Impact of Covid-19 on adolescent mental health in Viet Nam and Tanzania

A rapid review

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Key messages

- Covid-19 has severely disrupted the lives of children and adolescents across the world, leading to an increase in mental health disorders, particularly anxiety, stress and depressive disorders.

- School closures and online learning in particular have contributed to feelings of isolation, to a loss of the stability that is typically provided by structured school environments, and to stress over examinations. The rise in social media exposure and screen time has caused an increase in anxiety and depressive disorders as well as disrupted sleep patterns.

- Age was a factor in most studies of adolescent mental health during the pandemic. Among older adolescents (i.e. those in or who have just graduated from senior secondary school), stress about examinations and uncertainty regarding their futures and job prospects were found to be drivers of mental ill-being.

- Exposure to abusive household conditions and online child abuse material increased for children in Viet Nam and Tanzania, prompting increased provision of services dedicated to combating domestic and online violence.

- Governments and non-governmental organisations (NGOs) in both countries adapted to restrictions on providing in-person mental health services by introducing a variety of digital interventions. Telehealth, online education and information, as well as attempts to engage with youth through participatory programmes like digital storytelling were successful, reaching millions of adolescents globally. These digital interventions hold key lessons for post-Covid engagement that must be investigated, particularly to assess their accessibility.

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Acronyms

ADHD	attention deficit hyperactivity disorder
ASD	autism spectrum disorder
CBO	community-based organisation
CSEM	child sexual exploitation material
CSO	civil society organisation
DASS-21	Depression, Anxiety and Stress Scale
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders fourth edition
GDP	gross domestic product
IES-R	Impact of Event Scale-Revised
ILO	International Labour Organization
LMICs	low- and middle-income countries
MHPSS	mental health and psychosocial support
NGO	non-governmental organisation
PTSD	post-traumatic stress disorder
SME	social media exposure
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Glossary

CSEM Materials depicting acts of sexual abuse, representing children involved in sexual acts or in a sexualised manner, and/or focusing on the genitalia of the child.

Health literacy The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions (Institute of Medicine (US) Committee on Health Literacy, 2004).

Health-related quality of life Physical and mental health perceptions (e.g. energy level, mood) and their correlates – including health risks and conditions, functional status, social support and socioeconomic status.

Mental health and psychosocial support (MHPSS) '[A]ny type of local or outside support that aims to protect or promote psychosocial well-being and/or prevent or treat mental disorder' (IASC, 2007).

School-related gender-based violence Acts or threats of sexual, physical or psychological violence occurring in and around schools, perpetrated as a result of gender norms and stereotypes and enforced by unequal power dynamics (Beadle and Bordoloi, 2019).

Social media exposure The frequency with which audience members encounter, and the extent to which they engage with, messages and media content through forms of electronic communication that facilitate social networking.

Telehealth The delivery and facilitation of health and health-related services including medical care, provider and patient education, health information services, and self-care via telecommunications and digital communication technologies (NEJM Catalyst, 2018).

1   Introduction

Covid-19 has created an international public health emergency that has shuttered economies, led to a dramatic loss of lives, and presented unprecedented challenges to health systems across the world. The outbreak began in the Chinese province of Wuhan but quickly spread to the rest of the country and beyond. With cases rising rapidly, the World Health Organization (WHO) officially declared Covid-19 a pandemic on 11 March 2020 (Ghebreyesus, 2020). Throughout 2020, states have pursued a variety of public health measures to slow the spread of the disease, including nationwide lockdowns or curfews, restrictions on travel, mandatory quarantining measures, and social distancing. At the time of writing, there have been a total of 68.2 million confirmed cases of Covid-19 globally (Dong et al., 2020).

Since May 2020, the ODI and its Vietnamese and Tanzanian country partners have been engaged in a 2.5-year project to address the mental health needs of adolescents in schools, in the community and at the institutional level through the co-creation and implementation of digital and non-digital solutions. As a first phase of this project, we carried out a literature review. This paper contributes to the other outputs published in the literature review.[1]

The pandemic has radically altered mental health needs and support capabilities. Covid-19 has exacerbated previous stressors and introduced new drivers of mental ill-health among adolescents such as stress and anxiety induced by the health and economic impacts of the pandemic, the closure of public spaces and schools, children's increased online presence, and the possibility of being confined in abusive households (Duan et al., 2020;

Gonzalez, 2020; Orgiles et al., 2020; Sediri et al., 2020; Tang et al., 2021). The fear and uncertainty caused by the disease are themselves detrimental to the cognitive well-being of adolescents, who may not be able to comprehend and process the effects of the pandemic and are worried about their future (Qi et al., 2020; Tang et al., 2021).

This literature review explores the impacts of Covid-19 on mental well-being and the mental health and psychosocial support (MHPSS) needs of adolescents in Viet Nam and Tanzania. It is guided by two research questions:

• What impact has Covid-19 had on the mental health of adolescents in Viet Nam and Tanzania?
• What interventions (digital and non-digital) have been used to mitigate or respond to these mental health needs during the pandemic?

The review first explores briefly how Viet Nam and Tanzania experienced and responded to Covid-19. It then examines Covid-19-induced stressors on mental well-being, such as school closures, increased online presence, social isolation, abusive household conditions, and the fear of contracting the disease. Lastly, it examines MHPSS initiatives and interventions undertaken by non-governmental organisations (NGOs), governments and other organisations. Because of public health regulations mandating minimal contact between people to halt the spread of the disease, digital approaches have taken precedence, and this literature review examines how digital innovations have stepped in to fill the void created by the closure of in-person MHPSS services (see also Rost et al., 2020).

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1   Other outputs can be found at: www.odi.org/projects/17326-addressing-mental-health-needs-adolescents-tanzania-and-vietnam-through-co-creation-digital-and-non

1.1 Methodology

The search strategy for the literature review involved the following:

- **Bibliographic database searches,** which included websites and journals such as PubMed, Google Scholar and Scopus. The search string included a term for Covid-19 (e.g. 'Covid-19', 'coronavirus', etc.), a term for mental health (e.g. 'MHPSS', 'well-being', 'depression', etc.), a term for adolescence (e.g. 'adolescen*', 'teenager', 'youth') and different locations.
- **Hand searching,** focused primarily on searching for grey literature published by relevant international organisations, think tanks, NGOs, and community-based organisations (CBOs), such as the United Nations Children's Fund (UNICEF), the International Labour Organization (ILO), the World Bank, YoungMinds and Young Lives. This was particularly helpful when examining the nature and success of mental health interventions and initiatives undertaken during Covid-19. Reports and press releases by government sources such as youth and health ministries were also sought.

- **Snowballing,** which involved identifying new sources who were cited by or who had cited the original source. Only literature in English was included. The search began with December 2019 but almost all of the literature found was published in 2020.

