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What Do We Know about the Capacity of Mental Health and Substance Use Health Workforce to Respond to Emerging Needs during the COVID-19 Pandemic? A Review

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ABSTRACT

Growing evidence suggests an overall deterioration in mental health and a rise in substance use during the COVID-19 pandemic. The capacity of the mental health and substance use health (MHSUH) workforce to meet these emerging needs during crises is critical. This review aims to provide an overview of the evidence regarding the effects of the current and previous pandemics and previous disasters on the capacity of the MHSUH workforce to meet the emerging needs of individuals, communities, and populations. The literature reveals that similarly to previous pandemics and disasters, the COVID 19 pandemic has: 1) disrupted or halted MHSUH services; 2) resulted in a variety of strategies used by members of the MHSUH workforce to modify service provision; and 3) exacerbated the already problematic gaps in culturally and linguistically appropriate care. This review also discusses several promising practices and recommended actions that could improve the capacity of MHSUH workforce to respond to population needs during the COVID-19 pandemic and future pandemics or disasters. Still, the impact of the pandemic on MHSUH workforce capacity remains largely unexplored, including in specific practice settings.

KEY WORDS

COVID-19, pandemics, disasters, mental health, substance use, workforce capacity

1. BACKGROUND

COVID-19 has had a profound impact on the mental health of people around the globe. Evidence points to a deterioration in population mental health during the pandemic (Findlay and Arim, 2020; Hawke et al., 2020). For instance, one Canadian poll found that 50% of the population felt that their mental health had worsened since the pandemic began with many feeling worried (44%) and anxious (41%) (Angust Reid Institute, 2020).

Substance use has also been on the rise during COVID-19. According to UNODC's World Drug Report 2021, approximately 275 million people worldwide used drugs during 2020, an increase of 22 per cent from 2010 (United Nations, 2021). A 2020 Canadian poll revealed that a quarter of Canadians aged 35-54 and 21% of those aged 18-34 reported increased alcohol consumption since COVID-19 began (Canadian Centre for Substance Abuse, 2020). Similarly, as of June 2020, 13.3% of Americans reported starting or increasing substance use as a way of coping with stress or emotions related to COVID-19 (Czeisler et al., 2020).

The deterioration of mental health as a result of the COVID-19 pandemic can be tracked to increases in factors that generally pose a risk to mental health: financial insecurity, unemployment, fear, grief and a significant decline in protective factors (e.g., social connection, employment and educational engagement, access to physical exercise, daily routine and access to health services) (Joaquim et al., 2021; OECD, 2021).

The mental health and substance use health (MHSUH) workforce occupies a unique position in response to meeting the mental health needs of, individuals, communities, and populations during the COVID-19 pandemic. The capacity to deliver services is a core element of an effective response, and understanding workforce capacity will help support equitable access to MHSUH services. While COVID-19 has brought many challenges to healthcare systems and healthcare workers endangering their well-being ((Leite et al., 2020; Stuijfzand et al., 2020), less is known about the MHSUH workforce and the impact of the current pandemic on its capacity to meet the increasing mental health needs.

The aim of this review is to summarize the evidence regarding the effects of the COVID-19 pandemic on the MHSUH workforce and more specifically, the capacity of the MHSUH workforce to meet the emerging MHSUH needs of individuals, communities and/or populations. While the review will also reflect on effects of earlier pandemics and disasters on the capacity on the MHSUH workforce, its primary focus is on the impacts of the COVID-19 pandemic.

2. METHODS

2.1 Search Strategy

In collaboration with a university librarian experienced in knowledge synthesis, we created a search strategy that drew on structured searches of both the academic and grey literature at the intersections of three major concepts: “COVID/disasters”, “mental health/substance use service needs” and “service capacity/delivery”.

For each of the major concepts, we created a list of keywords to search Medline, CINAHL, and Google Scholar databases for academic literature. Manual searches of reference lists were also conducted to identify articles not captured by the literature search.

The search for grey literature included the websites of organizations relevant to various MHSUH workers (e.g., professional organizations, regulatory authorities, insurance providers, research institutes and advocacy groups at both national and international levels).

