


Framing the meaning of COVID-19 and the psychological responses to it: Insights gleaned from selected theoretical approaches

Julia Gouzman^{1,2}, Varda Soskolne¹
and Rachel Dekel¹

Journal of Health Psychology
2022, Vol. 27(13) 3046–3058
© The Author(s) 2022
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/13591053221079178
journals.sagepub.com/home/hpq


Abstract

This viewpoint article reviews theoretical approaches that are relevant to studying COVID-19 and the psychological reactions to it. We suggest that the published research can be viewed from four major theoretical perspectives: as a stress situation, traumatic event, shared reality/shared trauma, and loss and grief situation. We detail the terms and the main theory/ies underlying each approach and suggest how COVID-19 characteristics and the its' psychological consequences may be conceptualized in accordance with each approach. Additionally, we discuss the challenges and facets of each theoretical conceptualization that should be addressed in further research, and the necessity of exploring implications for practice.

Keywords

COVID-19, grief, shared trauma, stress, trauma

Introduction

The outbreak of SARS-CoV-2, the novel coronavirus that causes COVID-19, first emerged in China at the end of 2019, and to date has affected more than 250 countries worldwide (World Health Organization, 2021), resulting in lockdowns, quarantining, and social distancing, undertaken to curtail the pandemic's spread. Correlations have already been found between health issues, the economic and social consequences of unemployment, loss of income, domestic life issues, and mental distress outcomes (Zhang et al., 2020),

which will likely last a long time after COVID-19's end (Goveas and Shear, 2020).

Globally, the COVID-19 pandemic has been linked with elevated psychological distress (Xiong et al., 2020). A systematic review and

¹Bar Ilan University, Ramat Gan, Israel

²Maccabi Healthcare Services, Ramat Gan, Israel

Corresponding author:

Julia Gouzman, Department Of Social Work, Maccabi Healthcare Services, Ramat Gan, 5268104, Israel.
Email: juliagouzman1981@gmail.com

meta-analysis showed considerable levels of psychological reactions among the participants of the studies in the reviewed articles: poor sleep quality (40%), stress (34%), and anxiety or depressive symptoms (34%). These rates were highest among COVID-19 patients, followed by healthcare workers (HCWs) and the general population (Krishnamoorthy et al., 2020).

The wealth of recent research makes an important contribution to understanding the extent of the pandemic's short- and long-term psychological consequences. However, after reading articles and exploring what was measured in the studies, our impression was that most of the studies lacked a theoretical conceptualization basis for understanding the reactions to COVID-19. Many studies focused on outcome measurements only (e.g. Zhang et al., 2020), and COVID-19 characteristics and their consequences were often interchangeably described using multiple terms, such as fear, threat, stress, trauma, health anxiety, grief, and more, with no clear conceptualization of their meaning. Moreover, a specific theoretical model informing the research model, the hypotheses, and subsequently the measures, was generally missing. For example, some articles examined multiple psychological distress outcomes and only background characteristics as explanatory factors (Xiong et al., 2020). In others, different concepts were used but a comprehensive research model was lacking (e.g. Liu et al., 2020), or the study was not based on an existing theoretical model (e.g. Bareket-Bojmel et al., 2021). Although a theoretical model could be implied from the selected measures, we believe that examining only the implications per se is not sufficient.

This theoretical deficiency can likely be attributed to the intensity of the period, the need for immediate research findings in order to produce data about this uncertain situation, or the complexity of the pandemic's dynamics and consequences. It may also be explained by the fact that mental health researchers feel there is no need for particular or specific theories addressing the COVID-19 pandemic, given that it is an unprecedented and global event. A lack of conceptualization and theoretical model may

impair our learning process and understanding of COVID-19, as well as our ability to suggest appropriate psychosocial interventions. A theoretical framework may better guide research and interventions in alleviating the consequences of the pandemic.

Therefore, the aim of this article was to review and propose theoretical approaches to guide the evaluation of COVID-19-related psychological reactions. We conducted a PubMed database search, including articles published between mid-2020 and early 2021. The key words were "psychological distress" OR "mental response" OR "stress" AND "COVID-19" OR "SARS-CoV-2," and the search was limited to articles in English. We sorted the articles by topic, identified the concepts/terms that were repeated, and then examined whether they relied on a central model to which the concept belonged. This process led us to suggest that the published research can be viewed from four major theoretical perspectives: COVID-19 as a stress situation, COVID-19 as a trauma, COVID-19 as a shared traumatic reality, and COVID-19 as grief and loss. The categorization of approaches was guided by the concepts and terms used by the authors and/or the theoretical source of the questionnaires/measurement tools used in the research.

In what follows, we detail the terms related to each approach used in these COVID-19 studies, outline the main theory/ies underlying each approach, and suggest how these COVID-19 findings can be further conceptualized according to the theoretical approach suggested in order to better understand the pandemic and its consequences. We discuss the challenges and neglected facets of each theoretical conceptualization to be addressed in COVID-19 research and the necessity of exploring the implications for practice. We assume that this process will contribute to a better and more comprehensive understanding of the phenomenon.

COVID-19 as a stress situation

The unknown and consistently changing medical aspects of COVID-19 and the uncertainty

regarding its short and long-term effects (Wang and Flessa, 2020) intensify the threat it poses to one's everyday routine, and physical and mental health. Indeed, in many studies and literature reviews, the terms "health threat," "economic threat," "stress," "fear," and "anxiety," are used (Bareket-Bojmel et al., 2021). Although most of these studies appropriately define COVID-19 as a stress condition, which changes people's lives, and exerts a strong influence over health and psychological well-being, they focus on the psychological distress outcomes, without clearly delineating the components of the stress process.

