



Editorial: Special Issue on Subjective Well-being and Mental Health in the Early Days of COVID-19

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Introduction

The COVID-19 pandemic started in the winter of 2020 and has led to extensive measures taken by governments to curtail its spread, including vaccination programs, working from home, the closing of retail establishments, restaurants, and schools and curfews (Hale et al., 2021). Although many people were supportive of these measures in the early days of the pandemic, gradually there came a growing call to loosen COVID-19 restrictions and a decrease in adherence to ‘high’-cost measures such as curfews (Moradian et al., 2021; Petherick et al., 2021), arguing that the cure is worse than the disease. In addition to economic loss and erosion of freedom rights, stringent protective measures would also have resulted in a loss of joy in life (Frijters, 2021), although some groups were more heavily affected than others (Shek, 2021). Particularly, reports about increase in fear, loneliness and depression in society in times of COVID-19 has been part and parcel of academic and media reports in the past two years (Brooks et al., 2020; Wijngaards et al., 2020).

If the loss of joy in life must be weighed against the prevention of excess mortality and health damage through the implementation of stringent protective measures, it is important to understand how large that loss of joy in life approximately is. When looking at loss of joy in life, we should not only look at specific emotions such as anxiety and loneliness, but also how well people are able cope with these negative emotions. For example, moderate fear of contamination is not a pleasant experience, but there are more things in life that are not pleasant but that do necessarily decrease

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your subjective well-being, also known as life satisfaction or happiness (Veenhoven, 2000).

Although stringency measures have been associated with lower subjective well-being (Brodeur et al., 2021; Clark & Lepinteur, 2022; Greyling et al., 2021a; Grimes, 2022; Veenhoven et al., 2021) and mental health (Aknin et al., 2022; Schmidtke et al., 2021; Sibley et al., 2020), some studies have also found more neutral effects (e.g., Prati & Mancini, 2021; Wijngaards et al., 2020). In this regard, it should be kept in mind that some stringency measures taken during the COVID-19 pandemic can also positively affect our lives, such as improved air quality (e.g., Wang et al., 2021), less commuting time (e.g., Kroesen, 2022) and work flexibility and more time for family life (e.g., Cornell et al., 2022), while attitudes and reactions to stringency measures may also change over time (Moradian et al., 2021; Sarracino et al., 2021).

All in all, it is difficult to examine all measures in isolation and their relative importance will typically **vary across people and social contexts**. First, people have been affected to different extents by stringency measures. For example, Clark and Lepinteur (2022) found for several European countries that stringency measures had a stronger negative impact on the subjective well-being of women, those with weak ties to the labor market, and richer people. Wijngaards et al. (2020) found that the mental health of introverts was positively affected by stringency measures, while the mental health of extraverts was not affected. Second, the effect of (specific) stringency measures may also vary across countries. For example, stay-at-home orders have been associated with lower subjective well-being and/or mental health in the United Kingdom (Tan et al., 2021) and the United States (Marroquín et al., 2020; Tull et al., 2020). At the same time, Greyling et al. (2021b) found that while stay-at-home orders were positively associated with subjective well-being in South Africa, it was the ban on alcohol sale together with more social media use and fear of unemployment eventually resulted in a net loss of happiness.

The pandemic made once more evident that, in order for academia to provide useful advice to policy and practice aimed at people to live happier lives, it is not only of pivotal importance to produce more robust evidence, but also to address the question ‘what works for whom under which circumstances’ and take in that the effects of COVID-19 and subsequent stringency measures can vary across time and space. At the same time, the COVID-19 pandemic also made clear that the subjective well-being and mental health of some parts of the population has been more at risk than that of other parts and that health is only one of the life domains that is affected.

In This Special Issue

The papers in this special issue were presented at the virtual ISQOLS 2020 conference and all deal with subjective well-being in the early days of the pandemic. The first paper by Sarracino and O’Connor (2022), which was presented as the keynote speech of the conference, highlights that the COVID-19 crisis demonstrates that the use of economic growth as measure of quality of life or well-being is limited and that we need to better protect public goods in contemporary society and avoid

a ‘tragedy of the commons’. The authors propose a neo-humanistic approach, which prioritizes the well-being of people over the well-being of markets. In this light, the authors argue that economic growth has proven to be insufficient by itself to foster subjective well-being for current and future generations. In this regard, there is a need to identify under which circumstances economic growth also increases subjective well-being. Sarracino and O’Connor (2022) argue that promoting cooperation and social relations would be a good starting point to improve experienced quality of life and sustainability.

