

2020 and 2021 web-based training program on children's mental health during the COVID-19 pandemic

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Abstract: COVID-19 adversely affected mental health care and service delivery globally. Continuing its thrust on improving child and adolescent mental health, the National Center for Global Health and Medicine conducted a training program in collaboration with the University of the Ryukyus, University of the Philippines Manila, the National Center for Mental Health, and the Philippine Society of Child and Adolescent Psychiatry in 2020 and 2021 to discuss the situation, challenges, and good practices in mental health treatment, care, and promotion for children and adolescents during the COVID-19 pandemic. Composed of 15 on-demand lectures and a webinar on three general mental health themes, the training identified the need for strengthening the provision of care not only in specialized health facilities but also in empowering communities in addressing children and adolescent mental health concerns. Collaboration between different stakeholders is needed to ensure child and adolescent well-being during public health emergencies.

Keywords: COVID-19, mental health, child, adolescent, Philippines, Japan

Introduction

Adolescence is a crucial phase in the physical, emotional, and social development of an individual (1) and it also coincides with the stage where mental health conditions begin to manifest (2). Mental health problems affect children and adolescents globally (2) with mental disorders as the third leading cause of disability-adjusted life years (DALY) among children in the Western Pacific Region. Additionally, suicide remains high in the region.

The COVID-19 pandemic exacerbated mental health

challenges and disrupted mental health care and service delivery globally (3). Despite a lower risk of COVID-19 infection among children and adolescents, associated factors such as school closures and economic hardship experienced by the family during lockdowns pose significant threats to their mental well-being (4). Due to the pandemic, the need for mental health support for children and adolescents has increased, emphasizing the crucial role of engaging stakeholders in education and health to address these concerns effectively.

Children and adolescents with mental health

problems are also a cause of concern in the Philippines (5), with a reported 16% prevalence of mental disorders (6) and 16.8% prevalence of attempted suicide (7). The pandemic further exacerbated the situation, as evidenced by the 200% increase in calls to suicide prevention and crisis intervention hotlines (8), higher levels of stress, moderate to severe depression and psychological impact and anxiety (9,10).

Training program objectives

Given the increase in mental health concerns during the pandemic, the National Center for Global Health and Medicine (NCGM) organized a training program for children's mental health, specifically focusing on the challenges brought by the COVID-19 pandemic. Building on previous initiatives (11,12), NCGM, in collaboration with the University of the Ryukyus, the University of the Philippines Manila (UPM), the National Center for Mental Health (NCMH), and the Philippine Society of Child and Adolescent Psychiatry (PSCAP), conducted additional training programs in 2020 and 2021, reflecting a continued commitment to enhance child and adolescent mental health. The programs, entitled, "*Project to reinforce medical treatment, care, and the promotion of mental health among children and adolescents*" in 2020 and "*Project to reinforce medical treatment, care, and promotion of mental health among children and adolescents during the COVID-19 pandemic*" in 2021, aimed to discuss the current situation, challenges, and good practices in mental health treatment, care, and promotion for children and adolescents in the time of COVID-19.

Training program design

Training content

The training programs were shifted to web-based on-demand training in 2020 and 2021 to adapt to travel constraints brought about by the pandemic. The 2020 program covered 15 topics under three themes: *i*) child and adolescent mental health during the COVID-19 pandemic, *ii*) child and adolescent mental health in the school setting, and *iii*) special topics such as child abuse, pharmacotherapy, community mental health, and disaster psychiatry (Table 1). Each topic was composed of a prerecorded lecture and a pre-and post-lecture evaluation. Lectures were available on-demand through Moodle, and accessible to registered participants from January 4 to February 28, 2021. Two interactive sessions restricted to training participants – an introductory session on the training and a webinar on education in the new normal – were also conducted through Zoom. Lectures were subsequently made available to the public in 2021 through Youtube and the NCGM Clinical Center for Children's Mental Health homepage (13). The last webinar was held on February 17, 2022 through Zoom to share experiences on children and adolescent mental health while working in healthcare facilities during the COVID-19 pandemic and provide a global perspective on mental health during the pandemic.

