

## The Need for a Public Mental Health Approach to COVID-19

### Abstract

Mental disorder is responsible for at least 20% of global disease burden which COVID-19 is likely to increase. Effective public mental health (PMH) interventions exist to treat mental disorder, prevent associated impacts, prevent mental disorder from arising and promote mental wellbeing. However, implementation is poor with only a minority with mental disorder receiving treatment even in high-income countries, far fewer receiving interventions to prevent associated impacts, and negligible coverage of interventions to prevent mental disorder or promote mental wellbeing. There is an urgent need to address this implementation failure which contravenes the right to health, results in broad population scale impacts and preventable suffering, and is further amplified by COVID-19. PMH practice including during COVID-19 can prepare for and address the implementation gap in the following ways: assessment of size, impact, and cost of the current and future PMH intervention implementation gap taking into account COVID-19; estimation of impact and associated economic returns from improved coverage of PMH interventions; use of this information to inform national policy and transparent decisions about acceptable levels of national coverage of different PMH interventions which then informs level of provision, required resource and commissioning; operationalization of intervention implementation nationally and locally; evaluation of coverage and outcomes; and communication to the population and different professional groups. Coverage of PMH interventions can be increased including during quarantine/lockdown through appropriate professional training, improving population knowledge, digital technology, settings and integrated approaches, maximizing existing resources and application of relevant legislation. PMH practice should be an integral part of the response to COVID-19.

**Keywords:** Covid-19, implementation, prevention, promotion, public mental health

### INTRODUCTION

Before COVID-19, mental disorder accounted for at least 20% of disease burden<sup>[1]</sup> although this underestimates true impact by more than a third.<sup>[2]</sup> The size of this burden is due to a combination of high prevalence rates,<sup>[3,4]</sup> most lifetime mental disorder arising before adulthood,<sup>[5]</sup> and a range of impacts across health (including higher rates of health risk behavior, physical health conditions, and mortality), education, employment, social interaction, inclusion, stigma, violence, and crime.<sup>[6]</sup> In 2010, the impacts of mental disorder resulted in an estimated annual global economic cost of US \$2493 billion, which is projected to increase to US \$6046 billion by 2030.<sup>[7]</sup>

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### PHYSICAL IMPACT OF COVID-19

COVID-19 was assessed as a pandemic on March 11, 2020, and has spread rapidly across countries. Transmission occurs through respiratory droplets when breathing, talking, coughing, or sneezing although can occur by touching contaminated surfaces. Some evidence also suggests wider airborne transmission.<sup>[8]</sup> People can be infectious while asymptomatic.<sup>[9]</sup> In China, 81% of those affected had mild or no symptoms, 14% had severe disease requiring hospitalization, and 5% had critical disease with associated mortality.<sup>[10]</sup> Mortality is higher in those with physical health conditions,<sup>[11]</sup> living in deprived neighborhoods,<sup>[12]</sup> from particular ethnic groups<sup>[13]</sup> and older people including in care homes.<sup>[14]</sup>

The physical health of people with mental disorder is also likely to be disproportionately affected by pandemics, such as COVID-19.<sup>[15]</sup> This is because

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COVID-19 severe illness and mortality are more common in people with physical health conditions<sup>[8]</sup> and people with mental disorder have higher rates of physical health conditions which are responsible for most of their 7–25 years reduced life expectancy.<sup>[6]</sup>

## MENTAL IMPACT OF COVID-19

Pandemics such as COVID-19 are likely to increase the global burden of mental disorder by increasing prevalence of mental disorder, relapse of mental disorder, and poor mental well-being.<sup>[8]</sup> This occurs due to the impact of COVID-19 on many of the risk factors for mental disorder and poor mental well-being<sup>[6]</sup> highlighted below:

- Socioeconomic
    - Poverty: Globally, COVID-19 could increase the number of people living in poverty by 420–580 million<sup>[16]</sup> using World Bank poverty measures of \$1.90 a day although this is likely to be even greater if applying the relative measure of <60% of median income
    - Unemployment: COVID-19 threatens the employment of 1.25 billion workers globally who are at risk of falling into poverty, particularly in low- and middle-income countries (LMICs) where there is little or no unemployment benefit<sup>[17]</sup>
    - Workplace closure: During COVID-19, 81% of the global workforce (2.7 billion workers) had their workplace fully or partly closed<sup>[17]</sup>
    - Debt that mediates socioeconomic impact on mental disorder<sup>[18]</sup>
    - Recession that increases risk of mental disorder<sup>[6]</sup>
  - Inequality which underlies many other risk factors:<sup>[19]</sup> For instance, COVID-19 mortality rate in England was more than double in most deprived neighborhoods as compared to least deprived neighborhoods<sup>[12]</sup>
  - Food insecurity: Globally, in 2019, 820 million people were “hungry today,” 11% were undernourished, 26.4% (2 billion people) experienced moderate and severe levels of food insecurity, with 8% of people even in Northern America and Europe experiencing moderate food insecurity.<sup>[20]</sup> COVID-19 will increase food insecurity and could nearly double the number of people in acute hunger to almost 250 million by the end of 2020,<sup>[21]</sup> with associated increased risk of mental disorder<sup>[22,23]</sup>
  - Child adversity accounts for 30% of adult mental disorder.<sup>[24]</sup> Globally, over half of all children aged 2–17 years (1 billion children globally) experienced emotional, physical, or sexual violence in the previous year.<sup>[25]</sup> COVID-19 is further increasing child maltreatment, gender-based violence, and sexual exploitation because of lack of access to school friends, teachers, and social workers and the safe space and services that schools provide<sup>[26]</sup>
  - Violence including against women and children<sup>[27]</sup>
    - Parental mental disorder<sup>[6]</sup>
    - Social factors: Loss of social capital associated with COVID-19 is likely to increase risk of mental disorder.<sup>[28–30]</sup> Social isolation is also amplified by physical distancing advice and quarantine<sup>[31]</sup> and reduces the opportunity to engage in mental health-promoting activities such as leisure, culture, and helping others. For instance, in Great Britain, 21% of adults reported that lockdown had affected their relationships with spouses or partners causing the most concern.<sup>[32]</sup> Of those home schooling, 25% of adults said that it was putting a strain on their relationships in the household, while 32% of adults thought that the well-being of their children was being negatively affected
    - Work-related stress experienced by particular groups including health professionals and carers: For instance, a systematic review and meta-analysis of healthcare workers which examined infection with or exposure to COVID-19, MERS, and SARS found prevalence of depressive symptoms to be 26.3%, anxiety features 29.0%, posttraumatic features 20.7%, psychological distress 37.8%, burnout 34.4%, general health concerns 62.5%, fear 43.7%, somatization 16.1%, insomnia 37.9%, and stigmatization 14.0%.<sup>[33]</sup> Another meta-analysis found that healthcare workers in contact with affected patients had increased acute or posttraumatic stress (odds ratio [OR] 1.71) and psychological distress (OR 1.74).<sup>[34]</sup>
    - Physical illness including from COVID-19
    - Access to healthcare for physical and mental health issues: For instance, facilities may close to support physical distancing, and support may be more limited to phone calls which may be insufficient for some
    - Physical Inactivity: In 2016, global prevalence of insufficient physical activity was 81.0% in 11–17-year-olds<sup>[35]</sup> and 27.5% in adults,<sup>[36]</sup> which the COVID-19 pandemic is likely to further reduce
    - Other health risk behavior including tobacco/alcohol/drug use, poor diet, and excessive screen time
    - Life events including bereavement.
- Similarly, certain protective factors for mental well-being<sup>[6]</sup> are impacted during pandemics such as COVID-19 and include:
- Socioeconomic (see above)
  - Parental
  - Childhood: Secure attachment, child well-being, and social/emotional skills
  - Social including social network size,<sup>[37]</sup> social support,<sup>[38]</sup> social participation,<sup>[39]</sup> and social relationships<sup>[40]</sup>
  - General health and health behaviors (including not smoking, healthy diet, and physical activity)
  - Employment
  - Living environment
  - Engagement in leisure, culture, and the arts
  - Sleep

- Intentional activities and action for others
- Meaning, gratitude, autonomy, self-compassion, and religion.

