Psychological Science and COVID-19: An Agenda for Social Action

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This report summarizes what is known about the psychological impact of the COVID-19 pandemic and proposes ways for psychology organizations to engage in addressing pandemic-related challenges. A stress and coping framework is used to describe key factors that account for mental health difficulties resulting from the stress of pandemics including the pandemic course, political leadership and public response, cumulative stressors, risk and protective factors, and coping strategies. Psychology organizations could do much to provide help particularly to vulnerable healthcare and frontline workers, the elderly, and those socially isolated. They could offer clinical services and design prevention programs, train non-professional community workers to provide mental health first aid, assist NGO’s and political leaders, and translate basic research on psychological factors that influence acceptance of public health measures. The pandemic occurs at a time of advanced connectivity that provides an opportunity for (a) scientific information exchange, (b) alleviation of distress of social isolation, but also (c) infodemic, unprecedented spread of hoaxes and online incitements to non-compliance with preventative measures. Psychology’s role is not limited to addressing mental health needs but also includes promoting adjustment to changes in the economy, education and employment, and developing effective communication strategies that encourage acceptance of public health measures.

From time to time, the world suffers serious public health emergencies that are immense in scope and that have profound and deleterious consequences for individuals, families, and communities. With the COVID-19 pandemic, the entire world has struggled with an emergency that is unusually challenging, ubiquitous, and cataclysmic for health and well-being (Li et al., 2020). Through this pandemic, the world is tragically reminded of its interdependence and common destiny. Because of the scope and breadth of its impact, the most effective responses require the involvement of multiple nations, disciplines, professions, and communities. The aim of this article is to suggest actions psychological organizations can take to mitigate the pandemic effects on mental health. Psychology as a science can illuminate the cognitive and emotional processes underlying human responses to catastrophic events and the factors that shape the concomitant stress responses resulting in impaired functioning. As a profession, it can help to heal suffering and promote strategies that encourage resilience in the face of trauma. Accordingly, psychological organizations have much to offer with respect to mitigating mental health problems, but the nature and range of their contributions will vary depending on their available resources and their current functions. We first theorize about the key factors that account for mental health outcomes using a stress and coping framework that articulates the relationship between pandemic stress and mental health and the factors which moderate that relationship. Next, we propose a range of possible activities for organizations in keeping with their capacity and their ability to garner assistance from better resourced and more experienced peer organizations.

Stress and Coping Framework

Stress and coping models have been used widely to theorize about the outcomes of
The COVID-19 pandemic has altered life in significant ways and increased stress levels.

in response to life-threatening childhood illness (Barbarin & Chesler, 1986; Barbarin et al., 1985). Figure 1 presents this model as adapted for the COVID-19 pandemic. It proposes that mental health outcomes are principally a function of the individual’s stressful experience and their coping strategies as moderated by cumulative risk and access to resources that offer protection. Included in this adaptation is the role of political leadership, public response, and the developmental course of the pandemic in moderating the experience of stress and, in turn, its influence on coping. The likelihood of poor mental health outcomes will be affected by a combination of each of these factors.

Stressors

The COVID-19 pandemic has altered life in significant ways and increased stress levels (Piefkerbaum & North, 2020). In a representative survey of English adults, the most common sources of distress arising from the crisis were social isolation (20%), anxiety (11%), and financial concerns (10%; Worsley & Williams, 2020). For the sake of discussion, the sources and nature of pandemic-related stressors will be categorized as medical, economic, interpersonal, and existential (Barbarin, 1987).

Medical stressors result from fear of infection and the inability to protect oneself and loved ones. It is exacerbated by a lack of genuine knowledge about the virus, lack of protective equipment, limited availability of tests for the virus, and more general risks to health and life (Piefkerbaum et al., 2012). Perhaps most detrimental of all is the possibility of death for those who become infected.

Financial distress arises from the loss of income because of business closures during stay-at-home orders or quarantine. For many, the COVID-19 pandemic represents a reversal of fortune and a loss of hope. The economic gains of the last decades that have pulled many people out of poverty have been reversed and forced many back into economic privation and despair. For some, the economic stress is worse because, perhaps for the first time, they have become dependent on others for the provision of life’s necessities of food and shelter (Soklaridis et al., 2020).