Conceptualizing COVID-19 in accordance with the stress process requires an identification of its components: the stressors, cognitive appraisals, coping resources, coping strategies, and stress outcomes (Lazarus and Folkman, 1984; Pearlin, 1989). We differentiate between the specific objective characteristics of the pandemic (i.e. the stressors) from the meaning they hold for individuals (i.e. the subjective appraisals). Then, we review the factors that attenuate the detrimental effects of the stressors on the psychological distress outcomes.

The objective characteristics of COVID-19 (i.e. the stressors) can be differentiated as events or chronic strains and as primary and secondary stressors (Pearlin, 1989). Consequent measures undertaken to minimize its spread have evolved into ongoing strains, with the potential of becoming chronic strains. The disease, the risk of infection, and the major restrictive measures (social distancing, isolation, lockdown) may be viewed as the primary stressors, and their consequences may entail numerous secondary stressors impacting, for example, employment, income, domestic life, and family relationships. These diverse stressors may be appraised differently by people, influencing the way they react to COVID-19.

The transactional model of stress and coping (Lazarus and Folkman, 1984) emphasizes that the subjective cognitive appraisal of stressors is what initiates individuals' coping efforts and use of available resources, leading (if successful) to adaptive outcomes. The cognitive appraisal of the stressors reflects an ongoing process

of reappraisals, a major mechanism of emotion regulation, adapting the subjective meaning of the stressor to the individual and the ensuing coping efforts and emotional outcomes. Specifically related to illness, the common sense model (Leventhal et al., 1980) outlines how the meaning that individuals attribute to an illness by forming their own perceptions about it regulates their emotional responses, so that negative illness perceptions are associated with elevated emotional distress. A subjective appraisal of the stressor might be as a threat, as harm/loss, or as a challenge (Lazarus and Folkman, 1984). Controllability of stressors is a key factor in the subjective appraisal process and thus in the impact of stress on behavioral responses. Laboratory studies have shown that exposure to moderate, controllable stressors benefits performance, but exposure to uncontrollable stress tends to harm performance (Henderson et al., 2012). In most of the existing COVID-19 studies, the phenomenon is most dominantly appraised as a threat, specifically as a health threat, economic threat, or a threat related to changes in daily routine, stigma, and social isolation (Bareket-Bojmel et al., 2021; Xiang et al., 2020). Other studies have identified a persistent threat of death which has been directly associated with adverse health behaviors and mental distress (Liu et al., 2020). An appraisal of COVID-19 as a threat is often related to uncertainty: a constant feature of all the primary and secondary stressors. For example, it poses a health threat as a result of the uncertainty of the risk of infection, the severity of the disease, and/or treatment options. It also poses an economic and social threat, as a result of lockdowns and closures, raising questions about everyday life decisions. Uncontrollability is a looming aspect of cognitively appraising these situations as threats. Additionally, the continued intense media coverage of COVID-19 has become an information overload stressor (Garfin et al., 2020). Among other things, the continued uncertainty regarding long-haul COVID-19 symptomatology, the protection provided by the vaccines, and the length of one's unemployment prolong the perception of COVID-19 as a threat.

The theory of uncertainty in illness (Mishel, 1988) may contribute to understanding the role of uncertainty in COVID-19. Uncertainty is conceptualized as a stressor that often shapes the cognitive appraisal as a threat or a danger, rather than as a challenge. When uncertainty continues, people reappraise their situation and may gradually move toward accepting uncertainty as part of their reality, potentially leading either to a continued negative appraisal of threat, or to appraising the situation as a challenge (Mishel, 1988). In COVID-19, because of the ongoing uncertainty associated with the spread of mutations, we might ask whether the process of reappraisal will change from one of threat/danger to one of challenge, potentially affecting the outcomes and leading to positive emotions.

One final question relates to factors that attenuate the stressors' detrimental effects on psychological distress outcomes. Coping resources such as mastery, self-esteem, and/or social support reduce the impact of stressors on well-being, either by directly impacting physical and mental health (e.g. when emotion-focused or problem-focused coping strategies are used) (Lazarus and Folkman, 1984), or via mediation and moderation (Thoits, 2010). To date, the COVID-19 studies that have examined economic and psychosocial resources have mainly examined the direct association between, for example, low household income (Xiong et al., 2020), psychological resilience (Ran et al., 2020), or social support (Grey et al., 2020). Mediating and moderating variables have hardly been examined, nor have the additional potential effects of coping mechanisms.

The availability of coping resources, or loss thereof, during a crisis should also be examined. Some COVID-19 studies have already examined the resources available or lost as a result of the pandemic (Xiong et al., 2020). The conservation of resources theory (Hobfoll, 1988), which claims that loss of resources is a key factor in stressful situations (Hobfoll, 1988, 2002), is particularly relevant. We did not locate any COVID-19 studies based on this theory: a theory that would likely contribute to a better understanding of losing, regaining, or finding new resources as a significant feature in coping with the pandemic.

As can be seen, the main limitation in the existing COVID-19 studies seems to be the lack of a clear conceptual differentiation of the stress process components, combined with a focus on outcome measurements expressed, for example, in the rapid development of metrics for assessing fear of COVID-19 (Ahorsu et al., 2020). Examining the mediating and moderating factors related to the psychological outcomes may facilitate a better understanding of the stress and coping process and contribute to the planning of evidence-based interventions. Hobfoll (2002) claimed that post-disaster, most people are resilient and even discover new strengths in themselves. This focus on the assessment of positive COVID-19 coping outcomes that lead to well-being rather than to psychological distress, is needed to understand other possible long-term effects of COVID-19.

