

Psychological implications of the COVID-19 pandemic around the world: Introduction to the special issue

Martin Obschonka¹, Abigail H. Gewirtz^{2,3}, and Liqi Zhu⁴

¹Queensland University of Technology, Brisbane, QLD, Australia

²University of Minnesota, St Paul, MN, USA

³Department of Psychology, Arizona State University, USA

⁴Chinese Academy of Science, Beijing, China

Although psychological researchers have long studied the implications of major crises, the outbreak and spread of the COVID-19 pandemic have confronted the global community of psychologists and psychological researchers with new challenges. This special issue contributes to the growing empirical literature on the immediate psychological implications of the COVID-19 pandemic. We present and discuss diverse work from authors that followed our call for papers in May 2020, shortly after the World Health Organisation declared COVID-19 a global pandemic. The studies focus on the early phases of the pandemic by addressing (a) implications of the pandemic for psychological well-being and mental health, (b) psychological effects of lockdown scenarios as well as (c) individual compliance with COVID-19 prevention and intervention measures. We conclude by highlighting the need for new research efforts, with a special focus on low- and middle-income regions, international research collaborations and cross-cultural research designs.

Keywords: COVID-19; Coronavirus; Crisis; International psychology.

The global pandemic triggered by the coronavirus disease 2019 (COVID-19) (World Health Organisation, 2020) has raised the stakes for psychological research around the world. This is particularly relevant for psychological research on (a) clinical and health-related aspects of the pandemic (Freedland et al., 2020), (b) the implications of massive restrictions such as lockdowns and other physical distancing measures (Gollwitzer et al., 2020; Pillay & Barnes, 2020), and (c) the diversity of implications across regions, cultures, groups and individuals (e.g. cross-cultural and cross-national responses to the pandemic, individual differences in responses and vulnerabilities, Romano et al., 2021).

Over the past year, psychological scientists have engaged in the systematic study of a wide spectrum of relevant topics and research questions related to the pandemic itself, and related social and economic crises caused by the pandemic. Such varied psychological research efforts have been confronted with an unfolding pandemic that deeply affects societies and populations, disrupting essential aspects of public, economic, and

private life (Jetten, 2020). Needless to say, this pandemic also disrupted the work of the estimated more than a million psychologists around the globe (Stevens & Gielan, 2007) at the same time as demand for psychological research and evidence-based prevention and intervention has accelerated.

Psychological researchers have long studied the psychological implications of major crises in various regional and cultural contexts. They can rely on a toolbox of theoretical and empirical approaches and concepts that lend themselves as a starting point for addressing an emerging and unfolding crisis. Such research can immediately tap into fundamental questions such as how people perceive (Larson, 2018) and adapt and respond to crises (Thompson et al., 2017). Hence, in times of global risks and crises characterising modernity (Cutter et al., 2015), psychological research, as “essential science” (Kazak, 2020), has contributed to a better understanding of natural disasters (e.g. James et al., 2012), macro-economic shocks (e.g. Furnham, 2013; Lee et al., 2010; Schoon & Mortimer, 2017; Tomasik & Silbereisen, 2016), war (e.g.

Correspondence should be addressed to Martin Obschonka, Queensland University of Technology, Gardens Point, 2 George St, Brisbane, QLD 4000, Australia. (E-mail: martin.obschonka@qut.edu.au).

We would like to express our gratitude to all scholars that submitted papers, to the peer reviewers who provided high-quality and fast feedback, and to the International Union of Psychological Science (IUPsyS) for supporting this special issue project in various ways.

Amone-P'Olak & Omech, 2020; Basnet et al., 2018), refugee crises (e.g. Obschonka et al., 2018), ecological crises (Stokols et al., 2009) and global health crises and pandemics such as COVID-19 (Van Bavel et al., 2020). Whereas the latter represents a “once-in-a-century” global crisis (Gates, 2020), implications of psychological research on COVID-19 are far-reaching by assisting a broader understanding of major crises and their complex and diverse implications for humanity.

THIS SPECIAL ISSUE

In May 2020, shortly after the World Health Organisation declared COVID-19 a global pandemic, we announced the call for papers for this special issue. We received an overwhelming number of submissions: 279 abstracts from 52 countries, highlighting the engagement of psychologists around the world in fast-track COVID-19 research. The purpose of this special issue was to encourage and publish new research on the psychological implications of the unfolding crisis for society, populations, groups and individuals, as well as prevention and intervention efforts.