Social/Interpersonal stress occurs from isolation and a loss of the interactions that normally occur at work, in school, and within the community (Worsley & Williams, 2020). Social isolation and loneliness are even greater sources of distress than is the fear of infection (Holmes et al., 2020). Stigma also arises for those who have or are known to have been infected with the result that these victims are avoided, feared, and perhaps targeted for physical harm (Soklaridis et al., 2020). Moreover, heightened fear and concern about the danger has a contagion effect, impacts identity, and exaggerates in-group versus out-group distinctions leading to an increasing fear of and violence against the out-group (Johnson & Tversky, 1983). This contagion process may have played a significant role in the increased xenophobia and stigma that has occurred during previous pandemics such as those of HIV and SARS (White, 2020). Especially troubling is the separation from loved ones and the inability to comfort family members in need. Loneliness and

Figure 1

Stress and Coping Framework

Note. Adapted from Barbarin (1987).
isolation are associated with increased morbidity and mortality particularly among the elderly (Holt-Lunstad et al., 2017; National Academies of Sciences, Engineering, and Medicine, 2020). These problems are compounded by the inability to engage in the usual social rituals and traditions including births, burials, spiritual/religious ceremonies, and occasions in which people gather to support each other in celebrating or mourning some significant event. These disruptions of mourning may extend the period of grief and bereavement.

Existental Stress The pervasive loss of control over life and livelihood and the imminent risk of death are significant impacts of the pandemic. Existential threats arise from the significant transformation of life resulting from school closures, job loss, and work-at-home and shelter place orders. It is fueled by a loss of typical activities and the numbing repetition of life in isolation and lockdown. This loss of normalcy and personal control spawns an uncertainty about life and represents an existential threat to well-being (Pfeifferbaum et al., 2012). It is wrapped in worries about personal safety and fundamental questions about the meaning of life. It gives rise to impatience and obsessive rumination about when the pandemic will end, and whether life will ever return to a pre-pandemic normal. All things being equal, the greater the stress relative to coping resources, the greater the risk of mental health symptoms and disorders.

Pandemic Course

Pandemics have a natural disease course that begins with the initial transmission and typically ends when “herd” immunity is achieved through a vaccine or population level exposure and survival. The duration and undulations of this course may vary depending on the virus and the public’s response to it. Most often it is marked by multiple waves of infection in which the spread of the virus appears to have been controlled only to surge again and again.

In the initial phases of a pandemic, individuals often lack crucial information about the virus: how it is transmitted, the risk to individuals, and the precautions that can reduce those risks. Consequently, individuals try to acquire as much information as they can. However, obsessive attention to media coverage concerning the disease and a constant diet of pandemic statistics often results in an exaggerated sense of personal risk and an increasing feeling of personal distress (Holman et al., 2014; Thompson et al., 2017). Up to a certain point, information can help relieve anxiety, but too much information may have the opposite effect and raise anxiety levels by elevating estimations of the danger and risks of infection and death for individuals.

As the pandemic persists, personal restraint and compliance with public health mandates become more difficult to maintain, especially in the face of the resurgent waves of infection after periods of optimism that the end was in sight. After only a few weeks, even those who were dutifully, if not cheerfully, compliant, grow tired, and resentful of the constraints of distancing and lockdowns, which have limited their freedom of movement and in many cases their ability to maintain their livelihoods. Caution fatigue sets in as people tire of all the behavioral accommodations that needed to be made to cope with the virus and to reduce its spread. This exhaustion then leads to increased risk tolerance in which people become willing to take chances and to ignore the simple health protective measures that would help keep the virus under control.

Two overarching categories of coping strategies are: (a) problem-focused coping and (b) emotion-focused coping.

Coping Strategies

Efforts to adapt to and manage the combined strains of the medical, financial, social/interpersonal, and existential strain of COVID-19, the repeated surges of infection, and effects of compliance with public health measures have been conceptualized as coping strategies. Two overarching categories of coping strategies are: (a) problem-focused coping and (b) emotion-focused coping. Emotion-focused strategies involve the behavioral and cognitive effort to moderate levels of anxiety and sadness through reframing and deflection. According to this model, emotion-focused coping includes denial, optimism, acceptance, distraction, and reliance on religious and moral beliefs.

Problem-focused coping involves seeking information and solving specific problems related to COVID-19 such as approaches to income generation and securing food. In addition, problem solving can be facilitated by help seeking strategies in which individuals reach out to others for assistance (Barbarin et al., 1985). Evidence from research on disasters suggests that encouraging the use of problem-focused coping strategies may pay the greatest dividends with respect to promoting psychological resilience when individuals have access to needed resources (Salzer & Bickman, 1999). This would include helping individuals to identifying specific needs, setting priorities, considering alternative approaches, seeking resources, and developing and implementing action plans. However, emotion-focused strategies may be more helpful when individuals lack control over the sources of their distress (Barbarin, 1987, 1990). This appears to be the case for many
and by physical activity (Worsley & Williams, 2020). The ability to utilize these strategies effectively may be constrained by risks or facilitated by factors that promote resilience. If the latter is dominant, individuals may bend under the stress but not break.