Pandemics further disproportionately affect the mental and physical health of particular groups.<sup>[8]</sup> These include those with mental disorder, health professionals and carers, children and families, particular ethnic groups,<sup>[13,41]</sup> offenders, refugees, and older people, particularly in care homes.<sup>[8,14]</sup>

## PUBLIC MENTAL HEALTH INTERVENTIONS

Public mental health (PMH) interventions include mental disorder prevention, mental well-being promotion, and resilience promotion with many interventions resulting in economic benefits even in the short term.<sup>[6]</sup>

Mental disorder prevention occurs at three levels:

- Primary level addresses risk factors to prevent mental disorder from arising
- Secondary level involves early intervention for mental disorder and associated impacts as soon as they arise
- Tertiary level involves treatment to prevent relapse and action to both address and prevent associated impacts

Mental well-being promotion can also be defined at three levels:<sup>[6]</sup>

- Primary level involves promotion of protective factors for mental well-being
- Secondary level involves early promotion in those with recent deterioration in mental well-being
- Tertiary level involves promotion in those with existing and/or long-standing poor mental well-being.

Resilience involves negotiating, managing, and adapting to significant sources of stress and protects against mental disorder and poor mental well-being.<sup>[6]</sup> Resilience can be promoted through school- and work-based interventions.

Different PMH interventions are provided by various organizations including primary care, secondary mental healthcare, public health, social care, voluntary sector, schools, employers, housing, criminal justice, and others. Delivery of these interventions occurs at individual, community, and national levels with higher risk groups requiring more targeted approaches to prevent widening of inequalities. Coordination between different organizations and levels is required.

PMH interventions are even more important during pandemics such as COVID-19 to prevent anticipated higher prevalence of mental disorder, associated impacts, and poor mental well-being.<sup>[6,8]</sup> Mental and physical effects of COVID-19 can be prevented and reduced with higher risk groups, including people with mental disorder requiring more targeted approaches.

Primary prevention of mental disorder addresses risk factors. Particularly, important interventions during pandemics address risk factors outlined earlier including

socioeconomic inequalities, poverty, unemployment, debt, food insecurity, child adversity, violence, parental mental disorder, social isolation, and loss of social capital (including from quarantine),<sup>[31]</sup> work-related stress including by health professionals, physical illness including from COVID-19, physical inactivity and other health risk behavior including tobacco/alcohol/drug use, screen time, and poor diet.<sup>[8]</sup>

Secondary mental disorder prevention involves early intervention for established mental disorder and associated impacts such as COVID-19 as soon as they arise to minimize their effects.<sup>[6,8]</sup> Secondary prevention of COVID-19 in those with mental disorder involves early isolation of patients and staff with symptoms, appropriate use of PPE, testing of patients and staff, treatment and support, as well as tracing, quarantining, and testing of contacts.

Tertiary mental disorder prevention involves the prevention of relapse and associated impacts through evidence-based treatment, patient education, and action to address social isolation, health risk behaviors, and physical illness, including from COVID-19, socioeconomic issues, stigma, and discrimination.

Promotion of mental well-being is even more important during pandemics and includes interventions across different stages of the life course outlined below:<sup>[6,8]</sup>

- Starting well: Promotion of parental physical and mental health, infant attachment, parenting programs and support, and family intervention including parental reading to children
- Developing well: Preschool, school, and afterschool programs including digital-based
- Living well: Promotion of social interaction while maintaining physical distancing, physical activity, appropriate physical healthcare, financial interventions, neighborhood and housing interventions including access to green space, arts/culture/creativity, and mindfulness/yoga
- Working well: Flexible working, training, and online psychological approaches
- Aging well: Living-well interventions, psychosocial interventions, reablement, and addressing sensory deficits including poor eyesight and hearing.