2.2 Study Selection

We included English and French language sources that had met the following main inclusion criteria: 1) published from 2003 (to capture literature on the first SARS pandemic) to February 2021; 2) Canadian-based (both national and regional) or international literature focused on OECD countries (US, UK, Australia, New Zealand, etc.); 3) relevant to the MHSUH workforce (addressing capacity or issues directly related to capacity), including all professions and occupations (regulated and unregulated) providing MHSUH services in the public & private sectors; 4) focused on the MHSUH impacts in response to infectious disease epidemics or pandemics (including but not limited to COVID-19, MERS, Ebola, MERS, H1N1, SARS) or natural disasters (e.g., Haiti earthquake, New Orleans flooding, fires) with long term health and health service consequences; and 5) included any modifications to workforce capacity or service provision in response to the crisis (e.g., redeployments, adjustments to virtual service delivery and PPE requirements). For the academic literature, we initially intended to include only empirical or review papers that used systematic methodologies; however, given the recency of the topic, few literature pieces met these criteria. Thus, we expanded our inclusion criteria to also include more recent editorials, commentaries and other pieces published in 2020 and 2021 that were relevant to the topics we were examining. After title and abstract screening which was done in duplicate, two reviewers (JA and DR) explored full texts against inclusion and exclusion criteria to determine articles to be included in extraction. In terms of grey literature, we included publicly available reports, proceedings of meetings, content on organization websites, and social and traditional media outputs as well as legal, regulatory, and policy documents.

2.3 Extraction

Key data from the literature was extracted by three reviewers (JA, DR, RM) using literature extraction tools (one for academic, one for national grey literature, and one for international grey literature) that were created for the project. These tools which were developed by the project team and refined after a pilot test on several sources contained categories which helped guide and organize the extraction of information. Extracted data were maintained in spreadsheet software.

3. RESULTS

3.1 Descriptive Overview of the Reviewed Academic Literature

After full-text review, 129 academic sources were extracted (see Figure 1 for the PRISMA flow diagram for more details on selection/inclusion of academic literature). We also included 238 sources from national grey literature and 42 from international grey literature for extraction.

