https://doi.org/10.1590/1982-0275202239e200225

Use of digital technologies in mental health during COVID-19

Uso de tecnologias digitais na saúde mental durante a COVID-19

Nara Helena Lopes Pereira da **SILVA**[1] 0000-0001-6183-3709
Rafael Fontan **OTTOLIA**[1] 0000-0001-6900-4681
Luísa Gianoni **MARQUES**[1] 0000-0002-5626-8183
Andrés Eduardo Aguirre **ANTÚNEZ**[1] 0000-0001-5317-4459

Abstract

Most countries did not have a consolidated digital health structure before the pandemic. Both social distancing and mental health problems resulting from the situation justify the urgency of discussions on web-mediated interventions. The objective of this work is to present the panorama of technological mediation in mental health services and their specificities in the context of the pandemic. This paper is grounded on a critical look at the migration from face-to-face care to the Internet environment, highlighting: the international experiences using digital technologies in the pandemic context; the challenges in online consultations, emphasizing the importance of the ethical, technical/technological, and clinical domains, which are recurring issues in the international literature; the challenges and perspectives in the use of technologies. It is essential to develop strategies aligned with government incentives, aiming at the quality of the offered services and the guarantee of an adequate hybrid qualification.

Keywords: Covid-19; E-health; Mental health; Telepsychiatry; Telepsychology.

Resumo

A maioria dos países não possuía uma estrutura de saúde digital consolidada antes da pandemia. Tanto o distanciamento social quanto os agravos psicológicos decorrentes da própria situação justificam a urgência de discussões científicas

[1] Universidade de São Paulo, Instituto de Psicologia, Departamento de Psicologia Clínica. Av. Professor Mello Moraes, 1721, Butantã, 05508-030, São Paulo, SP, Brasil. Correspondence to: N.H.L.P. SILVA. E-mail: <nara.helena@gmail.com>.

Support: *Fundação de Amparo à Pesquisa do Estado de São Paulo* (Process nº 2018/11351-2).

How to cite this article

Silva, N. H. L .P., Ottolia, R. F., Marques, L. G., & Antúnez, A. E. A. (2022). Use of digital technologies in mental health during Covid-19. *Estudos de Psicologia* (Campinas), *39*, e200225. https://doi.org/10.1590/1982-0275202239e200225

sobre intervenções mediadas pela web. *O objetivo deste trabalho é apresentar o panorama da mediação tecnológica nos serviços de saúde mental e suas especificidades no contexto da pandemia. Parte-se de um olhar crítico diante da migração do cuidado face a face ao ambiente da Internet, ressaltando: experiências internacionais no uso das tecnologias digitais no contexto da pandemia; desafios nas consultas online, com destaque à importância dos domínios ético, técnico/tecnológico e da clínica recorrentes na literatura internacional; desafios e perspectivas do uso das tecnologias. É imprescindível desenvolver estratégias com incentivo governamental, visando a qualidade dos serviços oferecidos e a garantia de formação híbrida adequada.*

Palavras-chave: *Covid-19; E-saude; Saúde Mental; Telepsicologia; Telepsiquiatria*

The COVID-19 pandemic and the interventions to reduce its transmission have caused a global public health crisis, with psychological (Brooks et al., 2020) and economic (Schuchmann et al., 2020; Ayittey et al., 2020) repercussions. The international situation led countries to impose initial measures to control the infection, such as isolating infected patients to protect healthy individuals. In a second phase, the establishment of the quarantine (Wilder-Smith & Freedman, 2020), defined as the restriction of sick people and/or individuals exposed to the infectious agent, at the individual, group, or community level, points to the necessity of limiting their stay in a specific place, voluntarily or compulsorily (Ayittey et al., 2020). In a more advanced stage, with the absence of vaccine and adequate treatments, the strategies expand to social distancing interventions, closing collective spaces, encouraging remote work, and commuting only for essential purposes, such as buying food and health treatments (Wilder-Smith & Freedman, 2020).

The unpredictability of the situation, the severity and lack of knowledge about the disease, the isolation and social distancing, and the intolerance to uncertainty, cause symptoms such as irritability, loss of concentration, insomnia, intolerance to boredom, ideations, and suicide attempts, among other aggravations of preexisting symptoms (Brooks et al., 2020). Also the suffering of people who have been cured and their families, the exacerbation of stigma and prejudice between peoples and nations, makes the issue a duty of collective co-responsibility, encompassing governments, entities, and the civil society. The pandemic also promotes the need to assess medium and long-term interventions, since post-traumatic symptoms, chronic stress and depression, panic (Zhou et al., 2020), difficulties in grieving, and real and symbolic losses, if not embraced briefly, tend to intensify over time.

