Urgencias,

Hospital General Dr. Manuel Gea González, Mexico City, Mexico

- 2. Facultad de Psicología, Universidad Nacional Autónoma de México, Mexico City, Mexico
 - 3. Unidad de Salud Mental, Hospital Juárez de México, Mexico City, Mexico
 - 4. Departamento de Neurología y Psiquiatría,
- Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico
 - 5. Dirección Médica, Programa de Apoyo a Pacientes y Familiares.
 - Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico
 - 6. Departamento de Psicología, Hospital General Acapulco, Acapulco City, Mexico
 7. División de Neurociencias.

Centro Médico Nacional "20 de Noviembre" -ISSSTE, Mexico City, Mexico

Cómo referenciar este artículo/How to reference this article:

Landa-Ramírez, E., Sánchez-Cervantes, C. T., Sánchez-Román, S., Urdapilleta-Herrera, E., Basulto-Montero, J. L., & Ledesma-Torres, L. (2021). Clinical psychology during the COVID-19 pandemic: Experiences from six frontline hospitals in Mexico [Psicología clínica durante COVID-19: Experiencias de seis hospitales de primera linea en México]. Revista de Psicoterapia, 32(120), 143-155. https://doi.org/10.33898/rdp.v32i120.588





Abstract

Around the world, the COVID-19 pandemic has generated clinical challenges for health personnel in general, and particularly hospital personnel. In Mexico, the clinical psychologists who are part of the local hospital systems have adapted professional practices to provide mental health care in COVID-19 frontline hospitals. This text describes the actions, lessons, and challenges arising from treating patients, families, and health workers in six COVID-19 hospitals in Mexico. It highlights the main problems identified, strategies to address them, and the barriers encountered during this pandemic. Finally, this paper may be useful for planning clinical psychological activities within COVID-19 hospitals in locations where new waves of contagion appear.

Keywords: COVID-19, psychological intervention, mental health, Mexico

Resumen

A nivel mundial la pandemia COVID-19 ha generado retos clínicos al personal de salud en general y al personal hospitalario en particular. En México, los psicólogos clínicos que forma parte de los sistemas hospitalarios, ha adaptado su práctica profesional para poder brindar atención en salud mental en los hospitales COVID-19. Este escrito describe las acciones y retos derivados de la atención clínica a pacientes, familiares y personal de salud en seis hospitales COVID-19 en México. Se resaltan los principales problemas identificados, las estrategias para abordarlo y las barreras encontradas durante esta pandemia. Finalmente, este escrito puede ser de utilidad para planeación de actividades psicológicas clínicas dentro de hospitales COVID-19, en aquellos lugares en donde vienen nuevas olas de contagio.

Palabras clave: COVID-19, intervención psicológica, salud mental, México

COVID-19 has placed great stress on hospitals and healthcare professionals, and diverse global health systems have had to respond with structural adjustments to augment the availability of hospitals beds, ventilators, and personal protective equipment (PPE) and bolster the amount of sufficient health personnel, who must be prepared and protected to be able to address the various novel challenges presented during this pandemic (Bamias et al., 2020; The Lancet, 2020). This has posed major challenges for hospital professionals, health staff in general, and mental health staff in particular (Percudani et al., 2020). The clinical psychology sector of hospital systems has also needed to adapt its professional practices to provide care during the pandemic, thus generating valuable learning opportunities and challenges for psychological care needs on the front lines of COVID-19 (Cao di San Marco et al., 2020; Landa-Ramírez et al., 2020). As such, this text seeks to describe the lessons, practices and challenges which arose from providing clinical care to patients, families, and health workers in six COVID-19 hospitals in Mexico during the first seven months of this pandemic (February-September 2020).