The review encountered a number of limitations. Given that relatively little time has passed since the onset of the pandemic, academic and peer-reviewed research was scarce. While there has been more published research on Viet Nam, the sections on Tanzania have had to rely almost exclusively on grey literature, including newspaper articles. Consequently, we expanded the geographic coverage of the review beyond Viet Nam and Tanzania to the regions of Southeast Asia and East Africa. We have tried to limit the review to those regions but, at times, have had to include literature from other parts of the world given the greater volume of literature being produced in Europe, China and North America on this topic. We have had to make similar compromises on the limits on age, focusing on adolescents (aged 13/14 to 19) but including relevant literature from other age groups where needed.

2   Background: Covid-19 and mental health

2.1   The outbreak

Viet Nam has been lauded as a Covid-19 success story, with only 1,192 cases (at the time of writing, in November 2020) among a population of 95 million (Ravelo, 2020). When the first cases of Covid-19 were detected in January 2020, Viet Nam took more severe precautionary measures than the WHO recommended at the time, tightening its border with China, setting up mobile emergency response teams for quarantining and disinfection, and beginning mass testing (Thuy, 2020). The government has been praised for its effective public health messaging and aggressive contact tracing (Ravelo, 2020).

Viet Nam has been hit by the economic shocks of the pandemic but its robust economy has protected it from disaster. Its economy had been surging since 2012, with a gross domestic product (GDP) growth rate of 6% or higher every year, although the pandemic caused its worst performance in over three decades in the second quarter of 2020. Urban unemployment rose by 33% during the second quarter and average income per worker (estimated to be 4.2 million Vietnamese dong, or approximately $180, in 2019) decreased by 5%. GDP was still growing, however, at 0.4% – no mean feat given the contractions faced by most economies (Morriset, 2020). The government allotted $2.6 billion for social assistance but civil society organisations (CSOs) have been clamouring for better protection for informal workers and ethnic minorities who are not able to access this assistance (United Nations Viet Nam, 2020).

The Tanzanian government's response to the pandemic has been less aggressive. On 16 March 2020, the first case of Covid-19 was confirmed in Tanzania, following which Prime Minister Majaliwa announced public health measures that included the closure of schools and the banning of mass gatherings such as weddings. However, a full lockdown was never imposed (Edwards, 2020a). President Magufuli has asserted that there is no need to maintain social distancing, wear masks, or close public spaces such as places of worship since, according to him, the power of prayer had 'removed' the virus from the country (Jerving, 2020). The President also publicised a herbal tonic as a cure for the disease and declared the country entirely Covid-free on 9 June 2020. In May 2020, Tanzania had stopped reporting new cases of Covid-19 to the WHO after the President faulted the tests for producing false positives. The last data from Tanzania came on 29 April 2020, reporting a total of 509 cases and 21 deaths. At the time of writing, the country had still not resumed reporting cases of Covid-19, and activists and commentators within the country are accusing the government of a cover-up (Dahir, 2020).

Economically, Tanzania is suffering the effects of the pandemic. The World Bank predicts a growth rate of 2.5%, down from 6.9% growth in 2019 (World Bank, 2020). Tourism – one of the country's fastest growing sectors – was projected to contract by 80% or more in 2020. The crisis could push 500,000 or more Tanzanians below the poverty line. Especially vulnerable are those working in informal or micro enterprises and those relying on self-employment in urban settings. Elections were held in October 2020, which President Magufuli won in a landslide. There has, however, been international and domestic concern about the election, which was followed by a crackdown on protestors and opposition members calling for fresh elections (Burke, 2020).

2.2 Impact on mental health and psychosocial support

Although no efforts have been spared globally to understand the clinical characteristics of the disease, and despite a welcome increased media coverage on the impact of the pandemic on mental health, there is still much more to be done, particularly in low-and middle-income countries (LMICs) (see Samuels, 2020). As other research has shown, in LMICs, previous pandemics have had deep, wide-ranging and long-lasting psychosocial impacts on individuals and communities. During the Ebola outbreak in West Africa (2013–2016), for example, individuals were likely to experience negative psychological effects due to the fear of death or experiencing the death of others. These psychosocial effects were also felt at the community level, with the breakdown of social systems due to a cyclical pattern of fear, survivor guilt, stigmatisation, and a loss of trust in health services (Van Bortel et al., 2016).

Given the novelty of Covid-19, its emergence and spread has led to widespread anxiety and fear among the public, contributing to cognitive distress (Shah et al., 2020). Experts had forecast this in the early days of the pandemic, harkening back to data from the 2003 severe acute respiratory syndrome coronavirus (SARS-CoV). In a study of patients who survived SARS-CoV in 2003, the cumulative incidence of DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, fourth edition) psychiatric disorders after recovering from the disease was 58.9% (Mak et al., 2009); 25% of patients had post-traumatic stress disorder (PTSD) and 15.6% had depression. Mak et al. termed the outbreak of SARS-CoV a 'mental health catastrophe' and highlighted the need to enhance preparedness in detecting and managing the psychological consequences of future infectious disease outbreaks. Preliminary research has shown similar psychosocial effects of the Covid-19 pandemic and a rise in psychopathology such as depressive and anxiety disorders. Stresses have arisen from the illness itself, from financial losses and worries, as well as from public health measures such as quarantine and isolation.

In Viet Nam and Tanzania, mental health has emerged as a concern in the wake of the pandemic. One study in Viet Nam sought to assess the psychological impacts of Covid-19 using the Impact of Event Scale-Revised (IES-R), which measures the distress caused by a particular event. The study used snowball sampling to recruit Vietnamese people who had been in the country since January 2020 for a survey administered through an online questionnaire. Most participants were students and staff of Hanoi Medical University and their social networks. Over a quarter of the 1,423 participants reported mild to severe levels of PTSD: 16.4%, 5.3% and 5.4% respectively reported low, moderate and extreme psychological conditions (Le et al., 2020). Among the risk factors for higher levels of distress were being female, being 44 years or older, and having a higher number of children in the family. Being self-employed or unemployed was associated with higher symptoms and scores of intrusion (e.g. having intrusive and recurrent thoughts or dreams about the traumatic event) and hyperarousal (e.g. hypervigilance, exaggerated responses and irritability). In May 2020, a survey by the International Youth Foundation in Tanzania of 103 youth (primarily students at universities in Mtwara, Dodoma and Dar es Salaam) found that disruptions to education and staying out of school were causing anxiety and stress (Mushi, 2020). At the time of writing, this was the only available study on the impact of Covid-19 on the mental health of youth in Tanzania. Although no peer-reviewed studies have yet been published on the impact of Covid-19 on adolescents in Tanzania, research from neighbouring countries offers valuable insights into the drivers of distress during the pandemic. The following section will focus specifically on the impact of Covid-19 on the mental health of adolescents in Viet Nam and Tanzania, drawing also on findings from the wider Southeast Asia and East Africa regions. Where necessary, and where data from the aforementioned regions was scarce, the section also includes research from Europe (particularly the United Kingdom) and North America.