In addition to interventions aimed at slowing the speed of propagation, investment and simultaneous development of multidisciplinary mental health support are urgently needed, given the accelerated increase in psychological suffering in the face of the pandemic and the need for prevention (Bao et al., 2020) and early intervention (Ho et al., 2020). To contain the transmission, measures such as working remotely and reinventing life through digital technologies, reduce the risk of contamination and also mitigate the impact on the economy during periods of isolation (Schuchmann et al., 2020). In the health area, telemedicine favors a greater accessibility to mental health, through telepsychiatry and telepsychology (Tachakra et al., 2004).

The objective of this article is to present the state of the art on the use of digital technologies in mental health during the COVID-19 pandemic, based on experiences described in the scientific literature, raising the specificities and challenges of using digital technologies in services mental health.

Method

This article is based on a review of the existing literature about using technologies in mental health services during the COVID-19 pandemic, through a search in the PubMed and Google Scholar database, with the terms "Covid-19" and "e-health", "mental health". Were found 59 publications until May 2020. From the study of abstracts, 37 articles were excluded that dealt with specific conditions, such as epilepsy,

urology, immunodeficiencies, neurology, eating disorders, intensive care, diabetes, also, ophthalmology, dentistry, distance learning, letters to the editors, and which did not reveal any direct content of mental health interventions. The remaining 22 articles were analyzed through a survey from the perspective of using technologies for mental health actions during the pandemic.

The articles present multidisciplinary interventions, in different online modalities and focused on the period during and after the pandemic, with emphasis on the experiences reported in China and Singapore (Zhang et al., 2020; Ho et al., 2020; Galea et al., 2020); even so, the use of technologies in mental health is not a reality for many countries (Ohannessian et al., 2020), especially in situations of crises and emergencies (Smith et al., 2020). A study also addressed the need for digital education for the population and health professionals (Triana et al., 2020).

However, the articles provided little detail about the specifics of online consultations. Thus, a bibliographic survey of guidelines on the practice of teleconsultations was made; international guides and guidelines on the practice were used in order to present details of how to promote digital literacy and the specific care of the use of technologies in a web environment based on international guides and guidelines: Joint Task Force for the Development of Telepsychology Guidelines for Psychologists (2013); Yellowlees et al. (2010); Bozzaotra et al., (2017); International Society for Mental Health Online [ISHMO], (2000); Luxton et al. (2012), especially given the scarcity of studies on the theme in Brazil.

Regarding teleconsultations, four domains for practice were detailed: ethical, technological, online and cultural management. Studies (Ohannessian et al., 2020; Smith et al., 2020) also present perspectives for the future, highlighting the role of education and the need for incentive for developing hybrid interventions. They suggest the need to integrate online modalities with government services, aiming at a quick and efficient response, especially in the context of a pandemic (Ohannessian et al., 2020). However, for this to happen in a qualified way, it is also necessary to invest in the education of mental health professionals, with changes in the curriculum and the guarantee of adequate education and training in the digital field of mental health (Smith et al., 2020).

Based on these analyzes, were structured three axes, considering the mental health services online before the pandemic, the challenges and potentials at individual and governmental levels: (a) International experiences in the use of digital technologies; (b) Challenges in online consultations (c) Future perspectives on the use of technologies

COVID-19: International experiences in the use of digital technologies

The insertion of digital technologies must start from a macro and strategic conception in public health actions. Given the pandemic scenario, access to online mental health services causes changes both in governmental planning and the individual conditions of accessibility to such treatments. On the other hand, the abrupt changes in mental health support – previously offered face-to-face – and also the psychological vulnerability of people in the face of this reality constitute specific conditions for mental health treatment in their homes, places of family confinement and that need care and protection with specific ethical support.

Since the World Health Organization's pandemic decree, the world has been experiencing a humanitarian crisis a scenario of greater vulnerability to people, which requires rapid actions focused on mitigating suffering and reducing harm. In this sense, digital experiences of mental health care, prior to the COVID-19 pandemic, have become effective intervention tools.