**Risk Factors**

The burdens and stress of COVID-19 are not evenly distributed across society. Occupational, social and economic status, gender, age, and pre-pandemic health status place some individuals at greater risk of experiencing distress and thus succumbing to mental health disorders. Members of these high-risk groups include health care workers, soldiers deployed to high infection areas, the elderly and the medically fragile, socially isolated individuals, persons with pre-pandemic mental health problems, and individuals and communities which are still recovering from previous traumatic events including natural disasters, wars, and humanitarian crises. Health care workers are at particular risk of psychological distress and burnout because of the overwhelming service demands, the shortage of medical supplies and public failure to observe health protective guidelines (Lu et al., 2020).

The elderly, their caregivers, and those with prior health conditions are especially prone to infection and stress. Among persons 65 years and older affected by the SARS virus in 2003, there was a 30% increase in suicide and more than half of those who recovered continued to experience anxiety (Yip et al., 2010). Loneliness associated with the social isolation of quarantine and social distancing measures can affect sleep, cognitive functioning, and exacerbate pre-existing psychological disorders (Cacioppo & Cacioppo, 2014). Psychological reactions to the pandemic were especially common among those who had had pre-pandemic emotional problems and those who had greater exposure to media coverage of the epidemic (Thompson et al., 2017). Soldiers, especially single enlisted men who were deployed to provide care for Ebola in West Africa, demonstrated higher levels of clinically significant depressive symptoms following deployment (Vyas et al., 2016).

Children and youth are not spared the emotional distress of the pandemic. During times of intense emotional distress, children rely on their parents for comfort, reassurance, and the provision of a safe base (Cassidy, 2016). The mental health of children may be compromised as highly distressed and overwhelmed parents are less available emotionally to help their children cope. The Center for American Promise (2020) surveyed a nationally representative sample of American adolescents and found that over half of the youth reported concerns about the physical and emotional health of their family as well as for themselves. These worries extended beyond health issues to concerns about their future education. According to this survey, one in four reported loss of sleep because of worry, feeling unhappy or depressed, feeling constantly under stress, and suffering a loss of confidence in themselves.

Populations in countries that have experienced the adverse effects of repeated disaster represent another high-risk group. In many parts of the globe, nations had barely recovered, if at all, from prior disasters when hit with the COVID-19 pandemic (Jo et al., 2020). The pandemic can be more devastating and more difficult to cope with for those persons still trying to piece their lives back together after devastating hurricanes, significant economic downturns or crippling recessions, insect and bacterial infestations that destroy subsistence farming, famine, political corruption and insecurity, and violent conflict to mention only a few. Their resources to cope both emotionally and materially are seriously depleted, and this makes meeting the new challenges of the pandemic difficult if not impossible to manage. The experience of cumulative stressors may adversely affect mental health (Catani et al., 2010).

Nonetheless, there is strong evidence that maturation and emotional growth do result from experience with prior stressors (Helgeson et al., 2006). These stressors may have caused the individual to evolve and to test prior coping strategies resulting in their being better prepared and more emotionally strong in dealing with the new threat. There is some evidence that cumulative stressors increase a sense of personal agency allowing the individual to cope more effectively with future traumatic events (Alisic et al., 2008; Calhoun & Tedeschi, 2006; Cryder et al., 2006). For example, some nations exposed to repeated crises have managed the pandemic more effectively than those without these cumulative stressors. In addition, inhabitants of nations that experienced previous epidemics such as SARS appeared to have benefitted and coped better with the COVID-19 pandemic (Gutierrez et al., under review).

**Protective Factors and Resilience**

In the midst of pandemics and other medical emergencies, several sources of resilience enhance the capacity to cope. How individuals and families respond to the stressors and ultimately the impact that pandemics have upon them are dependent upon the specific coping strategies they employ and the extent to which they are able to draw upon the resilience of the family to moderate the adverse impact. For some, coping is facilitated by dispositions and practices such as perspective taking, attunement to others, and the use of interpretive frameworks that permit them to sustain a positive outlook in the face of the disruptions to family, work, and community life (e.g., see Prime et al., 2020). The family’s ability to cope well is related to the belief system they foster to give transcendent meaning to the suffering associated with the pandemic (Prime et al., 2020). These belief systems enable family members to utilize effective emotion-focused strategies such as denial and acceptance. Ability to adopt a positive, hopeful perspective on life combined with assets such as emotional and material support from friends are critical to successful coping. Community level empathy and generosity are also sources of...
resilience that contribute to effective coping (Cook & Bickman, 1990). People may slow down, spend more quality time with their families, and rethink what is truly important and valued in their lives. They may express appreciation to helpful neighbors, essential workers and first responders. They may feel empathy for those made vulnerable by illness and economic strain. It is not uncommon to see a revitalization of community spirit and increases in a willingness to help others, even in neighborhoods where anonymity and lack of contact with neighbors were the natural consequences of busy lives. These positive developments offer signs of resilience in the face of the COVID-19 crisis.