3 Impact of Covid-19 on adolescent mental health in Viet Nam and Tanzania?

The pandemic has caused disruptions to the lives of adolescents in Viet Nam and Tanzania, precipitating symptoms of stress, anxiety and depression. Existing evidence has shown that public health emergencies of this nature have a distinctive impact on children. During the SARS-CoV outbreak in Hong Kong in 2013, for example, an association was found between young age and psychiatric morbidity. Thus, studies found that stress, anxiety and post-traumatic symptoms were associated with younger age (Sim et al., 2010; Leung et al., 2005) – a relationship attributed to differences in coping mechanisms within younger individuals and higher rates of self-blame. Preliminary work on adolescent mental health has found similar trends related to Covid-19. In one study in China, 22.6% of children reported symptoms of depressive disorders and 18.9% reported symptoms of anxiety disorder (Xie et al., 2020). In another Chinese study, 43.7% and 37.4% of adolescents had symptoms of depression and anxiety respectively (S.-J. Zhou et al., 2020). They found that the prevalence of such symptoms among adolescents was higher than among the general population in China during the early and peak period of Covid-19, in March 2020 (S.-J. Zhou et al., 2020). The drivers of mental health disorders during the pandemic have ranged widely, from economic stressors and domestic violence to school closures and the disruption of access to psychosocial support. The following sections delve deeper into these drivers.

3.1 School closures and online teaching

Across the world, the closure of schools to prevent community transmission of Covid-19 left more than 1.5 billion children out of school, prompting the Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), Audrey Azoulay, to warn that 'the global scale and speed of the current educational disruption is unparalleled and, if prolonged, could threaten the right to education' (UNESCO, 2020). In Tanzania, an estimated 15.4 million students enrolled in pre-primary to advanced secondary education were forced to go home as schools shut down in March 2020, although all primary and secondary schools were reopened by 29 June 2020. Viet Nam mandated the closure of all education institutions, affecting more than 25 million Vietnamese students, at the beginning of February 2020 when the first Covid-19 infections were reported. Where possible, teaching and instruction was moved online. It was only in May 2020 that the country decided to reopen schools with the necessary sanitation and health protocols.

Schools are vital for the well-being of children, providing stability, key support services (including MHPSS), and social recourse in the form of peers and teachers. Daily routine and access to social infrastructure are crucial for building resilience in children. The routine of going to school provides an anchor for students, which was uprooted during the pandemic, causing lethargy

and frustration (Lee, 2020). Hoffman and Miller argue that this non-academic support provided by schools is, therefore, a crucial protective factor for students' emotional and mental well-being (Hoffman and Miller, 2020).

A survey of 4,342 primary and secondary school students in Shanghai linked Covid-19-related school closures to anxiety in 24.9% of the sample, depression in 19.7%, and stress in 15.2% (Tang et al., 2021). Similar findings were reported by a number of other studies (Gonzalez, 2020; Qi et al., 2020; S.-J. Zhou et al., 2020). Both Qi and colleagues and Gonzalez found a significant correlation between gender and mental health disorders, with women being more likely to have anxiety and depressive disorders. In the global survey (with more than 12,000 responses from 112 countries) conducted by Gonzalez, average mental well-being was far lower among young women than young men. Women were 7 percentage points more likely to show possible anxiety or depression and 4 percentage points more likely to exhibit probable anxiety or depression. Gonzalez argues that this may be because young women are 'more subject to stress-inducing responsibilities within the home' (Gonzalez, 2020: 29).

YoungMinds, a UK-based mental health organisation, ran a series of surveys to investigate the mental health impacts of Covid-19 on school students in the UK. Over 80% said the pandemic had made their mental health worse. A recurring theme in things they were looking forward to when schools reopened, which included getting support from teachers, was 'normality'. Some reported concerns because they had lost a 'safe place away from difficult home environments' (YoungMinds, 2020a). This data is not gender- or age-disaggregated.

In China, a study of youth aged 11–20 found that adolescents in senior secondary school reported more anxiety than students in junior school because of fears relating to academic pressure and university entrance examinations (Qi et al., 2020). Among Chinese students, students in senior high school had a much higher risk factor for depressive and anxiety symptoms; the higher the grade, the greater the prevalence of symptoms (S.-J. Zhou et al., 2020). Qi et al. (2020) found the same relationship between concerns about

graduation or having more homework while classes were online, with increased risk of anxiety. Many countries chose to cancel or postpone entrance exams for universities. Tanzania chose to hold exams for students in June 2020 despite schools being closed for two months prior (Salla, 2020). Viet Nam delayed exams but held the national final exams for nearly 867,000 graduating high school students in August 2020. Although some students were grateful for the postponement of the exams because of the problems of online education, which many described as 'inefficient', others said that it would lead to increased stress (Nguyen, 2020).

Some children are more vulnerable to the impact of school closures than others. More than six million children live with disabilities in Viet Nam and parents have struggled to find alternative childcare arrangements (Vu, 2020). Children with special education needs, such as those with autism spectrum disorder (ASD) or attention deficit hyperactivity disorder (ADHD), rely heavily on the routine and services provided by schools (Mutluer et al., 2020). In one study in Italy, adolescents with ASD and ADHD became more irritable, less able to follow through simple instructions, engaged in problematic interactions with their family, and began to lose their independence and communication skills (degli Espinosa et al., 2020). Warnings about similar trends in Uganda, South Africa and Southeast Asia have also emerged (Amaral and de Vries, 2020). A report produced by UNICEF's East Asia and Pacific Regional Office (2020) states that children with disabilities, especially children with mental disabilities, had been showing signs of serious distress during the school closures due to the lack of services and the sudden interruption of their daily routines. One response by UNICEF in Viet Nam was to support home visits by professionals to provide specialised services, including psychosocial support, for children with disabilities.

In Viet Nam, there was also a stark digital divide that called into question the inclusivity of distance learning (Minh et al., 2020). Socioeconomically disadvantaged areas and rural areas struggled to access and keep up with online classes. Ethnic minority students were not able to access much of the online learning material because of language barriers. As a result, students

reported increased anxiety and psychosocial disorders (ibid.).

Interestingly, the third round of data collection of the YoungMinds survey in the UK found that mental health issues were also increasing after children returned to school. Among youth aged 11–18, 69% described their mental health as poor, up from 58% prior to returning to school, and 61% said that school had had a negative effect on their mental health because of social distancing measures, the inability to return to a routine, renewed academic pressure, and reduced mental health support (YoungMinds, 2020b).

3.2 Social and physical isolation

Closely related to school closures is the social and physical isolation that adolescents feel without regular contact with their peers and without the support networks they derive from school. Two noted psychologists, Stephen Becker and Alice Gregory, wrote an editorial note in the Journal of Child Psychology and Psychiatry arguing for greater MHPSS for adolescents since they are especially vulnerable to Covid-19-related social isolation because of their prioritisation of peer relationships. Becker and Gregory (2020) also argue that this is exacerbated by new parent-child disagreements relating to increased presence at home and compliance with public health guidelines.

In the YoungMinds survey of students in the UK, the 80% who said the pandemic had made their mental health worse cited increasing anxiety, isolation, loss of motivation and loss of coping mechanisms such as support from friends, with 87% reporting feeling lonely and isolated. Some of the main concerns they expressed were loneliness and the loss of friendships.