Participants

Teachers, health personnel, academics, and researchers were invited to participate through email from December 18, 2020 to January 28, 2021. The email, which described the objectives, content, and schedule of the web-based training program, also included the registration link. Data privacy protection measures were implemented and a certificate was provided to participants who completed the program.

Similar to previous activities, the invitation to the webinar held on February 17, 2022 was extended to

Table 1. Lectures included in the 2020 web-based on-demand training program

Topics	Lecture
Child And Adolescent Mental Health During the COVID-19 Pandemic	Child Mental Health During COVID-19 (Japan) Extending Child Community Mental Health Care During the COVID-19 Pandemic (Philippines) Care for Children During the Pandemic (Philippines)
Child And Adolescent Mental Health in the School Setting	School Closure During the COVID-19 Pandemic (Japan) Education in the New Normal: Learning and Psychosocial Challenges to Students in the Philippines (Philippines) Development of a Mental Health Literacy Teaching Material for Schools in the Philippines
Special Topics on Child And Adolescent Mental Health	Online Sexual Exploitation in the Philippines Current Situation of Child Abuse in Japan Current issues Pharmacotherapy in Japan Traditional Practices in Managing Children's Illness "Folk sector" involvement in community mental health Promotion of community mental health: an example in the remote island of Okinawa Needs and global strategy of community mental health Disaster Psychiatry in Japan (Nuclear Power Plant Accidents) Disaster Psychiatry in Japan (Earthquake)

psychiatrists, psychologists, teachers, school health personnel, academics, and researchers in the field of child and adolescent mental health. Participants who accomplished a pre-test and a post-test was provided with a certificate of attendance.

Training outcomes

On-demand lectures and synchronous sessions in 2021

A total of 202 people registered in the training program (Table 2), with 27 (13.37%) completing selected lectures and five participants (2.5%) completing all sessions. The majority of participants who only viewed selected lectures accessed the sessions consecutively while 20% only viewed sessions that they wanted. The session with the most recorded views was "Child Mental Health During COVID-19 (Japan)", followed by the session "Extending Child Community Mental Health Care During the COVID-19 Pandemic (Philippines)", and "The Care for Children During the Pandemic (Philippines)". The synchronous sessions on education in the new normal was attended by 15 participants. The average pre-test score was 42.9% while the average post-test score was 83.3%, resulting in a 40.4% score improvement.

Webinar in 2022

The webinar was attended by a total of 259 participants, with 63 accomplishing both the pre- and post-tests. The average score for the pre-test was 66.7% while the average post-test score was 77.8%, showing an 11.1% improvement in the average score. An evaluation of the webinar revealed an outstanding rating in terms of content, delivery, and logistical preparation.

Participants stated their appreciation for the insightful discussion on global mental health and the strategies implemented by countries like Japan in response to the COVID-19 pandemic. The comparative analysis of best practices between Japan and the Philippines provided an opportunity to examine good practices that can be adapted to local settings. Notably, participants highlighted the significance of addressing suicidal behaviors among children and adolescents, emphasizing the importance of identifying red flags among students and how to address these. For future webinars, participants recommended a variety of topics such as awareness of different disabilities, stress and burnout management, internet addiction, coping skills, counseling strategies for students with mental health issues, psychological first aid, resilience for children, and self-care and support for children. Some participants also suggested discussing the mental health programs that were developed and implemented by the Philippine government, as well as strategies that will support students as they return to school during the COVID-19

Table 2. Profession of the Participants in the web-based on-demand training program

Profession	Frequency	Percent
Teacher	132	63.16
Medical Doctor	38	18.18
Nurse	22	10.53
Psychologist	3	1.44
Faculty member	3	1.44
Dean	2	0.96
Guidance Counselor	2	0.96
School personnel	2	0.96
Educator	1	0.48
Psychiatrist	1	0.48
Dentist	1	0.48
Clinical Instructor	1	0.48
Public Health Program Manager	1	0.48
Total	209	100.0

pandemic. Another major theme that the participants recommended was mental health in the workplace, recognizing that teaching and non-teaching personnel are also experiencing stress, burnout, and other mental health problems like their students.

