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Adverse sequelae of the COVID -19 pandemic on mental health services in Chile

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ABSTRACT

Objective. This study seeks to describe the adverse effects of the COVID-19 pandemic on mental health services in Chile.

Methods. This study is part of ongoing multicountry research known as the Mental Health Care – Adverse Sequelae of COVID-19 study (or the MASC study) that includes seven countries. Chile is the only one in Latin America. This study used a convergent mixed methods design. The quantitative component analyzed data about public mental health care collected between January 2019 and December 2021 from the open-access database at the Ministry of Health. The qualitative component analyzed data collected from focus groups of experts that included professionals in charge of mental health services, policy-makers, service users and caregivers. Finally, the data synthesis was performed by triangulation of both components.

Results. By April 2020, mental health service provision had been reduced by 88% in primary care; moreover, secondary and tertiary levels had also reduced their mental health activities by, respectively, 66.3% and 71.3% of pre-COVID levels. Negative sequelae were described at the health systems level, and full recovery had not been achieved by the end of 2021. The pandemic affected the essential characteristics of community-based mental health services, with adverse impacts on the continuity and quality of care, reduced psychosocial and community support, and negative effects on health workers' mental health. Digital solutions were widely implemented to enable remote care, but challenges included the availability of equipment, its quality and the digital divide.

Conclusions. The COVID-19 pandemic has had significant and enduring adverse effects on mental health care. Lessons learned can inform recommendations for good practices for the ongoing and future pandemics and health crises, and highlight the importance of prioritizing the strengthening of mental health services in response to emergencies.

Keywords

COVID-19; pandemics; mental health services; Chile.

The COVID-19 pandemic is one of the biggest challenges faced by health systems in recent decades. The required responses restricted access to care for mental illness (1), even as mental health problems increased (2). The evidence from Latin America highlights the urgency of strengthening mental health

care services in response to COVID-19, restoring the availability of care and expanding psychosocial support services (3).

In Chile, the first COVID-19 case was confirmed on March 3, 2020. As a result, the health system adapted by developing a national epidemiological surveillance system (4) and increasing

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the number of beds in intensive care units from 1 313 in March to 4 450 by June 1, 2020 (a 239% increase) (5). The vaccination campaign began at the end of 2020 (6).

Four lines of action were implemented to mitigate adverse mental health effects at the population level (7). First, the health system's response was guided by Chile's Mental Health Care and Disaster Risk Management Model, which the country began developing in 2018 (7). Capacity-building for mental health and psychosocial support followed the recommendations of the Inter-Agency Standing Committee (8).

Second, the Ministry of Health led the development of a COVID-19 Mental Health Action Plan that covered seven dimensions: (i) ensuring continuity and strengthening of mental health services, (ii) facilitating intersectoral coordination, (iii) addressing the needs of specific populations, (iv) caring for the health care workforce, (v) community strengthening and social communication, (vi) information management and (vii) developing training and technical guidelines for interventions (7).

Third, the presidential initiative known as Healthy Mind (or Programa SaludableMente) (9) had two main strategies. The first was to develop a digital platform to enhance mental health literacy and the second was to provide psychological interventions and create the Healthy Mind Committee to trace a comprehensive and intersectoral roadmap. Finally, research funding from the National Agency for Research and Development was focused on COVID-19 and mental health (7).

Before the pandemic, Chile had made significant advances in community mental health services, promoting the deinstitutionalization of psychiatric care in Latin America (10). Some achievements included integrating mental health care into primary care (11); providing universal coverage of treatment for schizophrenia, depression, and bipolar disorder (12); increasing the number of psychiatric inpatient beds in general hospitals; and developing supportive housing for people with mental health conditions (13). Likewise, the existing gaps in service provision, human rights and user participation were already on the public agenda as important challenges (14, 15).

To strengthen these developments, it became necessary to understand the changes to mental health services triggered by the COVID-19 pandemic. This paper presents the most relevant results of the convergent mixed methods analysis of the Mental Health Care – Adverse Sequelae of COVID-19 study (known as the MASC study), a multicountry research project led by King's College London that is taking place in seven countries. This study sought to describe the implications of the pandemic for global mental health services in sentinel low- and middle-income countries. The results in Chile will allow for a greater understanding of these sequelae, contributing to informing the decision-making processes to aid in the recovery of pre-pandemic levels of progress and to incorporate the lessons learned to cope with future crises or improve existing mental health services.

MATERIALS AND METHODS

This study used a convergent mixed methods design (16) to explore and describe the adverse effects of the COVID-19 pandemic on mental health services.

