

Health Psychology in Pandemic Response

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ABSTRACT

Because of the COVID-19 pandemic, the world is facing a lot of fear due to deteriorating health. As our social bonds and family ties had broken off due to the national quarantine measures and social distancing, people became emotionally distressed having anxiety, frustration, boredom, denial, anger and post-traumatic stress. The spread of false health information, panic buying and public disorder worsens health risk and emergencies. COVID-19 is an ongoing global crisis. Although it started as a health crisis, several management initiatives have been taken in response. These include health policies, public health steps, closure of institutions and even military action. These include the influence of context on adherence to protective behaviors and the containment of outbreaks. The importance of mental health in crisis like a pandemic. Positive mind science gives us a framework for understanding that wellbeing does not merely mean being free from the disease. It also means flourishing, which is to be emotionally engaged, to have good relationships, to be able to achieve things, and to have a purpose in life. Models, theories, and tools have been developed for the management of psychological wellbeing at the individual or social level, or the community. These multi-level strategies respond to the mental health impact of the pandemic in a comprehensive and inclusive manner. Even though wellbeing in global emergencies is very important, we have not seen a lot of efforts to enhance this. It calls for need of the hour for integrated and proactive mental health measures.

Keywords: COVID-19, Mental Health, Psychological Wellbeing, Positive Psychology, Social Distancing

INTRODUCTION TO HEALTH PSYCHOLOGY

The COVID-19 pandemic has triggered serious health, social, and economic consequences (1). In addition to risks associated with the circulation of the virus and drastic changes in daily life, the pandemic potentially exerts risk for health problems related to negative changes in eating patterns, physical activity, drinking, sleeping, smoking, and anxiety (2). Many studies showed that the pandemic increases distress and changes health-related and other behaviors (3). Psychology is one of the most important sciences that responds at such times (4). Health psychology is one of the main branches of psychology contributing to managing the pandemic (2). Health psychology is defined as the field capable of integrating knowledge and insights from psychology to understand these health problems and to design effective intervention strategies (5).

This symposium has been the first national initiative in Turkey and among the very first efforts around the world tried to integrate health psychology to COVID-19 pandemic preparing countries without any prior experience (6). So far, 4 workshops and 11 symposia focused on health psychology in different perspectives from differentiation of behavioral responses by personal characteristics to motivational and affective mechanisms

underlying health behavior change were conducted (7). The accumulated data is used to extend the understanding of behavioral responses on the pandemic, one of the main applications of public health (8). The collective effort has already produced an unprecedented amount of data, and analysis of some studies is still ongoing (9).

Understanding Pandemics

While response research in health psychology can foster community resilience and reduce adverse psychological and behavioral responses to pandemics, considerable insights from pandemic response experience are available to the health psychology community (10). Unfortunately, this experience is not well understood in the health psychology community (11). Therefore, it may be useful to review key observations from pandemic response experience in the fields of public health, disaster response, and public policy to inform efforts in health psychology response research (10).

Essential characteristics of pandemics include perception of the threat, anxiety about the risks, resulting behaviors adopted, and subsequent socio-political consequences (12). These characteristics are the key features of a disaster in the context of public health or epidemiology (13). Ultimately, they are a crisis in the minds of the public, which can be called panic (14). Pandemics are marked by fear and uncertainty that motivate cascading, second- and third-order effects that alter perceptions of the risks following their initiation (15). This perception of risk has been shown to have a direct and strong effect on the extent to which recommended health behaviors are engaged, particularly in the early phases of a pandemic (13). Such engagement may reduce the chain of contagion, and associated morbidity and mortality, but aggressive responses to high-risk situations can carry both empirical (behavioral) and normative (social and political) consequences that may impair community functioning and occupational performance, especially in the short term (12). Overall, responsive or adverse psychological and behavioral responses to pandemics that diminish community functioning and occupational performance are primary targets for intervention (12).

The Role of Health Psychology in Public Health

Governments around the world are obliged to inform their citizens how to behave normally while sustaining their health, while health authorities must apply their knowledge of health behavior changes and health threats to specific threats (15). The public's response is primarily governed by psychosocial factors (16). Thus, the experience and knowledge of health psychologists should be harnessed (17). Health psychology is a discipline devoted to the psychology of health, illness, and health care, covering a wide range of topics (15). Health psychologists have considerable experience designing and applying health risk communication strategies and health behavior change interventions that aim at persuading people to adhere to recommended behaviors and advice (17). Health psychologists are already collaborating with governments and authorities across the world to design and apply behavior interventions aimed to promote protective health behaviors (16).