In China's mental health services (Zhang et al., 2020), remote psychological support has been integrated into medical, psychiatric, psychological, and social services, through online platforms. The quick definition of online governmental and social actions helps to cope with psychological crises, with online psychosocial

support and psychological assistance to communities. These aim to identify and assist target groups through hotlines related to their fear of the disease, adaptation difficulties, and serious problems, such as violence and suicidal behavior. Interventions consider actions during and after the contamination phase. During the crisis, this action actively took place in the general disease intervention processes to mobilize psychosocial responses promptly, with the offer of simultaneous and integrated activities of web-based medical and psychological interventions. Teams of specialists were set up to provide health education and training, psychological rescue teams aimed at crisis interventions for people in distress, and frontline teams, with rapid identification of emotional problems through online resources. After the outbreak, psychosocial support should focus, in particular, on family members of victims of the infection and health professionals, via digital communication applications, with training on psychosocial impacts and the development of a personal resilience plan, to identify and anticipate responses. The central idea is integrating technologies into the intervention process, combining early actions and subsequent rehabilitation. However, the effective use of digital resources is still a challenge, as well as the close cooperation between a multidisciplinary team.

Singapore (Ho et al., 2020) developed a plan with strategies, identifying six critical areas for strengthening mental health care, applicable to other countries: first, offering a base of studies on the psychological impacts of the disease and identifying groups of psychological risk, aiming to establish early intervention measures; second, mapping psychiatric morbidities, with recommendations for doctors and professionals from emergency and support services to be proactive in identifying the psychological suffering of patients who go to psychological consultations, given the limited number of mental health professionals. In addition, mapping the psychiatric history of the person and those who are close to them, such as children or young people with fear and risk factors for suffering, providing psychological support for all cases, working together with management teams and/or psychiatrists to the continuity of these assessments; third, paying attention to future demands, with the possibility of providing, in addition to synchronous services, online psychoeducation actions, promotion of mental well-being and psychological intervention initiatives that assist in stress management and adaptation strategies. Online support networks among peers, in order to share challenges and resolutions in the face of the pandemic and resilience; fourth, development of online support actions for health professionals involved in direct efforts to treat the pandemic; fifth, careful dissemination of information based on scientific and up-to-date evidence, both traditionally and via web platforms, actions on emotional strategies, epidemiological data, modes of transmission, and preventive measures; and sixth, integration of hospitals and treatment networks to community resources, to integrate and expand the accessibility of treatments to the general population.

Australia has been an example of integrated use of web-based health systems since 2006, offering information, communication, and intervention to different age groups in the government sphere. They have used synchronous and asynchronous, informative, preventive, and therapeutic forms. They have used modalities such as text message, e-mail, chat, forum, online groups, telephone, video calls, psychoeducation sites, e-health platforms, self-help platforms, and mobile applications. These modalities have a wide range of mental health services, such as support and treatment of depression, anxiety, stress, suicide, self-mutilation, post-traumatic stress disorders, eating disorders. It is also possible to share information about symptoms and prevention, offering apps for developing cognitive skills, relaxation, meditation, monitoring and, emotional support (Zhou et al., 2020).

Due to the pandemic, some countries have temporarily accepted the migration of health and mental health services to the field of digital technologies. The confinement reflected in the continuity of treatments for other pathologies, so the online medical consultation appeared as a possibility to expand access to treatments and reduce the risk of COVID-19 transmission.

In Latin America, countries like Ecuador, Peru, Uruguay, Colombia, and Mexico have invested in technology solutions to face the COVID-19 pandemic. Among the new modalities, communication applications

were inserted guiding and informing the user when obtaining a decision, self-diagnosis applications. In addition to these, assets geolocation and location of assistance networks are technologies that are being used to disseminate service guides to be used in cases of worsening of the situation, including also telemedicine with free and real-time guidance (Celuppi et al., 2021). It should be noted that, in general, these are countries that did not have an integrated hybrid telemedicine service and, especially, mental health.

Some states in the USA and countries like Brazil, where telemedicine was restricted, established policies to regulate this practice during the pandemic, such as Ordinance 467 of March 20th, 2020, which started to regulate previously unregulated telemedicine. In Brazil, the Federal Council of Psychology (CFP) regulated psychological assistance mediated by technologies in 2018, through Resolution CFP nº 11, 2018. However, assistance in emergencies and disasters, crises, violation of rights, and violence were prohibited online; these were only authorized after Resolution CFP 04/2020. Unfortunately, there was a lack of attitude towards the early adoption of telemedicine in a country like Brazil with disproportionate use of technology related to its income levels. Although Brazil is known for being a pioneer in adopting new technologies, the same did not happen with the use of telemedicine before the COVID-19 pandemic, except for specific research and niche applications. There is a scarcity of national studies on online mental health services (Maldonado et al., 2016).

