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## Commentary

## Introduction to the special issue on COVID-19



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The unparalleled health crisis caused by COVID-19 has had a major impact on the lives of humans worldwide. This pandemic has impacted all aspects of society with enormous health effects (Cutler, 2021), including mental health and psycho-social impacts (WHO, 2020). When the COVID-19 pandemic began to impact communities around the world in the early months of 2020, national, regional, and local governments began instituting public health measures (i.e., social distancing and mask mandates, school and business closures, contact tracing, and lockdown orders) to quell the spread of the virus as case, hospitalization, and death rates rose at exponential rates. As a result, psychologists and allied professionals were faced with the challenge of supporting people as they dealt with loss, grief, anxiety, social isolation, and a variety of other stressors. This special issue attempts to elucidate relevant psychological processes that play a role in people's reactions to the pandemic and offer helpful clinical tools and techniques from within a contextual behavioral science (CBS) lens. We, the co-editors of this special issue, argue that the CBS approach is uniquely positioned to make sense of the impacts of a health crisis on all aspects of an individual's life and propose ways to help people in times of crisis, because of its emphasis on contextual factors, human language and cognition, symbolic relations, repertoire expanding, and flexibility skills. The coronavirus pandemic thrust the world into a radically new context. By focusing on the development and strengthening of psychological flexibility and examining functioning within this context, CBS methodologies can help people make sense of impacts at all levels of functioning and modify their behavior and offer themselves and others acceptance and compassion.

To promote this line of work, an announcement for the special issue was made in June 2020, at which point submissions were opened. More than 30 manuscripts were handled for this special issue by three Guest Editors (Martin, Rogge & Karekla). Eighteen manuscripts addressing a wide range of topics were chosen to include in this issue after rigorous peer review. Drawing upon the rich conceptual foundations underlying interventions like Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999, 2011) and Functional Analytic Psychotherapy (FAP; Kohlenberg & Tsai, 2012), these articles use Relational Frame Theory, functional analysis, and psychological flexibility as theoretical frameworks to clarify the processes helping to shape how individuals

responded and adapted (or failed to adapt) to the stressors associated with the pandemic. Setting the stage, one of the articles in the issue (Hayes, Hofmann, & Stanton, 2020) offers a CBS framework tailored to address the novel challenges faced by individuals during a worldwide health crisis. Those authors blended traditional functional analysis with the growing body of evidence on processes of change (e.g., psychological flexibility) to propose a new conceptual framework for clinical practice: process-based functional analysis. This conceptual framework can offer clinicians process-based insights into selecting effective treatment kernels for specific individuals to help them address challenges like COVID-19 related trauma, burnout and stress during the pandemic, and the personal behavior changes necessary for them to comply with public health guidelines implemented to quell the spread of COVID-19.

Three articles in this special issue examine the salience of sleep as a correlate of physical and emotional wellbeing during the pandemic. First, Peltz, Daks, & Rogge (2020) present cross-sectional findings in data from 1003 parents living in the United States taken in the first two months of the pandemic. These authors conceptualized sleep quality and daily energy levels as critical mechanisms representing internal resources necessary to enable parents to engage in psychologically flexible responses to difficult or challenging situations. Their results suggested that health stress was linked to lower sleep quality, which in turn predicted parents engaging more inflexible responses (in particular, greater self-as-content, fusion, and inaction) during the early stages of the pandemic. Greater health stress was also linked to lower energy levels, which in turn predicted parents engaging in fewer flexible responses to challenging or difficult situations (in particular, lower acceptance, present moment awareness, self-as-context, defusion, contact with values, and committed action). Second, McCracken and colleagues (2020) present cross-sectional findings in data from 1102 adults in Sweden during the first few months of the pandemic in which they conceptualized sleep as a key outcome. Their analyses suggested that global inflexibility was uniquely predictive of not only higher levels of depression and anxiety symptoms, but also greater insomnia symptoms, even after controlling for key demographics (e.g., gender, age, education) and for aspects of grit (i.e., consistency of interest and perseverance of effort). In contrast, higher levels of committed action were uniquely predictive of lower levels of symptoms of depression, anxiety, and

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insomnia, reflecting a potential source of resilience. [Zhang and colleagues \(2020\)](#) extended this work by asking 323 nurses in hospitals in China to retrospectively report on the severest time of the COVID-19 pandemic in China (January to March 2020). Their analyses suggested that cognitive fusion served as a key mechanism linking occupational stress not only to greater mental health problems but also to greater sleep difficulty. Taken as a set, these three studies spanning three distinct countries converge to highlight how integrally sleep is connected to psychological flexibility/inflexibility and to individual well-being/distress, particularly during a global health crisis.