Increased prevalence of mental health difficulties was observed in populations where the Ebola virus raged.

Accumulation and Pile up of Stressors: Risk or Protective Factor?

An interesting question in this context is whether the experience of pre-pandemic trauma and crises might contribute to personal growth that in turn fosters resilience. What are the impacts of recent traumatic events from which one is still recovering? If managed well, these recent stressors could be a source of growth, enhance coping, and lead to positive outcomes. Earlier hardships may provide real time opportunities to test and settle upon effective strategies for managing stress arising from later traumatic events.

It is also possible, however, that the pile up of previous stressors may deplete emotional reserves, leaving individuals drained and weakened in their ability to regulate arousal and, in time, increasing the likelihood of adverse mental health outcomes. If this is true, then they may be depleted by these multiple concurrent stressors and have a diminished ability to employ coping strategies which might reduce the adverse mental health outcomes. As with most issues related to human adaptation, success depends on a number of factors, some of which have been identified here such as governmental leadership, the course of the pandemic, the level of crises and stressors such as chronic poverty may render individuals less able to meet the challenges of the pandemic. On the other hand, it is possible that countries experiencing significant hardship may be toughened by their hard-won experience and have become more resilient as a consequence.

Mental Health Impact of Pandemics

Recognition of mental health consequences of pandemics has increased considerably since the 1918 Spanish ‘flu. Within months, the Spanish ‘flu spread worldwide, affecting young and previously healthy individuals and achieving a mortality rate between 10% and 20%. It was the first pandemic on which a body of research investigated both the short-term and the long-term effects in areas as diverse as educational attainment, physical disability, income, and socioeconomic status (Huremović 2019, p. 21). However, less has been learned about the psychological effects, perhaps because mental health was not a major concern at the time.

However attention to mental health had increased greatly by the time of the HIV/AIDS epidemic in the early 1980s. HIV/AIDS was marked not only by its high mortality rate, but also by the associated distressing social processes in which the gay community was isolated, blamed, and stigmatized (Huremović 2019, p. 22). As a consequence of addressing the social sequelae in real-time, the psychological literature on HIV/AIDS is comprehensive, revealing the multiple impacts of the epidemic. Studies from this period include the prevalence of psychological disorders among people affected by HIV. They also shed light on substance use and abuse, guilt/shame, and details regarding the adherence to treatment protocols. Initially, psychological treatments were generic and based on existing treatment modalities which were not tailored to deal specifically with the psychosocial sequelae of HIV. Moreover, in working with persons diagnosed with HIV, psychologists gained valuable knowledge about the many different sources of distress that contributed to the design of more specific mental health prevention and intervention strategies (Wong et al., 2001).

The SARS (Severe Acute Respiratory Syndrome) pandemic beginning in the early 2000s became the next major challenge and was, from its inception, closely examined through a mental health lens (Chua et al., 2004). This work focused on the impact not only of individuals infected with SARS, but also on their families, the wider community, and health providers. Some studies particularly tackled the effect of isolation, the effect of surviving the disease, and the difficulties and consequences for healthcare providers in working with the affected population (Maunder, 2009).

Following SARS, the outbreak of the Swine ‘flu or H1N1 in 2009 affected around 10% of the global population. It was especially worrisome because of its rapid escalation of respiratory problems in otherwise young, healthy individuals. This outbreak was the first such crisis in which psychological research had a discernible influence on government policy, and in which provisions were made to include mental health services in preparedness plans and programs for disease mitigation (Huremović, 2019, p. 25). This attention on mental health was maintained with subsequent pandemics, namely the Ebola pandemic and the Zika outbreak, by having mental health research explore more specific factors such as the specific psychological effects of quarantine. Increased prevalence of mental health difficulties was also observed in populations living in areas where the Ebola virus raged (Thompson et al., 2017).