COVID-19 as a traumatic event

The COVID-19 pandemic could be seen as a traumatic event, when looking at Criterion A of the DSM-5 (the event criterion) as well as when considering the four clusters of post-trauma symptoms and functioning (Criteria B, C, D, and E). The diagnosis of posttraumatic stress disorder (PTSD) begins with the Criterion A definition. According to the DSM-5, a traumatic event is defined as "an exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: 1. Directly experiencing the traumatic event(s). 2. Witnessing, in person, the event(s) as it occurred to others. 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental. 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s)" (American Psychiatric Association, 2013).

The distinction between the definition of threat in the previous approach and in this one is that in the former, the threat is appraised as

taxing or exceeding resources for coping (Lazarus and Folkman, 1984). According to Criterion A, however, the threat must be a life-threatening one. Nevertheless, as both the stress theory (Lazarus and Folkman, 1984) and the trauma theory suggest that the threat/stressor and their subjective perception are important, differentiation becomes more difficult.

COVID-19 indeed comprises exposure to actual or threatened death: To date, 196 million people have been officially diagnosed with COVID-19, and 4.2 million have died (World Health Organization, 2021). In addition, millions have suffered from the disease's symptoms and its long-term consequences. The COVID-19 outbreak could also be defined as a traumatic event given the acute and chronic threats it poses: its direct effect on the population (i.e. the fear of contagion and the risk of death, for oneself and for loved ones) (Criterion A of the DSM-5).

The critical need to focus on COVID-19's impact on the mental health of frontline HCWs has also been put into stark relief. Again, part 4 of the PTSD definition of Criterion A in the DSM-5, reads as follows: "Experiencing repeated or extreme exposure to aversive details of the traumatic event(s)" (American Psychiatric Association, 2013). It has been consistently shown that a high proportion of frontline workers are at greater risk for developing PTSD and posttraumatic stress symptoms (PTSS) (Yuan et al., 2021).

Identifying the traumatic event is a first, but not sufficient, criterion for a PTSD diagnosis. In addition, symptoms related to four dimensions must be identified: intrusive symptoms, avoidance, negative alterations in mood and thinking, and changes in arousal and reactivity (Criteria B, C, D, and E; American Psychiatric Association, 2013). The negative impact of PTSD symptomatology on daily life is another important criterion to consider, given its functional significance (Criterion E).

During the pandemic, PTSD prevalence rates ranging from 7% to 53.8% have been reported in the general population in China, Spain, Italy, Iran, the US, Turkey, Nepal, and

Denmark (Xiong et al., 2020). Relatively high PTSD symptomatology has been found worldwide in young adults (Liu et al., 2020) and among COVID-19 survivors (Bo et al., 2021), making the latter population one of the most worrisome in terms of post-trauma prevalence. Moreover, a meta-analysis and systematic review of the prevalence of PTSD after all infectious disease pandemics in the twenty-first century, including COVID-19, found that the overall pooled prevalence of post-pandemic PTSD across all populations was 22.6%. Healthcare workers had the highest PTSD prevalence (26.9%), followed by people who had contracted the infection (23.8%), and the general public (19.3%) (Yuan et al., 2021). These prevalence rates far exceed average levels of PTSD among the general population after other events, such as terrorist attacks. For example, PTSD prevalence related to the September 11th attack in Manhattan declined from 7.5% 1 month after September 11th to 0.6% 6 months after the terrorist attack (Galea et al., 2003). We would suggest that the high PTSD prevalence during the COVID-19 is due to the unprecedented personal, family, health, political, social and economic consequences deriving from it, as well as the uncertainty. The abovementioned findings validate the use of the trauma perspective when addressing COVID-19, call for further studies to understand PTSD trajectories and similarities to earlier findings regarding such trajectories, and require an examination of the effectiveness of current PTSD interventions and their adaptation.

Decades of psychological science on collective traumas have indicated that individuals' responses are shaped by pre-existing and diverse personal, psychosocial, and environmental risk factors. Regarding previous epidemics and to COVID-19, the following factors—being female and young, having a low annual income and a low level of education, living in a city, and being a previous or current tobacco user—were found to put people at greater risk of suffering from post-pandemic PTSD (Yuan et al., 2021). In most of the studies, women received higher scores on all the

clinical scales, and the difference between women and men in PTSD prevalence was statistically significant (Lahav, 2020; Yuan et al., 2021).

Prior trauma exposure and subsequent post-traumatic reactions might intensify one's vulnerability when facing a substantial additional stressor, such as COVID-19. Having experienced traumatic events in one's past puts an individual at higher risk of developing post-pandemic PTSD (Yuan et al., 2021). Findings regarding continuous traumatic stress (CTS) have shed some light on this potential vulnerability. For example, an Israeli study investigated whether individuals previously exposed to traumatic events, and particularly to continuous traumatic stress (CTS), might be more vulnerable to distress when facing additional stressors (Lahav, 2020). The study was conducted in the context of the ongoing shelling of Israel from the Gaza side of the Israel-Gaza border, which continued even amidst the COVID-19 crisis. Trauma survivors reported elevated psychiatric symptomatology related to COVID-19, and CTS was associated with symptomatology during the pandemic. Continuous traumatic stress moderated the relations between PTSD and symptomatology (Lahav, 2020).