The 11 papers in this first of two special issues (the second to be published later this year) can be broadly categorised into three groups. The first set of papers addresses *implications of the pandemic for psychological well-being and mental health*. For example, Menichetti Delor et al. (2021) examined grief management in 246 families that lost a family member to COVID-19 in Italy. The results highlight the traumatic circumstances and implications for families' grieving. The research teams identified six themes of the bereavement process: without death rituals, solitary, unexpected, unfair, unsafe, coexisting with other stressors. Families' needs ranged from finding alternative rituals to giving meaning and expressing different emotions. The authors also studied the supportive role of psychologists in the grieving process.

Wang et al. (2021) examined psychological implications of the pandemic in 1780 left-behind children and 1500 non-left behind children in China during the national shutdown in the first months of 2020. Left-behind children refer to those under the age of 18 who have been left alone in their hometown and cared for by people other than their parents for over 12 months. During this period, the family situation of left-behind children had changed such that their parents could not go to work anymore and thus stayed with them at home, which brought changes in their family environment as well as parent–child bonds. The results identified issues with emotional and academic adjustment in these left-behind children during lockdown (e.g. more severe depression and anxiety symptoms and poor academic adjustment). The authors conclude that although left-behind children lived with their parents during the pandemic, parent–child bonds were still not stable. On the other hand, left-behind children

reported lower levels of loneliness than non-left-behind children. In summarising their findings, the authors stress that left-behind children were indeed still at a disadvantage during the pandemic, even with their parents' company. The authors thus put a special emphasis on addressing emotional and academic adjustment in left-behind children.

The study by Haft et al. (2021) examines xenophobic and racist incidents. The authors analysed data collected from Chinese American college students collected *before* the local outbreak of the pandemic in the USA ($N = 134$) and then also from February to March 2020, *during* the local outbreak ($N = 64$). The sample surveyed during the outbreak reported higher levels of perceived discrimination and anxiety than the sample surveyed in the months before the local outbreak. There was also a stronger relationship between perceived discrimination and anxiety in the outbreak sample, compared to the other sample. Mediation analyses indicate that negative media exposure partly accounted for the group difference in perceived discrimination. The study concludes that, among the manifold psychosocial implications of the COVID-19 pandemic, increased discrimination and its mental health consequences represent a pressing societal issue in our globalised world.

The longitudinal study by Meyer et al. (2021) examines implications of COVID-19 for employee psychological well-being in Germany. Data were collected right after onset of a national lockdown ($N = 2900$), during the lockdown ($N = 1237$) and again when lockdown restrictions had started to ease ($N = 789$). Women's psychological health was more strongly affected by the pandemic than men's, with a curvilinear effect of pandemic duration on working women's exhaustion. The data also shows how the introduction and the easing of lockdown measures affected exhaustion, and that women with children who work from home while childcare is unavailable were especially exhausted. Job autonomy and partner support mitigated some of these effects. The study therefore illustrates the far-reaching effects of the pandemic on the occupational health of various groups.

The second set of papers focuses on countrywide *lockdown scenarios during COVID-19*. Gollwitzer et al. (2021) examined public acceptance of national lockdown scenarios in a large German sample ($N = 14433$). The authors put a special focus on the potential length, intensity and flexibility of distancing rules implied by different lockdown scenarios. The findings indicate that lockdown length is more important for public acceptance than intensity or flexibility.

Tomasik et al. (2021) examined how prolonged school closures affected school performance in mathematics and language of $N = 28685$ pupils in Switzerland, by comparing learning during a prolonged phase of school closure related to the COVID-19 pandemic with learning gains in the 8 weeks before these school closures. While older

pupils were able to sustain learning progress, younger children's learning not only slowed down, with potential long-term repercussions for future development, but also became more heterogeneous. These developmental differences have important implications for the education systems in countries with COVID-related school closures.

The study by Mazza et al. (2021) focuses on psychological effects of lockdowns on the family context, highlighting the challenging nature of managing a family at home during a long and unexpected lockdown, while often working remotely from home. Parents in this Italian sample ($N = 917$) showed high rates of psychological distress, and greater distress was associated with being a mother, higher levels of education, neuroticism, child emotional and hyperactivity-inattention symptoms, lower extroversion, as well as a combination of child emotional problems and parent extroversion. The study illustrates some of the concrete risk factors and the challenges families are facing during such lockdowns.