Natural disasters appear to have similar effects on mental health function. All of these factors in turn impact the likelihood that there will be severe mental health consequences. The most common sequelae include posttraumatic stress disorder, grief reactions, acute stress, chronic anxiety, depression, substance abuse, domestic violence, and suicide. In a recent meta-analytic review, Beaglhole et al. (2018) concluded that the risk of diagnosable psychological
disorders, specifically PTSD and depression, almost doubled among populations exposed to a natural disaster as compared to pre-disaster levels or to the levels observed among population who had not been affected by the disaster. Chierzi et al. (2014) surveyed the literature on natural disasters in Italy and similarly found clear evidence of significant psychological sequelae. Following pandemics and natural disasters, high rates of PTSD were observed, i.e., increased prevalence of mood disturbances and more recently of neuro-cognitive impairments in the case of COVID-19.

Mood Disturbances

Reports of psychological distress and functional impairment have been noted in pandemics before COVID-19. Over time an accumulation of mental health studies has provided a clear understanding of the pervasive mental health effects of pandemics. Given the high level of uncertainty and distress associated with these, it is not surprising that PTSD is among the most commonly observed mental health sequelae, closely followed by the mood disorders. For example, Zhou et al. (2020) examined the mental health effects of the novel Coronavirus in China and found that PTSD was common. Ueda et al. (2020) note that the Coronavirus not only placed individuals at increased risk for PTSD but was also associated with trauma that increased the risk of suicidal ideation, suicide attempts, and suicide completions both among the general population and among healthcare workers. Studies in countries around the globe have pointing consistently to the pandemic’s impact in terms of increasing levels of anxiety, post-traumatic stress disorder, bereavement and grief reactions, depression, and suicide (Pfeiferbaum et al., 2012).

Mood disturbances, specifically anxiety and depression disorders along with PTSD appear to be the most common mental health sequelae. For example, in a study of a nationally representative sample of 1,041 adults in Ireland, the overall prevalence rates or for mood disorder was 27%. Specifically, for Generalized Anxiety Disorder the prevalence was 20% and for depression it was 23% (Hyland et al., 2020). Moreover, Xin et al. (2020) specifically noted an association between forced quarantine during the COVID-19 outbreak in China and increases in depressive symptoms and suicidal ideation.

Like adults, children are adversely affected by pandemics and natural disasters (Racine et al., 2020). The most common long-term negative consequences are similar to those noted in adults, e.g., PTSD symptoms, anxiety and generalized distress, major depression, suicidality, but can also include behavior disorders (Silverman & La Greca, 2002). Jiao et al. (2020) surveyed the parents of 320 children and adolescents in China regarding the mental health functioning of their children. In this survey parents report a range of reactions symptomatic of anxiety (worry, agitation, nightmares, fear for the health of relatives, obsessive request for updates), and depression (fatigue, poor appetite, sleeping disorders irritability, inattentiveness, clinginess). Liu et al. (2020) found similarly high rates of depression, anxiety, and somatic symptoms in a survey of 209 primary school students. In a study of 1,784 Chinese primary school children, 23% of children had elevated depression score, and 19% reported high levels of anxiety (Xie et al., 2020). Zhou et al. (2020) surveyed over 8,000 Chinese high school students. Across the entire sample about 44% reported depressive symptoms and 37% reported symptoms of anxiety. Girls, older students, and students residing in rural areas reported significantly higher levels of both depression and anxiety than their counterparts.

Cognitive Impairments

There is growing evidence that the Corona virus and its treatment may directly affect the brain leading to effects on the brainstem and other brain regions, thus culminating in respiratory failure. The virus can also trigger exaggerated immune responses that lead to further cognitive and neurological problems (Holmes et al., 2020). In a U.S. based study of 509 patients consecutively admitted to a Midwestern hospital system with COVID-19, 82% showed evidence of neurologic disturbance at some point from symptom-onset throughout their hospitalization (Liotta et al., 2020). Neurologic disturbances included myalgia, headache, confusion, dizziness, and encephalopathy. Almost one third of those with neurologic disturbances had encephalopathy or impaired mental functioning in the form of diminished short-term memory, inability to concentrate, delirium, disorientation, and coma-like non-responsiveness. Whereas young people were more likely to have other forms of neurologic disturbance, the elderly were more likely to have encephalopathy. Encephalopathy appears to have a negative impact on the ability to carry out normal activities without assistance after discharge. Moreover, encephalopathy was found to predict a more severe disease course, longer hospitalization, and a lower probability of survival. Males were at greater risk than females of experiencing encephalopathy (Liotta et al., 2020). Moreover, individuals who have recovered from the COVID-19 infection may not return to their pre-infection level of functioning. Many suffer post intensive care syndrome which may include neuropathy and possible cognitive impairments in memory, attention, visuospatial perception, and impulsivity. Other reported post recovery symptoms include brain fog and sleep disturbances. These may however be the iatrogenic aftereffects of intensive care treatment (Stam et al., 2020).