Reading the published studies on COVID-19 and PTSD, there are several challenges. First, a PTSD diagnosis requires the identification of a traumatic event, but very few studies defined or evaluated the level of COVID-19 exposure or, specifically, subjective exposure (i.e. perceived life threat). One cannot assume that exposure in and of itself is associated with the perception of a threat to life, without appropriate assessment. Second, most of the studies did not specify the level or type of COVID-19 exposure that preceded the measurement of the responses to the event, by, for example, detailing the duration or date of COVID-19 exposure. They also didn't distinguish within populations (e.g. patients with severe COVID-19 symptoms vs patients with mild symptoms). As such, the conclusions of these studies might be too general. Third, participants were not asked to refer specifically to COVID-19 when

filling in the PTSD questionnaire. Most of the studies used self-report online PTSD questionnaires and convenience samples, rather than a clinical diagnosis process, which would have required in-person clinical interviews and confirmation of sustained symptoms over time. Moreover, the heterogeneity of the study findings (i.e. the wide range of PTSD) indicates that results should be interpreted cautiously, and measurements must be made carefully (Xiong et al., 2020; Yuan et al., 2021). Finally, most of the studies did not control for previous traumatic events, which could have significantly influenced reported COVID-19-related posttraumatic symptoms either for the better or the worse. For example, a study conducted among older adults with chronic PTSD found that PTSD symptoms significantly declined among PTSD participants relative to trauma-exposed healthy comparison participants, whereas no differences in loneliness, self-reported stress levels, or physical activity were observed (Rutherford et al., 2021).

The current APA definition of a traumatic event refers to events that come to an end. The ongoing-ness of COVID-19 poses another challenge, in relation to the period during which the symptoms are measured, and the question of whether and to what extent the PTSD definition is appropriate in the context of such an ongoing event. Previous studies conducted in Israel after 7 years of continuous missile attacks showed that in contrast to the typical presentation of PTSD, some patients' symptoms tend to diminish dramatically or completely resolve when they are no longer in harm's way (Diamond et al., 2010). This clinical presentation may be best understood as an ongoing traumatic stress response (OTSR), rather than PTSD or PTSS. Specific diagnostic features discriminate between these two phenomena, influencing treatment plans (Diamond et al., 2010; Hoffman et al., 2011). The ongoing nature of COVID-19 and similarities in conditions such as life threateningness, uncertainty, and loss of control of the situation, suggest further discussion and examination of the continuity and dynamics of COVID-19 as a traumatic stressor.

COVID-19 as a shared trauma

COVID-19 has affected populations the world over, blurring boundaries between different cultures, countries, and socioeconomic strata, as well as between patients and caregivers. “Shared trauma” (Tosone, 2006), “shared traumatic reality” (Keinan-Kon, 1998), “shared traumatic stress,” and “common fate,” are relatively new concepts, originally introduced after the First Gulf War (Keinan-Kon, 1998), in studies on the effects of terror in Israel (Cohen et al., 2015; Dekel, 2010). These concepts/terms became more common after the 9/11 (Tosone et al., 2012), examining therapists (Bauwens and Tosone, 2010), as well as medical staff (Meltzer et al., 2020).

“Shared trauma” relates to the experience of a significant event by both patient and caregiver, simultaneously. The helping professional thus experiences double exposure: as a professional providing services, and as a member of the stricken community. The main characteristics of shared trauma are highly applicable to COVID-19: 1. The disaster is an event that has the potential to be experienced as traumatic by the entire community. 2. The disaster is an event that takes place in the present, and not an event that has ended. 3. The caregiver and the patient belong to the same affected community (Baum, 2010).

Indeed, we see that COVID-19 studies examined the concept of “shared trauma,” assessing mental health outcomes among HCWs and among therapists. As a medical health crisis, COVID-19 has highlighted the fact that healthcare work can be risky (McDougall et al., 2021). Achieving both adequate personal protection and high-quality patient care has become more difficult, or even impossible in some circumstances, raising new clinical ethics emotionally challenging questions (McDougall et al., 2021). Findings documented that HCWs were at high risk of contracting COVID-19, and experienced high levels of stress, anxiety, and mental distress (Reger et al., 2020), similar to those of COVID-19 patients (Xiang et al., 2020), and higher than among the general population (e.g. Krishnamoorthy et al., 2020). These findings are consistent with findings from

earlier studies conducted in Israel, showing PTSS among therapists who both worked and lived in communities exposed to terrorist attacks (Cohen et al., 2015; Dekel, 2010).

There is also a lack of robust literature describing the psychological impact of COVID-19 on the family members and partners of HCWs. During the COVID-19 outbreak, the perception of the risk of contracting the infection and concerns for the health of one’s family were found to be predictive of psychological distress. Furthermore, psychological responses to COVID-19 were dramatic among family members of HCWs during the initial phase of the outbreak, and these individuals manifested high levels of anxiety and depression (Ying et al., 2020). This may create a conflict in HCWs between caring for their patients and worrying about themselves and their families—“a trap of conflicting needs” (Baum, 2012). Indeed, therapists found it difficult to help their patients cope with the trauma of the pandemic. They too were exposed to family members/relatives who died or were ill and contracted the disease. The transition to working remotely raised several issues related to setting, and introduced a relational challenge, as the use of a remote platform created an inherent, physical distance between therapist and patient. Both therapist and patient had to cope with privacy challenges. Some patients requested more self-disclosure from their therapists (Shklarski et al., 2021). That said, it is important to note that therapists reported the shared trauma experience to be helpful in terms of the therapist/patient “bonding” process (Shklarski et al., 2021), a finding that is consistent with earlier findings regarding shared resilience (Nuttman-Shwartz, 2015).

The shared trauma concept seems helpful in conceptualizing this unique situation. However, more studies are needed in order to examine the level of “sharedness,” for example between therapist and patient (Nuttman-Shwartz and Shaul, 2021). Moreover, shared trauma can be experienced differently in different contexts (such as health care workers and their patients, school children and their teachers, etc.), and the

specific sharedness of each such group should be defined.

Thus, quantitative studies are needed in order to deepen the understanding of the experience and conceptualize it properly.