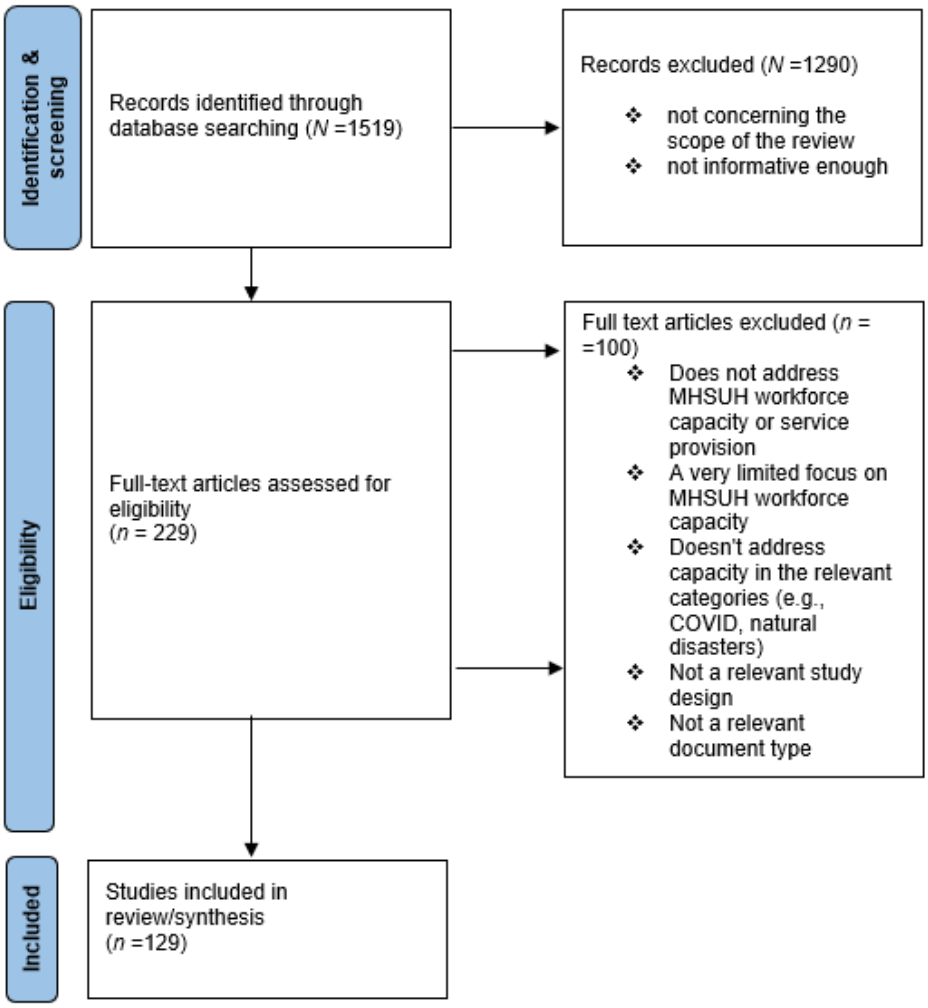

Figure 1: PRISMA Flow-Chart of Study Selection Process

3.1.1 Geographic Coverage/Country

Most of the included academic literature came from the United States (20%; N =56), followed by OECD European countries (20 percent; N =26), Australia, (eight percent, N =10), Canada (5 percent; N =7) and UK (5 percent; N =7).

3.1.2 Type of Workers

Out of 129 academic articles reviewed, most focused on the MHSUH workforce in general, followed by those focused specifically on psychiatrists. Psychologists were the focus of few of the reviewed articles and even fewer pieces were dedicated to other categories of MHSUH workers such as addiction counsellors, MH nurses, social workers, crisis counsellors, psychotherapists, harm reduction workers and peer support workers (Figure 2).

Figure 2: Academic literature: Number of publications per category of MHSUH Workers[1]

3.1.3 Paper Type & Methods

Empirical studies (N =42, 32%) represent the greatest number of the reviewed academic literature, followed by commentaries (N =34; 26%), review articles (N = 27; 21%), editorials (N =11; 9%), letters to the editor (N =3; 2%) and theoretical articles (N =2; 2%). The remaining articles (N =10; 8%) included special communication articles and position papers. In terms of methods used, most of the reviewed academic pieces were editorials or discussion papers that propose solutions to expand MHSUH workforce capacity, categorized as “qualitative – other” (N =31; 24%), and the smallest number are systematic reviews (N =3; 2%) (Figure 3).

[1] Category ‘other’ includes other types of workers not belonging to the aforementioned categories or explore more than one of these categories (e.g., addiction counsellors, psychiatrists, and others).