Hoyer et al. (2021) assessed the immediate effects of an online behavioural activation intervention on positive and negative state affect in 3624 German-speaking adults. The intervention was particularly beneficial for participants with higher baseline depression and anxiety. Online psychological interventions prompting behavioural activation appear to improve state mood during major lockdowns.

The third category of papers is concerned with *individual compliance with COVID-19 prevention and intervention measures*. Kluck et al. (2021) examined individual compliance with physical distancing measures as an important factor in the fight against the spread of the pandemic. Integrating frameworks from psychology and communication science, the authors assessed whether and which type of technology-mediated communication fosters compliance with distancing measures ($N = 301$ participants of an online survey in Germany). Whereas the impact of audio-visual communication is limited, text-based communication appeared to indirectly foster willingness to adhere to physical distancing via increased feelings of social support and life satisfaction. Longitudinal data from those $N = 180$ that also participated in three follow-up waves showed that feelings of social support increased, while technology-based communication and willingness to adhere to distancing measures decreased. The authors stress the potential of text-based communication to generate and maintain social support in challenging times during a pandemic.

The study by Rosman et al. (2021) tested associations between COVID-19-related economic worries and virus-related worries over the course of an unfolding pandemic. In a sample of 13094 Germans, virus-related worries decreased over time, but economic worries remained largely stable. The acceptance of restriction measures, which decreased over time, was positively associated with virus-related worries, and negatively with

economic worries. The study delivers important insights into the role of perceived health and economic threats during a public health crisis with broader risks for the economy and society as a whole.

The study by Doerfler et al. (2021) targeted risky decision-making during the pandemic. The authors applied the framing effect (message framing) to hypothetical COVID-19 scenarios in their online study with US adults ($N = 294$), also examining personality differences. Both gain- and loss-framing influenced risk choice in response to COVID-19. Among the Dark Triad traits, psychopathy was a particularly important predictor of such risk taking. Framing of public health messages can have important effects on compliance with restriction measures.

CONCLUSION

This special issue presents important empirical insights into the various psychological implications of the early phases of the pandemic. While we witnessed increased research activity in this field, which is in line with the general agility academia demonstrated in earlier public health emergencies (Zhang et al., 2020), it is noteworthy to add that the studies included in this issue focus on countries located on three continents—Asia, Europe and North America, which reported higher case rates in earlier stages of the global pandemic than did other regions of the world. This—as well as the greater resources available to conduct psychological research in the countries represented in this issue—may in part explain the accelerated research efforts in these countries. Far more psychological research from other regions also affected by the pandemic is needed—particularly from low- and middle-income regions that are likely to be particularly affected by the pandemic and related socioeconomic consequences (e.g. De Sousa et al., 2020; Niederkrotenthaler et al., 2020). While the papers in this special issue are important, they also exemplify the overrepresentation of WEIRD (Western, educated, industrialised, rich and democratic) populations in psychological research in general (Muthukrishna et al., 2020; Rad et al., 2018) and in early COVID-19 research in particular (Fry et al., 2020). More collaborative international/cross-cultural research designs are needed that transcend national borders as are those that compare countries and populations from various regions around the world (Cai et al., 2021).

Manuscript received July 2021

Revised manuscript accepted July 2021

REFERENCES

- Amone-P'Olak, K., & Omech, B. (2020). Predictors of somatic symptomatology in war-affected youth in Northern Uganda:

- Findings from the WAYS study. *Psychological Studies*, 52(2), 182–190.
- Basnet, S., Kandel, P., & Lamichhane, P. (2018). Depression and anxiety among war-widows of Nepal: A post-civil war cross-sectional study. *Psychology, Health & Medicine*, 23(2), 141–153.
- Cai, X., Fry, C. V., & Wagner, C. S. (2021). International collaboration during the COVID-19 crisis: Autumn 2020 developments. *Scientometrics*, 126(4), 3683–3692.
- Cutter, S. L., Ismail-Zadeh, A., Alcántara-Ayala, I., Altan, O., Baker, D. N., Briceño, S., Gupta, H., Holloway, A., Johnston, D., McBean, G. A., Ogawa, Y., Paton, D., Porio, E., Silbereisen, R. K., Takeuchi, K., Valsecchi, G. B., Vogel, C., & Wu, G. (2015). Global risks: Pool knowledge to stem losses from disasters. *Nature*, 522(7556), 277–279.
- De Sousa, A., Mohandas, E., & Javed, A. (2020). Psychological interventions during COVID-19: Challenges for low and middle income countries. *Asian Journal of Psychiatry*, 51, 102128.
- Doerfler, S. M., Tajmiriyahi, M., Dhaliwal, A., Bradetich, A. J., Ickes, W., & Levine, D. S. (2021). The dark triad trait of psychopathy and message framing predict risky decision-making during the COVID-19 pandemic. *International Journal of Psychology*, 56, 623–631.
- Freedland, K. E., Dew, M. A., Sarwer, D. B., Burg, M. M., Hart, T. A., Ewing, S. W. F., Fang, C. Y., Blozis, S. A., Puterman, E., Marquez, B., & Kaufmann, P. G. (2020). Health psychology in the time of COVID-19. *Health Psychology*, 39(12), 1021–1025. <https://doi.org/10.1037/hea0001049>
- Fry, C. V., Cai, X., Zhang, Y., & Wagner, C. S. (2020). Consolidation in a crisis: Patterns of international collaboration in early COVID-19 research. *PLoS One*, 15(7), e0236307.
- Furnham, A. (2013). The Psychology of Unemployment: Laying People off in a Recession. In A-S. G. Antoniou & C.L. Cooper (Eds.), *The Psychology of the Recession on the Workplace* (pp. 155–175). Cheltenham: Edward Elgar Publishing Limited.
- Gates, B. (2020). Responding to Covid-19—A once-in-a-century pandemic? *New England Journal of Medicine*, 382, 1677–1679. <https://doi.org/10.1056/NEJMp2003762>
- Gollwitzer, M., Platzer, C., Zwarg, C., & Görtz, A. S. (2021). Public acceptance of Covid-19 lockdown scenarios. *International Journal of Psychology*, 56, 551–565.
- Haft, S. L., & Zhou, Q. (2021). An outbreak of xenophobia: Perceived discrimination and anxiety in Chinese American college students before and during the COVID-19 pandemic. *International Journal of Psychology*, 56, 522–531.
- Hoyer, J., Dechmann, J. C. G., Stender, T., & Čolić, J. (2021). Selecting and imagining rewarding activities during the COVID-19 lockdown: Effects on mood and what moderates them. *International Journal of Psychology*, 56, 585–593.
- James, L. E., Noel, J. R., Favorite, T. K., & Jean, J. S. (2012). Challenges of postdisaster intervention in cultural context: The implementation of a lay mental health worker project in postearthquake Haiti. *International Perspectives in Psychology Research Practice Consultation*, 1(2), 110–126.
- Jetten, J. (2020). *Together apart: The psychology of COVID-19*. Sage.
- Kazak, A. E. (2020). Psychology is an essential science: American psychologist highlights the role of psychology in understanding and addressing COVID-19. *American Psychologist*, 75(5), 605.
- Kluck, J. P., Stoyanova, F., & Krämer, N. C. (2021). Putting the social back into physical distancing: The role of digital connections in a pandemic crisis. *International Journal of Psychology*, 56, 594–606.
- Larson, H. J. (2018). The biggest pandemic risk? Viral misinformation. *Nature*, 562(7726), 309–310.
- Lee, S., Guo, W. J., Tsang, A., Mak, A. D., Wu, J., Ng, K. L., & Kwok, K. (2010). Evidence for the 2008 economic crisis exacerbating depression in Hong Kong. *Journal of Affective Disorders*, 126(1–2), 125–133.
- Menichetti Delor, J.P., Borghi, L., Cao di San Marco, E., Fosfati, I. & Vegni, E. (2021). Phone follow up to families of COVID-19 patients who died at the hospital: families' grief reactions and clinical psychologists' roles. *International Journal of Psychology*, 56, 498–511.
- Mazza, C., Marchetti, D., Ricci, E., Fontanesi, L., Di Giandomenico, S., Verrocchio, M. C., & Roma, P. (2021). The COVID-19 lockdown and psychological distress among Italian parents: Influence of parental role, parent personality, and child difficulties. *International Journal of Psychology*, 56, 577–584.
- Meyer, B., Zill, A., Dilba, D., Gerlach, R., & Schumann, S. (2021). Employee psychological well-being during the COVID-19 pandemic in Germany: A longitudinal study of demands, resources, and exhaustion. *International Journal of Psychology*, 56, 532–550.
- Muthukrishna, M., Henrich, J., & Slingerland, E. (2020). Psychology as a historical science. *Annual Review of Psychology*, 72, 717–749.
- Niederkrotenthaler, T., Gunnell, D., Arensman, E., Pirkis, J., Appleby, L., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., & Platt, S. (2020). Suicide research, prevention, and COVID-19: Towards a global response and the establishment of an international research collaboration. *Crisis*, 41(5), 321–330.
- Obschonka, M., Hahn, E., & Bajwa, N. H. (2018). Personal agency in newly arrived refugees: The role of personality, entrepreneurial cognitions and intentions, and career adaptability. *Journal of Vocational Behavior*, 105, 173–184.
- Pillay, A. L., & Barnes, B. R. (2020). Psychology and COVID-19: Impacts, themes and way forward. *South Africa Journal of Psychology*, 50(2), 148–153.
- Rad, M. S., Martingano, A. J., & Ginges, J. (2018). Toward a psychology of *Homo sapiens*: Making psychological science more representative of the human population. *Proceedings of the National Academy of Sciences*, 115(45), 11401–11405.
- Romano, A., Spadaro, G., Balliet, D., Joireman, J., Van Lissa, C., Jin, S., Agostini, M., Bélanger, J. J., Gützkow, B., Kreienkamp, J., & Leander, N. P. (2021). Cooperation and trust across societies during the COVID-19 pandemic. *Journal of Cross-Cultural Psychology*, <https://journals.sagepub.com/doi/full/10.1177/0022022120988913>
- Rosman, T., Kerwer, M., Steinmetz, H., Chasiotis, A., Wedderhoff, O., Betsch, C., & Bosnjak, M. (2021). Will COVID-19-related economic worries superimpose health worries, reducing nonpharmaceutical intervention