The quantitative component compared routine data about publicly available mental health care services between January 2019 and December 2021 to establish the magnitude of the

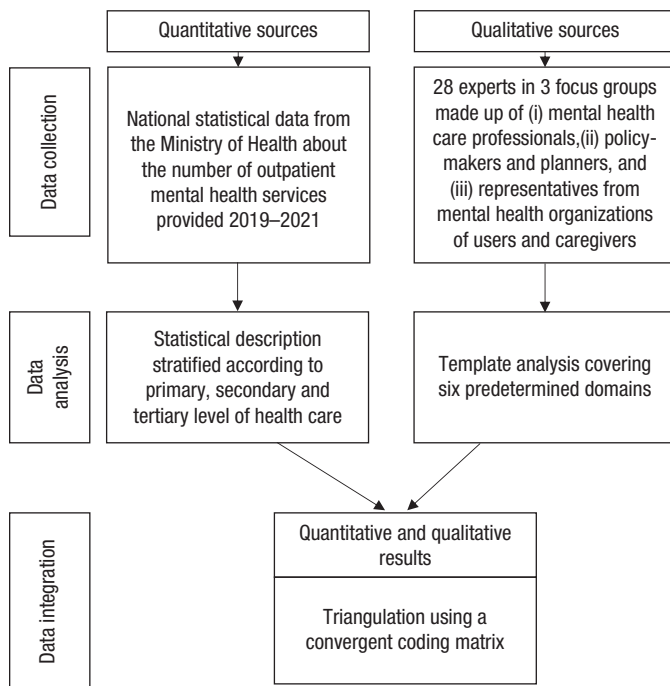
pandemic's impact. The data were collected from open databases at the Department of Health Statistics and Information at the Chilean Ministry of Health (17). Outpatient mental health activities in the public health care system were analyzed at primary, secondary and tertiary care levels, generating variables for each level through the STATA v. 17 program (StataCorp, College Station, TX, USA). Data from different time points were compared to observe changes in service provision during the period. Subsequently, a quantitative data collection tool developed by the researchers of the MASC study was sent to the mental health planners of the 29 national health services to collect data about service disruptions, the availability of interventions, staff distribution and training, and infrastructure. The national health services are the political, technical and administrative entities that provide health care services under the direction of the Ministry of Health.

Data for the qualitative component were collected through three focus groups that included experts from each of the following categories: (i) professionals in charge of mental health services, (ii) mental health care policy-makers and planners, and (iii) representatives from mental health care organizations of service users and caregivers. The aim was to describe the implications of the COVID-19 pandemic on publicly available mental health services by exploring six predetermined domains: (i) the availability of mental health treatment; (ii) access to care for physical health and measures to prevent COVID-19 transmission among people with mental health conditions; (iii) the quality of care; (iv) governance, legislation and financing of mental health services; (v) the mental health of health care workers; and (vi) good practices for addressing the pandemic's impact. Through convenience sampling, 28 experts were selected to participate from the country's northern, central and southern areas (i.e. 11 professionals in charge of mental health services, 10 mental health care policy-makers and 7 representatives from organizations of service users and caregivers). Consent was obtained before the participants took part in the focus group. The experts were selected because they had been actively involved in providing services for people with mental health conditions during the pandemic.

Template analysis was used to assess the content of the narrative data with a qualitative narrative tool developed by the researchers of the MASC study (18). After data analysis, a preliminary report was sent to the focus groups, and members provided their feedback, which was used to make final adjustments to the report. Finally, the results were integrated through triangulation (19) by using a convergent coding matrix to analyze the quantitative and qualitative data according to their degree of convergence (i.e. convergence or partial convergence), discrepancy or silence. Triangulation enabled the development of a complete picture of the impact of the pandemic on mental health services in Chile, and significant results were found for each predefined theme. Figure 1 summarizes the convergent mixed methods design. This article presents the most relevant results of the mixed integration phase of the study.

RESULTS

A sharp decline in mental health care was identified as occurring in April 2020, with an 88% decrease in services in primary care, a 66.3% decrease in secondary care and a 71.3% decrease in tertiary care compared with care provided in April 2019

FIGURE 1. Scheme of the convergent mixed methods design used in the study

Source: Figure developed by the authors based on their research.

(i.e. pre-COVID 19). After April 2020, the availability of outpatient mental health services showed a slow and progressive recovery. Figure 2 shows the number of outpatient mental health services provided in the national health system from January 2019 to December 2021, by level of care, with the start of the COVID-19 outbreak indicated.

For example, when comparing April 2021 with April 2019, primary care had recovered 57% of its usual services, and secondary and tertiary care had recovered 52% and 58%, respectively. By December 2021, 81% of mental health services had been recovered in primary care, 67% in secondary care and 70% in tertiary care compared with April 2019. Table 1 shows the total number of outpatient services for mental health, neurological and substance use disorders before COVID-19 and during the pandemic by comparing data from April 2019, 2020 and 2021.

The qualitative findings allowed for a deeper understanding of the impact of the pandemic as it converged with the significant reduction in mental health services. Both the quantitative and qualitative components were integrated into six themes to achieve a more comprehensive understanding of the results. Due to their length, comments from the qualitative data and the convergence matrix are available as supplementary material upon request to the corresponding author.