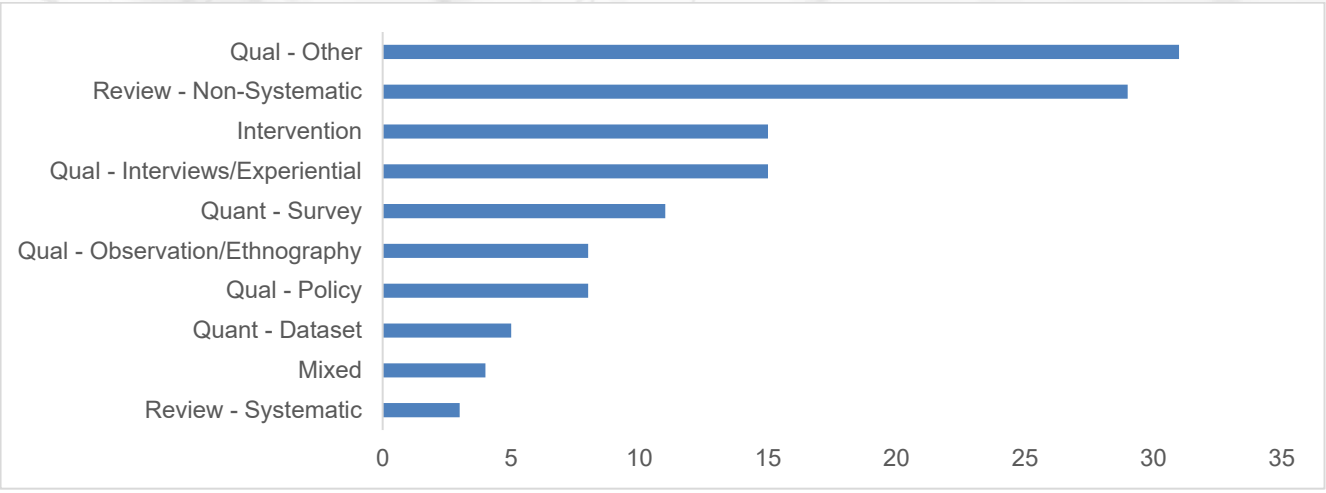

Figure 3: Academic Literature: Number of Publications per Category of Methods

3.2 Key Themes

In our review of academic and grey literature, we identified three main themes related to MHSUH workforce capacity during COVID-19 and other pandemics and disasters from the analysis: 1) negative impact of pandemics and disasters on MHSUH workforce capacity or service provision; 2) MHSUH workforce capacity responses and modifications to service provision; and 3) impact of social identities on MHSUH service access/provision and MHSUH workforce capacity responses. The main findings related to each of the themes are discussed in more detail below.

3.2.1 Negative Impact of Pandemics and Disasters on MHSUH Workforce Capacity or Service Provision

Although the issue of MHSUH capacity remains largely unexplored in the literature (only 6 percent of reviewed academic papers explored capacity), some evidence indicates that COVID-19 has had negative impacts on the MSHUH workforce capacity and/or care provision in various parts of the world (Auerbach and Miller, 2020; Bojdani et al., 2020; de Girolamo et al., 2020; Lyne et al., 2020; Rosenberg et al., 2020; Yang et al., 2020). Most MH care systems were under-resourced and under-prepared, having difficulty managing both existing and new clients (Rosenberg et al., 2020). In particular, the pandemic exacerbated workforce shortages in some countries (Fischman and Irarrazaval, 2020) and resulted in disruptions in MH services, causing clients considerable distress (Newfoundland and Labrador Psychology Board, 2021). One WHO survey conducted in 2020 revealed that the COVID-19 pandemic "disrupted or halted critical mental health services in 93% of countries worldwide while the demand for mental health is increasing" (WHO, 2020a). These changes to MHSUH service provision or workforce capacity due to COVID-19 were varied, including reconverting psychiatric inpatient units for COVID-19 care and minimization of some treatment options, redeployment of MHSUH staff to work in other areas of healthcare, and

discontinuation of non-essential visits to inpatient units (Cullen et al., 2020; Lyne et al., 2020; Mateos et al., 2020; O'Connor et al., 2021). Some evidence also indicates that the level and scope of job activities (which are important aspects of workforce capacity) MHSUH workers are involved with have also significantly changed during the pandemic (Johnson et al., 2021; Koushik, 2020). Integrated community mental health systems seem to have demonstrated greater adaptability when compared to services based on face-to-face and hospital-based care and, in some contexts, remained a key player in provision of mental health services (Fischman and Irarrazaval, 2020; Rosenberg et al., 2020). The literature also suggests that substance use services were hit particularly hard by COVID-19 pandemic due to social distancing measures and isolation enacted to protect patients and workforce which raised significant challenges in terms of care provision (Knopf, 2020; Radfar et al., 2021).

Similarly, the literature on previous disasters and pandemics showed that these events had grave consequences on MHSUH workforce capacity and care provision in various parts of the world (Calderon-Abbo, 2008; Matusow et al., 2018; Yamashita and Shigemura, 2013). For instance, after Hurricane Katrina, it was hard to access outpatient and intermediate-level mental health service in the affected area, as 60 percent of public-sector outpatient clinics were damaged or had relocated (Calderon-Abbo, 2008). Also, the storms resulted in closure of health facilities, including New Orleans' only public hospital, as well as displacement of specialty providers, hampering community access to mental health services (Springgate et al., 2011). See Table 1.