In Brazil and other Latin American countries mental health care systems do not have the practice of using mobile applications, web systems or telehealth support. Partnerships between public-private sectors and investments in technology are needed. In addition, the development of telehealth interventions focusing on mental disorders is fundamental, as well as expanding strategies such as brief psychotherapy and telemedicine, always focusing on primary health care, which is the basis of the single health system (Mari et al., 2021).

Most countries (Ohannessian et al., 2020) do not have a central or governmental structure that regulates, authorizes, integrates, and invests in online health care, especially in situations of crises and emergencies (Smith et al., 2020). In this way, private services offered directly to the user through digital platforms or applications via free solutions, offered by American companies (Ohannessian et al., 2020), which may not meet the legal requirements of clinical practices, such as privacy, confidentiality, and health data security. The provisional regulation of online services has an impact on the individual dimension. Web-based health care in mental health has its own risks and, therefore, has its respective package of guidelines that must be carefully considered.

The applicability of telemedicine implies the interaction between multidisciplinary agents. From health professionals to information technology professionals, from managers to the governmental sphere. The exchange between health areas and between technology professionals aims to assist in the development and support of digital tools that excel in the ethics and confidentiality of health care, confidentiality of information and Internet security, and teams training of teams to meet the demands of different populations. It is necessary to redesign work processes, as well as changes in the doctor-patient relationship, and overcome institutional cultural barriers, aiming to insert the digital field in medical treatments. It is noteworthy that the provisional implementation of online mental health services due to the pandemic might have repercussions on important issues in the face of the urgency on psychological help. Often neglecting or ignoring the needs for ethical, technological, and methodological care, without considering relevant aspects of specific clinical conducts and managerial practices that are particular to the online modality. It is necessary to emphasize the peculiarities of web-based interventions in crisis and emergencies, in the unique global context of social confinement, and in the implementation of health treatments in people's privacy.

Challenges in online consultations

Based on international experiences, a collection of data on the guidelines for online consultations was performed (Bozzaotra et al., 2017; ISHMO, 2000; Joint Task Force for the Development of Telepsychology

Guidelines for Psychologists, 2013; Luxton et al., 2012; Yellowlees et al., 2010). Four domains were detailed for mental health practices:

Ethical care: Professionals should be aware of ethical (ISMHO, 2000; Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Luxton et al., 2012; Luxton et al., 2014) and legal norms for exercising the profession and consider these principles in their entirety, also, in the Internet environment. They must know the regulations of each profession for the provision of web-based services and the jurisdictional borders of origin and destination; also, respect the laws about the rights and duties of using the Internet and/or specific guidelines of e-health practices. The conditions of secrecy, privacy, confidentiality, and security of data are fundamental and must be preserved, observed, and discussed with patients, with clear and accessible guidelines, so that they can give their opinions on their treatment of choice.

Regarding the adequacy of online service modalities and professional competence, the American Psychological Association (APA), rescues the primary ethical obligation to "provide professional services only within the limits of competence based on their education, training, supervised experience, consultation, study, or professional experience" (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013, p. 793). It is important to assess in advance the relevance of the services mediated by the technologies, in relation to the demands and needs of each situation, the conditions and skills (professional, technological, and psychological) (Bozzaotra et al., 2017), as well as the risks and benefits of the use of digital tools (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Luxton et al., 2012), and the appropriate means (e.g., video or audio conferencing, text messaging, e-mailing).

It is also recommended to have a consent form (Bozzaotra et al., 2017; Luxton et al., 2012; Luxton et al., 2014; Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Yellowlees et al., 2010) agreed by both parties. Through this document, the patient is informed about the process, avoiding misunderstandings inherent in a remote process. For example, regarding the response time in asynchronous communications, another example would be about the privacy of the completed form. Other issues should also be dealt with, such as data manipulation, identity, and the data of those involved (name, qualifications and confirmation), information and contacts of people and health services that are physically close to the patient for possible emergencies. Potential risks and benefits of online treatment, guarantees against these risks and alternatives to these services should also be considered, whether in the event of an emergency or patient discomfort when using technologies in their treatment.