Theme 1: impact of the pandemic on availability of mental health treatment

Changes at the community level. Among the changes at the community level, an increase in stigmatizing attitudes was described by the participants of the three focus groups, including attribution of a greater risk of transmission of COVID-19 to

people with mental health conditions. Likewise, there was an increase in conflicts and discrimination within families, especially during periods of quarantine. The increased stigma and discrimination towards people with mental health conditions magnified social exclusion and exposed this population to higher risks associated with COVID-19 and homelessness.

For the focus group participants, the pandemic deepened pre-existing social inequities, and these were linked with the social unrest in 2019, a massive social protest in response to inequity in Chile, which triggered the process of enacting a new constitution. Negative impacts of the pandemic were perceived to have affected poverty, employment and overcrowding, and led to worsening mental health in the general population. A greater need for social support for service users and their relatives was reported.

Regarding the impact on specific groups, isolation seems to have had a stronger impact on indigenous populations and led to discontinuity in community health practices. Furthermore, it was perceived that there was a higher risk of disease transmission to homeless people due to their reduced access to personal protective equipment. For people with pre-existing mental health conditions, a greater risk of homelessness was ascribed by the focus group participants to overcrowding occurring during mandatory quarantines.

Impact on availability of mental health services. Mental health services at the primary care level experienced the most significant disruption. At the national level, outpatient mental health services decreased to 12% in April 2020 compared with activities in April 2019, resulting in an 88% decrease in services. In addition, 60% of the national health services reported a partial reduction in the delivery of psychological and psychosocial interventions, and 40% reported a substantial reduction.

The decrease in the availability of mental health services in primary care was mainly associated with (i) the redeployment of staff to deliver vaccinations and contact tracing, (ii) illness and quarantine of health care professionals and (iii) shift working. The reduction in psychosocial interventions was associated with the redeployment of psychological staff to support the needs of frontline workers. The decrease in mental health consultations between primary and secondary levels affected referrals to the secondary level and the supervision of primary care professionals.

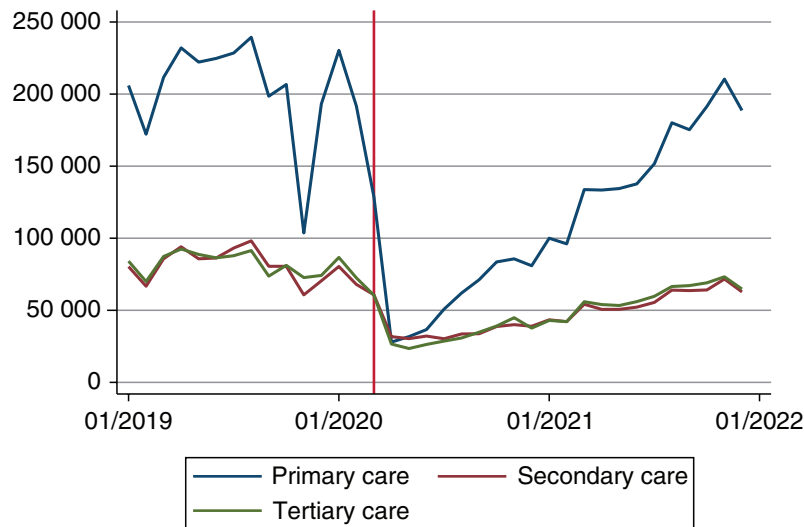
Psychotropic medicines continued to be available, with 87% of the national health services reporting that patients were able to receive their usual medicines and doses and 13% reporting partially reduced use of medicines. Home delivery of psychotropic medications was implemented in several regions.

There were barriers to accessing digital (or remote) care for populations with a technological gap, lack of digital devices or no internet connectivity. This affected the utilization of services, mainly among older people, and in rural communities and families with greater social vulnerability.

At the national level, the availability of secondary mental health services decreased to 33.7% in April 2020 compared with availability in April 2019, with 66.3% fewer mental health services provided.

This decrease at the secondary level was associated with (i) an increase in illness among care professionals; (ii) the need to physically distance in indoor spaces; (iii) shift working, which reduced staffing in health centers; and (iv) mobility restrictions

FIGURE 2. Change in the availability of mental health care services, by level of care in national health services in Chile between January 2019 and December 2021*



* The vertical red line indicates the start of the pandemic in March 2020.
Source: Figure developed by the authors based on data from the Department of Health Statistics and Information at the Chilean Ministry of Health about the number of outpatient mental health services provided.

TABLE 1. No. of outpatient services for mental health, neurological and substance use disorders, by level of care, before and during the COVID-19 pandemic, in April 2019, April 2020 and April 2021, Chile

Level of care	Month and Year		
	April 2019	April 2020	April 2021
Primary	232 794	28 042	133 723
Secondary (e.g. community mental health centers)	94 062	31 720	49 811
Tertiary (e.g. general hospital)	92 518	26 591	54 526
Total	419 374	86 353	238 060

Source: Table developed by the authors based on data from the Department of Health Statistics and Information at the Chilean Ministry of Health about outpatient care provided in mental health facilities.

for people who were in quarantine. In addition, 13% of the national health services reported planned closures of mental health services at the secondary level, and 73% reported reductions in psychological, psychosocial and community interventions. Remote care was widely implemented; however, inequalities in access occurred among vulnerable groups.