Context of the Development of COVID-19 in Mexico

At the time of writing, August of 2021, Mexico had reported over three million cases of SARS-COV-2 and over 250,000 deaths, ranking among highest numbers of COVID-19 contagions and deaths of any country in the world (Secretaría de Salud [Ministry of Health], 2021). The first case of SARS-COV-2/COVID-19 in Mexico was registered at the end of February, 2020. Due to the transmission behavior of the virus, it was possible to identify and observe the problems related to COVID-19 that were occurring in other countries such as China, Italy, Spain and the USA for weeks in advance (World Health Organization [WHO], 2020), and preparatory measures to prevent hospital saturation were taken in Mexico (e.g., population quarantine and creation of specific hospitals for the care of patients with COVID-19), as well as actions focused on preparing, organizing and training hospital health staff in order to meet the specific needs created by the pandemic. Despite taking these actions, Mexico's preparatory capacity was limited, in large part due to political tension between local and federal governments which resulted in an uncoordinated response to COVID-19. Ultimately Mexico was one of the countries hit hardest by the COVID-19 pandemic in 2020 (Taylor, 2020). Further challenges included Mexico's high levels of poverty and chronic degenerative diseases such as obesity, hypertension and diabetes (Pablos-Méndez et al., 2020).

The confluence of these factors had a considerable impact on hospital psychological work, as previous reports from other countries indicated a great need for psychological care for frontline health personnel, relatives, and patients with COVID-19 (Cao di San Marco et al., 2020; Lai et al., 2020); work focused on mental health was therefore prioritized in COVID-19 hospitals in Mexico. Many private and public hospitals in Mexico staffed full-time clinical psychologists before the onset of the pandemic, who worked together with psychiatrists and mental health

nurses for assessing and treating mental health in the hospital setting. Building on these years of clinical experience, the unique challenges of COVID-19 necessitated new adaptations to address mental health for patients, relatives, and health personnel in COVID-19 hospitals in Mexico, as described below.

Caring for COVID-19 Patients

This work involved both patients presently hospitalized for COVID-19 and those who had been discharged due to improvement. The work was carried out face-to-face, remotely or with mixed methods. Patients were selected based on referral by the healthcare team or by the psychologist when going from bed to bed to inquire about the patients' needs. Evaluations were carried out through semi-structured clinical interviews and sporadic application of instruments, either online or in-person. Remote work was carried out through the use of the internet, electronic tablets, and smartphones, and, in the case of one hospital, remotely controlled robots used to help implement psychological evaluations and interventions with the patient. The relevance and usefulness of online work for mental health care during this pandemic, in addition to its relevance to reduce the risk of contagion, was observed in China at earlier phases of the pandemic (Gong et al., 2020; Liu et al., 2020).

The main mental health issues reported by the patients were: depressive and anxious symptoms, stress due to the hospital stay, sleep problems, need to communicate with their relatives, need for more information about COVID-19, concerns about their health, need for support for decision-making about medical procedures, anger, emotional crisis from hospitalization, desire to leave the hospital, feelings of unreality, loneliness, and fear of dying. Several of these needs are similar to those reported in other writings about patients who had COVID-19 and who were hospitalized for this disease (Guo et al., 2020; Zhang et al., 2020a). Discharged patients--especially in patients who were intubated--experienced additional acute stress problems including panic attacks, fear of the aftermath of the disease, fear of reinfection, the emergence of obsessive-compulsive disorder (OCD), and fear of reintegration to hospital activities (in the case of COVID-19 patients who are healthcare workers). These problems reflect those reported in other patients who are recovering from COVID-19, or who had a prolonged hospitalization (Grover et al., 2019; Vindegaard & Benros, 2020).

The primary and most effective techniques used were: psychoeducation, relaxation techniques, decisional balance, coping strategies, cognitive restructuring components, and, if relevant, evidence-based therapies used to create a treatment plan for users; for example, cognitive behavioral therapy (CBT) for depression and panic attacks, acceptance and commitment therapy for depression, or a combination of psychological therapy and pharmacological support (Axelsson et al., 2020; Barbui et al., 2020). Another action carried out for emotional support was the implementation of video calls (5-10 minutes) between hospitalized patients and their relatives,

which allowed for better communication between them and in some cases allowed the family member to say goodbye to the patient before their death. Interventions with hospitalized patients were given in a range of two to four sessions, lasting 20 to 60 minutes per session. Interventions with patients discharged from the hospital were given in an average of three sessions when emotional monitoring was given, and for more than eight sessions when a specific therapeutic intervention program was applied. Finally, it is important to highlight that in order to access COVID-19 wards, the psychologists were trained in biosafety care and the use of PPE.