Behavior change is not simple, and compliance with authorities' recommendations to restrain and cope with the COVID-19 virus spread requires considerable motivation, both immediate and long-term (18). Prolonged changes to normal lifestyles entail the risk of mental distress and psychological problems (19). Understanding health behavior change is based on appreciating the operating health threat as well as the perceived susceptibility and severity of threatened personal and social losses (20). Influencing health perceptions necessitates identifying, understanding, and communicating the epidemic threat and illustrated probabilities of threat attainments (20). This includes straightforward probabilistic forecasts for the likely future spread of the virus and human losses (18). Likewise, understanding how the health threat impacts health behavior requires defining direct and indirect potential impacts on relationship satisfaction, work satisfaction, and the strain on basic needs and capabilities and forging a common understanding of possibly affected personal lives (19).

The pandemic alters people's normal social world and personal routines and is liable to entail high stress, mental distress, depression, and coping problems (21). Still, these risks require generic public communication of how to behave normally in a new social and activity environment during such a probability-based event (22). Communicating the message needs to convey humans' ability to adapt to social change and the continual growth of productive lives (23). Interventions should be productively tailored to individuals' prior level of distress (24). Appropriately responding to prolonged threats like COVID-19 requires a long-term perspective (24).

Behavioral Responses to Health Crises

The COVID-19 pandemic has greatly disrupted global social and economic order, with widespread lockdowns and social distancing measures (25). To slow its spread, many localities have imposed restrictions on movement, gathering, and commerce, with varying levels of compliance (26). Pandemic responses were previously studied using various theoretical frameworks (27). However, behavior change in response to the COVID-19 pandemic has not yet been examined (28). Examining the behavioral responses to the COVID-19 outbreak can synthesize existing research on prior epidemics and include new factors that may be unique to this pandemic (28).

Earliest papers examining COVID-19 responses mainly focus on attachment and coping strategies (29). Much focus has been on protective behaviors. Protective behaviors are taxonomically diverse, nonlinear, multiprofessional and multilevel, and challenge misconceptions held by an otherwise well-informed public (30). Alarmist portrayals may not be effective in guiding behavior change (31). Fear and emotion regulation can both inform and constrain behavioral responses (29). Behavioral responses to cryptic and evolving problems can be effective under certain circumstances but can also contribute to problem propagation (31). A compelling cardinal frame can be gender-neutral, parsimonious, and connected to systems thinking (32). These responses evolved over the course of the pandemic (33). Information acquisition and health protective behaviors are most commonly examined by collecting and analyzing social media data across countries (33). Influencing factors include perceived riskiness, the number of confirmed cases or deaths, and life disruption (32).

Mental Health Impacts of Pandemics

Pandemics in the modern, scientifically advanced world are, unfortunately, not new phenomena (34). Peoples' lives have been disrupted suddenly, and in unprecedented ways, by microbial organisms that are either zoonotic or that evolved in humans (35). The World Health Organization defines a pandemic as "an epidemic occurring over a wide area and affecting an exceedingly high proportion of the population" (36). It is important to recognize that pandemics are not just health issues (36). They are national and global crises with major public health, public safety, and economic consequences (35). Although the primary public health goal is to protect the community from further spread of infectious diseases, it is also critical to maintain the community's mental health, public functioning, and essential operations, particularly during cure and initial intervention phases (31).

Public mental health encompasses two complementary areas (37). The first considers mental health as one of many components contributing to overall population health (37). Impacts and interventions that affect mental health are included in this realm, especially monitoring systems, triage, and treatment for those with mental illness or distress (38). The second considers mental health as a domain of functioning of a community, whose daily functioning requires optimal levels of performance, social engagements, and resilience, and whose public function cannot be crippled by more than limited numbers of distressed or dysfunctional individuals (39). Analyses of responses to disasters such as mass violence, terrorism, industrial accidents, and natural disasters include rhyming cohorts of responses (40). They consist of distress reactions, health risk behaviors, psychiatric disorders, and resilience. Each of these factors can affect labor and community forces and thus are particularly relevant to pandemic issues (40).