The remaining of the papers revolve around two themes: (1) Heterogeneous responses to COVID-19 pandemic and stringency measures and (2) Effects of the pandemic on specific (vulnerable) populations. All studies were conducted in the early days of the pandemic, ranging from March 2020 to November 2020. Please note that since most studies had the aim to capture the subjective well-being and mental health effects of an emerging crisis, many studies make use of convenience samples and look at short term effects of the pandemic.

Heterogeneous Responses to COVID-19 Pandemic and Stringency Measures

During turbulent times it is important for societies to gauge how the population is doing and which groups are vulnerable. At present, several longitudinal studies have examined how subjective well-being has developed during the pandemic (e.g., Li et al., 2020; Bittmann, 2022), making use of survey data, which has been conventional in event studies related to natural disasters (e.g., Rehdanz et al., 2015), wars (e.g., Coupe & Obrizan, 2016) and economic crises (e.g., Arampatzi et al., 2020). However, a problem with most survey data is often that individuals have often not been surveyed before the event and surveys are conducted at a low frequency and it takes time to process them. The article by Morrison et al. (2022) that was already published in a previous issue of *Applied Research in Quality of Life*, introduces a new measurement of subjective well-being using Twitter data (see also Greyling et al., 2021a, b), which they label ‘Gross National Happiness’. This real-time measure can be perceived as a thermometer to gauge the country’s reaction to the pandemic. For New Zealand, the authors show that the worldwide outbreak of COVID-19 went hand-in-hand with a decrease in the emotion ‘joy’ and an increase in negative emotions such as ‘fear’ and ‘sadness’. In the period in which the (initial) danger was curtailed and the virus was under control, negative emotions decreased, and positive emotions increased. Hence, the authors show that the effect of the pandemic on subjective well-being is time-dependent.

On a similar note, Tubadji et al. (2022) compare anxiety in relation to stringency measures taken in the United Kingdom, Italy, and Sweden (used as control group because of no lockdown) in the early days of the pandemic using Google data. The authors find that the early lockdown in Italy increased anxiety in both Italy and the United Kingdom, while the introduction of the lockdown in the United Kingdom decreased anxiety in both countries. The authors explain these findings by high uncertainty to with regard to the ‘right’ policy response when Italy went in

lockdown and a consensus that lockdown was the right strategy when the United Kingdom went in lockdown.

Other papers in the special issue show that the effects of COVID-19 and related stringency measures was heterogeneous and some groups suffered more than other groups. Focusing mostly on Spanish workers, Escudero-Castillo et al. (2022) study the relationship between psychological well-being and labor market transitions that were brought about by the lockdowns. The authors find that unemployment due to the government measures that were taken had a larger negative impact on psychological well-being compared to furloughs and teleworking. At the same time, the authors find interesting gender differences in that women experience a larger decline in psychological well-being than men, which can in part be attributed to a combination of work disruption and increased family obligations. However, Escudero-Castillo, Mato-Díaz, and Rodríguez-Alvarez also conclude that women in areas with more stringent measures are less affected than women in areas with less stringent measures, suggesting *'that women are willing to sacrifice freedom of movement as long as restrictions protect their at-risk relatives'*.

Using survey data for cities in Pakistan from before and during the early days of the pandemic, Shams and Kadow (2022) find that satisfaction with socio-economic status has declined. However, not all groups in society were equally affected and satisfaction with socio-economic particularly decreased for the unemployed, married couples, males, older people and richer people. The finding that satisfaction with socio-economic status declined more for richer people is explained by the authors by an increased fear for falling into poverty due to lockdowns and inflation.

Kelley et al. (2022) examine the effect of social distance on subjective well-being and find a positive relationship between social distancing approval and subjective well-being. The more people agree with the measures taken by the government, the higher the subjective well-being. Likewise, there is a strong, heterogeneous relationship between the emotional cost of and subjective well-being, where emotional costs reduce subjective well-being, but not the other way around.

Mohan et al. (2022) look at the associations between psychological capital, perceived stress, coping and subjective well-being. Conducting surveys in India and Thailand and using structural equation modelling, the authors find that psychological capital and perceived stress and associated with subjective well-being and that especially younger people reported a more negative effect of the stringency measures taken to mitigate the COVID-19 spread. Follow-up interviews highlighted that psychological capital could be developed to support vulnerable populations, such as younger people.