- acceptance in Germany? A prospective pre-registered study. *International Journal of Psychology*, 56, 607–621.
- Schoon, I., & Mortimer, J. (2017). Youth and the great recession: Are values, achievement orientation and outlook to the future affected? *International Journal of Psychology*, 52(1), 1–8.
- Stevens, M. J., & Gielen, U. P. (Eds.). (2007). *Toward a global psychology: Theory, research, intervention, and pedagogy*. Psychology Press.
- Stokols, D., Misra, S., Runnerstrom, M. G., & Hipp, J. A. (2009). Psychology in an age of ecological crisis: From personal angst to collective action. *American Psychologist*, 64(3), 181.
- Thompson, R. R., Garfin, D. R., Holman, E. A., & Silver, R. C. (2017). Distress, worry, and functioning following a global health crisis: A national study of Americans' responses to Ebola. *Clinical Psychological Science*, 5(3), 513–521.
- Tomasik, M. J., Helbling, L. A., & Moser, U. (2021). Educational gains of in-person vs. distance learning in primary and secondary schools: A natural experiment during the COVID-19 pandemic school closures in Switzerland. *International Journal of Psychology*, 56, 566–576.
- Tomasik, M. J., & Silbereisen, R. K. (2016). Demands of social change across multiple domains of life and across time at the advent of the global financial crisis. *Research in Human Development*, 13(4), 312–327.
- Van Bavel, J. J., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., Crockett, M. J., Crum, A. J., Douglas, K. M., Druckman, J. N., Drury, J., Dube, O., Ellemers, N., Finkel, E. J., Fowler, J. H., Gelfand, M., Han, S., Haslam, S. A., Jetten, J., ... Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 4(5), 460–471. <https://doi.org/10.1038/s41562-020-0884-z>
- Wang, Y., Liu, W., Wang, W., Lin, S., Lin, D., & Wang, H. (2021). Left-behind children's social adjustment and relationship with parental coping with children's negative emotions during the COVID-19 pandemic in China. *Journal of International Psychology*, 56, 512–521.
- World Health Organization (2020). Coronavirus disease 2019 (COVID-19) Situation Report – 69. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200329-sitrep-69-covid-19.pdf?sfvrsn=8d6620fa_2
- Zhang, L., Zhao, W., Sun, B., Huang, Y., & Glänzel, W. (2020). How scientific research reacts to international public health emergencies: A global analysis of response patterns. *Scientometrics*, 124, 747–773.