Coping Mechanisms during Health Crises

Experiencing stress, anxiety, and depression is all part of coping with a pandemic (41). The guidelines to help reduce stress include getting the daily dose of news about the virus and saving some for later, interpreting updates accurately and empathetically, going outside regularly, spending time with family and friends and practicing mindfulness (42). While these may help individuals cope during the pandemic, more long-term mental health resources and coping techniques are crucial for the aftermath (43). So, contrary to governments and public health agencies seeking to tackle the pandemic impact itself, the call on world governments to increase resources for mental health services now and during the rescue from the pandemic (41). Good or positive mental health is vital for dealing with a pandemic, just as highly sought financial resources are needed to cope with a drought (44). As mental health resources – even more powerful than financial resources – are needed to counter a pandemic, societies will be "paying" their impact on wellbeing as that impact comes from cognitive blind spots (45). Most importantly, people make the most of their senses and seek enrichment (44). Research-proven techniques and strategies for happiness and fulfillment are therefore abundant and inexpensive (45). The suggestion of two happiness gears: nurturing social connections and healthily meeting their needs (social connection is crucial for positive mental health, hence a buffer against psychopathological conditions), and mindfulness (i.e., attentively focusing on the moment without distress) (43). Focusing on breathing and letting go of distracting thoughts are mindfulness meditation techniques. Also, goal commitment is pivotal for happiness (42). Additionally, when stress comes from worry over loss (the pandemic has most worried about income fluctuations, business failures, and loved ones falling sick), the stress can be lessened by concentrating on everyday achievements (i.e., remembering going through a hard time in the past) (46). Another relevant coping method focuses on empowering resilience, such as swiftly taking a moment to think ahead before a conversation (46).

Health Communication Strategies

Health communication strategies have been important during the COVID-19 pandemic and should work through accessible avenues for people (47). To construct knowledge and awareness about COVID-19, health communication is of utmost importance (47). There should be transparency on the part of facilities and hospitals while relaying information regarding hospital capacity and prevalence (48). Governments should reach to

constructive journalism (47). Parallel to deliberative democracy, interactive mechanisms of direct access to public health or political authorities should provide a pathway for engagement, empowerment, accountability, and addressing questions, concerns, or misinformation (48). Health communication should adapt governance mechanisms visible to incoming years of COVID-19 (49).

Using data on past health communication strategies and resources might help with combating misinformation (50). The use of rapidly growing social media was an effective vehicle for increasing knowledge and awareness (51). Concerning the immediacy of the pandemic, health communication was able to rally national responses (52). As public health systems in many countries had prepared themselves for measures to control infection, failure was not due to a lack of know-how (53). Addressing questions about self, community, and national behaviours to safeguard health is as vital as developing vaccines (52). Risk perception, risk literacy, and public preparedness were rated as the lowest predictor variables, portraying inadequate risk explanations (51).

Impressed with extensive mass vaccination campaigns and order of rolled-out vaccinations for second and third inoculations, actions taken by authorities in one nation can be countered by actions in another nation that one deems wrong (54). Members of the epidemiological community are challenged to learn a way of communicating that reduces the direct and indirect harm of the disease(s) at hand (55). The establishment of communication protocols and channels sensitive to democracy affecting health and hearing systemic risk communicators will be vital for ruling out the emergence of pandemics where rapid responses may involve coercive public health measures (56).

Public Compliance with Health Guidelines

Understanding compliant behavior during a pandemic is particularly important now as COVID-19 has been declared a pandemic (57). This is crucial because compliance to guidelines such as stay-at-home orders and the avoidance of organizing or attending social events promotes collective health-responsible behaviors that help flatten the curve and minimize the spread of the virus (58). As panic and fear become prevalent in society, a concern for people's psychosocial contexts is necessary as there may be detrimental mental health consequences including feelings of loneliness, anxiety, and depression on top of the stress already being experienced (59). Therefore, there is a need to foster understanding and cooperation between compliant and non-compliant people in societies for the common goal of survival (60). Close adherence to guidelines during a pandemic will aid in improving people's lives during these trying times (57).