Only 13% of the national health services reported redeploying staff to COVID-19 care. However, many professionals changed functions and performed administrative tasks associated with the pandemic. In addition, it was reported that psychiatrists were reassigned to acute care and psychologists to support the mental health needs of frontline health workers.

All health services reported that medicines continued to be available. Home delivery of pharmacological treatments was implemented as part of community mental health care at this level.

At the national level, the total number of outpatient mental health care activities in tertiary care decreased to 28.7% in April 2020 compared with April 2019, with 71.3% less care being provided (i.e. fewer people were seen). Among the causes were (i) the redeployment of staff to COVID-19 care and contact tracing and (ii) an increase in illness among care professionals.

Altogether 73% of health services reported a reduction in the availability of psychosocial interventions associated with the redeployment of psychological staff to support the needs of frontline health workers. Remote care was broadly implemented at this level; however, inequities in access and utilization were ascribed to the digital divide.

No tertiary mental health facilities were closed. However, there were raised thresholds for admission, some admissions were suspended and hospitalizations were shorter. Altogether, 67% of health services reported converting mental health facilities to COVID-19 care, leading to fewer clinical beds available for mental health care. An increase in hospitalizations in emergency units was reported.

Theme 2: access to care for physical health and prevention measures for people with mental health conditions

Stigma and discrimination led to difficulties for homeless people and people with substance and alcohol misuse disorders in accessing what were known as sanitary residences; these residences were part of a national strategy of providing hotels adapted for quarantine, financed by the Ministry of Health, for people who tested positive for COVID-19. The Ministry of Social Development helped to bridge barriers to access by opening shelters for homeless people.

Discontinuities in general health care and reduced access to care among rural communities were reported. Some focus group participants described difficulties accessing official digital permissions for traveling during quarantine. People with mental health conditions did not perceive discrimination if they needed to access intensive care beds.

Altogether, 87% of health services reported providing health education about COVID-19. However, at the service users’ and carers’ level, uncertainty, fear and confusion were reported about the availability and utilization of services. In addition, providing

health education mainly by digital media was described as a barrier for people with mental health conditions.

Participants reported that homeless people, people with mental health conditions and migrants were unable to afford personal protective equipment. In addition, access to vaccination was perceived as being unequal, even though people with mental health conditions were a priority population.

Theme 3: quality of care

The significant impacts on the quality of care at the different health care levels were related to (i) a decreased frequency of care, (ii) a lack of resources for remote care and (iii) a lack of privacy for children and adolescents during remote care visits.

At the health systems level, a decrease in the frequency of care was reported, with a more significant impact on primary care. No resources were allocated for remote care, which negatively affected equipment availability and training. Care professionals' own resources were used. In addition, compromised privacy impacted confidentiality in remote care, which was a particular concern for children and adolescents who needed care.

Although the continuity of pharmacological treatments was an achievement, a medicalization of the mental health response was described as occurring, given that psychosocial and community interventions did not have the same priority as pharmacological mental health treatment. Therefore, care coverage was primarily based on delivering medication.

Theme 4: governance, legislation and financing

The pandemic weakened social participation as a governance strategy for mental health services. Focus group participants were critical of the lack of inclusion of service user groups and civil society members in the promulgation of Law 21331, which addresses mental health care and was enacted in 2021. This law regulates the recognition and protection of the rights of people in mental health care.

It was perceived that the historical underfunding for mental health services was an adverse condition to face during the pandemic. No cuts in the existing budget were reported; however, funding was insufficient to respond to the reorganization of the services. Health services planners made efforts to avoid redeploying management teams. However, some professionals were reassigned to COVID-19 surveillance. The development of the national Healthy Mind program was seen positively. However, there was a negative perception of the lack of integration and distribution of resources to local services and the scarcity of strengthening strategies for primary care.

There was no evidence that people with mental health conditions were excluded from policies designed to mitigate the social and economic impacts of the pandemic; however, access to the programs was perceived as being unequal and discriminatory. The challenges highlighted were to adapt the legislation and social measures and to ensure focus on people with mental health conditions to promote equity in access to benefits.

Theme 5: mental health of frontline workers

Increased mental health care needs among frontline workers and exhaustion were reported.

Possible causes were (i) concerns about transmission and fear of infecting their relatives and (ii) the quickly changing nature of the way services were provided, especially the reorganization from in-person care to remote care.

The consequences of burnout were an increased number of people taking medical leave, the loss of professional purpose and organizational conflicts. Women were more affected by the unequal gender division, which translated into a double workload (i.e. at work and home). Mental health workers were strongly emotionally affected by the pandemic. The second year of the pandemic was considered even riskier for workers' mental health than the first.

There was a perception of a non-existent response from the government in terms of providing mental health care for frontline workers because it was provided through the redeployment of existing human resources without additional investment or clear guidelines. Participants perceived that there was insufficient information about mental health care alternatives for health workers and there was low use of them. Some professionals coped with the mental health burden by taking self-help actions or resorting to self-medication.