Caring for Relatives

Working with relatives of COVID-19 patients can be classified in three contexts: 1) psychological support during their relative's hospital stay; 2) support with the transmission of bad news or notification of death of the patient; 3) post-hospital support. Due to the confinement measures, most of the work with relatives was done remotely; however, given that quarantine was not mandatory in Mexico (given the country's high levels of poverty, isolation was not financially feasible for many Mexicans), the work could be carried out either in person or remote. Evaluations and interventions were carried out either in person or remotely; in the case of remote work, video calls or telephone calls were used. Face-to-face evaluations and interventions were carried out in open areas of hospitals (gardens or esplanades) and within hospital facilities. In the latter case, a private space was provided where biosafety measures could be adhered to.

The main problems identified in caregivers were: fear and uncertainty about hospitalization and evolution of the health status of their patients, fear of being a carrier of SARS-COV-2, need for information about COVID-19, anger at the impossibility of seeing the patient, need to communicate with the patient, depressive and anxious symptoms, sleep problems, stress due to the hospital stay, emotional exhaustion due to patient care, financial problems, crisis due to notification of death, and grief. A high impact on the 'mental health burden' of caregivers of patients with various chronic diseases and relatives of patients with COVID-19 has previously been reported (Koyanagi et al., 2018; Mazza et al., 2020).

Psychological support given to family members during the hospitalization of their relative was focused on psychoeducation about SARS-COV-2/COVID-19, identification of possible symptoms of COVID-19 in family members, and communication strategies with their hospitalized relative. When working with the emotional distress of a family member during the hospitalization of their relative, workers applied emotional restraint to emotional lability, promoted the use of support networks, demonstrated techniques for managing anxiety and emotional distress, and if the problems identified were more intense emotional disorders, coordination was carried out so that this family member could receive remote psychotherapy for the specific emotional problem (Chi & Demiris, 2015; Marzorati et al., 2018).

In the case of death notifications, both face-to-face and telephone crisis support

skills (connect with the person; focus the call; relieve any emotional stress; promote coping strategies; and decide on the next steps (Kitchingman et al., 2015)) were adapted to the COVID-19 context; although telephone intervention was an option, several family members refused to take the call or did not have the physical or emotional ability to do so at that time. In the case of death, providing psychological support to this population was especially challenging due to deep-rooted cultural beliefs around burial and rites, based in Pre-Hispanic and Catholic syncretism, to be carried out when a loved one dies. Given the pandemic context, the Mexican government encouraged people to cremate rather than bury deceased COVID-19 patients, and attendance to funerary rituals were restricted. This generated great distress among the relatives of deceased patients (Landa-Ramírez et al., 2020).

Calls were coordinated with the relatives of patients who left the hospital to identify their emotional state and, if appropriate, start remote psychotherapy work. Both face-to-face and remote interventions were delivered on average over four sessions lasting 40 to 60 minutes per session. However, crisis interventions in the face of death notification, by their nature, are more challenging, therefore these interventions were carried out in a single session accompanied by a follow-up call (generally one week after cremation or burial) and generally lasted between 90 and 120 minutes.

Caring for Hospital Personnel

Psychological work with hospital staff was focused on the following actions: 1) evaluation of psychological problems; 2) preventive and informative strategies; 3) psychological interventions. Generally, hospital staff directly sought psychological support, or were referred by a coworker. Evaluations, preventive strategies and interventions were applied in various modalities: face-to-face, remote, or mixed. In order to carry out evaluations, internet pages, online links or the application of physical instruments were used, and an attempt was always made to give immediate recommendations for their emotional health status.

The main problems identified in this population were: fear of becoming infected and infecting their loved ones, emotional distress due to not being able to see their family, fear of having a permanent aftermath effect on their health, fear of dying (for those that contracted COVID-19), guilt over the thought of having infected a loved one (for those that contracted COVID-19), anxiety or depressive symptoms, OCD, alcohol use, sleep problems, panic attack, burnout, compassion fatigue, post-traumatic stress, problems with coworkers, irritability, anger, frustration, desire to leave the hospital, and emotional crisis due to the hospitalization or death of a coworker due to COVID-19. Several of these problems have been previously reported in health personnel during this pandemic (Pappa et al., 2020), in prior pandemics (Kisely et al., 2020) and in other Spanish-speaking populations including Spain (Alonso et al., 2021) and Mexico (Robles et al., 2020).