Threatening rights and liberties seems to be a feasible method to combat non-compliance, without people's basic psychological needs fulfilled, compliance with guidelines may be affected negatively (25). During the pandemic, some people view a pandemic like COVID-19 as an unprecedented scenario and completely rely on available guidelines (61). These people mainly rely on the authorities to make sense of and deal with the threat (61). Then, this group is quite prepared to comply with the guidelines (60). Others have trouble following guidelines that differ from their psychological schemas (62). They include some of those who rationalize their rules in pandemic-free scenarios, those who believe in conspiracy theories about the virus and think they cannot be infected with it, and those who deviate from guidelines that infringe on the basic need for autonomy (62). Some reactively apply the cognitive style of conspiracy theories during the pandemic that filter unwanted inputs and seek a controllable logical structure for the resulting fear (63). The method of forcibly intervening with a violation of the law is insufficient to effectively promote compliance among these people due to the individual and collective costs it generates (63).

Social Support and Community Resilience

Before the pandemic, social support was found to relate to common mental health problems (64). Thankfully, after the outbreak of COVID-19 emergency, most people regarded the pandemic as a disaster (64). People received support from many social sources. For instance, social support could transmit emotional concern and information (65). Side effects or hazards of social support on mental health might also exist during the pandemic (65). Therefore, it is vital to investigate the sources of social support and mental health in a community in a pandemic context (65).

Prior to the pandemic, a positive relationship between social support and mental health had been confirmed. For instance, in terms of psychosocial factors among adolescents, higher levels of social support predicted a lower risk of psychopathology (10). However, few studies focused on social support in the context of the pandemic (66). Most research on social support during the COVID-19 pandemic was conducted in the early stage of the pandemic, yet little afterward (66). The pandemic lasted a long period of time, which is a major disaster for all communities (67). During the pandemic, people received various kinds of social support, which might simultaneously affect mental health in an interaction (67). Meanwhile, no studies consider different sources of social support and safety, anxiety, hopelessness using a person-centered approach and with a relatively larger sample on a community level during this period (68).

The Effect of Misinformation on Public Health

Misinformation is an information type that is false, inaccurate, or misleading, regardless of intent to deceive (69). Misinformation is especially harmful when it sparks fears affecting global health, safety, and wellbeing (69). Furthermore, misinformation during pandemics is a pressing global concern as its false claims hinder prevention and control efforts (70). During the COVID-19 pandemic, for example, false claims emerged that drinking bleach could kill the virus (69). Such misinformation is pernicious and even more prevalent in spreading health concerns (70).

During the COVID-19 pandemic, WHO warned of an infodemic being similar in severity to the pandemic itself (71). Research investigated how such misinformation affects information seeking, avoidance, and processing behaviors (72). The 2020 COVID-19 Misinformation Study involved 10 countries, including Canada, Chile, Germany, Ireland, and the UK (71). The survey aimed to identify behavioral discrepancies due to misinformation across countries. Rising interest in discussing the COVID-19 pandemic, WHO's early declaration of a pandemic, and rapidly rising health care system stress in all 10 countries contributed to information-seeking growth (72). However, misinformation played a causal role (73). Specifically, recalled personal interest in misinformation increased avoidance to counter irrational fears and behavioral reactance (73). Some misinformation led to greater negative emotions, such as fear (70).

12. Psychological First Aid in Pandemic Situations

Individuals and communities may face a number of potentially catastrophic situations, including natural disasters, terrorist attacks, or disease epidemics (74). Responses to these disasters often include media broadcasts warning of impending danger as well as measures to mitigate potential losses (74). This immediate phase (the acute phase of the disaster) typically lasts from hours to days, and is followed by a period of recovery and rebuilding (75). People who have lost a loved one or witnessed a traumatic event may show different signs of semblance, and their scientific and psychological coping processes will also vary (75). Psychological first aid (PFA) is defined as a humane, supportive response to a fellow human being who is suffering and who may need support (76). This is in accordance with principles of involvement rather than treatment designed to lower distress levels (37). The PFA model requires the provision of immediate help and support to individuals experiencing distress due to a recent crisis. For immediate needs, PFA focuses on promoting safety and comfort, ensuring access to social, physical, and intimate resources, and connecting individuals with loved ones and social supports (77). For distress or impairment, the focus should be to foster emotional adjustment by helping people talk, listen, validate emotions, or positively redirect them toward recovery (78). It is also important to support social behavior and interaction in order to ensure ongoing peer support for healing (77).