Studies from Italy, Spain and China have looked at the impact of isolation, quarantine and home confinement on adolescents, finding significant behavioural and emotional changes (Jiao et al., 2020; Orgiles et al., 2020). Adolescents were found to become more anxious, angry, restless or withdrawn. The study by Orgiles et al. (2020) in Italy and Spain asked parents how their children had been affected, and extremely high percentages reported behavioural changes: 76.6% said their children had difficulty

concentrating; 52% said their children had experienced boredom; 39% said the children were more irritable; 38.8% said they were more restless; 38% said they were more nervous; and 31.3% said they thought their children were more lonely than before the pandemic. A study on home quarantine in Turkey found a positive correlation between loneliness and anxiety due to reduced social and physical contact with others, the attenuation of friendships, and a sense of isolation (Kılınçel et al., 2020).

Minh et al. (2020) also argue that neighbourhood support in Viet Nam has been important in coping with the anxiety and stresses of social distancing as well as with material needs. ATMs dispensing rice and Zero Dong supermarkets were set up to provide free essential foods to poor families, schools donated goods to students whose families were struggling financially, and, in their view, 'solidarity and social cohesion were promoted and strengthened' (Minh et al., 2020: 29).

The intensification of feelings of loneliness during quarantine and isolation can, therefore, lead to emotional and psychological distress. In addition to elevating levels of anxiety and depression, more severe disorders may also arise. During the H1N1 pandemic in 2009, one study in the USA with 586 participants found that children subjected to quarantine had PTSD scores four times higher than those who were not quarantined, and children who were quarantined were at greater risk of acute stress disorders and PTSD than adults (Sprang and Silman, 2013). A literature review by Imran et al. cautions that there is a high likelihood that adolescents will 'experience residual and lasting distress and trauma' because of prolonged isolation during Covid-19 (Imran et al., 2020: 1111).

3.3 Increased presence online

The closure of schools and public spaces has led to a sharp rise in online presence and social media exposure (SME). Across the world, classes have moved online and the internet has served as one of the primary sources of information about the pandemic, increasing young people's screen time dramatically. Studies have shown that adolescents' extended use of smartphones

and the internet may lead to mental health disorders (including depression and anxiety), reduced concentration, decreased sleep quality, relationship disorders, and decreased positive social interactions (Soni et al., 2017; Lemola et al., 2015). One study in the USA by Twenge and Campbell (2018) in 2016 found that after one hour a day of use, increased hours of screen time were significantly correlated with lower psychosocial well-being. Participants were the caregivers of 40,337 children and adolescents aged 2 years or above. Indicators of lower psychosocial well-being included 'less curiosity, lower self-control, more distractibility, more difficulty making friends, less emotional stability, being more difficult to care for, and inability to finish tasks' (Twenge and Campbell, 2018: 271).

Given what is known about the impact of internet use and screen time on adolescent mental health, the increased presence of adolescents online gives cause for concern. One study of 3,613 Chinese students reported the following increases in time spent on the internet during Covid-19 (Duan et al., 2020). For the 29.58% of respondents who spend more than five hours per day online, there is a high risk of smartphone and internet addiction. Duan et al. used the DSM-IV's Internet Addiction Scale and the Short Version of the Smartphone Addiction Scale to assess the impact of increased internet and smartphone use on mental health. Using logistic regression, they found that smartphone addiction and internet addiction had a significant correlation with symptoms of anxiety and clinical depression.

The use of electronic media also risks displacing sleep as it is an unstructured leisure activity with no time constraints (Van den Bulck, 2010). Electronic media use before sleep also increases emotional, physiological and mental arousal. This disturbance of sleep and decreased sleep quality has been found to be one bridge between electronic media use and high levels of depressive symptoms, which is a cause for concern during Covid-19 (Lemola et al., 2015).

One study in China tried to identify associations between SME and mental health disorders. After controlling for covariates, the authors found that the frequent use of social media was positively correlated with anxiety and depression (Gao et al., 2020). Their sample comprised 4,872 Chinese citizens aged 18 years and above, more than two-thirds of whom were women; 82% had high SME after the outbreak of the pandemic and therefore higher levels of anxiety and depression. The authors posit two reasons for this relationship. The first is that information and misinformation about the disease have overwhelmed the social media people access, leading to fear and worry. The second is the expression and viewing of negative feelings such as nervousness or fear on social media and the consequent amplification of those feelings through social networks. SME was lower among women and among those over 30 years of age, which acted as a protective factor for mental health disorders associated with increased SME.

Another major concern for psychological and physical well-being relates to child protection issues such as online sexual exploitation and abuse. Experts have cautioned about the increased risk of sexual exploitation of children online. Increased time spent online may increase children's likelihood of coming into contact with online predators (UNICEF, 2020a). Distributors of child pornography and sexual exploitation material (CSEM) in Africa have become emboldened because lockdown and curfew measures forced a reduction in capacity of internet child abuse watchdogs (by up to 89%), and they have been targeting mainstream platforms to reach a greater audience (Tesemma, 2020). The demand for CSEM has also grown during the lockdown, which could lead to higher commercial sexual exploitation of children. Child protection units in Kenya have found an increase in children being groomed by predators who are soliciting for sex online (ibid.). Cyberbullying is another risk, particularly pronounced during adolescence, with some groups – including girls, children with disabilities or children otherwise perceived to be different – at higher risk (UNICEF, 2020b).

Southeast Asia has especially high rates of internet-based child sexual exploitation and the production of CSEM. In the Philippines, Covid-19 has increased the risk of 'grooming' of children by sex offenders, trafficking to create new CSEM, and the distribution of CSEM (International Justice Mission, 2020). During the lockdown, over 20 law enforcement operations

have rescued 76 victims and at-risk children in the Philippines. Spain, Denmark, Australia and Germany have seen similar increases in CSEM (ibid.). One study warns of these concerns during quarantine and isolation given that in the Philippines, 38% of traffickers were the biological parents of the victims, which means that lockdowns may trap children at home within abusive families and may reduce the ability to detect such cases because children no longer have access to teachers or community members to whom they may turn for help (Inocencio Jr, 2020).

Therefore, this increased online presence is not only increasing mental ill-health among adolescents but also exposing them to physical and other harms that can have long-lasting impacts.

3.4 (Mis)information, communication and the fear of Covid-19

There are three mechanisms by which information relating to Covid-19 affects adolescents' mental health. Firstly, the fear and uncertainty surrounding Covid-19 and the lack of reliable, timely, accurate, transparent and simple information regarding its pathogenicity and transmissibility could cause anxiety and stress (H.C. Nguyen et al., 2020). Secondly, the absence of calming messaging and clear public health guidance about how to protect oneself from the disease can increase feelings of helplessness (ibid.). Thirdly, the (mis)information and competing messaging that has bombarded social media may confuse individuals and be exhausting and exceedingly negative (Gao et al., 2020).