Technological domain: About health care with technology, an initial aspect is the choice of the intervention modality and the adequacy to the broadband and transmission of data capacity, images and sound, which implies assessing, first, the digital accessibility of the professional and the patient – both in terms of quality of connection and in relation to the need for training and guidance on the use of online applications and tools. It is recommended that professionals use applications or software with characteristics of security and confidentiality corresponding to health services for online health care (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Melo et al., 2020). For that, the professional must know the registration tools, the terms and conditions of data usage of the chosen applications, the processes for storing and erasing information on these software programs, as well as the use of devices with firewall and antivirus, end-to-end data encryption, and the use of personal and non-transferable passwords (Melo et al., 2020).

In addition to choosing programs and applications, the professional must keep in mind the various tools that can support health care quality – such as synchronous or asynchronous, psychoeducation or online guidance, or even remote monitoring (Yellowlees et al., 2010). The choice of modalities, as well as their use, must be previously agreed with the patient, specifying the limits and benefits of these technologies in the treatment (ISMHO, 2000; Melo et al., 2020) and their scientific basis (Joint Task Force for the Development

of Telepsychology Guidelines for Psychologists, 2013; Melo et al., 2020). Regarding synchronous therapies, it is the professional's responsibility to ensure the technical conditions of the devices used, as well as to promote quality of care (Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Melo et al., 2020), with guidelines on the deactivation of notifications and alerts on devices, the non-interruption of service by other people, and other precautions related to the environment that require greater attention from the professional.

Responsibility for the medical service environment unlike face-to-face services should be shared with the person who will be served, preferably prior to the start of the process, so that both are aware and responsible for the construction and maintenance of a moment guided by privacy and secrecy. In the office's physical environment, the professional prepare the place, based on the ethical premises of the intervention, with the physical-bodily dimension as a sign of any change, such as a ringing cell phone or using it during the session, or a person who enters the room. In the online modality, physical distancing, and visual limitation of the interlocutor's space, as well as the web resources themselves, such as the use of multiple simultaneous screens, automatic message notifications, silencing ambient sound, make it impossible for the professional to have control over what happens in the patient's environment. It is, therefore, essential that the professional inform about the recommendations and establish a dialogue, aiming at the construction of an adequate place by both parties, with privacy, secrecy, silence and without interruptions; the use of headphones during video or voice calls can help to reduce noise and, also, collaborate in the privacy of psychological consultations (Melo et al., 2020). Consideration should be given to the quality of room lighting, as this can impair viewing quality or even serve as a source of distraction.

Online management of crisis situations: In online clinical care in crisis and catastrophe situations, the need for a careful assessment is unanimous in international guides (ISMHO, 2000; Joint Task Force for the Development of Telepsychology Guidelines for Psychologists, 2013; Yellowlees et al., 2010), referring to the suitability of each patient to the treatments and digital modalities made available. One of the critical points of telepsychiatry or telepsychology in crisis and emergency situations is the lack of control over the patient's actions and attitudes and the need to elaborate a detailed screening method (Gilmore & Ward-Ciesielski, 2019). A careful assessment of the mental health history is essential, as well as knowledge about how patients deal with crisis situations, the potential risks they present to themselves or to other people; the identification of high or imminent risk states – such as suicide, psychotic outbreaks, or violence – and the definition, before the start of treatment, of mechanisms to be used in eventual complications. As a differential, it is recommended to develop an emergency plan in conjunction with the patient, with their active participation. This action enables mapping the health resources of the geographical area, such as health plans, reference hospitals, and contacts of people who are physically present and able to assist in critical situations. Loss of confidentiality of medical information must be agreed upon in advance, with the professional having such information accessible during consultations. The possibilities of use and adequacy and the understanding and knowledge about technological resources must also be considered.

Regarding the online service environment in a crisis, the observation of the places where the patient is during the consultation must occur in each contact, with attention to physical security, privacy, feelings, and significant changes or signs and behaviors that may indicate health risks, to themselves or to those who are close to them.

The security and privacy of care regarding the use of technological resources must also be preserved with special attention to situations of violence, in which the aggressor may have access to digital devices. The professional's task must be explaining about the risks of third-party access to applications and content of treatment, encouraging patients not to store exchanged messages, to use passwords and technological security and privacy measures. In addition to conducting a regional mapping of psychosocial resources, as well as guiding the patient to seek local support networks.