Studies on the shared trauma experienced by other professionals who are also at risk of potential exposure to the virus through their work are needed. For example, police officers not only had to respond, as usual, to criminal activities but also found themselves in the position of having to enforce non-essential business closures and maintaining order at testing sites, while trying to preserve their own health (Collazo, 2021).

Future COVID-19 studies would benefit from studying potential positive responses to shared trauma: collaborations and connections between organizations (Tosone et al., 2012), shared resilience and sense of fulfilling a mission (Nuttman-Shwartz, 2015) and posttraumatic growth (Tosone et al., 2016), and more.

COVID-19 as loss and grief

COVID-19 mortality, reaching 4.2 million deaths by mid-June 2021 (World Health Organization, 2021), brought extremely high levels of loss, grief, and mourning among the survivors and family members of those who had contracted and died from the disease. Thus, research into COVID-19 perception would benefit from the theoretical perspective of loss and grief (Menzies et al., 2020).

Grief comprises an individual's personal response to loss: the emotional, physical, behavioral, cognitive, social, and spiritual dimensions of the responses. Mourning reflects the outward and active expression of the grief—the process through which the grief is resolved. Bereavement refers to the period after the loss during which grief and mourning occur (Buglass, 2010).

The unique characteristics of COVID-19 have changed the way people are cared for, die, and grieve (Jordan et al., 2022). The protective equipment and remotely delivered care have limited the extent to which HCWs can express compassion and friendliness (Kim and Su,

2020), and the social isolation protocols have decreased social support and meaningful end-of-life engagement (Lee and Neimeyer, 2022). Goveas and Shear (2020) described the characteristics of most COVID-19 deaths: 1. *Circumstances of the death*: sudden, unexpected, seemingly preventable, and random; dying alone; restrictions and inability to say goodbye to the dying family member. 2. *Context of the death*: Physical distancing policies affecting family participation in the funeral, burial, rituals, and support for the grievers, as well as feelings of lack of safety and financial insecurity. 3. *Consequences of the death*: being alone, fearing contamination, having others to care for, financial worries. These circumstances prevent the achievement of a sense of closure, potentially resulting in feelings of “unfinished business,” helplessness, guilt, and shame (Menzies et al., 2020). COVID-19 grief seems to be more severe than grief derived from other forms of loss (Eisma et al., 2021b) and is compounded by the erosion of coping resources, contemporaneous stressors, and the loss of face-to-face mourning rituals that provide a sense of community (Carr et al., 2020).

The original dual process model (DPM; Stroebe and Schut, 1999) may best explain the process of grief following COVID-19 deaths. This model identifies two specific types of stressors: loss-oriented stressors (stressful experiences relating to the death of the close person him/herself) and restoration-oriented stressors (a range of experiences and stressful matters that are secondary consequence of the loss) (Eisma et al., 2021a). Adaptive coping is composed of confronting the avoidance of loss and managing the secondary, restoration stressors. A recent systematic review of 474 articles found that the DPM accurately represents the bereavement experience, that it can be used to understand how bereaved individuals cope, and that interventions based upon the DPM may be more effective than traditional grief therapy (Fiore, 2021). As for bereavement during COVID-19, the developers of the DPM point to the lack of guiding theoretical models and highlight the way the original model enables a

systematic assessment of the range of loss and restoration-related challenges for the bereaved (Stroebe and Schut, 2021).

The COVID-19 pandemic has intensified several risk factors during the mourning process, of which reduced social interactions and loneliness are well-known for evoking psychopathological reactions (Nolen-Hoeksema and Ahrens, 2002). The situation is even more complicated when feelings of guilt and shame related to the infection are involved (Travaglini and Moon, 2021). These feelings contribute to “unfinished business,” or “unresolved relational issues between the living and the dead” (Klingspon et al., 2015). We would suggest that some of the bereaved may have regrets or express anger, especially now, when vaccination plans have been rolled out, significantly decreasing morbidity and mortality in many countries.

These circumstances put bereaved individuals at risk of developing prolonged grief disorder (PGD) (Morris et al., 2020), which differs from “normal” grieving (Menziés et al., 2020). The ICD-11 criteria for PGD (World Health Organization, 2019) include, in addition to the death of a loved one, the manifestation of a persistent and pervasive grief response accompanied by a longing for or preoccupation with the deceased; intense emotional pain, and avoidance of social and other activities; and significant impairment in personal, family, social, occupational, or other functioning after a minimum of 6 months, exceeding social, cultural, and religious norms.

About 10% of bereaved individuals are at high risk of developing PGD (Lundorff et al., 2017), ultimately requiring individual professional intervention by mental health professionals, and another 30% are at moderate risk, likely needing group intervention at some point (Aoun et al., 2015). Applying the conservative 10% PGD prevalence rate to the estimate that over 35 million people worldwide have already been bereaved as a result of a COVID-19 death, 3.5 million of them may currently be suffering from PGD (Lee and Neimeyer, 2022). Therefore, HCW need to prepare for the likely increase in individuals manifesting various forms of PGD due to COVID-19 (Jordan et al., 2022). Services

that may be required are professional support, virtual funeral services, pairing bereaved elders with a telephone companion, remote counseling, etc. (Carr et al., 2020).

Although the loss and grief approach highlights how the unique characteristics of COVID-19 may put people at risk for PGD, the evidence to date is limited due to the scarcity of longitudinal studies and premature conclusions from studies conducted when the grief was acute (i.e. soon after the loss of a loved one). In addition, most of these studies did not examine the COVID-19 circumstances or the context of the death or the grief; they also didn't examine the relationship of the bereaved to the deceased. As such, it is difficult to reach a differential diagnosis that distinguishes PGD from other kinds of psychological distress or PTSD reactions to COVID-19. Further investigation and longitudinal research are therefore needed.