H.C. Nguyen et al. (2020) conducted a study of 3,947 participants across Viet Nam between February and March 2020 to assess the impacts of health literacy and information on depression and health-related quality of life. They recruited participants from outpatient departments of hospitals and health centres across the country and conducted the survey using printed questionnaires that assess participants' characteristics, clinical parameters, health behaviours, health literature, depression, and quality of life. They found health literacy to be a protective factor in improving depression

and health-related quality of life. Among those with low health literacy, those who contracted Covid-19 were 9.7 times more likely to experience depression than those with higher levels of health literacy. For those who had not contracted Covid-19, a one-score increment of health literacy created a 5% decrease in the likelihood of depression and increased their health-related quality of life score by 0.45 (H.C. Nguyen et al., 2020). However, Viet Nam has one of the lowest health literacy levels in Asia and the authors posit that the Ministry of Health needs to improve accessibility of its information on Covid-19 and other health concerns (ibid.).

In Tanzania, misinformation or 'fake news' regarding Covid-19 has been widespread. The government's insistence on cures that have not been scientifically tested, its dismissal of the need to wear masks and to maintain sanitation protocols, and allegations that tests were producing false positives on a mass scale have been counteracted by opposition activists who claim the government is trying to cover up the real statistics and by CSOs that have been running information and health literacy campaigns to provide WHO-sanctioned information to the public (Dahir, 2020). Misinformation has also taken the shape of mimicking official directives. For example, a fake message claiming to be a UNICEF press release claimed that avoiding ice cream and cold foods could prevent Covid-19, while another claimed that the consumption of alcohol and antibiotics could prevent it (UNICEF Tanzania, 2020).

Parents/caregivers and communities have been found to play a crucial role in addressing adolescents' mental health concerns. During school closures, parent-child discussions on Covid-19 were found to be protective factors of mental health, increasing life satisfaction (Tang et al., 2021). In this study of secondary school students in China, those who had regular discussions on Covid-19 with their parents had a much lower prevalence of depression, anxiety and stress symptoms; and among all the psychosocial factors associated with depression, parent-child communication had the largest effect size (r = .43). Parent discussions were also related to the perception of benefits (such as preventing

the spread of the disease, spending time with parents, etc.) from the quarantine, which reduced the risk of mental health disorders. However, even among those children who did not perceive any benefits from isolation, parent-child discussion prevented the development of severe symptoms of stress, anxiety and depression. The authors conclude, 'This highlights the crucial role of open communication between parents and children when coming to terms with stress and crisis … [The] frequency of discussion about the ongoing public health crisis mitigated depression, anxiety, and stress, and boosted life satisfaction' (ibid.: 359).

Thus, on the one hand, increased exposure to social media, where adolescents may be bombarded with (mis)information about the pandemic or negative expressions of fear and worry from social networks, has been found to increase the risk of mental health disorders and give rise to unsubstantiated fears. On the other hand, improved communications with parents, among other things, has been shown to be protective against mental ill-health.

3.5   Negative economic shocks

The economic consequences of the pandemic have been as severe as the public health crisis. In the Young Lives survey of 2,548 Vietnamese youth (aged 19–25 years), 54% reported that at least one member of the household had been suspended without pay or experienced a salary cut, 51% had lost most or all of their business income, and among the respondents themselves, 62% had lost their income or employment (Scott et al., 2020). Almost two-thirds, 65%, said they felt 'extremely nervous' about their economic and educational situation (ibid.).

A global report on youth employment by the ILO based on survey responses from 112 countries found that young workers (aged 18–29) who had lost their jobs were almost twice as likely to show probable symptoms of anxiety than those who remained employed (23% vs 14%) (Gonzalez, 2020). Among these respondents, 38% were uncertain of their future career prospects and one in six (approximately 17%) who were employed before the pandemic had been forced to stop working altogether,

particularly younger workers and those in the service sector. The report concludes that its findings '[underscore] the interlinkages that exist between mental well-being, educational success and labour market integration' (ibid.: 28).

One study of 8,444 adolescents and young adults between the ages of 13 and 29 by UNICEF in Latin America and the Caribbean (specific countries were not mentioned) found that of the 27% experiencing anxiety and 15% experiencing pandemic-related depression, one-third said the main reason for their mental health disorder was the economic situation (UNICEF, 2020c). It is important to note the gendered dimension to this phenomenon. Among women, 43% felt pessimistic about their future, compared to 31% of men.

The impact of economic shocks on school-going adolescents who are not pursuing part-time or full-time work is not restricted solely to changes in material conditions. Children and adolescents' mental health is also heavily affected by the mental and emotional state of adults they are exposed to, and during the pandemic, children have been exposed to high levels of stress and anxiety among their parents and older family members (Dalton et al., 2020). Parents often avoid talking about their stress in order to avoid placing the burden on their children, but children are extremely perceptive and, in an opinion piece in *The Lancet Child & Adolescent Health* journal, Dalton et al. argue that parents need to communicate sensitively with their children, taking into account the child's age and level of understanding. They also argue that adults need to be honest about their own fears and uncertainty in order to explain the distress that children can feel even when adults are not communicating with them, as well as to normalise their own emotional reactions and give them permission to share their anxiety (ibid.). Kılınçel et al., who studied children aged 12–18 years quarantined due to Covid-19 in Turkey, also argue that 'parents' talking to the youth and establishing a sensitive and effective communication about the disease have great benefits in terms of the mental health of adolescents' and argue for increased communication during the pandemic (Kılınçel et al., 2020: 5).

3.6 Closure of public facilities and leisure activities

The closure of public facilities impacts physical activity, leisure activities, as well as opportunities to build social networks. A UNICEF study in Viet Nam found that due to the closure of public spaces, public health directives, and the unwillingness of individuals to go out, visits to recreational and retail spaces fell by 52%, groceries and pharmacies by 29%, and bus and train stations by 49% (Minh et al., 2020). Around 64 million people (over half the population of the country) were active only online. This has severely limited young people's physical exercise – a crucial component of mental well-being and overall health – and increased their screen time. This fall in mobility and social activities could have a substantial impact on well-being.

In Tanzania, there was a much less drastic reduction in public activities even at the height of the pandemic in February and March 2020. According to Google mobility data, it recorded one of the lowest decreases in movement compared to other African countries, with only an 11% decrease in travel to bus and train stations, a 16% reduction in visits to retail and recreational spaces, and an 8% reduction in trips to groceries and pharmacies (Edwards, 2020b). Of African countries, it had the lowest increase of tracked residents staying at home, at just 3%.

Another key element is the halting of activities such as part-time employment, sports, and extra-curricular activities that are formative of adolescents' identities. In an opinion piece, Becker and Gregory (2020) argued that these absences could lead to increased depressive symptoms among children and adolescents, as well as decreased sleep quality and lethargy.