Theme 6: good practices

Among the types of good practices described were: (i) prioritizing continuity of care and incorporating remote mental health care; (ii) ensuring home delivery of pharmacological treatments as part of community-based mental health care; (iii) ensuring intersectoral action to provide supportive shelters for homeless people and people with mental health conditions, which was implemented by the Ministry of Social Development in coordination with secondary-level mental health centers; additionally, supportive mental health housing was adapted as residences for quarantine for people with severe mental health conditions; and (iv) implementing the Hope Line (Linea Esperanza), a helpline staffed by community workers who provided mental health counseling and psychosocial support to people in different parts of the country.

DISCUSSION

Early literature about the impact of the COVID-19 pandemic highlighted how groups that were vulnerable before the pandemic (e.g. children, youth, women, migrants, homeless people, elderly people, and people with mental health conditions) were exposed to a higher risk of infection, psychological distress, worsening social conditions and discrimination in the contexts of health emergencies (20-22). Global recommendations have encouraged countries to enhance social support, prevention measures and access to care. In the case of Chile, the adverse effects of the pandemic on mental health services have exposed past challenges to providing holistic and equitable health care (23). Our study shows how prioritizing mental health as a fundamental social good (24) that should be protected during emergencies remains an important challenge to strengthening the mental health response.

The findings of this study showed that the COVID-19 pandemic has had substantial and enduring adverse effects at different levels of the health system, negatively affecting the essential characteristics of community-based mental health services, especially the continuity, comprehensiveness and quality of care.

The changes at the community level involved increased stigma, discrimination and social exclusion, especially among populations that were highly vulnerable before the pandemic, thus exposing them to higher health risks. Ignorance and stigma around mental health conditions in vulnerable populations are barriers that make it challenging to ensure people with these conditions are included in responses to a health emergency (25). As a core component of a build back better approach (21), stigma reduction in mental health should be vigorously and strategically adopted to ensure equal protection and access to health services, especially during a health crisis.

Mental health services at the primary care level were most badly affected. Human resources were redeployed to COVID-19 services, such as contact tracing and vaccination. Secondary and tertiary levels also showed a sharp decrease and a slow recovery of their usual provision of services until December 2021. The decline in availability seems to be a central factor in the fragmentation of services described by some authors as part of the pandemic's impact (20). In Chile, the impacts on mental health services in primary care triggered negative consequences at the health systems level due to their keystone role within an integrated services network (26). These findings reinforce the need to ensure continuity of care at this level and strengthen the mental health response during health emergencies, especially considering their high psychosocial impact.

Psychological treatments were affected at all levels of the health system, especially as psychological staff were redeployed to care for frontline workers. Pharmacological treatments remained available; however, psychosocial and community activities were severely affected. This seemed to lead to a greater medicalization of community-based mental health care, which is perceived as a setback considering Chile's advances before the pandemic. Thus, it has become necessary to reinforce the comprehensive community approach by working to activate local resources and avoid medicalization. Providing more significant psychosocial support at the community and primary care levels could contribute to this (27, 28). Good practices involving task-sharing, such as in counseling and psychosocial support, were developed with community workers and service users, which could be replicated to increase the response capacity of services, as has happened elsewhere internationally (29, 30).

Regarding the quality of care, special measures must be put in place to improve the conditions under which remote care is implemented to overcome the lack of equipment and training. Rural communities, older people and youth were more exposed to the digital divide; therefore, structural barriers should be addressed, and training in how to use new technologies can be implemented as a community resource to evaluate its acceptability and appropriateness (31).

The pandemic also impacted participatory governance, which has been one of the central strategic lines for developing mental health services in the community in Chile's national mental health plans. A fundamental part of governance is to ensure a more robust community-based system with better partnerships with civil society and organizations of service users and caregivers. Their input can be improved at the national, regional and local levels to ensure there are mechanisms for active involvement in planning for and providing care and for making informed decisions.

The current budget allocated to mental health services constituted a prior adverse condition. The results of this study can be used to inform a more suitable budget allocation that

strengthens community-based services, which appear to adapt better to emergencies and be more resilient (32). However, the country still allocates most of its mental health budget to psychiatric hospitals (33). Following guidelines from the World Health Organization and international recommendations (32-35), stronger efforts should be made to increase the national budget for mental health, and resources should be reallocated to overcome gaps in prevention and treatment and in ensuring the human rights of people with mental health conditions, thus strengthening the integration of mental health care into general health care.

Finally, the decisions to redeploy human resources and reorganize services have impacted workers' health, with an increase in illness among health care professionals, further reducing the health system's response capacity. Gender differences in this impact were observed, with a higher impact for women. Other studies in the country have had similar results (34). More research is recommended to encourage a more substantial focus on gender perspectives as part of public health policy in Chile.

