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## The Covid-19 lockdown will have consequences for child mental health: investing in school mental health programs can help

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### Abstract

Children are likely to struggle with mental health consequences relating to Covid-19. School closures and home confinement increase the risk of experiencing emotional distress, domestic violence and abuse, and social isolation; and disrupting nutritional, sleep/wake cycles, physical exercise routines and access to healthcare. As schools re-open, school mental health programs incorporating universal approaches will be important for all children, while targeted approaches remain necessary for those more severely affected. Based on our experience in Pakistan, we provide a roadmap for extending the WHO EMRO school mental health program to address the child mental health consequences of the Covid-19 pandemic globally.

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Although children have been mostly spared from Covid-19 fatalities (1), they are likely to struggle with many of its mental health consequences. Periods of prolonged exposure to toxic stress and deprivation in nutrition, social stimulation and health care may have significant implications for child mental health and overall wellbeing (2). As of 25 April 2020, around 1.5 billion children (an estimated 90% of the world's student population) (3), have been out of school as part of widely implemented lockdown measures. While such closures are important from a public health perspective, closure of day care centers and schools, and wider movement restrictions, limit opportunities for children to interact and

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access learning opportunities in a safe and structured environment. Female students in particular are at greater risk for not returning to schools again, particularly in rural areas in low- and middle-income countries (4). Younger children, especially those with developmental disabilities, are at higher risk for falling behind academically and are less likely to benefit from remote learning. All these factors may negatively impact children's academic attainment and mental and physical well-being for months or years after restrictions are lifted.

Children restricted to their homes may benefit from increased interaction with parents and siblings, but they may also experience elevated levels of emotional distress (5,6) and are at heightened risk of witnessing or experiencing domestic violence and emotional, physical and sexual abuse. Being confined to home increases the risk of disruption to sleep/wake cycles and physical exercise routines, and promotes inappropriate use of technology. Additionally, family financial stressors and unemployment are challenges with short- and long-term consequences for child physical and mental health (7, 8). A study conducted among Italian and Spanish parents during the COVID-19 pandemic indicated that 85.7% of parents perceived changes in their children's emotional state and behaviors during home confinement (9). The most frequent symptoms were difficulty concentrating (76.6%), irritability (39%), restlessness (38.8%), nervousness (38%) and feelings of loneliness (31.1%). For those whose families lose income and those who depend on school meals, there are frank risks for acute hunger and malnutrition.

Without deliberate global actions now, a whole generation of children may not realize their full potential. While remote learning for those with access to it could provide children with some of their educational needs, it does not provide the necessary social and emotional support essential to child socio-emotional development, and may worsen the inequity of access to education and other social services (10). Hence, it is important that effective measures are put in place to address the pandemic and for schools to safely re-open (4). As they re-open, schools will offer an important setting in which to support children to re-establish routines and the networks essential for them to thrive socially, emotionally, and educationally. School mental health programs incorporating universal mental health approaches will be important as all children are impacted in some way, while targeted approaches remain necessary for those more severely affected. Not only are these interventions important for student's mental health, but addressing the emotional needs of students has been linked to their educational attainment (11).

The World Health Organization Eastern Mediterranean Regional Office (WHO EMRO) school mental health program (SMHP), informed by developmental, behavioral, social and cognitive theories, focuses on mental health prevention and promotion, fostering a positive culture of wellbeing in schools, alongside early identification and referral for more intensive mental health support, as well as tiered interventions that can be applied by teachers within a classroom setting. In 2016, the [School Mental Health Implementation Network in the EMR \(SHINE\)](#) was formed with the aim of scaling up the WHO EMRO SMHP in the region by enhancing collaboration among practitioners, researchers and policy makers. The network includes partners from academia, non-governmental organizations, policy makers, and implementation scientists from EMR countries, with support from international universities.

The SHINE network, supported by the US National Institute of Mental Health (NIMH) and WHOEMRO, is already implementing task shifting programs involving training and supervising teachers to take leading roles in supporting the mental health of their students through universal and targeted mental health interventions in Egypt, Pakistan, Iran, Jordan and the UAE. Here, we provide a roadmap for extending the SHINE initiative through public-private investments to address the mental health consequences of the COVID-19 pandemic among children globally.