3.7 Exposure to abusive household conditions

The rise of domestic violence and abuse during Covid-19 has been termed the 'shadow pandemic' and is a grave public health concern (Agüero, 2021; Boxall et al., 2020; Kofman and Garfin, 2020). Exposure to domestic violence is an extreme stressor that can lead to or exacerbate mental health disorders such as

PTSD, anxiety, depression and suicide ideation. For adolescents, mental health concerns are not restricted solely to those who experience abuse (whether emotional, physical, or neglect-related abuse) directly. Even children who witness domestic violence inflicted on other members of the family have a higher likelihood of developing mental health disorders, as a number of studies have shown (Silva et al., 2019; McFarlane et al., 2003; Zuckerman et al., 1995). One study of children aged 5–16 years in the UK found that the likelihood of conduct disorders was tripled if children had witnessed severe domestic violence (Meltzer et al., 2009).

The increase in domestic violence was given prominence among activist and academic circles during the pandemic. Activists in Tanzania warned that domestic violence was increasing, as did CSOs in other African countries such as Somalia, where there was a 50% increase in calls to hotlines, and South Africa (Tesemma, 2020). Child maltreatment and abuse, including neglect, physical abuse and emotional abuse, also increased across the continent.

In Viet Nam, the Center for Studies and Applied Sciences in Gender – Family – Women and Adolescents (CSAGA) reported a surge in violence against women and girls, with 624 cases reported to them in the first four months of 2020, compared to 208 cases in the last four months of 2019 (Giang and Huong, 2020). They found that perpetrators were using social distancing to restrict survivors from seeking help outside. Additionally, the Peace House Shelter in Viet Nam recorded a 40% increase in calls to their hotline and a 250% increase in intake at their shelters (Phromkade, 2020). The Peace House Shelter also noted violence against migrant women and girls as a particular concern.

One study in Tunisia specifically examined the impact of domestic violence on the mental health of Tunisian women during the lockdown. Among the study participants, reported violence against women increased from 4.4% to 14.8% during the lockdown and over half of the participants (57.3%) reported extremely severe distress symptoms on the Depression, Anxiety and Stress Scale (DASS-21) (Sediri et al., 2020). Those who were abused during lockdown had more severe symptoms of depression, anxiety

and stress. Of those who were abused, 96% experienced emotional or psychological violence, 41% experienced economic violence, and 10% experienced physical violence. Interestingly, violence during lockdown was also associated with higher Facebook addiction scores (ibid.).

This is the only peer-reviewed study currently available on the mental health impacts of intra-household violence during Covid-19, but the relationship between mental health disorders and domestic violence is well-established and gives cause for great concern during the pandemic.

4 Responding to the mental health and psychosocial support needs of adolescents during the Covid-19 pandemic

This section examines the interventions that have been undertaken by states, CSOs and international NGOs. Because of public health guidelines mandating curfews, minimal contact and the closure of many services, many/most services have had to be delivered via telecommunications and the internet. Digital interventions have been crucial in the response to mental health needs during the pandemic, and the following section illustrates the many ways in which they have been used.

4.1 Interventions to mitigate drivers of mental health disorders

Viet Nam and Tanzania have been active in attempting to mitigate the drivers of mental health disorders during Covid-19 that have been identified earlier in the report. Their efforts include measures to curb misinformation and increase child protection services geared towards online sexual exploitation and domestic abuse.

The Vietnamese government has taken steps to combat misinformation related to the pandemic and to provide timely and correct information to the public to alleviate fears and concerns. This has led to nearly 200 law enforcement cases seeking to halt the spread of fake information relating to the pandemic (T.T.P. Nguyen et al., 2020). In addition,

the government established official channels of communication on social networking sites such as Facebook and Zalo (a popular social app in Viet Nam). Social media platforms were leveraged by the Ministry of Health and UNICEF Viet Nam to provide instructions to parents and caregivers, and to provide knowledge and education about the spread of Covid-19. Mass media campaigns were undertaken on social media platforms such as Facebook, Zalo, YouTube and TikTok (Minh et al., 2020). To encourage behaviour changes in line with public health guidelines, the government and UNICEF launched a campaign with the hashtags #ICT_anti_nCoV or #ONhaVanVui (StayHomeIsFun). On the other hand, the Tanzanian government has taken a hard line against information regarding Covid-19. Their efforts were directed against both misinformation about the virus but also any information that contradicts the government's official stance that Covid-19 has been eradicated from the country (M'bwana, 2020).

The Tanzanian government has been more active with child protection efforts. In order to combat child sexual abuse and exploitation, it developed Malezi, a WhatsApp bot that aims to provide youth with information on CSEM and how they can decrease their risk of being targeted. It has chat features that cover key

questions and information about sexual abuse and exploitation as well as information about where to report cases. Malezi also provides information on sexual and reproductive health, WHO-approved messages on Covid-19, and data on trends in the country (End Violence Against Children, 2020). The government also led a campaign to promote its 'online sexual abuse content removal portal' through social media to inform the public about how to report such content (Sema Tanzania, 2020).

While these steps may not be directly responding to mental health concerns, they play a crucial role in mitigating drivers of ill-health and are important to preserving mental well-being rather than attempting to restore it after problems arise. The following section examines steps taken to directly respond to MHPSS needs rather than to mitigate stressors.

4.2 Types of intervention

Mental health interventions may have taken a backseat to infectious disease control and physical health interventions during the pandemic but many states and NGOs have pursued digital and non-digital interventions to meet the MHPSS needs of adolescents. The following is a categorisation of the types of intervention found:

1. **Information and education:** These interventions aim to provide information about mental health and drivers of mental ill-being, in order to raise awareness about the ways in which mental health is or could be affected and strategies to mitigate the effects. They can be delivered through awareness campaigns, both online and offline, computerised training modules, websites and applications.
2. **Training of service providers:** Given the almost instantaneous shift to digital and online provision of MHPSS, it became necessary to train service providers to use telehealth and other digital means to deliver their services. It also became necessary to train other health providers in psychosocial support services to detect and treat mental health disorders in patients and among service staff because of the toll of the pandemic.
3. **Participatory approaches:** Attempts to engage with youth and adolescents involved participatory interventions such as digital storytelling, social media 'challenges' and focus group discussions with policy-makers. This not only encourages creativity, reflection, critical thinking and discussion (Pieterse and Quilling, 2011) but also provides agency to adolescents by allowing them to participate in conversations about policies and strategies relating to their health.
4. **Telehealth:** Mental health treatments and therapies (including counselling) have had to move online because of the closure of non-essential health services. Service providers began providing treatments, consultations and therapy over digital platforms using videoconferencing software or mobile phone communications.
5. **Community-building:** In order to counter one of the most important drivers of mental ill-being during the pandemic – isolation – community-building efforts were undertaken through digital platforms. Organisations set up social networking groups to discuss mental well-being with online peers, to connect people and reduce feelings of loneliness, as well as to provide networks of mutual support.

Table 1 contains examples of interventions that have been undertaken in our target regions (Southeast Asia and East Africa) to meet MHPSS needs during the pandemic, reflecting the categories above. These categories are not mutually exclusive, so some interventions may cover more than one category. They have been placed in the category that corresponds to their primary components and objectives.