A Social Action Agenda for Psychology

Although the anguish, somatic and emotional consequences of pandemics are serious, for most people they do not rise to the level of diagnosable disorders which have been estimated to occur in about 17% of the population (Salzer & Bickman, 1999). The likelihood of the occurrence of severe problems is a function of factors such as those proposed in the stress and coping model (Barbarin, 1987).

The stress and coping model proposes several moderating variables that may provide targets for interventions which may
reduce the likelihood of the adverse impact of the pandemic on mental health. These moderators are stressors associated with the disease course especially with the multiple surges in infections, information overload, and caution fatigue occurring during an extended disease course, the quality of leadership and public response to it, and the mental health risks and protective factors. These moderators represent potentially malleable factors that might serve as the focal point of psychology’s engagement in helping to minimize long-term mental health problems arising from pandemics. Psychology may play a role in helping to anticipate and minimize caution fatigue, help fashion more effective communication strategies from leadership, develop intervention strategies for high risk groups, and promote and strengthen social assets such as social support.

Psychological factors such as motivation and self-regulation of emotions and behavior will largely determine physical health and emotional well-being until a vaccine or herd immunity controls infections (Janssen & van der Voort, 2020). By addressing these touchpoints, psychology can apply its expertise to promote optimal response to the pandemic. Its contribution can take multiple forms and be directed towards any of several audiences: the general public, high risk individuals with pre-pandemic mental health issues, the infected individuals and their families, health workers, socially and economically vulnerable individuals, governments, or human service organizations.

These contributions can be made by psychologists working individually or in groups, or by associations of psychologists. The focus here will be on the potential responses for psychological organizations, because their actions have the potential of being broader in scale and in influence. The actions can take the form of organizing direct clinical service or prevention programs, collaborations with NGO’s, consultation with governments, basic research, and mobilizing psychologists for regional and international initiatives (See Gutierrez et al., under review). Table 1 presents examples of activities that might be undertaken within each of these categories.

Critical to regaining emotional balance is mitigating the loneliness and isolation of individuals.

Direct Clinical Services and Prevention Programs to Reduce Emotional Distress

A major goal of psychological intervention during pandemics is to reinforce a sense of control and self-efficacy and to establish routines that can create a new sense of normalcy in spite of the prevailing abnormal conditions (Kalisch et al., 2017). Critical to regaining emotional balance in this context is mitigating the loneliness and isolation of individuals, thus reducing the likelihood of suicide and self-harm. Prevention programs may involve sharing insights about ways to cope with change, regain a sense of control, and to manage the stress of life disruption and losses using group support and by multimedia dissemination. Whether through direct clinical service provision or by indirect prevention programs psychology organization can help by:

a. providing assistance which mitigates the adverse psychological sequelae of loneliness, bereavement, loss of job income or educational opportunities, and the uncertainty that they produce.

b. helping in efforts to reframe the current conditions, recalibrating views about what is most important in life, and helping others to embrace the changes with courage and thus create a new sense of normalcy.

c. re-establishing neighborhood solidarity and a sense of community, fostering the community and/or patriotic spirit, and mutual support.

Psychological first aid is a basic, humane, and supportive response to suffering (mHGap, World Health Organization; WHO, 2016). It includes listening carefully, assessing basic needs and ensuring that they are met, encouraging social support, and protecting individuals from further harm. It is non-intrusive and does not require people to talk about their distress. Most often this work is performed by non-specialized healthcare workers who can be trained and supervised to deliver manualized cognitive, behavioral, and interpersonal interventions for depression, anxiety, and post-traumatic stress disorder.

Collaboration With NGO’s and Consultation With Political Leadership

Disbelief about the virus’s existence and cynicism about the dire warnings of experts also stand in the way of observing mandates that save lives. In addition to helping individuals manage uncertainty, fear, stress, and anxiety, psychology can also be useful in conceptualizing behavioral strategies to anticipate information overload, minimize caution fatigue, or combat stigmatization of the infected persons.

Psychological organizations can collaborate with NGO’s in the design and implementation of programs and offer expertise to governmental organizations to assist with the challenges they face in dealing with the pandemic such as public health messaging and campaigns to enhance trust and compliance with public health mandates. Collaboration could also occur among psychologists themselves in the form of mobilizing individuals and associations across geographical regions and national boundaries for joint action and the sharing of resources.

These outreach efforts can take the form of model program designs, policy briefs, or advocacy, for example of economic relief, to citizens whose livelihoods have been damaged by the pandemic. They can also be helpful in developing interview protocols for contact tracing or programs to establishing community networks of support based on mutual aid from citizen to citizen.