In case of connection or technology failures during consultations in a crisis situation, it is suggested to maintain alternative contacts and reestablish communication as soon as possible, in order to assess the person's emotional conditions in the face of the crisis. In cases of suicidal ideations, it is recommended that consultations have parallel and professional support and supervision available to act in times of crisis, to guide, discuss and define the conditions of response and safety in possible emergencies.

Intercultural aspects – Digital health education must also consider socio-cultural barriers, geopolitical contexts, and jurisdictions of origin and destination. Web-based consultations open the possibility of transitioning mental health care between regions and countries, bringing cultural, geographic, economic, social, political, and local health resources into online clinics. It also allows direct access to the people's intimacy and their environments. In general, rooms inside their homes, their singularities, besides to the specifics and dynamics of each family. These actions require openness and ethical commitment to diversity, as it influences the understanding of symptoms and signs of mental health and brings determining factors for a comprehensive understanding. Emphasis should be given to the online environment as to regionality, in regards to values, beliefs, and ways of understanding mental health, illness, psychopathology, and coping with crises. Both in the personal, family, and community levels, as well as in the social and political dimensions. Especially considering the actual and symbolic conditions of personal/local experiences in the face of coping and psychological repercussions in the presence of crisis situations.

Brazil, for example, has a vast territoriality that also determines the digital accessibility of web-mediated services. In this sense, it is proposed to offer different types of assistance according to the local/regional profile, using asynchronous resources in populations with less broadband capacity, assessing the reach and effectiveness of such resources. Longitudinal studies are needed to assess the possibilities, challenges, and effectiveness of online services in the face of different regionalities and cultures, as well as the reach and accessibility of digital services, both for patients and mental health professionals, to invest in modalities prevention and online mental health information, with the provision of substantiated information and strategies for control and guidance regarding fake news.

It is also added that the profile of Internet users affects the way digital services are received people (Gilmore & Ward-Ciesielski, 2019) with positive attitudes towards online services and younger health professionals were more familiar with online modality of treatment for people at risk of suicide. However, studies in the area are needed to develop care protocols for online therapies targeting high-risk groups.

Future perspectives on the use of technologies

Although digital solutions may be favorable (Ohannessian et al., 2020) in the pandemic contingency, online psychological care was not an integral part of the health systems of many nations until the emergence of the COVID-19 pandemic. Thus, the challenges for online psychological consultations must consider the repercussions of the digital environment, both in the individual/family dimension with ethical-professional-technological support, and in the configuration of governmental structures, especially with a view to preventing possible future crises (Ohannessian et al., 2020). It is worth mentioning the importance of integrating international and national guidelines. Strategies should be structured with government incentives, defining national regulations and forms of financing in the context of public health emergencies. The structuring of online health services and the development of clinics and remote monitoring on a local, regional or global scale are considered important, with the possibility of sharing secure data with public health authorities and epidemiological studies. To actively think about the development of digital tools aimed at health and comprehensive mental health care, with the aim of communication, information and guidance to the population on recommendations for online care and a crisis situation in general. Not forgetting the incentive

to research, disseminate and train health professionals in the online environment, with research funds focused on the impacts of the use of technologies in face of the psychological needs arising from the pandemic in the medium and long term. Another aspect refers to the training of mental health professionals (Smith et al., 2020) to develop online interventions, which is an essential point to include technologies as a legitimate part of psychological care. Effective actions in contexts of pandemic and other situations of crisis and psychological risks depend on a qualified workforce capable of alternating hybrid care modalities. Therefore, the professional's availability and openness are necessary besides the mastery of the digital language, transcending prejudices and barriers, integrating different professional categories, and expanding the perception of this universe in its potential care. Thus, dealing properly with the inherent risks and failures to the online environment.

Such changes require rethinking the health curriculum at its various levels, transmitting a clear message to professionals and students about the usual possibilities of web-based psychological care and developing strategies to deal with emergencies at the national and global levels. Thus, it is suggested to ensure adequate education and training in the digital field of mental health and, also, to guarantee the incentive and financing of studies in the area; strengthening the dissemination of knowledge, breaking barriers of beliefs and values, and basing the practice on studies and scientific evidence in the most diverse types of health services; the attention to the need to redesign clinical models, aiming at including a hybrid approach in mental health actions, in order to have a strongly prepared health care team whether in the macro-social dimensions, or in the aspect of the individual's ethical care in psychological fragility and ready to act in situations of crisis, disasters, and human vulnerabilities.