Discussion and conclusions

In the current article we reviewed four theoretical approaches to conceptualize the effects of the COVID-19. Doing so illuminated the complexity of the mental and emotional reactions to the pandemic. On the one hand, all the approaches have common themes; that is, they view COVID-19 as a significant life-changing event that requires ways of coping that differ from what we previously knew. On the other hand, each theoretical approach adds its own unique layer that contributes to a deeper understanding of the phenomenon.

We identified several recurring problems in all the approaches. First, the theoretical definition of the meaning of COVID-19 and how it shapes psychological responses is still limited. Some unexplored components of the theoretical approaches that we reviewed (e.g. coping strategies), as well as additional theoretical perspectives, might contribute to a more integrated understanding of the psychological responses to COVID-19 and promote therapeutic practice. For example, the concept of resilience, which suggests that human beings are naturally resilient and able to adapt to change and loss (Bonanno, 2004), could be applied.

Second, many of the studies reviewed had methodological limitations. The vast majority were cross-sectional (e.g. Wang et al., 2020a; Ying et al., 2020), did not give enough attention to the exposure measurement, neither the type nor the level (e.g. Liu et al., 2020; Travaglino and Moon, 2021), and/or examined specific negative responses rather than a wider range of responses (e.g. Ahorsu et al., 2020; Wang et al., 2020b). To date, relatively little consideration has been given to positive or compensatory processes that could alleviate the effect of COVID-19 traumatic circumstances (Stroebe and Schut, 2021).

Another limitation is sample-related. Some studies did not distinguish between sub-populations (e.g. patients with severe cases of COVID-19 vs patients with mild symptoms). Many relied on convenience samples, or on volunteers responding to online surveys, raising questions about the generalizability of the results and conclusions. Therefore, large-scale as well as longitudinal studies with representative samples are needed. Additionally, the research thus far has mainly focused on adults, which is why in the current paper we only reviewed such articles. It is reasonable to assume that young children and adolescents have also been greatly affected by the stress, trauma, loss, and grief related to the pandemic, and have likely experienced other effects unique to them, perhaps making them even more vulnerable (Deolmi and Pisani, 2020). A separate focus on children and adolescents is therefore necessary. Moreover, quantitative studies are needed in order to assess the level of “sharedness” and of distress, and should include other contextual, cultural, and political factors that might contribute to the level of stress and to the perception of COVID-19 as a shared reality (Nuttman-Shwartz and Shaul, 2021).

The current article has a few limitations, the main one being that it was not based on a scoping review of the literature. That said, an in-depth and comprehensive literature review was indeed conducted. Second, we focused on four major perspectives and did not review other theoretical approaches. Third, although we aimed to make a distinction between the theories, there is some

overlap between them, and as such the divisions were not always unequivocal. In addition, the conceptualizations herein may be limited as a result of our attempt to study the COVID-19 pandemic in progress, as it evolves. Nevertheless, we believe that the conceptualization and definition of the approaches will contribute to a better understanding of the phenomenon.

Finally, the focus of the article was on the conceptualization of psychological responses to COVID-19, but due to word limitations we could not review the implications for practice. We would recommend a separate review of therapeutic practices. In particular, as internet-supported communication technologies have created the opportunity to deliver high-quality online psychological interventions during the pandemic (Inchausti et al., 2020), to assess their theoretical approach to COVID-19 and provide evidence of their effectiveness.