Preventive strategies were focused on promoting balanced nutrition, exercise,

mental health care, social support with colleagues and remote contact with loved ones. These actions have been recommended for mental health care in hospital staff and have been identified as an important component for preventing burnout (Pan American Health Organization, 2020; Yıldırım et al., 2021) or even moral injury stemming from professional decision-making when treating COVID-19 patients (Williamson et al., 2020).

Mental health information was sent to the hospital staff's email, informational posters were set up in COVID-19 wards, online technology was used (social networks, videos to share mental health information), group workshops were promoted (two or three sessions of 60 minutes each) to identify sources of stress and promote emotional expression and, if required, work was carried out through individual psychological therapies. The interventions were given on average over two sessions (for acute emotional distress) lasting 60 to 90 minutes per session; and more than eight sessions (50 to 60 minutes per session) when a treatment was applied for a specific psychological issue. The main techniques used were: psychoeducation, relaxation techniques, support for self-care, sleep hygiene, autogenous relaxation, decisional balance, components of emotional containment and crisis intervention, and components of cognitive restructuring.

The therapies that were most used were CBT, exposure therapy, Acceptance and Commitment Therapies for depression, anxiety and panic attack (Bandelow et al., 2015; Twohig & Levin, 2017), and individual interventions focused on mindfulness and organizational modifications for the management of burnout (Panagioti et al., 2017; Zhang et al., 2020b). The intervention strategies used in Mexico are very much in line with the interventions used in Spain during the first wave of the pandemic. In Spain, mental health services from 36 public hospitals reported working both face-to-face and via online therapy. They also reported that the most common aim of these interventions was emotional regulation of health care workers. Finally, psychoeducation and CBT techniques were frequently used during individual interventions, while psychoeducation and mindfulness were primarily used during group interventions (Priede et al., 2021).

In the case of three hospitals in Mexico, psychological work was carried out directly with health personnel in the COVID-19 wards through videos, relaxation audio recordings, and music (Ozgundondu & Gok Metin, 2019). In one of the hospitals, staff managed stress and anxiety through contact with a trained dog named "One-Eyed Harley" (a practice which followed strict biosecurity measures) within the COVID-19 wards. The successful use of 'hospital-based animal therapy' as an option to support the mental health of the hospitalized population is well documented in the literature (Chubak et al., 2017; Holder et al., 2020), but while this intervention is widely accepted by health personnel, more data is needed to reinforce recommendation of the practice. Table 1 describes assessments, psychological interventions, and primary barriers inside COVID-19 hospitals.

Lessons Learned

At the beginning of the pandemic, some countries considered hospital mental health personnel to be non-essential, and these staff members were therefore quarantined in order to protect them from possible infections (Duan & Zhu, 2020; Li et al., 2020). With the evolution of the pandemic, however, the great need for emotional support and the relevance of mental health personnel's work became evident. This has made it easier for hospital psychologists in Mexico to be part of the COVID-19 pandemic response team, thus enabling the generation of experiences in clinical application in the pandemic context. Undoubtedly, the clinical application of hospital psychological work during the pandemic is very challenging; for example, due to the use of PPE and maintaining physical distance, communication with patients and relatives is diminished, and the psychologist must therefore increase efforts to transmit her or his message. This situation, combined with the use of PPE, makes clinical sessions particularly strenuous. Similarly, one must be prepared to deal with the physical and cognitive complications of patients (dyspnea or attention problems, for example) and be aware that due to their severity, a number of the patients with whom psychological work has been initiated will have to be intubated or they will die. Due to the above, a hospital psychologist must have the temperament to be able to cope with a large amount of human suffering from patients, family members and health personnel.

A hospital clinical psychologist must use and adapt to the best available evidence to treat emotional problems in the COVID-19 context. Because most of the research in the area of mental health comes from developed countries or countries with very different cultural aspects (Vindegaard et al., 2020), it is important to adapt said evidence to the cultural, institutional and idiosyncratic conditions of the country in which they are being applied. Likewise, it is recommended to pay special attention to those patients, relatives, or health personnel who, prior to the pandemic, already had a mental health problem (personality disorders, previous grief, or emotional problems), because this population is quite large and is especially vulnerable to negative mental health impacts during the pandemic (Percudani et al., 2020).

	arriers in COVID-19
	, and Primary Bar
	Il Interventions,
	, Psychologica
lable 1	Description of Evaluations,