Conclusions

Chile's mental health services experienced negative affects from the COVID-19 pandemic that differed according to the level of health care. These are possible to describe in terms of different domains, such as the discontinuity of care for users of mental health services, a decline in the quality of care, the emergence of new needs in the population, and the fatigue of frontline and mental health care workers. Furthermore, substantial reductions in mental health care services were reported during the acute phase of the pandemic, and these persisted into the second year. Therefore, the Chilean health system will have to make significant efforts to recover the level of mental health care capacity that existed before the pandemic.

Decision-makers can drive this recovery by incorporating the lessons learned as valuable input to help face ongoing and future health emergencies. Local mental health care teams can work with community workers, intersectoral actors, and organizations of users and caregivers to improve policies for responses during health emergencies.

Authors' contributions. RA-M coordinated the MASC study in Chile. OT-D led the qualitative component, was the leader for the publication and wrote a portion of the manuscript. GS-B led the quantitative component and wrote that portion of the manuscript. CS-A wrote and edited the manuscript and was co-lead for the publication. CS-Q, PP and FL collected and analyzed the data. GT, CH, and MI reviewed and edited the manuscript. All authors reviewed and approved the final version.

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REFERENCES

- World Health Organization. The impact of COVID-19 on mental, neurological and substance use services: results of a rapid assessment. Geneva: World Health Organization; 2020. <https://apps.who.int/iris/handle/10665/335838>
- Santomauro DF, Mantilla Herrera AM, Shadid J, Zheng P, Ashbaugh C, Pigott DM, et al. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *Lancet*. 2021;398:1700-12.
- Tausch A, Souza ROE, Viciana CM, Cayetano C, Barbosa J, Hennis AJ. Strengthening mental health responses to COVID-19 in the Americas: A health policy analysis and recommendations. *Lancet Reg Health Am*. 2022;5:100118.
- Ministry of Health, Government of Chile. Oficio CP N° 1553/2020: Alerta y refuerzo ante brote de 2019-nCoV en China. [CP Official Letter No. 1553/2020: Alert and reinforcement in the face of an outbreak of 2019-nCoV in China] [Internet]. Santiago: Ministry of Health; 2023 [cited 2023 April 4]. Available from: <https://www.minsal.cl/wp-content/uploads/2020/01/Ord.-1553-Alerta-y-refuerzo-ante-brote-de-2019-nCoV-en-China.pdf>
- Ministry of Health, Government of Chile. Reporte diario: COVID-19. 1 de junio 2021 [Daily report: COVID-19. 1 June 2021] [Internet]. Santiago: Ministry of Health; 2021 [cited 2022 July 7]. Available from: <https://www.minsal.cl/covid-19-solo-dos-regiones-disminuyen-sus-casos-en-los-ultimos-siete-dias-y-cuatro-en-las-ultimas-dos-semanas/>
- Ministry of Health, Government of Chile. Seguimos cuidándonos: yo me vacuno [We keep taking care of ourselves: I get vaccinated] [Internet]. Santiago: Ministry of Health; 2023 [cited 2023 April 4]. Available from: <https://www.gob.cl/pasoapaso/#vacunas>
- Irrarrazaval M, Norambuena P, Montenegro C, Toro-Devia O, Vargas B, Caqueo-Urizar A. Public policy responses to address the mental health consequences of the COVID-19 pandemic: evidence from Chile. *Front Public Health*. 2021;9:590335.
- Inter-Agency Standing Committee. IASC guidelines on mental health and psychosocial support in emergency settings. Geneva: IASC; 2007.
- Ministry of Health, Government of Chile. SaludableMente [Healthy Mind] [Internet]. Santiago: Ministry of Health; 2023 [cited 2022 August 8]. Available from: <https://www.minsal.cl/saludablemente/>
- Desinstitucionalización de la atención psiquiátrica en América Latina y el Caribe [Deinstitutionalization of psychiatric care in Latin America and the Caribbean]. Washington (DC): Pan American Health Organization; 2020. <https://doi.org/10.37774/9789275323014>
- Minoletti AA, Soto-Brandt GG, Sepúlveda RR, Toro OO, Irrarrazaval MM. Capacidad de respuesta de la atención primaria en salud mental en Chile: una contribución a Alma-Ata [Mental health response capacity in primary care in Chile: a contribution to Alma-Ata]. *Rev Panam Salud Publica*. 2018;42:e136. <https://doi.org/10.26633/RPSP.2018.136>
- Minoletti A, Soto-Brandt G, Toro O, Irrarrazaval M, Zanga R, Alvarado R. Schizophrenia treatment coverage provided by the public and private health systems of Chile. *Psychiatr Serv*. 2021;72(4):478-81.
- Mundt AP, Martínez P, Jaque S, Irrarrazaval M. The effects of national mental health plans on mental health services development in Chile: retrospective interrupted time series analyses of national databases between 1990 and 2017. *Int J Ment Health Syst*. 2022;16(1):5.
- Minoletti A, Toro O, Alvarado R, Carniglia C, Guajardo A, Rayo X. Respeto a los derechos de las personas que se atienden en Servicios de Psiquiatría Ambulatoria en Chile [A survey about quality of care and user's rights in Chilean psychiatric services]. *Rev Med Chile*. 2015;143(12):1585-92.
- Minoletti A, Sepúlveda R, Gómez M, Toro O, Irrarrazaval M, Díaz R, et al. Análisis de la gobernanza en la implementación del modelo comunitario de salud mental en Chile [Analysis of governance in the implementation of the Chilean Community Mental Health model]. *Rev Panam Salud Publica*. 2018;42:e131. <https://doi.org/10.26633/RPSP.2018.131>
- Creswell JW, Plano Clark VL. Designing and conducting mixed methods research. 3rd ed. Thousand Oaks (CA): Sage; 2017.
- Department of Health Statistics and Information, Government of Chile. Cifras oficiales COVID-19 Chile [Official figures for COVID-19 in Chile]. Santiago: Department of Health Statistics and Information; 2023 [cited 2021 April 21]. Available from: <https://deis.minsal.cl>
- Brooks J, McCluskey S, Turley E, King N. The utility of template analysis in qualitative psychology research. *Qual Res Psychol*. 2015;12(2):202-22.
- O'Cathain A, Murphy E, Nicholl J. Three techniques for integrating data in mixed methods studies. *BMJ* 2010;341:c4587.
- Maulik PK, Thornicroft G, Saxena S. Roadmap to strengthen global mental health systems to tackle the impact of the COVID-19 pandemic. *Int J Ment Health Syst*. 2020;14(1):57.
- Kola L, Kohrt BA, Hanlon C, Naslund JA, Sikander S, Balaji M, et al. COVID-19 mental health impact and responses in low-income and middle-income countries: reimagining global mental health. *Lancet Psychiatry*. 2021;8(6):535-50.
- Moreno C, Wykes T, Galderisi S, Nordentoft M, Crossley N, Jones N, et al. How mental health care should change as a consequence of the COVID-19 pandemic. *Lancet Psychiatry*. 2020;7(9):813-24.
- Saldivia S, Vicente B, Kohn R, Rioseco P, Torres S. Use of mental health services in Chile. *Psychiatr Serv*. 2004;55(1):71-6.
- Patel V, Saxena S, Lund C, Thornicroft G, Baingana F, Bolton P, et al. The Lancet Commission on global mental health and sustainable development. *Lancet*. 2018;392:1553-98.
- Thornicroft G, Sunkel C, Alikhon Aliev A, Baker S, Brohan E, el Chammay R, et al. The Lancet Commission on ending stigma and discrimination in mental health. *Lancet*. 2022;400:1438-80.
- Ministry of Health, Government of Chile. Modelo de gestión: red temática de salud mental en la red general de salud [Management model: Mental Health Thematic Network in general health care]. Santiago: Ministry of Health; 2008.
- Smith SL, Raviola GJ. 'Jack be nimble, Jack be quick...': Mental health and psychosocial response in the time of coronavirus. *Glob Ment Health*. 2020;7:e21.
- Tayyib NM. An action plan to address the mental health impact of COVID-19 on communities: five effective strategies. *Psychol Serv*. 2021;19(Suppl 2):5-16.
- Chibanda D, Bowers T, Verhey R, Rusakaniko S, Abas M, Weiss HA, et al. The Friendship Bench programme: a cluster randomised controlled trial of a brief psychological intervention for common mental disorders delivered by lay health workers in Zimbabwe. *Int J Ment Health Syst*. 2015;9:21.
- Atif N, Krishna RN, Sikander S, Lazarus A, Nisar A, Ahmad I, et al. Mother-to-mother therapy in India and Pakistan: adaptation and feasibility evaluation of the peer-delivered Thinking Healthy Programme. *BMC Psychiatry*. 2017;17:79.