It is also essential to reflect on the scope and extension that the Internet assumes, including the areas in the digital field without official inspection services, posing a risk for all. Given these risks, it is understood that nothing that is done face-to-face can be merely transposed to the online environment without a constant personal and professional assessment of what is shared, stored, and produced via the Internet.

Conclusion

The international experiences in technology-mediated mental health treatments bring relevant aspects, both in the individual dimension, which must be based on ethics and the technological-clinical domain online, as well as on social and political aspects. The context of social distancing, which has lasted for months, will bring significant changes in life regarding the use of digital technologies. Without an expanded view of international experiences in internet-mediated mental health, in aspects of both individual health care and government strategies, the consolidation of protected and safe actions becomes distant, and can impact on the ethical carelessness which is advocated for a qualified performance in the mental health field hybrid, equitable, promoting accessibility and comprehensive care. It is an evolving area, which requires the integration of different areas of knowledge, knowledge of international literature, constant updating of the professional, as well as governmental and educational incentives for a complete and high-quality performance.

It is possible to identify people with severe symptoms including people at risk of suicide just applying telepsychiatry strategies as proven in global pandemic. Although, the consolidation of protected and safe actions becomes distant without an expanded view of the international experiences in the implementation of technologies in mental health, regarding both individual care and government strategies.

Actions can sometimes have repercussions on the ethical carelessness of what it is recommended for a qualified performance in the field of mental health, hybrid, equitable and promoting accessibility and comprehensive care.

Also, it is essential to reflect on the scope and extent that the Internet currently assumes, including the areas without inspection inherent to the digital field that offers risks for all. Because of these risks, it

is understood that nothing that is done by face-to-face means can be merely transposed to the online environment without a continuous personal and professional assessment of what is shared, stored and produced via the Internet.

Contributors

N. H. L. P. SILVA, has taken part in the idealization and outlining of the text, in the analysis and interpretation, writing of the article, and critical review and approval of the final version to be published. R. F. OTTOLIA, has taken part in the analysis and interpretation, writing of the article and approval of the final version to be published. L. G. MARQUES, has taken part in the analysis and interpretation, writing of the article and approval of the final version to be published. A. E. A. ANTÚNEZ, has taken part in the reading, and the final review and approval of the version to be published.

References

Ayittey, F. K., Ayittey, M. K., Chiwero, N. B., Kamasah, J. S., & Dzuvor, C. (2020). Economic impacts of Wuhan 2019-nCoV on China and the world. *Journal of Medical Virology, 92*(5), 473-475. https://doi.org/10.1002/jmv.25706

Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: address mental health care to empower society. *Lancet, 395*(10224), e37-e38. https://doi.org/10.1016/S0140-6736(20)30309-3

Bozzaotra, A., Cicconi, U., di Giuseppe, L., di Iullo, T., Manzo, S., & Pierucci, L. (2017). *Digitalizzazione della professione e dell'intervento psicologico mediato dal web*. Consiglio Nazionale dell'Ordine degli Psicologi.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet, 395*(10227), 912-920. https://doi.org/10.1016/S0140-6736(20)30460-8

Celuppi I. C., Lima G. S., Rossi E., Wazlawick R. S., & Dalmarco E. M. (2021). Family Health Support Center and the challenges for mental health in primary health care. *Cadernos de Saúde Pública, 37*(3), 4-15. https://doi.org/10.1590/0102-311x00243220

Galea, S., Merchant, R. M., & Lurie, N. (2020). The Mental Health Consequences of COVID-19 and Physical Distancing: The Need for Prevention and Early Intervention. *JAMA Internal Medicine, 180*(6), 817-818. https://doi.org/10.1001/jamainternmed.2020.1562

Gilmore, A. K., & Ward-Ciesielski, E. F. (2019). Perceived risks and use of psychotherapy via telemedicine for patients at risk for suicide. *Journal of Telemedicine and Telecare, 25*(1), 59-63. https://doi.org/10.1177/1357633X17735559

Ho, C. S., Chee, C. Y., & Ho, R. C. (2020). Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals of the Academy of Medicine of Singapore, 49*(1), 1-3.