Table 1: Examples of findings related to impact of pandemics/disasters on MHSUH Workforce capacity or service provision

Author	Country	Article Type	Method/Study Design	Findings
Mateos et al., 2020	Spain	Commentary	Non-Systematic Review	The psychiatric inpatient units were largely reconverted for coronavirus care. Treatments such as electroconvulsive therapy were minimized.
Johnson et al., 2020	UK	Empirical paper	Quantitative-Survey	Reduced activities reported, especially regarding inpatient admissions and new referrals to crisis services and community services

Radfar et al., 2020	Global (survey included 77 countries)	Empirical Paper	Quantitative- Survey	Participants of 41% of countries reported partial discontinuation of harm-reduction services such as needle and syringe programs. 57% of overdose prevention interventions and 81% of outreach services also having been negatively impacted.

3.2.2 MHSUH Workforce Capacity Responses and Modifications to Service Provision

A substantial proportion of literature and especially academic articles (23%) focus on the strategies employed or could be employed by the members of MHSUH workforce to modify their service provision to better respond to the needs of the population during a crisis (Datta et al., 2020; Kopelovich et al., 2021; Lyne et al., 2020; Perez et al., 2020). Virtual care, which was rapidly expanded during the pandemic, is one of the strategies most commonly highlighted in the literature (Perez et al., 2020; Raphael et al., 2021; Yellowlees et al., 2020). Evidence from across the globe shows the dramatic shift in MHSUH care from in-person to virtual visits and consultations, with associated advantages and disadvantages (see Table 2) (Parker et al., 2020; Reay et al., 2020; Uscher-Pines et al., 2020; Yellowlees et al., 2020).

Some papers discuss task shifting (defined as “moving mental health care to less specialized workers” (Marques et al., 2020) (p.2) or “the use of trained lay health workers to deliver mental health care in non-specialist settings” (Kola, 2020) (p.656) as a promising, effective strategy to expand MH services during COVID-19 (Kola, 2020; Marques et al., 2020; Vigo et al., 2020).

In addition to virtual care and task shifting, other strategies discussed most commonly in the literature are: 1) increased flexibility of licensing (e.g., offering temporary licenses to individuals that were retired, expediting the process of licensing for new registrants) and expanded scope of practice (authorizing health professionals to provide patient care services outside their regular scope of practice) (American Psychiatric Association, 2020; Canadian Nursing Association, 2021); 2) temporary exemptions for prescription of controlled substances (e.g. Health Canada issued temporary exemptions for such prescriptions to help ensure the continuation of opioid agonist treatment for people with opioid use disorder) (Health Canada, 2020); and 3) home hospitalization care for SMI patients (i.e., patients with severe mental illness) who are at risk of relapse or acute admission (Garriga et al., 2020).

Similarly, evidence related to previous disasters and pandemics showed that in addition to tele support and virtual care, which was introduced in some disaster contexts (Hart et al., 2011; Mack et al., 2007), other strategies were implemented by the MHSUH workforce in order to respond to emerging

population mental health needs. Emergency mental health units stationed in areas affected by the storms were useful following hurricane Katrina (Rodriguez and Kohn, 2008). In addition, implementing outreach activities of public health teams (e.g., setting up common rooms) in temporary housing developments to deal with the issue of scarce mental health resources in the Tohoku region after the "triple disaster" (East Japan Earthquake, Tsunami, and Fukushima Daiichi Nuclear Power Plant Explosions) were effective (Yamashita and Shigemura, 2013). See Table 2.

Table 1: Examples of findings related to MHSUH Workforce capacity responses and modifications to service provision

Author	Country	Article Type	Method/Study Design	Findings
Sharma et al., 2020	US	Empirical Paper	Intervention	Transitioning a comprehensive outpatient child and adolescent psychiatry program to a home-based telemental health clinic was accomplished in 6 weeks, despite technological and administrative challenges.
Usher-Pines et al., 2020	US	Empirical Paper	Qualitative study (Interviews/Experiential)	Some clinicians highlighted positive impacts of telemedicine on the quality of their patient interactions, including increased access for patients. Others noted negative impacts such as less structure and accountability, less information to inform clinical decision-making, technological challenges, and shorter visits
Wendt et al., 2020	Canada and US	Commentary	Non -systematic review	Relaxing certain policies (e.g., allowing larger volume take-home prescriptions and giving greater flexibility to pharmacists in delivering prescriptions have aided medications for opioid use disorder access and continuity.