The WHO has produced mental health and psychosocial advice on COVID-19 for a range of audiences.<sup>[42]</sup>

COVID-19 can be prevented through hand hygiene, respiratory etiquette, masks for symptomatic individuals, isolation and treatment of ill individuals, monitoring of healthy contacts, and environmental cleaning.<sup>[43]</sup> Early intervention for COVID-19 includes highly effective contact tracing and case isolation, which in most scenarios is enough to control a new outbreak of COVID-19 within 3 months.<sup>[44]</sup> Quarantine mitigates COVID-19 pandemic although early implementation of quarantine combined

with other public health measures including school closure, travel restriction, and physical distancing, is important to ensure effectiveness.<sup>[45]</sup> Countries that have been particularly successful in minimizing COVID-19 through such approaches include Germany, New Zealand, Singapore,<sup>[46]</sup> South Korea, and Taiwan.<sup>[47]</sup> However, quarantine and isolation are also associated with increased risk of mental disorder and poor mental well-being.<sup>[31]</sup>

## PUBLIC MENTAL HEALTH IMPLEMENTATION GAP

Despite the existence of evidence-based PMH interventions, only a minority of people with mental disorder receive any treatment even in high-income countries, even fewer receive interventions to prevent associated impacts such as the 7–25-year reduced life expectancy, while coverage of interventions to prevent mental disorder from arising or promote mental well-being is negligible.<sup>[6,48]</sup> This implementation failure results in population-scale suffering as well as a broad range of associated impacts and economic costs. It also represents a systematic contravention of the right to health.<sup>[49]</sup> The causes of the PMH implementation gap include lack of:<sup>[6]</sup>

- PMH knowledge and training
- Information about size, impact, and cost of the PMH implementation gap<sup>[49,50]</sup>
- Information about estimated impacts and economic benefits of improved coverage at national level<sup>[49]</sup>
- Appropriate policy targets to reflect required coverage
- Resource associated with lack of political will and/or understanding by those who allocate resources: Despite at least 20% of global disease burden being due to mental disorder,<sup>[1]</sup> global expenditure on mental disorder treatment was less than 2% of general government expenditure.<sup>[48]</sup>

During pandemics, this PMH implementation failure has even greater impacts. In addition to the global PMH implementation gap outlined above, COVID-19 presents a further triple global PMH challenge;<sup>[15]</sup> the first challenge, to prevent associated anticipated increased mental disorder and reduced mental well-being across populations; the second, to protect people with mental disorder from COVID-19 and associated impacts given their increased vulnerability; and the third, to provide appropriate PMH interventions to staff and carers looking after those with COVID-19.

Before the COVID-19 pandemic, there was already a compelling need to address the failure of scale implementation of evidence-based PMH interventions given the associated impacts and economic costs. Since COVID-19, the case for scale implementation has become even more urgent.<sup>[15]</sup>

## PUBLIC MENTAL HEALTH PRACTICE TO ADDRESS THE IMPLEMENTATION GAP

PMH practice including during pandemics such as COVID-19 is a mechanism to prepare for and address the implementation gap in the short and longer term in several steps:<sup>[6,8,15]</sup>

1. Assessment of size, impact, and cost of the current and future PMH intervention implementation gap taking into account COVID-19 and including information for higher risk groups
2. Estimation of impact and associated economic returns from improved coverage of PMH interventions<sup>[49]</sup>
3. Use of information from steps 1 and 2 to inform national policy and transparent decisions about acceptable levels of national coverage of different PMH interventions. This in turn informs the level of provision, required resource, commissioning, and coordination between providers of different PMH interventions
4. Communication to the general population, higher risk groups, and different health and allied professionals to improve awareness and reduce distress associated with uncertainty
5. Operationalization of intervention implementation at national and more local levels
6. Evaluation of coverage and outcomes including for higher risk groups.