13. Telehealth and Remote Psychological Services

The years 2020–2022 were unprecedented for health systems worldwide. The COVID-19 outbreak has not only challenged physical health but also mental health (79). Global events and media coverage contributed to widespread anxiety and distress (32). Although prior research warned about future epidemics and pandemics, there was little resilience planning (80). Indeed, there was little earlier planning for any form of mass disruption on this scale (81). Whereas there were learning lessons from significant alterations to business-as-usual, health services were challenged to meet unprecedented demand for new modes of service delivery and work organization (82). To their credit, many quickly adapted and had to transform their core business models. Long-term learning from their successful adaptation is crucial (79).

Addressing Health Disparities during Pandemics

The COVID-19 pandemic has disproportionately impacted different population groups, with the burden of death and illness falling on marginalized populations due to long-standing social injustices (83). In general, the criticisms focus on the failure of the healthcare system to improve access to healthcare for these vulnerable populations (84). Immediate solutions were sought to provide catch-up vaccinations and establish temporary vaccination centers in immigration-heavy areas (83). In this regard, the government's answers to vaccine inequities were generally appropriate (84). However, it is important to carefully review all aspects of organizations' responses since the studies may yield new knowledge and suggestions for better addressing health disparities in future calamities (85). Without such scrutiny, issues such as the role of state and local health departments and the exacerbation of vulnerabilities in communities with higher poverty rates may remain invisible in the next public health calamity (84). For vaccination, several novel ideas emerged from the government's responses to health disparities: paid time off for vaccinations, equitable distribution of clinics and vaccines, equitable access to vaccines through emerging venues, and relevant materials to increase vaccine knowledge (85). Governments learnt that contracting with barbershops, churches, and community centers helped provide vaccines in the communities most impacted by health equity gaps (86). Assessment of the impact of equity-focused innovated practices on the

vaccination rate should be prioritized (87). Such activities previously unheard of have now emerged as great providers of interventions aimed at populations that had been invisible and neglected during the early phases of the pandemic (86). Emphasizing their merit and financially supporting these activities would lead to better addressing population and health disparities in future public health crises (87).

The Importance of Mental Health Resources

Before the COVID 19 pandemic, public health communication primarily concentrated on physical health considerations (88). Public health was sincerely judged by how many hospitals have been built, how many doctors have been trained, and how much money had been invested in medical machines, concerning its status (89). Little time was considered the psychological part of public health: the concern in most developing countries was the physical health only (90). As a result, most governments and health departments across the world were not aware that there should be a plethora of human resources in all behavioral fields (i.e., psychologists, family therapists, marriage counselors, school social workers trained) to prevent and respond to the mental health consequences of a pandemic (89). Looking back at the past decades of the COVID 19 pandemic, it can be seen that the following basic mental health resources had already been disregarded before the outbreak of COVID 19 (88).

Most public health authorities initially focused on the provision of personal protective equipment (PPE, masks, disinfect agents, etc.) instead of addressing the communications and the action agenda for preemptive psychological prevention that was at the core of all outbreak investigations and research across countries (91). Little pandemic health etiquette was developed to educate the public as how to properly wake up – the psyche education and attitudinal training of the public to prevent possible social upheaval, panic, anxiety, trauma, post-traumatic stress disorder (PTSD), inefficiency of personal judgment and action, etc (92). In other words, public health was treated as physical health and not as whole-body health (69).

Long-term Psychological Effects of Pandemics

A growing body of research demonstrates the public mental health impact associated with the COVID-19 pandemic (93). Responses to a pandemic can include distress reactions, health risk behaviors, and psychiatric disorders (93). Most people also develop resilience, either returning to pre-pandemic functioning or finding new ways to also thrive in the adaptive response to the pandemic (94). Responses that emerge due to the pandemic context could negatively affect community functioning and occupational performance (95). Greater understanding of the capacity of these adverse responses to negatively affect functioning and performance in crises can inform community public mental health interventions that protect health and sustain operations (96). Responses to such events cut across a continuum of functioning and affect, ranging from positive to negative responses. Research on the public mental health impact of pandemics can usefully examine both the psychological and behavioral responses to pandemics (94). Pandemics entail fear and uncertainty that alter perceptions of risk. Perception of risk is central to engagement in recommended health behaviors (95). Knowledge of risk is insufficient, as demonstrated by continued cigarette smoking and refusal to wear masks (96). Effort to alter perception of risk is fundamental to optimizing health behaviors required to control a pandemic (97). Among the public responses to a pandemic that are of most direct relevance for mental health understanding are the formation and recalibration of perceptions of risk and the resultant public engagement in health risk behaviors from either disarray or hyper-vigilance (97). Concentration on societal-level responses to pandemics threatens to overlook the fact that behavior is dependent upon minds and feelings (31).