31. Naslund JA, Aschbrenner KA, Araya R, Marsch LA, Unützer J, Patel V, Bartels SJ. Digital technology for treating and preventing mental disorders in low-income and middle-income countries: a narrative review of the literature. *Lancet Psychiatry*. 2017(6):486-500.
32. Ghebreyesus TA, Jakab Z, Ryan MJ, Mahjour J, Dalil S, Chungong S, et al. WHO recommendations for resilient health systems. *Bull World Health Organ* 2022;100(4):240-240A.
33. Mascayano F, Alvarado R, Martínez-Viciano C, Irarázaval M, Durand-Arias S, Freytes M, et al. 30 years from the Caracas Declaration: the situation of psychiatric hospitals in Latin America and the Caribbean prior, during and after the COVID-19 pandemic. *Soc Psychiatry Psychiatr Epidemiol*. 2021;56(8):1325-7.
34. Alvarado R, Ramírez J, Lanio Í, Cortés M, Aguirre J, Bedregal P, et al. El impacto de la pandemia de COVID-19 en la salud mental de los trabajadores de la salud en Chile: datos iniciales de The Health Care Workers Study [Impact of the COVID-19 pandemic on the mental health of health care workers: initial data from the Health Care Workers Study]. *Rev Med Chile*. 2021;149(8):1205-14.
35. World Health Organization. Comprehensive mental health action plan 2013–2030. Geneva: World Health Organization; 2021. <https://apps.who.int/iris/handle/10665/345301>

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Secuelas adversas de la pandemia de COVID-19 en los servicios de salud mental en Chile

RESUMEN

Objetivo. Este estudio pretende describir los efectos adversos de la pandemia de COVID-19 en los servicios de salud mental en Chile.