As part of collaboration and consultation, psychology organizations can provide technical assistance in program design and implementation. For example, they can provide training modules for non-professional helpers in active listening and basic problem solving. This assistance can be especially helpful to nongovernment organizations which are establishing new programs but may lack the in-house expertise for the design.
Table 1

Proposed Activities

Direct Clinical Services and Prevention Programs

- Offer pro bono direct services to individuals at high risk of mental health problems
- Train non-professionals to provide psychological first aid within the primary health care system
- Develop a mental health survival guide addressing loneliness, bereavement, loss of job income or educational opportunities and distribute using a variety of media
- Conduct forums and disseminate materials to help public understand and cope with pandemic-related loss
- Sponsor and promote psychology’s presence in multiple public media (newspapers, TV, radio, online, etc.)
- Design and implement of pandemic response and risk management.
- Propose program standards, strategies and guidelines for engagement by psychological organizations in mitigating the effects of the pandemic

Collaboration with NGO’s and Consultation with Political Leadership

- Work with Community based NGO’s to strengthen natural helping systems such as self-help and neighborhood support groups, e.g., for mothers of young children.
- Develop opportunities for adults and youth to be of service to others
- Advocate with government and foundations to expand clinical services and to meet residents’ need for material aid
- Collaborate with health and mental health organizations (e.g., WMHF, WHO, UNICEF)
- Convene scholars with expertise in social and cognitive psychology to fashion effective messaging around risks and protective measures, and information overload.
- Work with educators to develop and evaluate best practices in the on-line learning environment to improve students learning experiences during lockdowns and quarantines
- Prepare Briefs with guidelines and advice to federal and state governments, health systems, schools, businesses, e.g., promoting telehealth, in-person schooling, or safe leisure activities.
- Use a train-the-trainer models with community-based organizations to expand the number of people who can offer psychological first aid in pandemics and other crises.

Research for Evaluation and Planning

- Share databases and conduct meta-analyses of mental health risk factors
- Translate basic psychological research for use by key decision makers to communicate effectively about the behavioral and emotional challenges related to compliance with public health measures
- Prepare systematic reviews and conduct research to fill in gaps about pandemic mental health effects particularly suicides and other social ills as gambling, substance abuse, domestic violence and child maltreatment
- Implement studies to assess local responses to the pandemic (e.g., caution fatigue) and evaluate the effects of program and policy interventions
- Conduct studies on stressors, risk and protective factors
- Conduct longitudinal studies of the mental health outcomes of pandemics and natural disasters
- Conduct research on the effectiveness of different types of public health messaging
- Evaluate practices and approaches to delivering mental health resources particularly to socially excluded groups such as refugees, homeless, prisoners, persons with special needs and those living in rural areas with lower population densities.

Support and Build Capacity of Other Psychology Organizations

- Covene psychologists for joint regional and international action
- Create regional and multi-national crisis commissions to works across national boundaries on common problems and to share resources and approaches
- Develop strategies, standards and guidelines for actions to be taken in future pandemic and natural disasters that draw on lessons learned from prior pandemics and COVID-19
- Organize online biennial meetings coordinating psychologists to share knowledge and lessons from a selected region or from around the world
- Produce Webinars, toolkits, guidelines and publications and website that can be shared globally covering topics such as grief, domestic violence, self-help skills, grief and coping, maybe also loneliness, sleep disturbance, implications for ongoing education for students etc.
- Collect and disseminate examples (success and failures) of psychologists’ action in such emergencies.
- Form standing Regional and National Psychology Task Forces for responding to pandemic and future emergencies.
- Help other psychological organization raise their profile in regions where psychology is not visible

and implementation of training needed to deliver those programs effectively.

Perhaps one of the biggest emerging opportunities for helping lies in the use of online resources for sharing information on stress management for the general public and guidance for individuals struggling with psychological problems exacerbated by pandemics. Direct services could be offered through telehealth in primary health care settings or through collaborations with institutions serving high risk populations such as nursing homes and schools.

Other topics could include suggestions for parenting and caregiving; coping with grief, maintaining productivity at work, facilitating physical distancing and isolation, managing anxiety, trauma, and PTSD; the need for self-care and minimizing stigma and xenophobia. It could also provide specific tips for quarantined parents about caring for, entertaining, and playing with their children to reduce stress and anxiety of their own and concomitantly of the children themselves, working with educators to provide resources for home schooling that are based on solid learning principles, providing guidance for practicing psychologists regarding maintaining services previously offered, and in how to create and manage group or individual psychotherapy offered via telehealth. This guidance specifically helps in making the transition from in-person therapy to online interventions.