3.2.3 Impact of Social Identities on MHSUH Service Access/Provision and MHSUH Workforce Capacity Responses During the Pandemics and Disasters

Only four papers (1.5 percent) included in our review discuss the role that social identities (i.e., gender, race, ethnicity, immigration status) play in MHSUH service access and MHSUH workforce capacity responses during the COVID-19 crisis and other pandemics and disasters (Auerbach and Miller, 2020; Ijadi-Maghsoodi et al., 2020; Mack et al., 2007; Moreno et al., 2020)(see Table 3).

Some scholars and international organizations have highlighted vulnerabilities among Indigenous and other equity deserving groups during the pandemic (Júnior et al., 2020; Liu and Modir, 2020; McGorry, 2020; Wendt et al., 2021). It has also been argued that COVID-19 "exacerbates the already problematic gaps in culturally and linguistically appropriate care" (Auerbach and Miller, 2020, p. 969) and that service provision has been disproportionally affected for these groups (Radfar et al., 2021; Sneed et al., 2020; Yang et al., 2020). Moreover, disadvantaged patients often lack access to a reliable smartphone, computer, or high-speed Internet, which can limit their ability to benefit from virtual MHSUH services (Endale et al., 2020; Galea-Singer et al., 2020; Kanzler and Ogbeide, 2020; Uscher-Pines et al., 2020).

In addition to exacerbating the existing inequalities within nations (Kapoor, 2020; Toit, 2020; Youn et al., 2020), the pandemic has greatly exacerbated the inequalities among nations. This disparity is particularly notable among low- and middle- income countries (Global Health Council, 2020; WHO, 2020b) because these countries have a smaller MHSUH workforce, less funding, and limited resources to address the service disruptions caused by the pandemic and to transition to virtual care.

Literature on other pandemics and disasters similarly shows that these events exacerbated the existing gaps in culturally and linguistically appropriate care (Legerski et al., 2012; Mack et al., 2007). For instance, one study (Legerski et al., 2012) with Katrina evacuee service providers (including mental health clinicians) has shown that these individuals felt that that they lacked adequate training to address culture differences that were specific to the New Orleans and Gulf Coast regions.

While few papers discussed mental health vulnerabilities among women (McGorry, 2020) and the barriers to their access to MHSUH services during the pandemic (Auerbach and Miller, 2020; Galea-Singer et al., 2020) (mentioning this topic only in passing), it is important to note that there is generally a scarcity of literature exploring impacts of gender on MHSUH service access/ provision and workforce capacity responses. None of the studies we reviewed considered these issues in relation to gender diverse individuals.

Table 3: Examples of Findings related to Impact of Gender and Other Social Identities on MHSUH service access/provision and MHSUH workforce capacity responses during the pandemics/disasters

Author	Country	Article Type	Method/Study Design	Findings
Auerbach and Miller, 2020	US	Editorial	Qualitative	The mental health workforce, particularly for highly trained providers such as psychologists, is not as *gender, ethnically and racially diverse* as the general population which in past emergencies meant unequal access to care.
Endale et al., 2020	US	Commentary	Review	Not all families were able to access a program designed to provide community-based mental health and social services to immigrant and refugee youth and families when it converted to video treatment modalities due to technology access and proficiency issues.
Radfar et al., 2020	Global (survey included 77 countries)	Empirical Paper	Quantitative- Survey	Only 18.4% of survey respondents replied that substance use treatment and/or harm reduction services for refugees and/or immigrants population continued as usual and 81.6% replied that this service continued however, with limitations. (p.17-18).

3.2 Promising Practices & Recommendations

The reviewed literature reveals some promising practices and recommended actions that could improve the capacity of the MHSUH workforce to respond to population needs during the current pandemic and future pandemics and disasters. These practices and recommended actions revolve around four main areas discussed in greater detail below.