Table 1   Examples of interventions to meet mental health and psychosocial support needs during the Covid-19 pandemic

Name	Country; target groups	Objective	Main components	Reach/impact/evaluation
Information and education				
UNICEF Viet Nam (UNICEF East Asia and Pacific Regional Office, 2020)	Viet Nam; Adolescents, children and parents	To create and disseminate information about challenges faced by children during quarantine and home isolation To create and disseminate information about Covid-19 that can be easily understood by children	Translating materials prepared by UNICEF (such as Parenting for Lifelong Health: Parenting Tips and the My Hero Is You storybook) into Vietnamese as well as eight ethnic minority languages Developing videos and music videos with child-friendly material on Covid-19, particularly for children with disabilities	N/A
Sema Tanzania and Government of Tanzania (Sema Tanzania, 2020)	Tanzania; children	To combat the sexual abuse and exploitation of children and raise awareness about its mental health impacts	Online training by health and counselling experts to social welfare officers about protection of children and youth from online sexual abuse Leading awareness campaigns through shows on local radio, social media, and videos about the effects of sexual abuse on health and well-being, as well as providing clear information about how to report child sexual abuse	N/A
UNICEF Cambodia (UNICEF East Asia and Pacific Regional Office, 2020)	Cambodia; children and parents	To raise awareness about the impact of the pandemic on mental health and provide tips on how to cope with these concerns	Using community loudspeakers and social media platforms to provide MHPSS tips, Covid-19 prevention messaging and parenting tips Developing short videos to raise awareness about the impacts of mental health and ways to cope with mental health concerns	The campaigns have reached 557,410 people, including 167,486 children, to date
China Youth League, Kuaishou, and UNICEF China (UNICEF East Asia and Pacific Regional Office, 2020)	China; adolescents	To provide mental health information and tips to adolescents across the country To offer counselling techniques to manage emotions and alleviate negative emotions triggered by the pandemic	Created and shared information on mental health stressors during the pandemic and how to cope Hosted four episodes of the podcast 'Listening to the young minds' on mental health during Covid-19 (covering anxiety, anti-stigma, and anti-bullying themes) and more than 50 online webinars on psychosocial issues focused on adolescents with the China Association for Science and Technology Hosted an indoor exercise challenge to encourage healthy living as a precursor to mental well-being	Reached more than 12 million adolescents with their awareness campaign and 320,000 with the podcast. The indoor exercise challenge received 4,600 submissions and reached 11 million page views
Training of and supporting service providers				
Government of Tanzania and JSI Community Health and Social Welfare Systems Strengthening programme (Mapalala, 2020)	Tanzania; social workers	To train community case workers, social workers, and other welfare officials in providing MHPSS to individuals and communities during Covid-19 To train social workers in psychosocial support, particularly as it related to combating fear and stigma around Covid-19	Creating and hosting a series of training videos and webinars (available at: www.youtube.com/c/JsiHealth/videos)	N/A
UNICEF Viet Nam Opening Up Better Schools initiative (UNICEF East Asia and Pacific Regional Office, 2020)	Viet Nam; children, adolescents and teachers	To develop and rollout the Opening Up Better Schools initiative, which aimed to improve students' mental well-being and prevent school-related gender-based violence (SR-GBV) when schools reopened	Developing a manual for teachers on how to address SR-GBV and stigma related to Covid-19 Integrating MHPSS training into training modules for teachers focused on online learning Hosting virtual teacher training on how to improve psychosocial well-being of students in both virtual and in-person classrooms	N/A

Name	Country; target groups	Objective	Main components	Reach/impact/evaluation
UNICEF Cambodia and the Cambodian Ministry of Social Affairs, Veterans and Youth Rehabilitation (UNICEF East Asia and Pacific Regional Office, 2020)	Cambodia; children and social workers	To provide increased mental health support to children To train social workers to identify mental distress in children and adults and provide MHPSS To increase child protection services in border areas with Thailand	Providing case management and MHPSS training to social workers to deal with mental health issues during Covid-19 Increasing the presence of social workers near the Thai border to identify at-risk children (including but not limited to unaccompanied children or children showing signs of abuse) and to identify whether they are in need of MHPSS Training staff in quarantine centres and social workers to provide basic counselling or teaching them referral pathways for specialised MHPSS	More than 300 social workers and staff at hospitals and quarantine centres were trained in basic counselling and given information about MHPSS referral pathways
UNICEF China life-skills project (UNICEF East Asia and Pacific Regional Office, 2020)	China; school students and children	To develop MHPSS guidelines for students To provide training on emotional and crisis management	Setting up MHPSS hotlines for students at 11 vocational schools Developing and sharing guidelines on preventive measures against mental ill-being, and emotional counselling techniques specifically to alleviate emotional stressors induced by the pandemic Providing online modules and in-person training for mental health crisis management	N/A
Participatory approaches				
UNICEF Malaysia: KitaConnect (UNICEF East Asia and Pacific Regional Office, 2020)	Malaysia; young people	To provide a platform in which young people can air their concerns about their mental health and seek information about MHPSS To address the concerns of young people relating to Covid-19 and their mental health	Creation of a digital platform to engage with young people and address their concerns about MHPSS. Young people can ask questions, express their views, and share stories on this platform Collaborating with mental health advocates and experts as well as social media influencers to raise awareness about mental health issues and share advice	It has engaged with more than 270,000 young people in Malaysia to date
Kindness is Contagious campaign by the Vietnamese Ministry of Health (MOH) and UNICEF Viet Nam (UNICEF Viet Nam, 2020)	Viet Nam; adolescents	To create a dialogue between adolescents and policy-makers about the mental health impacts of the pandemic To promote positive thinking and encourage creativity by asking adolescents to share their stories, photos, videos, ideas and messages In the words of the campaign, 'UNICEF and MOH want to give young people an opportunity to raise their voices and position themselves as leaders to fight anxiety and support each other'	Creating social media platforms (on TikTok, Facebook, Twitter and Instagram, among others) where adolescents make and upload messages, videos, artwork and photos about their experiences (using the hashtag #long_tot_de_lay, which roughly translates to 'share kindness') Contracting activists, policy-makers, artists and social media influencers to respond to the messages and work being uploaded Hosting TV and radio talk shows with policy-makers to respond to questions and engage in the dialogue	N/A
Telehealth				
UNICEF and the Malaysian National Early Childhood Intervention Council (UNICEF East Asia and Pacific Regional Office, 2020)	Malaysia; children and adolescents with disabilities	To provide online and tele-MHPSS for children and adolescents with disabilities since services for children with disabilities were categorised by the government as 'non-essential' during the pandemic, forcing in-person service provision to be halted	Provision of community-based psychosocial support to children with disabilities and their parents/caregivers. Both individual and group sessions were provided in the first five months of the programme (3,115 individual sessions, 394 group sessions). Prior to the sessions, training was provided to all service providers on the use of digital platforms	Supported 971 people (488 children and 483 parents) through more than 3,500 online and tele-MHPSS sessions within five months (April to August 2020). This was a 100% increase in service provision since March 2020, when Covid-related restrictions were introduced

Table 1   Examples of interventions to meet mental health and psychosocial support needs during the Covid-19 pandemic (cont.)