Two articles in this special issue touched upon key elements of CBS that are relevant when working with clients with chronic pain during the pandemic. First, [Rhodes, Martin, Guarna, Vowles, and Allen \(2020\)](#) explained that people with pain often have physical and mental health comorbidities, and experience loneliness and social isolation, that may put them at higher risk of COVID-19 infection. Drawing upon the CBS treatment literature, the authors provide clinical tools that can be adapted for telehealth treatment, including COVID-related metaphors and experiential exercises involving wearing a mask and hand washing. In the second paper, [Margolies et al. \(2020\)](#) presented an elegant mixed methods approach to understanding the roles of resilience and acceptance among individuals with pain. Quantitative findings underscored the importance of baseline depression, as it was associated with lower levels of resilience and acceptance. The qualitative analyses of open-ended responses to questions about participants' personal experiences of the pandemic augmented those quantitative findings by identifying a number of central themes: resiliency (i.e., gratitude, optimism/persistence, and the availability of telehealth), social connectedness (i.e., collective experience, shifting expectations), increased stress (i.e., fear of the virus, increased demands), difficulties with accepting pain (i.e., care access concerns, attention to pain), and social isolation. These studies highlight the insights that a CBS lens and treatment approach have to offer in treating chronic pain during a world-wide health crisis. The conceptual article by [Hayes et al. \(2020\)](#) contextualized this discussion of the potential clinical contributions of CBS during the pandemic within the Process-Based Functional Analysis model, describing how CBS could address some of the unique challenges posed by such a worldwide crisis.

Five articles in this issue describe the impact of lockdown and related restrictions in three European countries (Spain, Cyprus, and the UK) and the United States. In one of the few studies to have longitudinal data, [Hernandez-Lopez and colleagues \(2020\)](#) surveyed 260 college students in Spain at least twice between March and May of 2020. Results indicated that psychological inflexibility increased significantly over time and cross-sectionally, but not longitudinally, and predicted lower general health. The authors concluded that psychological flexibility is malleable and point to the need for public health initiatives targeting psychological flexibility during times of social isolation. A second longitudinal study ([Panayiotou, Panteli, & Leonidou, 2020](#)) compared the individual functioning of college students living in Cyprus during the early stages of the pandemic to the functioning of those students one year earlier. The results presented overall drops in physical and psychological functioning which were in part predicted by difficulties in describing feelings and in accessing effective emotion regulation strategies. Next, among a sample of 555 adults living in the UK in the spring of 2020, [Dawson and Golijani-Moghaddam \(2020\)](#) found that psychological flexibility and the related processes of approach-oriented coping were linked to lower levels of COVID-related distress whereas avoidant coping was linked to greater distress. Mediation analyses further suggested that psychological flexibility was associated with lower distress, in part by promoting greater approach-oriented coping. Interestingly, adherence to social distancing guidelines was not related to PF in this sample.

Shifting to studies conducted in the US, [Kroska, Roche, Adamowicz, and Stegall \(2020\)](#) collected data from 485 Mturk respondents in the US in May of 2020 and their analyses demonstrated that global inflexibility

and lack of present moment awareness both uniquely predicted psychological distress at the start of the pandemic even after controlling for demographics and pandemic-related adversity. Extending this work, [Daks, Peltz, and Rogge \(2020\)](#) collected data from 742 parents of school-aged children in the US (likely to be markedly impacted by the shutdowns of schools and daycare centers) from late March to early May of 2020. Analyses in their sample demonstrated robust links between psychological inflexibility of the parents and higher levels of COVID-19 related stress, poorer family functioning (coparental discord, family discord), greater caustic parenting (angry parenting, inconsistent parenting, spanking), greater child distress and greater parental depressive symptoms. Mediation path models further supported spillover effects linking those various domains of family functioning, further highlighting the widespread impact that parental psychological inflexibility may have had on families during the pandemic. Collectively, these articles offer a perspective on the impact of lockdown on individuals and families during the pandemic.