School closures during the COVID-19 pandemic affected mental health status and health service delivery

Both Japan and the Philippines implemented physical distancing measures to mitigate the spread of COVID-19, which disrupted daily life and interpersonal interactions. Schools in both countries were forced to close and shift to online learning. Philippine schools adopted alternative modes of learning, including online and modular approaches while Japanese schools gradually reopened in June 2020 with a staggered schedule, adopting online teaching systems. Minimum health measures, such as mask-wearing and limiting social activities, were implemented, and various school events such as school trips and forest schools, as well as sports events and school festivals were canceled.

Child and adolescent mental health during the COVID-19 pandemic

Although children and adolescents had lower COVID-19 infection rates than adults, they also faced significant challenges due to the pandemic (4). Females and individuals aged 12 to 21 years in the Philippines exhibited stress, depression symptoms, and anxiety (9). Japanese students had reduced physical activity and struggled with finding interests during extended school closures. Physical and psychological effects, including increased screen time, needed attention and monitoring (14).

The added stressors in the household due to the pandemic such as disruption in livelihood and social isolation, can increase the tensions at home, putting

children at a higher risk for abuse and neglect (15) and isolation from important child protection services (16). The same increasing trend in abuse and neglect were observed in both countries (17,18) with online sexual exploitation increasing by 264% in the Philippines (18). Children also spent more time indoors during the pandemic, resulting in less physical activity, increased pathological internet use, and binge eating behaviors.

Resources for mental health during the COVID-19 pandemic

The stay-at-home measures posed challenges to service delivery during the pandemic. In Japan, a decrease in outpatient consultations was observed when comparing the current figures with pre-pandemic data (19) while the number of children with anorexia nervosa requiring hospitalization increased by 104%. Telemedicine services were implemented to address the challenges posed by the restrictions on hospital and home visits.

The increase in mental health problems among children and adolescents also emphasizes the lack of mental health professionals in both Japan and the Philippines, which has been a long-standing problem even pre-pandemic (12). To augment the mental health services available to the Filipino public and raise awareness during the pandemic, government, non-government, and professional societies established telemedicine platforms, helplines, and mental health promotion campaigns.

In conclusion, the online training program provided an opportunity to share the current situation, challenges, and good practices in mental health treatment, care, and promotion for children and adolescents in Japan and the Philippines during the COVID-19 pandemic. It also provided an opportunity to share best practices for child and adolescent mental health care and promotion in a post-COVID-19 society. The COVID-19 pandemic exacerbated mental health problems among children and adolescents, with mitigation measures disrupting the routine of children and adolescents and subsequently increasing risk of their exposure to violence and developing mental health problems. The pandemic emphasizes the need for strengthening care not only in specialized health facilities but also by empowering communities to address mental health concerns of children and adolescents. Collaboration between health facilities, schools, local government, different stakeholders, and families, is crucial to ensure the well-being of children and adolescents during public health emergencies.