Name	Country; target groups	Objective	Main components	Reach/impact/evaluation
Study: Feasibility and Preliminary Results of Effectiveness of Social Media-based Intervention on the Psychological Well-being of Suspected COVID-19 Cases during Quarantine (L. Zhou et al., 2020)	China; patients suspected of having Covid	To assess the impact of psychosocial support delivered via a social media app	Providing patients suspected of having Covid-19 who had high scores on the Hospital Anxiety and Depression Scale[i] with two individual consultations daily by nurses, delivered over WeChat. The nurses listened to the patients and offered emotional support Providing patients with accurate and timely information about Covid-19 and telling them successful stories of other quarantined patients	Before and after the intervention, participants were assessed using the Hospital Anxiety and Depression Scale. The intervention showed an improvement in mood on both the anxiety and depression subscales
Study: Efficacy of Internet-based Integrated Intervention on Depression and Anxiety Symptoms in Patients with Covid-19 (Wei et al., 2020)	China; Covid-19 patients	To assess the impact of an internet-based integrated intervention on the mental health of Covid-19 patients	A self-help intervention focused on relaxation, self-care, and increasing patients' sense of security. It had four components: breath relaxation training, mindfulness, 'refuge' skills, and the butterfly hug method (i.e. a stress-reducing technique in which the individual wraps their hands around themselves and them simulating the movement of a butterfly's wings) The instructions for each session were audio-recorded and sent to participants' mobile phones daily for two weeks. It took approximately 50 minutes to complete each task. Participants in the control group received only daily supportive care	Patients in the treatment group had significantly decreased levels of depression and anxiety compared to those in the control group. The authors conclude that the 'internet-based integrated intervention showed a rapid improvement on mood disturbance and it should be applied in the management of psychological distress in COVID-19 patients.'
Community-building				
UNICEF Viet Nam's Social Network Groups (Minh et al., 2020)	Viet Nam; parents and teachers	To connect parents and teachers so that parents are able to communicate about their children's needs, and teachers were able to provide timely instructions on childcare and education as it related to concerns about the evolving pandemic To provide mutual support in maintaining their own mental well-being given the increased burden of work of both groups, and that of their children	The creation of groups on social networking websites and apps such as Facebook and Zalo where both parents and teachers were able to join and communicate with each other	According to a report by UNICEF Viet Nam , these groups were 'frequently used' and 'facilitated business continuity, fact-checked information and connected people for mutual support to maintain good mental health' (Minh et al., 2020)
Quan Tam Network, a collaboration between the Research and Training Center for Community Development and the Vietnam Women's Union (Quan Tam Network, n.d.)	Viet Nam; people with severe mental illness	To create a community support programme for individuals with severe mental illness To share information about mental health and Covid-19	Creating online groups on social media and instant messaging apps such as WhatsApp where members can communicate with each other Hosting video and poster contests where members were asked to comment on themes such as 'father-child interaction'	N/A
Child-friendly spaces project by China's National Working Committee on Children and Women, UNICEF China, and the University of Chinese Academy of Social Sciences (UNICEF East Asia and Pacific Regional Office, 2020)	China; children and caregivers	To provide safe child-friendly spaces To share information and provide services about MHPSS and child protection	Setting up 126 child-friendly spaces in 16 counties/cities where parents/caregivers and children can receive information and services regarding MHPSS and child protection Setting up 5 provincial technical support hubs to share information through blogs, social media and online methods about the child-friendly spaces, parenting tips, recommendations for child development activities, and psychosocial support	N/A

i   The Hospital Anxiety and Depression Scale is a questionnaire used to detect anxiety and depressive disorders. It is designed specifically for people experiencing health problems. The questionnaire has seven scale items for depression and seven for anxiety. A total subscale score of >8 points out of a possible 21 denotes considerable symptoms of anxiety or depression.

5 Conclusion

The Covid-19 pandemic has exacted a heavy toll on the mental health of adolescents across the world. School closures have contributed to feelings of social isolation and caused a loss of the stability that is typically provided by structured school environments. Combined with the increased use of electronic media (in particular, increased social media exposure), this has led to a rise in anxiety, stress and depressive disorders. Many children have been exposed to online child abuse and abusive household conditions during lockdowns, experiences that have historically been associated with mental health disorders including, but not limited to, PTSD. For older adolescents (i.e. those in senior secondary school and above), stress about examinations and uncertainty regarding their futures and job prospects was found to be a driver of mental ill-being. Misinformation, uncertainty, and a fear of contracting Covid-19 were other leading factors accounting for the rise in anxiety, depression, stress and other mental health disorders. Although Viet Nam and Tanzania have fared better in their Covid-related health outcomes than most other countries, they too were impacted heavily by public health policies mandating the closure of public spaces and by the pandemic's attendant socioeconomic shocks. While published research from Viet Nam and Tanzania, in particular, was scarce at the time of writing, trends from other Southeast Asian and African countries suggest that the aforementioned mediating factors had an impact on adolescents' mental health and broader well-being in these two countries as well.

This review has identified many gaps that need to be filled with further research. Firstly, the impact of Covid-19 on mental health in LMICs has not been studied in any great depth. Covid-19 has been devastating and, as some psychologists have been warning, its mental health effects will be long-lasting. Thus, there is an urgent need to better understand these effects so that interventions may be designed to combat them. Secondly, the studies that have been conducted so far have not adequately explored the mental health impacts on different groups of people. Disaggregation based on gender, age, disability, minority status, migration status, location, and other social identities needs to be factored into analyses because the adolescent experience is far from homogenous. Thirdly, better monitoring and evaluation needs to be undertaken of interventions designed by NGOs and governments. In most cases, the only data available about the intervention is the total number of people reached. While this is a useful metric, it does not adequately capture the effects of an intervention and whether it was successful in achieving its stated objectives.

The pandemic has, however, forced a rise in digital literacy that may be useful when designing future mental health interventions. The switch to information and communications technology (ICT) in the absence of in-person contact has increased fluency in the world of online learning, training webinars, and telehealth, which opens up new avenues for MHPSS in the future. Digital interventions were most successful in their ability to engage with youth and encourage youth participation in mental health awareness campaigns provided through social media platforms like TikTok and Twitter. Given that young people are best situated to identify and address their mental health concerns, it is crucial that such participatory programmes continue to amplify their voices. Digital interventions, however, bring their own challenges. The most pressing issue is the lack of accessibility by certain demographics, particularly adolescents living in rural areas and those coming from poor families. Limited access to electricity and internet may prevent many adolescents in LMICs accessing digital interventions and these technological limitations must be factored into

all digital programming (see also Rost et al., 2020). Additionally, Covid-19 has shown that increased use of digital devices and electronic media can also affect mental well-being, inducing lethargy, stress and depression, and reducing sleep quality. Care must be taken to avoid indirectly inducing mental health problems while attempting to address them.

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