	Psychological evaluations	Barriers found	Psychological Interventions	Barriers found
Patient care	Semi structured face-to-face clinical Physical and cognitive interview		Psychoeducation about COVID-19 Relaxation and breathing techniques	Few intervention sessions Limited time to work with the
	Remote semi-structured clinical interview (use of tablets or cell phones) Application (on tablets) of instruments for specific psychological problems +	Constant dyspnea and fatigue Several patients in the prone position + Complicated communication due to protective equipment + Internet connection problems Limited time to evaluate the patient +	Coping strategies Evidence-based therapies for any psychopathological problems (depression, panic attack) Emotional containment Decision making Support during communication with loved ones	patient + Internet connection problems Mild concentration problems Fatigue
Care for relatives	Care for relatives. Semi-structured face-to-face or remote clinical interview (use of tablets or cell phones) Application of instruments for specific psychological problems + Remote family group interviews	High stress levels Internet connection problems Internet connection problems Few possibilities for face-to-face support networks Complex emotional reactions to cell phone The death notification Impossibility of physical contact Emotional containment Complicated communication Complicated communication Intervention in crisis sudue to protective equipment + the loved one Steps to troubleshoot Making individual or far regarding patient care Evidence-based therap psychopathological propantic attack, grief)	Psychoeducation about COVID-19 Self-care measures for the possible development of SARS-COV-2 Sharing mental health information via email/ cell phone Relaxation and breathing techniques Emotional containment Intervention in crisis surrounding the death of the loved one Steps to troubleshoot Making individual or family decisions regarding patient care Evidence-based therapies for any psychopathological problems (depression,	Tiredness on the part of the relative Internet connection problems Previous physical or mental health problems of the relative Overload of activities for the family member

	Psychological evaluations	Barriers found	Psychological Interventions	Barriers found
Care for hospital	Care for hospital Semi-structured face-to-face or	Resistance to taking	Sharing mental health information via email, Stigma of receiving mental	Stigma of receiving mental
staff	remote clinical interview (use of	psychological evaluations	cell phone, in brochures, infographics,	health care; "I'm not crazy"
	tablets or cell phones)	Lack of time	posters, video/audio and internet pages	Hospitalization and death of
	Face-to-face or online application	Hopelessness that there could	Hopelessness that there could	co-workers
	of instruments for specific	a change in work organization	a change in work organization psychological care via face-to-face or	Heavy workload
	psychological problems +		remotely	
	Group interviews with biosecurity		Group psychological sessions with	
	measures		interventions such as Mindfulness, CBT or	
	Medical tests to rule out biological		listening groups	
	problems that explain psychological		Emotional containment in the face of	
	distress		emotional crises	
			Evidence-based individual therapies for some	
			psychopathological problems	

Note: + Only during hospitalization ++ Only after hospitalization

The physical and emotional care of the psychology staff is of great importance. In the case of the authors, in addition to the proper use of PPE, it has been necessary to follow protocols for cleanliness, distance, and the application of continuous SARS-COV-2 tests; even so, there have been cases of COVID-19 in hospital psychologists. Outside the hospital, it has been necessary to maintain quarantine, follow healthy eating plans, exercise, maintain online contact with family networks, employ techniques for mental health care (meditation and relaxation), avoid oversaturation of information, and seek psychotherapeutic support if required. These self-care strategies are in line with the recommendations given by The Pan American Health Organization (2020) and a confederation in Spain (Confederación Salud Mental España, 2021) for managing the mental health of hospital personnel during the COVID-19 pandemic. These protective factors are very important, since the hospital psychologist can present the same problems previously described in health care workers; in addition, hospitals face a strenuous and unprecedented demand for mental health care in the populations described.

Finally, this writing constitutes an effort to synthesize the experience and recommendations of clinical psychological work within COVID-19 hospitals; however, it is based solely on clinical experience. Therefore, it is recommended that in future work the impact of the psychological actions carried out in this area be measured and reported systematically. The clinical experience presented here, in combination with the increasing empirical psychological evidence reported in world research, can be very useful to help with organization and decision-making for care of mental health needs during this and perhaps future pandemics.