The Sphere Standards for humanitarian response in crises (Sphere Association, 2018) offer guidance for responding to the mental health needs of persons affected by pandemics and natural disasters and humanitarian crisis. The Standards underscore the need to provide acute emergency services and where feasible, train and supervise non-specialists; an example of which is the WHO mhGAP program which aimed to scale up mental health services through the use of lay persons in primary care centers.
community centers, and other locations to provide basic mental health support (WHO, 2016). This is achieved in part by breaking the tasks of counseling down into their essential components, e.g. active listening, using open ended questions, reflecting, and empathic responding (cf., Patel et al., 2011). Moreover, the reach of community mental health workers could be expanded by using cell phone technology (texts, audio messages, video calls) to provide mental health and substance abuse services, to facilitate mental health assessment, maintain contact over long distances, organize self-help groups, and to supervise community mental health workers (Naslund et al., 2017).

**Research for Evaluation and Planning**

Research and evaluation are areas of particular expertise that psychology organizations can bring to the table to address the need for information about the pandemic’s impact and the effectiveness of programs and strategies to mitigate the adverse impact on citizens. Basic research should be conducted on the critical psychological processes that underlie the mechanisms associated with gaining compliance. Over successive surges in the number of infections, the public grows weary and lessens its resolve to practices safety measures. Psychological knowledge and practice can play a significant role in helping populations to cope with pandemics through the combination of clinical intervention, public education, and prevention programs (Wong et al., 2001). However, there is still much to learn about the impact of threat perception to toleration of restrictive measures, the role of political and community values in shaping compliance, particularly regarding the tradeoffs of individual liberties and the common good, and the value of transparency and the participation of the citizenry in decision-making. Psychology can also assist with the development of public health strategies to increase public understanding, acceptance of and compliance with directives such as the use of protective gear, stay-at-home orders, physical distancing, and altering accepted social interaction patterns such as avoiding handshaking to reduce the transmission of the virus. Researchers could also investigate the factors that shape young adults’ perceptions of infection risks; infected persons’ reluctance to cooperate with contact tracing and seeking medical attention out of fear of hospitals which are perceived as “death traps.”

Some psychological organizations may not be developed enough or have sufficient resources to carry out these functions on their own. Table 1 offers suggestions about ways that organizations which are better resourced can be of help and in this way have an even greater impact on global efforts to mitigate the impact of pandemics.

**Conclusion**

Appreciation of the mental health consequences of the pandemic has matured greatly since the ‘flu pandemic of 1918. The medical concerns themselves along with the requirement for home confinement, social isolation, and economic disruption each give rise to emotional distress and the increased risk of mental health problems. Yet most people do not experience an enduring mental health disorder as a consequence of pandemics. Salzer and Bickman (1999) estimate that the prevalence of new disorders following a pandemic is low. Whereas PTSD and Major Depressive Episodes account for the largest increases, other commonly occurring sequelae include Substance use, Generalized Anxiety Disorder, Suicide, and Somatic Complaints (Goldmann & Galca, 2014). The likelihood of suffering a disorder is influenced by multiple factors including the course of the pandemic and the government response to it, the presence of risk and protective factors, and the effective use of coping strategies. When these can be optimized, individuals can become resilient in the wake of traumatic events such as pandemics. Given the possibility for increasing population resilience and mitigating psychological problems, it is imperative that psychological organizations deploy their expertise and share their knowledge in the service of humanity. In some respect, our model provides an agenda for social action. It identifies several specific modalities for engagement that range from basic and applied research to the provision of clinical services and consultation. These can be used to target outcomes from mitigating suffering and improving mental health of individuals to population level efforts to assist governmental and non-governmental organizations in creating a climate in which the public embraces the measures necessary to stem the tide of infections. As psychology has matured as a mental health science and profession, systematic initiatives must continue to emerge from its professional associations to marshal that knowledge and experience to moderate the adverse sequelae of pandemics (Taylor, 2019). The nature and range of their contributions will vary depending on their available resources and their current functions. Here we have proposed a range of possible involvements for psychological organizations in keeping with their capacity and ability to garner assistance from better resourced and more experienced peer organizations. Clearly, highly resourced and structured organizations have the capacity to operate across each of the three domains that we have identified. On the other hand, low resourced organization still have much they can accomplish especially in smaller countries where their knowledge of the cultural context may be deep, and they may have easier access to government policy makers than is likely for psychology organizations in larger more developed countries. With help from and in coordination with larger organizations, it is possible for smaller organizations to leverage additional resources and have a tremendously powerful impact on their countries and regions.

**Keywords:** pandemics, natural disasters, COVID-19, psychological sequelae, psychology role

**References**


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