Population access to PMH interventions including during pandemics can be improved in the following ways:<sup>[6,8,15]</sup>

- PMH training for health and allied professionals: This can be online<sup>[51]</sup> and includes COVID-19-related issues and interventions to both address and prevent COVID-19 in higher risk groups, such as those with existing mental disorder
- Improving population knowledge about mental health and well-being including how to mitigate the mental impacts of COVID-19
- Use of digital technology: Many PMH interventions including treatment can be delivered digitally.<sup>[6]</sup> Digital technology can also support mental health of health professionals and carers,<sup>[52]</sup> reduce social isolation<sup>[53]</sup> including for carers,<sup>[54]</sup> address stigma,<sup>[55]</sup> deliver PMH training,<sup>[51]</sup> and support contact tracing.<sup>[56]</sup> However, a minority have no digital access and need alternative ways to receive such interventions to prevent widening of inequalities
- Settings and group approaches: A large proportion of the population spends much of their time in particular settings such as school and workplace where more than one PMH intervention can be delivered. During lockdown or quarantine, PMH interventions can also be delivered digitally to such groups, e.g., parent training programs,<sup>[57]</sup> school-based drug and alcohol prevention,<sup>[58]</sup> and interventions for employees.<sup>[59,60]</sup> Groups such as health professionals can be supported and prepared for both demands and psychological impacts before, during, and after events such as COVID-19 to minimize risks and enhance resilience<sup>[61]</sup>
- Integrated approaches to facilitate coordinated delivery of PMH interventions across sectors
- Maximizing existing resources such as self-help, task-shifting to less trained individuals, improving

concordance with treatment, and traditional healers, particularly in LMICs

- Application of relevant legislation to support implementation.

PMH practice improves coverage of interventions to treat mental disorder, prevent associated impacts, prevent mental disorder from arising, and promote mental well-being. This results in broad impacts across health, education, employment, and social interaction with associated economic returns even in the short term.<sup>[49]</sup> The impact of PMH practice and improved coverage of PMH interventions is even greater during pandemics such as COVID-19.

For this reason, PMH is recognized as a key issue. The WHO's Mental Health Action Plan<sup>[62]</sup> highlighted the need to promote mental well-being and prevent mental disorder as well as treatment and prevention of associated outcomes. It also stressed the importance of provision of comprehensive, integrated, and responsive mental health and social care services in community-based settings, as well as the need for effective implementation and strengthening of information systems. Similarly, the United Nations Sustainable Development Goals<sup>[63]</sup> made mental health a core part and committed to the treatment and prevention of non-communicable disease including mental disorder as well as the promotion of mental well-being. The World Psychiatric Association (WPA) 2017–2020 Action Plan focused on the contribution of psychiatrists to conflicts, emergencies, and adversities,<sup>[64]</sup> while the WPA 2020–2023 Action Plan has made PMH a central part including mental health needs assessments and improving provision and coordination of PMH interventions.<sup>[65]</sup>

## CONCLUSION

COVID-19 is likely to increase mental disorder and poor mental well-being with associated impacts and economic costs. A range of effective PMH interventions result in broad impacts and associated economic savings even in the short term. However, even before COVID-19, coverage of PMH interventions was poor with only a minority of people with mental disorder receiving treatment, far fewer receiving interventions to prevent associated impacts, and negligible coverage of interventions to prevent mental disorder from arising or promote mental well-being. There is a compelling case for population-scale implementation of PMH interventions which is even more important during times of crisis such as COVID-19. PMH practice is a key opportunity to improve coverage of PMH interventions and prevent associated impacts, human suffering, and economic costs. PMH practice should therefore be an integral part of the response to COVID-19.

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Nil.

## Conflicts of interest

Jonathan Campion has carried out mental health needs assessments for regions in England covering several million population for which his employer received payment.

All other authors declare no conflicts of interest.

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