References

- Alonso, J., Vilagut, G., Mortier, P., Ferrer, M., Alayo, I., Aragón-Peña, A., Aragonès, E., Campos, M., Cura-González, I. D., Emparanza, J. I., Espuga, M., Forjaz, M. J., González-Pinto, A., Haro, J. M., López-Fresneña, N., Salázar, A. D. M., Molina, J. D., Ortí-Lucas, R. M., Parellada, M., ... MINDCOVID Working group. (2021).
 Mental health impact of the first wave of COVID-19 pandemic on Spanish healthcare workers: A large cross-sectional survey. Revista De Psiquiatria Y Salud Mental, 14(2), 90-105. https://doi.org/10.1016/j.rpsmen.2021.05.003
- Axelsson, E., Andersson, E., Ljótsson, B., Björkander, D., Hedman-Lagerlöf, M., & Hedman-Lagerlöf, E. (2020). Effect of internet vs face-to-face cognitive behavior therapy for health anxiety: A randomized noninferiority clinical Trial. *JAMA Psychiatry*, 77(9), 915-924. https://doi.org/10.1001/jamapsychiatry.2020.0940
- Bamias, G., Lagou, S., Gizis, M., Karampekos, G., Kyriakoulis, K. G., Pontas, C., & Mantzaris, G. J. (2020). The Greek response to COVID-19: A true success story from an IBD perspective. *Inflammatory Bowel Diseases*, 26(8), 1144-1148. https://doi.org/10.1093/ibd/izaa143
- Bandelow, B., Reitt, M., Röver, C., Michaelis, S., Görlich, Y., & Wedekind, D. (2015). Efficacy of treatments for anxiety disorders: A meta-analysis. *International Clinical Psychopharmacology*, 30(4), 183-192. https://doi.org/10.1097/YIC.000000000000078
- Barbui, C., Purgato, M., Abdulmalik, J., Acarturk, C., Eaton, J., Gastaldon, C., Gureje, O., Hanlon, C., Jordans, M., Lund, C., Nosè, M., Ostuzzi, G., Papola, D., Tedeschi, F., Tol, W., Turrini, G., Patel, V., & Thornicroft, G. (2020). Efficacy of psychosocial interventions for mental health outcomes in low-income and middle-income countries: An umbrella review. *The Lancet. Psychiatry*, 7(2), 162-172. https://doi.org/10.1016/S2215-0366(19)30511-5