3.3.1 Training for MHSUH Workforce

Some literature focuses on the importance of training in telemedicine for improving access to MHSUH services (Gautam et al., 2020; Perez et al., 2020; Perrin et al., 2020; Pierce et al., 2021). It has been recognized that "technological literacy varies across expert clinicians" (Perez et al., 2020, p. 228) and that developing telemedicine training tools can be useful in that regard. One example of the training-related promising practice from the reviewed literature is one US intervention, namely, The Digital Peer Support Certification, which was designed specifically for peer support specialists and "included an education and simulation training session, synchronous and asynchronous support services, and audit and feedback"(Fortuna et al., 2020). Moreover, some of the lessons learned through previous disasters (earthquakes, hurricanes) emphasize the importance of training interventions (e.g., the national disaster mental health training program) for mental health workers (Allen et al., 2010; Bentham et al., 2011; Ng et al., 2009).

3.3.2 Equity Considerations

Some of the recommendations and promising practices focus on equity considerations in accessing and providing MHSUH care (Maulik et al., 2020; Novacek et al., 2020; Wendt et al., 2021). Some authors call for racially and culturally sensitive interventions. For instance, in their paper, Novacek and colleagues (2020) argue that to address the mental health needs of Black Americans that will arise because of COVID-19, "race-conscious and culturally competent interventions that consider factors such as discrimination, distrust of health care providers, and historical and racial trauma as well as protective factors including social support and culturally sanctioned coping strategies are needed." (p.449). One example of the promising practice related to equity is the implementation of a mental health COVID-19 disaster response using a Psychological First Aid (PFA) framework that was done at Boston Hope Field Hospital (Boston, MA, USA) (where 500 of 1000 COVID-19 beds are reserved for homeless patients) (Dotson et al., 2020). In designing this response, the principles of PFA, the standard-of-care framework for disaster psychiatry, were applied to the homeless population (Dotson et al., 2020).

3.3.3 Integrating Mental Health into Preparedness and Response Plans for Public Health Emergencies

During a WHO Executive Board Meeting in January 2021, Member States emphasized "the importance of integrating mental health into preparedness and response plans for public health emergencies" (WHO, 2021). Similarly, Choi et al. argue that "a comprehensive public health response to the pandemic must include planning for emergency and acute psychiatric patient care if hospitals become overwhelmed with COVID-19 patients" (Choi et al., 2020, p.340).

3.3.4 Artificial Intelligence & Other Technological Solutions

With the rising popularity and convenience of virtual care (for some), a consideration that has been gaining traction is that of better integrating artificial intelligence to support the MHSUH needs of the general public as well as the MHSUH workforce (UNDP, 2020). The adoption of digital MH applications (e.g., Smiling Mind in Australia) and other technological options (e.g. blogs) may ease the burden on the MH workforce in developed countries during crisis situations (Kopelovich et al., 2021; Lehner et al., 2020; Marshall et al., 2020).

4. DISCUSSION

In sum, findings of our review shed light on the unexplored issue of MHSUH workforce capacity during the COVID-19 pandemic and other pandemics and natural disasters. We discuss these findings by the three major themes: 1) impact of pandemics and disasters on MHSUH workforce capacity or service provision; 2) MHSUH workforce capacity responses; and 3) impact of gender and other social identities.

First, the literature shows that COVID-19 disrupted or halted MH services, exacerbated staff shortages and led to changes in level and scope of activities of different workers. Similarly, previous disasters and pandemics led to closure of some mental health services which resulted in disruption of care. Second, literature reveals a variety of strategies that have been employed to modify service provision to better respond to the needs of population during the current pandemic and other pandemics/disasters, including virtual care, task shifting, increased flexibility of licensing, and expanded scope of practice, creation of emergency mental health units stationed in areas affected by the disasters, etc. Third, as was the case with previous pandemics/disasters, the COVID-19 pandemic has exacerbated already problematic gaps in culturally and linguistically appropriate care and MHSUH service provision has been disproportionally affected in the case of these groups as they have an unequal access to care.

Several promising practices and recommended actions that could improve the capacity of MHSUH workforce to respond to population needs during the COVID-19 pandemic were identified in the literature including training in telemedicine for MH staff, need for racially and culturally sensitive interventions, integrating mental health into preparedness and response plans for public health emergencies; and use of artificial intelligence and other technological solutions.

