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Journal
American Journal of Health Promotion, 35(2)

ISSN
0890-1171

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Publication Date
2021-02-01

DOI
10.1177/0890117120983982c

Peer reviewed

The Long Arm of Mental Health: New Urgency with the COVID-19 Pandemic

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Word count: 1,188

The outbreak of the novel coronavirus disease 2019 (COVID-19), its high death toll and uncertainty regarding how long it will persist, the socially isolating effects of distancing, and the subsequent economic impact have contributed to dramatic increases in psychological distress.[1] Given the near universal exposure to aspects of the COVID-19 pandemic, and the many forms of psychological distress (e.g., depression, posttraumatic stress disorder [PTSD], substance misuse) that can occur in response to traumatic experiences, researchers and public health professionals have emphasized the need to intervene to offset the mental health consequences of the pandemic.[2] These calls to action on mental health are separate from—but parallel to—those from the infectious disease community, which is focused on mitigating the spread of COVID-19. However, the independence of these efforts perpetuates a potentially dangerous competition between investing in interventions that promote physical health (e.g., by reducing morbidity and mortality from the virus) and those that promote mental health (e.g., by treating PTSD and other mental health conditions). Indeed, given the reality of limited resources, this framing creates a false dichotomy, implying we must attend to and choose between preserving either physical or mental health but not both. With the recent tremendous increase in methodologically rigorous research demonstrating that poor mental health—including in the context of traumatic stress—precedes and predicts chronic disease onset and premature mortality, such a dichotomy is no longer tenable. However, the pandemic throws into sharp relief the persistence of this dichotomization and the costs of continuing to view mental and physical health as competing for resources required to improve the public's health.

We and others have shown that experiencing high levels of psychological distress after a traumatic or severely stressful event increases risk of developing a range of physical health conditions, including several of the leading causes of mortality: heart disease, stroke, diabetes,

and dementia.[3] PTSD is the most well-studied form of psychological distress occurring as a consequence of trauma, but extensive research has shown parallel findings for depression, loneliness, and anxiety predicting adverse physical health.[4] Longitudinal research has also linked high psychological distress levels to drivers of chronic disease, including unhealthy behaviors like physical inactivity and poor diet and physiological factors like chronic inflammation.[3,4] This work has further suggested that even psychological distress occurring below clinically relevant thresholds can substantially impact physical health. Thus, mental health matters in its own right, but also because it serves as the "canary in the coal mine"—an early warning signal that physical health is at risk. If we take these findings seriously, the increases in psychological distress as a result of COVID-19 have sobering implications for chronic disease trends in upcoming decades.

Although it is generally accepted that the diagnosis and management of a chronic disease requires psychological adjustment, the idea that mental health influences physical health has long been debated, and significant skepticism remains. *We believe that we ignore the evidence that mental health is fundamentally intertwined with—and can serve as a foundation of—physical health at our peril*. It is time to take this idea seriously and allocate resources accordingly. First, we as a community—researchers and practitioners—need to stop viewing and treating mental and physical health as if they are completely independent of one another. The disease-focused institute structure of the National Institutes of Health, which sets funding priorities for much U.S. health research, contributes to this false dichotomy. Although some institutes have supported specific research projects at the intersection of mental and physical health, such work is often orphaned, considered outside the purview of any one institute and therefore not taken up for funding. More funding opportunities targeted at the intersection of mental health and chronic disease are needed.

Second, we need to advance research on whether effectively reducing psychological distress improves physical health outcomes. We found a cardioprotective effect of PTSD remission in a large community-based sample of women; women with remitted PTSD symptoms did not exhibit the elevated cardiovascular disease rates of those with ongoing elevated PTSD symptoms.[5] Another study showed veterans with PTSD who exhibited clinically meaningful decreases in symptoms subsequently had a lower risk of incident type 2 diabetes compared to veterans with minimal or no PTSD symptom improvement.[6] However, these results are based on observational data rather than randomized controlled trials examining effects of successful treatment of psychological distress on subsequent physical health outcomes. Such studies are possible given that evidence-based treatments are available for PTSD and other forms of psychological distress. Important remaining questions could also be addressed by including assessment of chronic disease or disease-related biomarkers as secondary outcomes in mental health treatment trials.

Third, we need to communicate more effectively about the importance of psychological well-being for population health. Conveying this message to a range of audiences, including healthcare providers, payers, employers, policymakers, and the public, has the benefit of reducing the stigma frequently attached to experiencing PTSD and other forms of psychological distress, motivating the integration of mental and physical health care services, and reducing the sense that mental and physical health must compete for resources. Effectively communicating this message will also increase political will to prioritize prevention and early determinants of population health, and thereby allocate resources to address structural and other factors that shape risk and resilience. Notably, many structural factors that have resulted in disproportionate

burden of COVID-19 on low-resource communities are also known to adversely affect mental health.

The pandemic exposes some hard truths about our health system and health priorities. In our current system, mental and physical health are treated as separate entities, addressed by different medical and public health disciplines. However, we must now attend to mental health in order to promote a sound mind and body. During this time of much uncertainty and fear, we see a unique opportunity to harness our increasingly sophisticated understanding of the inter-relationship between mental and physical health. Reducing the mental health burden of the COVID-19 pandemic has the potential to have lasting benefits for mental *and* physical health. Already researchers are mobilizing the evidence base to address the mental health impact of COVID-19,[7] pointing to phased intervention approaches to meet differing needs of affected individuals. Mental health interventions at the individual-, organizational, and population-level should be prioritized and supported not only to mitigate acute psychological distress, but also to evaluate whether and how such interventions improve subsequent physical health. Additionally, effects of other population-wide interventions (e.g., economic stimulus package) that are not targeted specifically at mental health but have substantial implications for health and functioning should be evaluated.

While considering mental health in the context of the COVID-19 pandemic is particularly relevant now, this is not the only context in which these considerations and efforts will have impact. Indeed, the vast majority of individuals will be exposed to a trauma during their lifetimes, with sizeable proportions subsequently experiencing psychological distress. By recognizing the critical interplay between mental and physical health, debunking the false dichotomy between them (and the corresponding competition for resources and attention), and

identifying upstream social determinants of how these relationships play out, we can make more substantial progress to improving population health in the context of a pandemic and beyond.

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