- Cao di San Marco, E., Menichetti, J., & Vegni, E. (2020). COVID-19 emergency in the hospital: How the clinical psychology unit is responding. *Psychological Trauma: Theory, Research, Practice and Policy*, 12(S1), S43-S44. https://doi.org/10.1037/tra0000684
- Chi, N.-C., & Demiris, G. (2015). A systematic review of telehealth tools and interventions to support family caregivers. *Journal of Telemedicine and Telecare*, 21(1), 37-44. https://doi.org/10.1177/1357633X14562734
- Chubak, J., Hawkes, R., Dudzik, C., Foose-Foster, J. M., Eaton, L., Johnson, R. H., & Macpherson, C. F. (2017). Pilot study of therapy dog visits for inpatient youth with cancer. *Journal of Pediatric Oncology Nursing: Official Journal of the Association of Pediatric Oncology Nurses*, 34(5), 331-341. https://doi.org/10.1177/1043454217712983
- Confederación Salud Mental España. (2021). Salud mental y COVID-19 [Mental Health and COVID-19]. https://www.consaludmental.org/publicaciones/Salud-mental-covid-aniversario-pandemia.pdf
- Duan, L., & Zhu, G. (2020). Psychological interventions for people affected by the COVID-19 epidemic. The Lancet. Psychiatry, 7(4), 300-302. https://doi.org/10.1016/S2215-0366(20)30073-0
- Gong, K., Xu, Z., Cai, Z., Chen, Y., & Wang, Z. (2020). Internet hospitals help prevent and control the epidemic of COVID-19 in China: Multicenter user profiling study. *Journal of Medical Internet Research*, 22(4), e18908. https://doi.org/10.2196/18908
- Grover, S., Sahoo, S., Chakrabarti, S., & Avasthi, A. (2019). Post-traumatic stress disorder (PTSD) related symptoms following an experience of delirium. *Journal of Psychosomatic Research*, 123, 109725. https://doi.org/10.1016/j.jpsychores.2019.05.003
- Guo, Q., Zheng, Y., Shi, J., Wang, J., Li, G., Li, C., Fromson, J. A., Xu, Y., Liu, X., Xu, H., Zhang, T., Lu, Y., Chen, X., Hu, H., Tang, Y., Yang, S., Zhou, H., Wang, X., Chen, H., ... Yang, Z. (2020). Immediate psychological distress in quarantined patients with COVID-19 and its association with peripheral inflammation: A mixed-method study. *Brain, Behavior, and Immunity, 88*, 17-27. https://doi.org/10.1016/j.bbi.2020.05.038
- Holder, T. R. N., Gruen, M. E., Roberts, D. L., Somers, T., & Bozkurt, A. (2020). A systematic literature review of animal-assisted interventions in oncology (Part II): Theoretical mechanisms and frameworks. *Integrative Cancer Therapies*, 19, 1534735420943269. https://doi.org/10.1177/1534735420943269
- Kisely, S., Warren, N., McMahon, L., Dalais, C., Henry, I., & Siskind, D. (2020). Occurrence, prevention, and management of the psychological effects of emerging virus outbreaks on healthcare workers: Rapid review and meta-analysis. *BMJ (Clinical Research Ed.)*, 369, m1642. https://doi.org/10.1136/bmj.m1642
- Kitchingman, T. A., Wilson, C. J., Caputi, P., Woodward, A., & Hunt, T. (2015). Development and evaluation of the telephone crisis support skills scale. *Crisis*, 36(6), 407-415. https://doi.org/10.1027/0227-5910/a000341
- Koyanagi, A., DeVylder, J. E., Stubbs, B., Carvalho, A. F., Veronese, N., Haro, J. M., & Santini, Z. I. (2018). Depression, sleep problems, and perceived stress among informal caregivers in 58 low-, middle-, and high-income countries: A cross-sectional analysis of community-based surveys. *Journal of Psychiatric Research*, 96, 115-123. https://doi.org/10.1016/j.jpsychires.2017.10.001
- Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open*, 3(3), e203976. https://doi.org/10.1001/jamanetworkopen.2020.3976
- Landa-Ramírez, E., Domínguez-Vieyra, N. A., Hernández-Nuñez, M. E., Díaz-Vásquez, L. P., & Santana-García, I. A. (2020). Psychological support during COVID-19 death notifications: Clinical experiences from a hospital in Mexico. *Psychological Trauma: Theory, Research, Practice and Policy*, 12(5), 518-520. https://doi.org/10.1037/tra0000679
- Li, W., Yang, Y., Liu, Z.-H., Zhao, Y.-J., Zhang, Q., Zhang, L., Cheung, T., & Xiang, Y.-T. (2020). Progression of Mental Health Services during the COVID-19 Outbreak in China. *International Journal of Biological Sciences*, 16(10), 1732-1738. https://doi.org/10.7150/ijbs.45120
- Liu, S., Yang, L., Zhang, C., Xiang, Y.-T., Liu, Z., Hu, S., & Zhang, B. (2020). Online mental health services in China during the COVID-19 outbreak. *The Lancet. Psychiatry*, 7(4), e17-e18. https://doi.org/10.1016/ S2215-0366(20)30077-8
- Marzorati, C., Renzi, C., Russell-Edu, S. W., & Pravettoni, G. (2018). Telemedicine use among caregivers of cancer patients: systematic review. *Journal of Medical Internet Research*, 20(6), e223. https://doi. org/10.2196/jmir.9812
- Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., & Roma, P. (2020). A nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: Immediate psychological responses and associated factors. *International Journal of Environmental Research and Public Health*, 17(9), 3165. https://doi.org/10.3390/ijerph17093165