In conclusion, in this article we reviewed four major theoretical approaches to COVID-19, emphasizing the importance of understanding the theoretical basis for evaluations of COVID-19 before exploring its consequences. Each perspective approaches the phenomenon uniquely and sheds light on its complexity, revealing the importance of a holistic perspective on the pandemic. Undoubtedly, the effects of COVID-19 will extend beyond the disease itself, for years to come. More research is needed to better understand the disease and to implement psychosocial interventions that will help people manage the consequences of COVID-19 and return to optimal functioning. Despite the shared characteristics of the disease itself, the experience of COVID-19 is hardly uniform across countries, populations, or societies. Earlier studies have confirmed that governmental attitudes can shape the coping and feelings of trust that citizens hold toward social and political systems following disasters such as Hurricane Katrina (Cordasco et al., 2007). Thus, even though COVID-19 has spared no one, “We’re not all in this together” (Bowleg, 2020). Studies about how community and governmental attitudes shape psychological reactions are recommended.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Ahorsu DK, Lin, CY, Imani V, et al. (2020) The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health Addiction*. <https://doi.org/10.1007/s11469-020-00270-8>
- American Psychiatric Association (2013) *Diagnostic and Statistical Manual of Mental Disorders*, 5th edn. Arlington, VA: American Psychiatric Association.
- Aoun SM, Breen LJ, Howting DA, et al. (2015) Who needs bereavement support? A population based survey of bereavement risk and support need. *PLoS One* 10: e0121101.
- Bareket-Bojmel L, Shahar G and Margalit M (2021) COVID-19-related economic anxiety is as high as health anxiety: Findings from the USA, the UK, and Israel. *International Journal of Cognitive Therapy* 14: 566–574.
- Baum N (2010) Shared traumatic reality in communal disasters: Toward a conceptualization. *Psychotherapy: Theory, Research, Practice, Training* 47(2): 249–259.
- Baum N (2012) Trap of conflicting needs: Helping professionals in the wake of a shared traumatic reality. *Clinical Social Work Journal* 40(1): 37–45.
- Bauwens J and Tosone C (2010) Professional post-traumatic growth after a shared traumatic experience: Manhattan clinicians' perspectives on post-9/11 practice. *Journal of Loss and Trauma* 15(6): 498–517.
- Bo HX, Li W, Yang Y, et al. (2021) Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China. *Psychological Medicine* 51(6): 1052–1053.
- Bonanno GA (2004) Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist* 59(1): 20–28.
- Bowleg L (2020) We're not all in this together: On COVID-19, intersectionality, and structural inequality. *American Journal of Public Health* 110(7): 917–918.
- Buglass E (2010) Grief and bereavement theories. *Nursing Standard* 24(41): 44–47.
- Carr D, Boerner K and Moorman S (2020) Bereavement in the time of coronavirus: Unprecedented challenges demand novel interventions. *Journal of Aging & Social Policy* 32: 425–431.
- Cohen E, Roer-Strier D, Menachem M, et al. (2015) "Common-fate": Therapists' benefits and perils in conducting child therapy following the shared traumatic reality of war. *Clinical Social Work Journal* 43(1): 77–88.
- Collazo J (2021) Backing the Blue in the Midst of COVID-19: Simultaneous shared trauma and the effects of coping in law enforcement couples. *Clinical Social Work Journal* 49: 456–462.
- Cordasco KM, Eisenman DP, Glik DC, et al. (2007) "They blew the levee": Distrust of authorities among Hurricane Katrina evacuees. *Journal of Health Care for the Poor and Underserved* 18: 277–282.
- Dekel R (2010) Mental health practitioners' experiences during the shared trauma of the forced relocation from Gush Katif. *Clinical Social Work Journal* 38(4): 388–396.
- Deolmi M and Pisani F (2020) Psychological and psychiatric impact of COVID-19 pandemic among children and adolescents. *Acta Bio-Medica: Atenei Parmensis* 91(4): e2020149.
- Diamond GM, Lipsitz JD, Fajerman Z, et al. (2010) Ongoing traumatic stress response (OTSR) in Sderot, Israel. *Professional Psychology Research and Practice* 41(1): 19–25.
- Eisma MC, de Lang TA and Stroebe MS (2021a) Restoration-oriented stressors of bereavement. *Anxiety, Stress, and Coping* 35(3): 339–353.
- Eisma MC, Tamminga A, Smid GE, et al. (2021b) Acute grief after deaths due to COVID-19, natural causes and unnatural causes: An empirical comparison. *Journal of Affective Disorders* 278: 54–56.
- Fiore J (2021) A systematic review of the dual process model of coping with bereavement (1999–2016). *OMEGA - Journal of Death and Dying* 84: 414–458.
- Galea S, Vlahov D, Resnick H, et al. (2003) Trends of probable post-traumatic stress disorder in New York City after the September 11 terrorist attacks.

- American Journal of Epidemiology* 158(6): 514–524.
- Garfin DR, Silver RC and Holman EA (2020) The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology* 39(5): 355–357.
- Goveas JS and Shear MK (2020) Grief and the COVID-19 pandemic in older adults. *American Journal of Geriatric Psychiatry* 28(10): 1119–1125.
- Grey I, Arora T, Thomas J, et al. (2020) The role of perceived social support on depression and sleep during the COVID-19 pandemic. *Psychiatry Research* 293: 113452.
- Henderson RK, Snyder HR, Gupta T, et al. (2012) When does stress help or harm? The effects of stress controllability and subjective stress response on troop performance. *Frontiers in Psychology* 3: 179.
- Hobfoll SE (1988) *The Ecology of Stress*. New York: Hemisphere.
- Hobfoll SE (2002) Social and psychological resources and adaptation. *Review of General Psychology* 6(4): 307–324.
- Hoffman YS, Diamond GM and Lipsitz JD (2011) The challenge of estimating PTSD prevalence in the context of ongoing trauma: The example of Israel during the Second Intifada. *Journal of Anxiety Disorders* 25(6): 788–793.
- Inchausti F, MacBeth A, Hasson-Ohayon I, et al. (2020) Psychological intervention and COVID-19: What we know so far and what we can do. *Journal of Contemporary Psychotherapy* 50: 243–250.
- Jordan TR, Wotring AJ, McAfee CA, et al. (2022) The COVID-19 pandemic has changed dying and grief: Will there be a surge of complicated grief? *Death Studies* 46: 84–90.
- Keinan-Kon N (1998) Internal reality, external reality, and denial in the Gulf war. *The Journal of the American Academy of Psychoanalysis* 26: 417–442.
- Kim SW and Su KP (2020) Using psychoneuroimmunity against COVID-19. *Brain, Behavior, and Immunity* 87: 4–5.
- Klingspon KL, Holland JM, Neimeyer RA, et al. (2015) Unfinished business in bereavement. *Death Studies* 39: 387–398.
- Krishnamoorthy Y, Nagarajan R, Saya GK, et al. (2020) Prevalence of psychological morbidities among general population, healthcare workers and COVID-19 patients amidst the COVID-19 pandemic: A systematic review and meta-analysis. *Psychiatry Research* 293: 113382.
- Lahav Y (2020) Psychological distress related to COVID-19 – The contribution of continuous traumatic stress. *Journal of Affective Disorders* 277: 129–137.
- Lazarus RS and Folkman S (1984) *Stress, Appraisal and Coping*. New York: Spring.
- Lee SA and Neimeyer RA (2022) Pandemic Grief Scale: A screening tool for dysfunctional grief due to a COVID-19 loss. *Death Studies* 46: 14–24.
- Leventhal H, Meyer D and Nerenz D (1980) The common sense representation of illness danger. In: Rachman S (ed.) *Contributions to medical psychology*, vol. 2. New York: Pergamon Press, pp.7–30.
- Liu CH, Zhang E, Wong GTF, et al. (2020) Factors associated with depression, anxiety, and PTSD symptomatology during the COVID-19 pandemic: Clinical implications for U.S. young adult mental health. *Psychiatry Research* 290: 113172.
- Lundorff M, Holmgren H, Zachariae R, et al. (2017) Prevalence of prolonged grief disorder in adult bereavement: A systematic review and meta-analysis. *Journal of Affective Disorders* 212: 138–149.
- McDougall RJ, Gillam L, Ko D, et al. (2021) Balancing health worker well-being and duty to care: An ethical approach to staff safety in COVID-19 and beyond. *Journal of Medical Ethics* 47(5): 318–323.
- Meltzer KJ, Mahesar S, Pollio DE, et al. (2020) The red purse and human remains: Personal and professional experiences of 9/11 mental health workers. *Social Work in Mental Health* 18(6): 651–669.
- Menzies RE, Neimeyer RA and Menzies RG (2020) Death anxiety, loss, and grief in the time of COVID-19. *Behaviour Change* 37: 111–115.
- Mishel MH (1988) Uncertainty in illness. *Image the Journal of Nursing Scholarship* 20: 225–232.
- Morris SE, Moment A and Thomas JD (2020) Caring for bereaved family members during the COVID-19 pandemic: Before and after the death of a patient. *Journal of Pain and Symptom Management* 60(2): e70–e74.
- Nolen-Hoeksema S and Ahrens C (2002) Age differences and similarities in the correlates of depressive symptoms. *Psychology and Aging* 17: 116–124.
- Nuttman-Shwartz O (2015) Shared resilience in a traumatic reality: A new concept for trauma workers exposed personally and professionally