Existing mental health systems globally are unable to meet current needs (12,13), and will be unable to cope with increased demands as a result of the pandemic. Hence, we believe that the wide-scale implementation of universal and targeted school mental health interventions should be prioritized to minimize the burden on the healthcare system. Importantly, school mental health programs should also address the mental health of teachers, who are themselves impacted by the pandemic. In low- and middle-income countries (LMIC), technology is playing an increasingly important role in providing access to mental health training as well as delivery (14). Schools are one environment where access to the internet is fast becoming a necessity in LMIC. Taking advantage of this, programs that integrate online teacher training and support not only have the potential for dissemination at scale, but also the ability to be accessible during lockdown so that teachers' trainings are uninterrupted, and these teachers are equipped to meet the mental health needs of students from day one upon their return (see Pakistan case study in the box). Such online portals are highly adaptable and can facilitate the delivery of tailored modules to students that may be required upon school re-opening e.g. implementing physical distancing in schools. Additionally, previous work from our group showed that a school based mental health intervention in a rural setting in Pakistan can raise mental health awareness not only in children themselves, but also in their parents, neighbors and non-school going children (15). In the COVID-19 context, schoolchildren could therefore serve a vital function where information has to be disseminated rapidly and effectively into the community.

In order to be successfully scaled-up, school mental health initiatives will require dedicated cross-sectoral (including the health and education sector) implementation teams, sustained policy advocacy and stakeholders' engagement, and effective coordination among education and health systems especially at the local level (18). We call for:

- The rapid establishment of cross-sectoral coordination mechanisms, and financial and resource investment in establishing the platforms necessary to ensure appropriate and timely support to address the mental health impacts of this pandemic on children and adolescents .
- Increased investment in, human and technological resources to support the training of teachers and the provision of the SMHP.
- Health and education administrators to work with parents and children in re-designing school curriculum and re-envisioning the school environment to accommodate SMHP services.

- Service providers and researchers to explore cost effectiveness and efficiency of delivering school mental health programs and other child mental health services at scale in diverse global settings.

Acting now to prepare for the re-opening of societies and schools across the globe is of critical importance to the mental health of children. Failure to do so could lead to poor mental health outcomes for the next generation that precipitate long-term social and economic consequences.

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## References:

1. Coronavirus Disease 2019 in Children- United States, February 12- April 2, 2020. MMWR Morb Mortal Wkly Rep 2020;69:422–426. DOI 10.15585/mmwr.mm6914e4 [PubMed: 32271728]
2. United Nations Sustainable Development Group. Policy Brief: The Impact of COVID-19 on children. <https://unsdg.un.org/resources/policy-brief-impact-covid-19-children>
3. United Nations Educational, Scientific, and Cultural Organization (UNESCO). <https://en.unesco.org/covid19/educationresponse>
4. UN Development Programme UNDP Africa policy note: confronting the gender impact of Ebola virus disease in Guinea, Liberia, and Sierra Leone. [https://reliefweb.int/sites/reliefweb.int/files/resources/RBA%20Policy%20Note%20Vol%202%20No%201%202015\\_Gender.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/RBA%20Policy%20Note%20Vol%202%20No%201%202015_Gender.pdf)
5. Xie X, Xue Q, Zhou Y, et al. Mental Health Status Among Children in Home Confinement During the Coronavirus Disease 2019 Outbreak in Hubei Province, China. JAMA Pediatr. Published online 4 24, 2020.
6. Sprang G, Silman M. Posttraumatic stress disorder in parents and youth after health-related disasters. Disaster Med Public Health Prep. 2013;7(1):105–110. [PubMed: 24618142]
7. Costello EJ, Compton SN, Keeler G, et al.: Relationships Between Poverty and Psychopathology: A Natural Experiment. JAMA. 2003;290(15):2023–2029. [PubMed: 14559956]
8. Bor W, Najman JM, Andersen MJ, et al.: The relationship between low family income and psychological disturbance in young children: An Australian longitudinal study, Australian and New Zealand Journal of Psychiatry 1997, 31 (5), 664–675.
9. Orgilés M, Morales A, Delvecchio E, et al.: Immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain. (2020, 4 21). 10.31234/osf.io/5bpfz
10. Armitage R and Nellums LB, 2020. Considering inequalities in the school closure response to COVID-19. The Lancet Global Health 2020, 8(5), p.e644.
11. Murphy JM, Guzmán J, McCarthy AE, et al.: Mental health predicts better academic outcomes: a longitudinal study of elementary school students in Chile. Child Psychiatry Hum Dev. 2015;46(2):245–256. [PubMed: 24771270]
12. Patel V, Saxena S, Lund C, et al. The Lancet Commission on global mental health and sustainable development, The Lancet, Volume 392, Issue 10157, 2018, Pages 1553–1598
13. Rahman A, Hamoda HM, Movaghar AR, et al.: Mental Health Services for Youth in the Eastern Mediterranean Region: Challenges and Opportunities. East Mediterr Health J. 2019;25(2):80–81. [PubMed: 30942470]
14. Naslund JA, Aschbrenner KA, Araya R, et al.: Digital technology for treating and preventing mental disorders in low-income and middle-income countries: a narrative review of the literature. Lancet Psychiatry. 2017;4(6):486–500. [PubMed: 28433615]