Métodos. El estudio forma parte de una investigación multinacional en curso denominada estudio *Mental Health Care – Adverse Sequelae of COVID-19* (atención de salud mental: secuelas adversas de la COVID-19), o estudio MASC, en el que participan siete países. Chile es el único de América Latina. En este estudio se utilizó un diseño de métodos mixtos convergentes. En el componente cuantitativo se analizaron los datos de atención en salud mental del sector público obtenidos entre enero del 2019 y diciembre del 2021, provenientes de la base de datos de acceso libre del Ministerio de Salud. En el componente cualitativo se analizaron los datos obtenidos a partir de grupos focales de expertos entre los que había profesionales a cargo de servicios de salud mental, responsables de la formulación de políticas, personas usuarias de los servicios y personas prestadoras de cuidados. Por último, la síntesis de los datos se realizó mediante la triangulación de ambos componentes.

Resultados. En abril del 2020, la prestación de servicios de salud mental en atención primaria había disminuido en un 88%; además, los niveles secundario y terciario también habían reducido sus intervenciones en salud mental en un 66,3% y un 71,3%, respectivamente, respecto a los niveles previos a la COVID-19. Se describieron secuelas negativas a nivel de los sistemas de salud, que a fines del 2021 aún no habían logrado su plena recuperación. La pandemia afectó las características esenciales de los servicios de salud mental prestados en la comunidad, con consecuencias adversas en la continuidad y la calidad de la atención, una reducción del apoyo psicosocial y comunitario, y efectos negativos en la salud mental del personal de salud. Se generalizó la adopción de soluciones digitales para posibilitar la atención a distancia, pero algunos de los principales problemas fueron la disponibilidad de equipos, su calidad y la brecha digital.

Conclusiones. La pandemia de COVID-19 ha tenido efectos adversos importantes y duraderos en la atención de salud mental. Las enseñanzas extraídas pueden servir de base para formular recomendaciones de buenas prácticas para las pandemias y crisis sanitarias presentes y futuras, a la vez que resaltan la importancia de dar prioridad al fortalecimiento de los servicios de salud mental en las situaciones de respuesta a emergencias.

Palabras clave COVID-19; pandemias; servicios de salud mental; Chile.

Sequelas adversas da pandemia de COVID-19 nos serviços de saúde mental do Chile

RESUMO

Objetivo. Descrever os efeitos adversos da pandemia de COVID-19 nos serviços de saúde mental do Chile.

Métodos. Este estudo é parte de uma pesquisa em andamento em vários países, denominada *Mental Health Care - Adverse Sequelae of COVID-19* (Atenção à saúde mental: sequelas adversas da COVID-19, também conhecido como estudo MASC), que inclui sete países. O Chile é o único país da América Latina incluído. O estudo utilizou um delineamento convergente de métodos mistos. O componente quantitativo analisou dados da atenção pública à saúde mental coletados entre janeiro de 2019 e dezembro de 2021 do banco de dados de acesso livre do Ministério da Saúde. O componente qualitativo analisou dados coletados de grupos focais de especialistas que incluíam profissionais responsáveis por serviços de saúde mental, formuladores de políticas, usuários de serviços e cuidadores. Por último, os dados foram sintetizados por triangulação dos dois componentes.

Resultados. Até abril de 2020, havia ocorrido uma redução de 88% na prestação de serviços de saúde mental na atenção primária; além disso, os níveis secundários e terciários também haviam reduzido suas atividades de saúde mental em 66,3% e 71,3% dos níveis pré-COVID, respectivamente. Sequelas negativas foram descritas no nível dos sistemas de saúde, e a recuperação total não havia sido alcançada até o final de 2021. A pandemia afetou as características essenciais dos serviços de saúde mental de base comunitária, com impactos adversos na continuidade e na qualidade do atendimento, redução do apoio psicossocial e comunitário e efeitos negativos na saúde mental dos profissionais de saúde. Soluções digitais foram amplamente implementadas para permitir o atendimento remoto, mas os desafios incluíam a disponibilidade de equipamentos, sua qualidade e a exclusão digital.

Conclusões. A pandemia de COVID-19 tem tido efeitos adversos significativos e duradouros na atenção à saúde mental. As lições aprendidas podem contribuir para recomendações de boas práticas em pandemias e crises de saúde atuais e futuras. Além disso, destacam a importância de priorizar o fortalecimento dos serviços de saúde mental em resposta a emergências.

Palavras-chave COVID-19; pandemias; serviços de saúde mental; Chile.