Another set of five studies examined psychological flexibility and inflexibility as moderators of the impact of the COVID-19 pandemic on individual wellbeing. For example, in a sample of over 1000 participants in Italy, [Pakenham et al. \(2020\)](#) examined links between COVID-19 lockdown risk factors (e.g., lockdown duration, working with COVID patients, infected family members, unhealthy lifestyle behaviors, etc.) and poor mental health (i.e., anxiety and depressive symptoms). Their analyses showed that psychological flexibility (in particular: self-as-context, defusion, contact with values, and committed action) buffered the links between COVID-19 lockdown risk factors and poor mental health whereas psychological inflexibility (in particular: lack of contact with the present moment, fusion, self-as-content, and lack of contact with values) exacerbated those same links. [Starr, Huang, and Scarpulla \(2021\)](#), examined co-rumination conceptualized within a social support-seeking framework promoting (or not) psychological flexibility among 320 undergraduate students whose studies were impacted by the pandemic. Findings suggested that when conversations among individuals focus on increasing perspective and understanding rather than dwelling on negative experiences, they ameliorate emotional distress and promote committed action. Similarly, [O'Brien and colleagues \(2020\)](#) presented analyses in a sample of 450 Mturk workers in the US taken in April 2020. Although their analyses suggested that psychological inflexibility and intolerance of uncertainty were both linked to psychological distress and physical symptoms, moderation analyses suggested that psychological flexibility buffered the links between intolerance of uncertainty and those outcomes, highlighting psychological flexibility as a source of resiliency. Extending this work further, [Smith, Twohy, and Smith \(2020\)](#) presented findings within 278 adults (primarily from the US) suggesting that psychological inflexibility exacerbates and flexibility buffers the adverse links between social isolation and psychological distress. Finally, moderated mediation analyses within a sample of 1003 parents living in the US suggested that in parents with high levels of inflexibility, COVID-19 related losses and stress from lack of resources were linked to greater levels of a desire for death through their links to greater perceived burdensomeness. However, the links in that mediational path were markedly weaker in parents with low levels of inflexibility ([Crasta et al., 2020](#)). Together, these studies highlight the critical roles that psychological flexibility and inflexibility play in shaping the impact of challenging and difficult events on the lives of individuals.

The restrictions placed on individuals and communities to contain more widespread contagion of the COVID-19 virus (e.g., limited indoor gatherings, enforced mask wearing) led many people to feel resentment and to act in ways that put them and others at risk. Several articles considered this problem from a contextual science perspective. First, [Stapleton \(2020\)](#) pulled from research on rule-governed behavior in the context of relational frame theory, neuroscience, and social and health psychology. She argued that factors such as the credibility of the speaker, the availability of reinforcement and punishment, and the

motivative augmentals that influence those consequences all play a role in the likelihood that a person will follow a rule. The author also put forth specific recommendations for public health measures that may promote rule-following during global pandemics. In another article, Constantinou et al. (2020) surveyed 1001 individuals to assess psychological flexibility, conspiracy theory beliefs, COVID-19 distress, and adherence to quarantine recommendations. Psychological flexibility mediated the relationship between conspiracy theory beliefs and adherence to governmental measures for public health, while stress increased the likelihood that a person would buy into such beliefs. The protective role of psychological flexibility was discussed. The last article that addressed this topic considered a contextual behavioral approach to responding to moral dilemmas during the pandemic. Borges, Barnes, Farnsworth, Drescher, and Walser (2020) proposed a model of moral injury that offers two approaches to intervening in response to COVID-19 moral dilemmas. The ACT for Moral Injury Model aims to foster acceptance of moral pain in the service of an individual's values, while the Prosocial approach is put forth as a group-based intervention to prevent moral injury related to COVID-19. Case examples of each of these models are presented.

It was truly a honor and a pleasure for us to serve as guest editors for such a diverse and exemplary set of research articles. We were humbled by the extraordinary levels of work and dedication of not only the researchers and authors, but also of the JCBS staff and reviewers who made this special issue possible. We believe that, because of its focus on flexibly expanding behavioral repertoires in the context of crises, contextual behavioral science is adequately and uniquely suited to understand and offer ways to aid individuals, families, groups, and governments when dealing with important health and mental health issues such as a pandemic. We hope you enjoy these articles as much as we did.

#### Declaration of competing interest

Given their roles as editors, Drs. Martin, Rogge and Karekla had no involvement in the peer-review of this article and had no access to information regarding its peer-review.

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