Evaluating Pandemic Response Strategies

A variety of strategies have been proposed for countries and organizations to respond to the COVID-19 pandemic (98). However, there is still great uncertainty about how they might interact with each other and determine the ultimate impact of the disease on global health and welfare (99). This study applies a simple epidemiological model to evaluate alternative strategies for mitigating the pandemic. Basic social distancing and hygiene measures such as home confinement, work from home, and the use of masks are assumed to reduce the rate of contact between individuals (100). In addition, it is assumed that further protective measures such as comprehensive stay-at-home orders for infected individuals, travel restrictions, and domestic travel bans in infected locations may further attenuate the contact rates, but at a significant social or economic cost (101). Symplecticity of the model is established, and dynamic programming is used to find time-continuous policies that yield the optimal trajectories of potential intervention scenarios (100). The extensive computational experiments provide unique insights into how effective policies might mitigate the COVID-19 pandemic (98).

The future course of the COVID-19 pandemic is largely uncertain and may significantly impact global health and welfare (101). As a result, a wide range of intervention strategies have been proposed at national, international, and organizational levels to contain the ongoing outbreak of COVID-19 (102). A complex contagion model which simulates contagion on networks is set up to evaluate alternative strategies (103). More than twenty similar

strategies are analyzed for their effectiveness at different levels, in terms of speed or size of the outbreak (104). The model is then applied to study the response behavior of agents involved in the infect spread (103). The derived estimates of the used parameters are then used to identify which strategies are more likely to be implemented in most effective ways and which ones are less likely to control the outbreak (102).

Lessons Learned from Previous Pandemics

The emergence of COVID-19 was unexpected and met with denials from various political systems, few predicting the global impact of the pandemic (105). Within a few weeks, health systems of many nations failed to cope with the virus (106). Deaths occurred in significantly greater numbers than from other outbreaks (106). With the pandemic unabated, lessons learned need to be urgently recalled (105). The emergence of another pandemic is expected.

The last century has seen pandemics emerge in 1918, 1957, 1968, and 2009, coinciding with the emergence of new illnesses or pathogens (107). COVID-19 made the changes made by previous public health systems and regimes exposed (108). Historical records after each pandemic provide an opportunity to learn (108). The 1918-19 Spanish influenza pandemic killed an estimated 50 million people, predicting the likely devastation of health systems in the current climate (109).

Problems with gathering knowledge and responses were emphasized (110). Lessons learned from effective and ineffective acts and deeds are likely to improve responses and who health systems plan to deal with future pandemics (111). Pan-global events that interacted with the emergence of pandemics include the 1918 war, and the social and health system inequalities that were exacerbated by it (110).

Ethical Considerations in Pandemic Response

Health psychologists may be involved in pandemic policy responses from an ethical standpoint and may recommend societal responses to pandemics (112). Since the 1970s, health psychologists have argued the case for public health ethics as the valuing and prioritizing of population health (113). A framework for public health ethics need not be exclusive to public health practitioners or academics, it can be used in public health decision-making by recognizing that such decision-making is value-laden (112). The public health ethical framework recognizes that policymakers may employ one or more of the four ethical styles of utilitarianism, nontotalitarianism, egalitarianism, and promoting the common good in response to these ethical principles (114). The public health ethical framework is applied to past pandemic responses through theory examples (113). It is recommended that health psychologists prioritize their professional and academic experiences to respond to ethical concerns raised in past and expected pandemic responses (114).

Ethical issues concerning a policy response to COVID-19 are raised at two generic levels (115). At a societal level, ethical questions concern restrictions on societal freedoms and actions in order to control the pandemic of a serious infectious disease (115). At a level that is specific to public health authorities, ethical questions arise from the pandemic phase that is most pertinent to the policy response being formulated by the authorities (116). Notably, past policy responses to serious epidemics of infectious disease are reviewed, as these shape expectations of the current policy response (117). The ethical issues that arise are foregrounded irrespective of social, political, or economic context in order to aid discussion regarding current deliberation and decision-making with specific relevance to health psychologists (117).