- Ozgundondu, B., & Gok Metin, Z. (2019). Effects of progressive muscle relaxation combined with music on stress, fatigue, and coping styles among intensive care nurses. *Intensive & Critical Care Nursing*, 54, 54-63. https://doi.org/10.1016/j.iccn.2019.07.007
- Pablos-Méndez, A., Vega, J., Aranguren, F. P., Tabish, H., & Raviglione, M. C. (2020). COVID-19 in Latin America. *BMJ*, 370, m2939. https://doi.org/10.1136/bmj.m2939
- Panagioti, M., Panagopoulou, E., Bower, P., Lewith, G., Kontopantelis, E., Chew-Graham, C., Dawson, S., van Marwijk, H., Geraghty, K., & Esmail, A. (2017). Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. *JAMA Internal Medicine*, 177(2), 195-205. https://doi.org/10.1001/jamainternmed.2016.7674
- Pan American Health Organization. (2020). Folleto: Cuidando la salud mental del personal sanitario durante la pandemia de COVID-19 [Brochure: taking care of the mental health of personal healing during the Covid-19 pandemic]. https://www.paho.org/es/documentos/cuidando-salud-mental-personal-sanitario-durante-pandemia-COVID-19
- Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsi, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, Behavior, and Immunity*, 88, 901-907. https://doi.org/10.1016/j. bbi.2020.05.026
- Percudani, M., Corradin, M., Moreno, M., Indelicato, A., & Vita, A. (2020). Mental health services in Lombardy during COVID-19 outbreak. Psychiatry Research, 288, 112980. https://doi.org/10.1016/j.psychres.2020.112980
- Priede, A., López-Álvarez, I., Carracedo-Sanchidrián, D., & González-Blanch, C. (2021). Mental health interventions for healthcare workers during the first wave of COVID-19 pandemic in Spain. Revista De Psiquiatria y Salud Mental, 14(2), 83-89. https://doi.org/10.1016/j.rpsm.2021.01.005
- Robles, R., Rodríguez, E., Vega-Ramírez, H., Álvarez-Icaza, D., Madrigal, E., Durand, S., Morales-Chainé, S., Astudillo, C., Real-Ramírez, J., Medina-Mora, M.-E., Becerra, C., Escamilla, R., Alcocer-Castillejos, N., Ascencio, L., Díaz, D., González, H., Barrón-Velázquez, E., Fresán, A., Rodríguez-Bores, L., ... Reyes-Terán, G. (2020). Mental health problems among healthcare workers involved with the COVID-19 outbreak. Revista Brasileira De Psiquiatria, S1516. https://doi.org/10.1590/1516-4446-2020-1346
- Secretaría de Salud. (2021). Comunicado técnico diario nuevo Coronavirus en el Mundo (COVID-19) [New coronavirus daily technical statement in the world (COVID-19)]. https://www.gob.mx/salud/documentos/coronavirus-COVID-19-comunicado-tecnico-diario-238449
- Taylor, L. (2020). COVID-19: How denialism led Mexico's disastrous pandemic control effort. *BMJ*, 371, m4952. https://doi.org/10.1136/bmj.m4952
- The Lancet. (2020). COVID-19: Protecting health-care workers [Editorial]. *Lancet*, 395(10228), 922. https://doi.org/10.1016/S0140-6736(20)30644-9
- Twohig, M. P., & Levin, M. E. (2017). Acceptance and commitment therapy as a treatment for anxiety and depression: A review. The Psychiatric Clinics of North America, 40(4), 751-770. https://doi.org/10.1016/j.psc.2017.08.009
- Vindegaard, N., & Benros, M. E. (2020). COVID-19 pandemic and mental health consequences: Systematic review of the current evidence. *Brain, Behavior, and Immunity*, 89, 531-542. https://doi.org/10.1016/j. bbi.2020.05.048
- Williamson, V., Murphy, D., & Greenberg, N. (2020). COVID-19 and experiences of moral injury in front-line key workers. *Occupational Medicine*, 70(5), 317-319. https://doi.org/10.1093/occmed/kqaa052
- World Health Organization. (2020). WHO Coronavirus Disease (COVID-19) Dashboard. https://covid19.who.int Yıldırım, M., Çiçek, İ., & Şanlı, M. E. (2021). Coronavirus stress and COVID-19 burnout among healthcare staffs: The mediating role of optimism and social connectedness. Current Psychology, 1-9. https://doi. org/10.1007/s12144-021-01781-w
- Zhang, J., Lu, H., Zeng, H., Zhang, S., Du, Q., Jiang, T., & Du, B. (2020a). The differential psychological distress of populations affected by the COVID-19 pandemic. *Brain, Behavior, and Immunity*, 87, 49-50. https://doi.org/10.1016/j.bbi.2020.04.031
- Zhang, J., Song, Y., Jiang, T., Ding, N., & Shi, T.-Y. (2020b). Interventions to reduce burnout of physicians and nurses: An overview of systematic reviews and meta-analyses. *Medicine*, 99(26), e20992. https://doi. org/10.1097/MD.0000000000020992