- to collective disaster. *Trauma Violence & Abuse* 16(4): 466–475.
- Nuttman-Shwartz O and Shaul K (2021) Online therapy in a shared reality: The novel coronavirus as a test case. *Traumatology* 27: 365–374. DOI: 10.1037/trm0000334
- Pearlin LI (1989) The sociological study of stress. *Journal of Health and Social Behavior* 30(3): 241–256.
- Ran L, Wang W, Ai M, et al. (2020) Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. *Social Science & Medicine* 262: 113261.
- Reger MA, Stanley IH and Joiner TE (2020) Suicide mortality and coronavirus disease 2019—A perfect storm? *JAMA Psychiatry* 77(11): 1093–1094.
- Rutherford BR, Choi CJ, Chrisanthopoulos M, et al. (2021) The COVID-19 pandemic as a traumatic stressor: Mental health responses of older adults with chronic PTSD. *American Journal of Geriatric Psychiatry* 29(2): 105–114.
- Shklarski L, Abrams A and Bakst E (2021) Navigating changes in the physical and psychological spaces of psychotherapists during COVID-19: When home becomes the office. *Practice Innovations* 6(1): 55–66.
- Stroebe M and Schut H (1999) The dual process model of coping with bereavement: Rationale and description. *Death Studies* 23: 197–224.
- Stroebe M and Schut H (2021) Bereavement in times of COVID-19: A review and theoretical framework. *OMEGA - Journal of Death and Dying* 82(3): 500–522.
- Thoits PA (2010) Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior* 51(Suppl. 1): S41–S53.
- Tosone C (2006) Therapeutic intimacy - A post-9/11 perspective. *Smith College Studies in Social Work* 76(4): 89–98.
- Tosone C, Bauwens J and Glassman M (2016) The shared traumatic and professional posttraumatic growth inventory. *Research on Social Work Practice* 26(3): 286–294.
- Tosone C, Nuttman-Shwartz O and Stephens T (2012) Shared trauma: When the professional is personal. *Clinical Social Work Journal* 40(2): 231–239.
- Travaglino GA and Moon C (2021) Compliance and self-reporting during the COVID-19 pandemic: A cross-cultural study of trust and self-conscious emotions in the United States, Italy, and South Korea. *Frontiers in Psychology* 12: 565845.
- Wang C, Pan R, Wan X, et al. (2020a) Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health* 17(5): 1729.
- Wang M and Flessa S (2020) Modelling Covid-19 under uncertainty: What can we expect? *The European Journal of Health Economics* 21: 665–668.
- Wang X, Hegde S, Son C, et al. (2020b) Investigating mental health of US College students during the COVID-19 pandemic: cross-sectional survey study. *Journal of Medical Internet Research* 22(9): e22817.
- World Health Organization (2019) *International Statistical Classification of Diseases and Related Health Problems*, 11th edn. Available at: <https://icd.who.int/> (accessed 1 August 2020).
- World Health Organization (2021) Coronavirus disease (COVID-19) pandemic. Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> (accessed 1 August 2020).
- Xiang YT, Yang Y, Li W, et al. (2020) Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *The Lancet Psychiatry* 7(3): 228–229.
- Xiong J, Lipsitz O, Nasri F, et al. (2020) Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders* 277: 55–64.
- Ying Y, Ruan L, Kong F, et al. (2020) Mental health status among family members of health care workers in Ningbo, China, during the coronavirus disease 2019 (COVID-19) outbreak: A cross-sectional study. *BMC Psychiatry* 20: 379.
- Yuan K, Gong YM, Liu L, et al. (2021) Prevalence of posttraumatic stress disorder after infectious disease pandemics in the twenty-first century, including COVID-19: A meta-analysis and systematic review. *Molecular Psychiatry* 26(9): 4982–4998. <https://doi.org/10.1038/s41380-021-01036-x>
- Zhang SX, Wang Y, Rauch A, et al. (2020) Unprecedented disruption of lives and work: Health, distress and life satisfaction of working adults in China one month into the COVID-19 outbreak. *Psychiatry Research* 288: 112958.