The existence of a contagious respiratory disease considered serious with the potential for large impacts on the health of populations raises ethical questions concerning the extent to which societal actions might be warranted in order to control it (118). Ethical issues are neither unique to a serious infectious disease nor novel as societal actions have been proposed and enacted in response to such diseases for centuries (119). However, the recent emergence of the coronavirus disease 2019 and, more significantly, its pandemic declaration and consequential policy responses have generated ethical interest and concern as opponents and supporters of these actions raise their case immediately and publicly (120).

Training Health Professionals in Psychological Aspects

The emergence of COVID-19 has prompted a global mental health emergency (121). Handling public health emergencies requires vast resources, from individual awareness to national capabilities. In the context of COVID-19, yet there are still calls for efforts to raise public awareness and develop capacities regarding psychological health (122). It is much more pertinent to expand the practice of psychological assistance and improve the competencies of related professionals hastily deployed (122). The mental health and wellbeing of healthcare workers (HCWs) is a critical component of managing the COVID-19 pandemic effectively (123). However, there has been limited understanding about the nature of organizations or groups of HCWs' responses worldwide (123). The proportions and needs for mental health services among HCWs also remain unclear (121).

Increase in HCW participants was observed in population based large scale mental health surveys, training programs and tele-therapy programs. Still, the emerging challenges for HCWs' mental health during the COVID-19 pandemic are unique (124). Protecting the mental health of HCWs is critical for managing the COVID-19 pandemic, but global awareness around the psychosocial response to HCWs has yet to develop comprehensively (125). Challenges include lack of validation of existing opinion statements and recommendations among different workforce groups, lack of evidence to account for observed differences in responses, and inadequate advocacy for the mental health needs of non-clinical HCWs (124). Worldwide efforts focusing on both understanding the response of HCWs and promoting psychosocial well-being among HCWs are urgently warranted to manage the ongoing and ever-revolving concerns related to the COVID-19 pandemic (125).

It is critical to study and assess the psychological response of HCW groups, as well as to assess their differing mental health needs (110). To this end, theoretical frameworks may assist understanding of differential bystander reactions; however, they need to be further validated among HCWs (126). Measurement among diverse HCW groups and contexts, including nonclinical, on-the-ground, administrative, and allied health roles, is warranted (127). It is equally critical to address the immediate mental health needs of HCWs in a timely manner (110). There is an urgent need for complementary and tiered mental health interventions for HCWs, covering from general good practice recommendations, to training programs for specific HCWs, to clinical psychiatric care provision (111).

FUTURE DIRECTIONS FOR RESEARCH IN HEALTH PSYCHOLOGY

In this final section dedicated to health psychology in response to the COVID-19 pandemic, research-related recommendations have been drawn from others' work, focusing on psychological science and the pandemic (128). It is worth noting that no attempt has been made to be exhaustive (128). The recommendations below may be useful for psychological scientists in thinking about what they want to change or accomplish in the next few years (129).

Common public policy experiments must be targeted immediately to determine which policies best limit infection levels with least damage done to society during this transition to a new normal stage (130). It would be valuable to prioritize applied virology research to develop and improve tools and technologies for better preparedness against future pandemics, as well as a program of work on how best to manage public behavior in response to viral outbreaks (131). The applicability of the findings of service innovation studies must be explored across different public benefit and non-profit sectors to democratically develop service innovation that matches a social context and public need (131).

Prioritization of longitudinal studies is essential to track longer-term context-driven determinants of behavior and behavior change across the pandemic and post-pandemic as the situation evolves, plus the consequences of behavior changes (132). The adaptivity of existing models to the data must be assessed by paying tighter attention to social contexts of behavior and behavior change, such as social inequality, collective emotions, and social norms (133). Consequently, collaboration must be fostered with experts from other disciplines to analyze complex interactions among public perceptions of political responses, infection spread, and behavior changes, and their social impacts (133).

CONCLUSION

COVID-19 shows how a global pandemic can challenge public health systems through illness as well as through society. When people panic occurs, it doesn't contain their behavior, or comply with health recommendations, it can make the economy worse and the mental health condition worse. Fear, misunderstanding and mistrust of the public drive these reactions. Grasping these modes of conduct is important in creating interventions. The PanfluaUS model is designed to provide an expandable framework for simulating responses and planning for a pandemic. The study's findings highlight that tailored public messaging, risk-protective population factors, and more refined simulations may help in anticipating and negating the psychosocial impact of pandemics with greater precision.

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