Although the literature explored in this review sheds some light on the capacity of workforce to respond to increase in MHSUH needs during COVID-19 pandemic, the research on this issue is still relatively scarce. Given the relative lack of research on the capacity of MHSUH

workforce, many areas remain unexplored and could be a focus of the future research. First, based on few studies, our review has demonstrated that in some countries, such as Chile, community MH systems have shown greater adaptability than services which depended on face-to-face and hospital-based care during COVID-19 crisis. Thus, we need to know more about the impact of practice settings on MHSUH workforce capacity during COVID-19.

Second, through our search, we identified few studies that touched on the MHSUH needs of MHSUH practitioners during the pandemic (Guan et al., 2021; Raphael et al., 2021). For instance, one survey with mental health care professionals in Argentina has revealed higher levels of mental health concerns, more substance use, and in some cases higher levels of suicidal ideation among MHSUH practitioners as a result of COVID-19 (World Psychiatric Association, 2020). These concerns were higher among those working in public institutions than those in private institutions. However, none of these studies explored how changes in MHSUH needs of this workforce impact on its capacity. Thus, we need to know more about the impact of MHSUH needs on mental health of MHSUH workers in various settings and how it relates to workforce capacity. The impact of pandemics and disasters on women, gender diverse and other vulnerable populations in this workforce should also be given more attention in the literature.

Third, this review demonstrates that most of the studies/documents included in this review come from the US and indicates the need for more research in other country contexts. This is particularly important because the unique configuration of MHSUH services across countries makes it difficult to extrapolate findings from the equally unique US MHSUH service context. Our review also demonstrates the need for studies that compare and contrast the capacity of MHSUH workforce based on the various responses different jurisdictions took during the COVID-19 pandemic. Indeed, our review includes very few studies that take a global or comparative perspective (e.g., Radfar et al., 2020).

Furthermore, the reviewed literature focuses predominantly on certain types of MHSUH workers (i.e., psychiatrists) leaving other MHSUH workers (e.g., psychotherapists, addiction counsellors, and peer support workers) relatively understudied. There is a need for more research on these important yet neglected groups.

In addition, the impact of gender on MHSUH workforce capacity and workforce capacity responses during Covid-19 remains largely unexplored. Devoting more attention to this issue would be valuable, especially in relation to gender diverse individuals.

Finally, many studies (Fortuna et al., 2020; Johnson et al., 2021) were based on surveys using smaller samples and convenience samples, which may limit the generalizability of the results.

Some studies were also conducted during the initial phase of pandemic (Pierce et al., 2021; Uscher-Pines et al., 2020), leading to speculation regarding whether findings have continued to be applicable over the course of the pandemic (Pierce et al., 2021). Thus, it would be beneficial to have additional surveys using larger samples that make use of random sampling to increase population representativeness.

The findings of this review should be considered in light of certain limitations. Given the recentness of the topic at the time when our search was conducted and relative lack of the research on this issue, this review included papers with no systematic methodologies (e.g., non-systematic reviews, commentaries, editorials). Also, in we did not assess the quality of the studies which is often done in the case of reviews with more systematic methodologies (e.g., systematic reviews).

CONCLUSION

Despite the limitations mentioned above, our review makes an important contribution to the existing literature by summarizing the findings of the literature on such unexplored topics and highlighting the gaps in our knowledge and areas for future research. It is important to conduct new research on these unexplored areas in order to come to a better understanding on the issues related to MHSUH workforce capacity during Covid-19 and other pandemics and disasters. Findings from such research could provide insight or guidance on some of the policy changes and interventions needed to improve MHSUH service provision and increase access to care in similar or unprecedented emergency circumstances in the future.

DECLARATIONS

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

This review is based on articles available in the databases searched.

Competing interests

The authors report there are no competing interests to declare.

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Author's Contributions

All authors were involved in designing the literature strategy. JA, RM and DBR conducted a literature search, screened, selected and extracted the resources for review. In collaboration with RM and DBR, JA led the process of manuscript writing. All team members reviewed and approved the final manuscript. RM prepared the manuscript for publication, applying the designated formatting conventions.

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