15. Rahman A, Mubbashar MH, Gater R, et al.: Randomised trial of impact of school mental-health programme in rural Rawalpindi, Pakistan. *Lancet*. 1998;352(9133):1022–1025. [PubMed: 9759745]
16. Hamdani SU, Muzaffar N, Huma Z, et al.: Using Technology to Advance School Mental Health: Experience from The Eastern Mediterranean Region. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2019 10 1;58(10): S22.
17. Hamdani SU, Huma A, Warratch A, et al.: Technology assisted teachers' training to promote socio-emotional wellbeing of children in public schools of rural Pakistan. *Psychiatric Services*. In Press.
18. Alonge OO, Chiumento AC, Hamoda HM, et al.: Identifying pathways for large-scale implementation of a school-based mental health program in the Eastern Mediterranean Region: A theory driven approach. *Health Policy and Planning*. In Press.

### **The adaptability of SMHP for COVID-19 based on current experience in Pakistan**

In Pakistan, the WHO SMHP training was adapted to an online teacher training platform and a 'Chat-bot' to aid the implementation of intervention strategies in classroom settings (16,17). Using the online platform, school-teachers were trained in implementing universal and targeted intervention strategies in a rural sub-district of Rawalpindi, Pakistan. Teachers used a Chat-bot to identify the socio-emotional and behavioral problems of children, to support appropriate strategies for the management of these in everyday classroom settings (targeted intervention strategies), and to promote mental health among all school children (universal components of the SMHP) (<https://learnwithshine.org/>).

Following the Covid-19 outbreak, online consultations with parents and teachers were conducted to understand the impact of Covid-19 on the mental health and psychosocial wellbeing of children and teachers. Parents and teachers expressed concerns that children may be at a higher risk of demonstrating mental health problems once they return to school; and they may have new etiologies for their behavior of which teachers needed to be aware of. Teachers may also experience stress from the epidemic themselves, and this could impact their ability to carry out their educational and SMHP activities.

The on-line training system and "chat-bot" has the potential to allow COVID-specific knowledge and support to be more readily disseminated to teachers in public schools. The online SMHP ensures program integrity and quality and has the flexibility to be adapted in response to diverse psychosocial needs of the target population.

It should be noted that not all students, parents and teachers will have the technological and financial ability to access online resources. To overcome that in Pakistan the school curriculum has been made available on TV channels. Potentially, this platform can also be used for delivering universal school mental health content.

**Highlights:**

- Children are likely to struggle with mental health consequences related to covid-19.
- School mental health programs can meet child mental health needs arising as a result of the COVID-19 pandemic in a scalable manner.
- Online platforms for delivering school mental health programs have the flexibility to be adapted in response to diverse mental health needs of the target population.