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References

1. World Health Organization. World Health Organization; 2020 October 20. <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health> (accessed July 5, 2024).
2. Kessler RC, Angermeyer M, Anthony JC, *et al.* Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World psychiatry*. 2007; 6:168-176.
3. World Health Organization. COVID-19 disrupting mental health services in most countries, WHO survey. <https://www.who.int/news/item/05-10-2020-covid-19-disrupting-mental-health-services-in-most-countries-who-survey> (accessed July 5, 2024).
4. Singh S, Roy D, Sinha K, Parveen S, Sharma G, Joshi G. Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Res*. 2020; 293:113429.
5. Cagande C. Child Mental Health in the Philippines. *Adolescent Psychiatry*. 2013; 3:11-13.
6. World Health Organization. WHO-AIMS Report on Mental Health System in the Philippines. https://cdn.who.int/media/docs/default-source/mental-health/who-aims-country-reports/philippines_who_aims_report.pdf?sfvrsn=479112f_3 (accessed July 5, 2024).
7. World Health Organization. Global school-based student health survey. <https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey> (accessed July 5, 2024).
8. Nortajuddin A. Suicide spikes amid pandemic? The ASEAN Post. <https://theaseanpost.com/article/suicide-spikes-amid-pandemic> (accessed July 5, 2024).
9. Tee ML, Tee CA, Anlacan JP, Aligam KJG, Reyes PWC, Kuruchittham V, Ho RC. Psychological impact of COVID-19 pandemic in the Philippines. *J Affect Disord*. 2020; 277:379-391.
10. Montano RL, Acebes KM. Covid stress predicts depression, anxiety and stress symptoms of Filipino respondents. *International Journal of Research in Business and Social Science*. 2020; 9:78-103.
11. Usami M, Lomboy MFT, Satake N, *et al.* Addressing challenges in children's mental health in disaster-affected areas in Japan and the Philippines—highlights of the training program by the National Center for Global Health

- and Medicine. BMC Proc. 2018; 12(Suppl 14):65.
12. Estrada CA, Usami M, Satake N, *et al.* Current situation and challenges for mental health focused on treatment and care in Japan and the Philippines-highlights of the training program by the National Center for Global Health and Medicine. BMC Proc. 2020; 14(Suppl 11):11.
 13. National Center for Global Health and Medicine Clinical Center for Children's Mental Health. Project to reinforce medical treatment, care, and promotion of mental health among children and adolescents during the COVID-19 pandemic. <https://child-psychiatry.com/fj45d/> (accessed July 5, 2024).
 14. Ueno C, Yamamoto S. The relationship between behavioral problems and screen time in children during COVID-19 school closures in Japan. *Scand J Child Adolesc Psychiatr Psychol.* 2022; 10:1-8.
 15. Rapp A, Fall G, Radomsky AC, Santarossa S. Child maltreatment during the COVID-19 pandemic: A systematic rapid review. *Pediatr Clin North Am.* 2021; 68:991-1009.
 16. Bullinger LR, Boy A, Feely M, Messner S, Raissian K, Schneider W, Self-Brown S. Home, but left alone: Time at home and child abuse and neglect during COVID-19. *J Fam Issues.* 2023; 44:338-362.
 17. Ministry of Health, Labour and Welfare. Child Abuse Consultations at Child Guidance Centers in FY 2020. Ministry of Health, Labour and Welfare; 2022 [https://www.mhlw.go.jp/toukei/youran/aramashi/jidou.pdf&sa=U&ved=2ahUKEwjaltOd0-KHAXVcBfsDHY6nKTcQFnoECAYQAQ&usg=AOvVaw2y8K6FIINy08BRXfK5JlBV&arm=e](https://www.google.com/url?client=internal-element-cse&cx=005876357619168369638:ydrbkuj3fss&q=https://www.mhlw.go.jp/toukei/youran/aramashi/jidou.pdf&sa=U&ved=2ahUKEwjaltOd0-KHAXVcBfsDHY6nKTcQFnoECAYQAQ&usg=AOvVaw2y8K6FIINy08BRXfK5JlBV&arm=e) (accessed July 5, 2024). (in Japanese)
 18. Save the Children. Online sexual abuse of children rising amid COVID-19 pandemic. <https://www.savethechildren.org.ph/our-work/our-stories/story/online-sexual-abuse-of-children-rising-amid-covid-19-pandemic/#:~:text=Kindness%20Circles-,Online%20sexual%20abuse%20of%20children%20rising%20amid%20COVID%2D19%20pandemic,the%20same%20period%20in%202019> (accessed July 5, 2024).
 19. Usami M, Sasaki S, Sunakawa H, *et al.* Care for children's mental health during the COVID-19 pandemic in Japan. *Glob Health Med.* 2021; 3:119-121.
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