International Society for Mental Health Online. (2000, Jan 9). *Suggested principles of professional ethics for the online provision of mental health services*. http://ismho.org/resources/archive/suggested-principles-for-the-online-provision-of-mental-health-services/

Joint Task Force for the Development of Telepsychology Guidelines for Psychologists. (2013). Guidelines for the practice of telepsychology. *American Psychologist, 68*(9), 791-800. https://doi.org/10.1037/a0035001

Luxton, D. D., Kayl, R. A., & Mishkind, M. C. (2012). mHealth Data Security: the need for HIPAA-Compliant Standardization. *Telemedicine Journal and e-Health, 18*(4), 284-288. https://doi.org/10.1089/tmj.2011.0180

Luxton, D. D., O'Brien, K., Pruitt, L. D., Johnson, K., & Kramer, G. (2014). Suicide risk management during clinical telepractice. *The International Journal of Psychiatry in Medicine, 48*(1), 19-31. https://doi.org/10.2190/PM.48.1.c

Maldonado, J. M. S. D. V., Marques, A. B., & Cruz, A. (2016). Telemedicine: challenges to dissemination in Brazil. *Cadernos de Saúde Pública, 32*(2), S1-S12. https://doi.org/10.1590/0102-311X00155615

Mari, J. J., Gadelha, A., Kieling, F. C., Kapczinski, F., Nardi, E. A., Almeida-Filho, N. S., Zila M. S., & Salum, G. A. (2021). Translating science into policy: mental health challenges during the COVID-19 pandemic. *Brazilian Journal of Psychiatry, 43*(6), 638-649. https://dx.doi.org/10.1590/1516-4446-2020-1577

Melo, B. D., Pereira, D. R., Serpeloni, F., Kabad, J. F., Kadri, M., Souza, & Freitas, C. M. (2020). *Saúde mental e atenção psicossocial na pandemia COVID-19: recomendações aos psicólogos para o atendimento online*. Fundação Oswaldo Cruz.

Ohannessian, R., Duong, T. A., & Odone, A. (2020). Global Telemedicine implementation and integration within health systems to fight the COVID-19 pandemic: a call to action. *JMIR Public Health and Surveillance, 6*(2), e18810. https://doi.org/10.2196/18810

Schuchmann, A. Z., Schnorrenberger, B. L., Chiquetti, M. E., Gaiki, R. S., Raimann, B. W., & Maeyama, M. A. (2020). Isolamento social vertical X Isolamento social horizontal: os dilemas sanitários e sociais no enfrentamento da pandemia de COVID-19. *Brazilian Journal of Health Review, 3*(2), 3556-3576. https://doi.org/10.34119/bjhrv3n2-185

Smith, A. C., Thomas, E., Snoswell, C. L., Haydon, H., Mehrotra, A., Clemensen, J., & Caffery, L. J. (2020). Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19). *Journal of Telemedicine and Telecare, 26*(5), 309-313. https://doi.org/10.1177/1357633X20916567

Tachakra, S., Wang, X. H., Istepanian, R. S. H., & Song, Y. (2004). Mobile e-health: the unwired evolution of telemedicine. *Telemedicine Journal and e-Health, 9*(3), 247-257. https://doi.org/10.1089/153056203322502632

Triana, A. J., Gusdorf, R. E., Shah, K. P., Horst, S. N. (2020) Technology Literacy as a Barrier to Telehealth During COVID-19. *Telemedicine Journal and e-Health. 26*(9), 1118-1119. https://doi:10.1089/tmj.2020.0155

Wilder-Smith, A., & Freedman, D. O. (2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of Travel Medicine, 27*(2), 1-4. https://doi.org/10.1093/jtm/taaa020

Yellowlees, P., Shore, J., & Roberts, L. (2010). Practice guidelines for videoconferencing-based telemental health – October 2009. *Telemedicine Jorunal and e-Health, 16*(10), 1074-1089. https://doi.org/10.1089/tmj.2010.0148

Zhang, J., Wu, W., Zhao, X., & Zhang, W. (2020). Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital. *Precision Clinical Medicine, 3*(1), 3-8. https://doi.org/10.1093/pcmedi/pbaa006

Zhou, X., Snoswell, C. L., Harding, L. E., Bambling, M., Edirippulige, S., Bai, X., & Smith, A. C. (2020). The role of telehealth in reducing the mental health burden from COVID-19. *Telemedicine Journal and e-Health, 26*(4), 377-379. https://doi.org/10.1089/tmj.2020.0068

Received: May 1, 2021
Approved: May 12, 2021