Effects of the Pandemic on Vulnerable Populations

The second theme focuses on vulnerability of the mental health and quality of life of specific populations at both the regional and individual level. Sánchez and Jiménez-Fernández (2022) look at European NUTS-2 regions and estimate a socio-economic vulnerability index for each of regions linked to the objectives of the 2021–2027 Cohesion Policy. The higher the index, the greater the difficulty in

achieving these objectives compared to the rest of the regions. Subsequently, the authors link their socio-economic vulnerability index to COVID-19, since it is likely that the pandemic will increase inequalities and poverty levels. At the same time, it is shown that not all regions are equally vulnerable to COVID-19. By estimating multilevel models, the authors find that that increases in government spendings on education and improving political stability fosters the capacity for resilience, while increases in regional monetary poverty would be associated with increased vulnerability in regions that are already vulnerable.

The remaining articles focus on the subjective well-being of specific (vulnerable) groups: healthcare workers and students. Where healthcare workers have been at continuous risk of contracting COVID-19 and experienced an excessive workload in some cases (e.g., Bielicki et al., 2020; Spoorthy et al., 2020), studies on students have typically focused on issues like loneliness and study problems (e.g., Erden et al., 2021; Wan et al., 2021; Hagedorn et al., 2022; Ye et al., 2022; Zhang et al., 2022).

Lins-Kusterer and colleagues (Lins-Kusterer et al., 2022) examined anxiety among professional residents of multi-professional programs in Brazil. In line with other studies on healthcare workers during COVID-19 times, the authors show that anxiety is related to fear of contracting COVID-19, high workload and feeling unsafe and female employees were more likely to report anxiety symptoms. Higher levels of anxiety were in turn related to lower quality of life and higher emotional exhaustion. The authors conclude policy should pay specific attention to residents by providing adequate protective supplies and psychological support when responding to pandemic outbreaks in order to prevent adverse mental health outcomes.

The last two papers build on a series of articles that has already appeared in *Applied Research on Quality of Life* and that focuses on the subjective well-being and mental health of university students in COVID-19 times (e.g., Erden et al., 2021; Hagedorn et al., 2022; Shek et al., 2022; Ye et al., 2022; Zhang et al., 2022).

The study by Akay et al. (2022) focuses on the subjective well-being of students of the Faculty of Economics at Marmara University in Turkey. Life satisfaction of students was lower during in the early days of the pandemic, compared to the pre-pandemic period, which the authors attribute to increased feelings of frustration, isolation, lower future expectations, and study problems (e.g., access to computers and the internet; bad study environment). Income, employment, hobbies, and friendship ties alleviated the negative effect of the pandemic.

Cunha et al. (2022) examine the subjective well-being of business administration students at the University of Antwerp by means of an affect balance score. Overall, the effects of the lockdown appear to be very heterogeneous and broadly students can be clustered in two groups: one group that experiences predominantly negative affect and one group that experiences predominantly positive affect and is optimistic. In the group that predominantly experiences negative affect, female students and students in the early years of their university education are overrepresented. This group has a harder time to cope with the lockdown: they experience more financial difficulties and a more significant reduction of social contacts. At the same time, they experience more study problems, studying fewer hours, and perceiving a lower

study efficiency and engage in less health behaviors (such as less exercise and drinking more alcohol).

Future Studies

All papers in this special issue are about the first phase of the COVID-19 pandemic. In this regard, this special issue does not present the final papers on the subject matter. Research about effects on enjoyment of life in later phases of the pandemic is burgeoning and when the pandemic is over, we can expect studies that compare the net effects of different policies, both for the general population in countries and for special groups. This literature is gathered in the Bibliography of the World Database of Happiness (Veenhoven, 2022), the subject classification of which currently involves sections on effects of the epidemic on average happiness in nations as well as sections of effect on the happiness of infected individuals and of worry about the illness. Future reviews can build on that source.

References

- Akay, E. C., Dumludag, D., Bulbul, H., & Zulfuoglu, O. (2022). Students in Turkey during the early days of the COVID-19 pandemic. *Applied Research in Quality of Life*, *16*, 1–29.
- Aknin, L. B., Andretti, B., Goldszmidt, R., Helliwell, J. F., Petherick, A., De Neve, J. E., & Zaki, J. (2022). Policy stringency and mental health during the COVID-19 pandemic: a longitudinal analysis of data from 15 countries. *The Lancet Public Health*, *7*(5), e417–e426.
- Arampatzi, E., Burger, M., Stavropoulos, S., & Tay, L. (2020). The role of positive expectations for resilience to adverse events: Subjective well-being before, during and after the Greek bailout referendum. *Journal of Happiness Studies*, *21*(3), 965–995.
- Bielicki, J. A., Duval, X., Gobat, N., Goossens, H., Koopmans, M., Tacconelli, E., & Van der Werf, S. (2020). Monitoring approaches for health-care workers during the COVID-19 pandemic. *The Lancet Infectious Diseases*, *20*(10), e261–e267.
- Bittmann, F. (2022). How trust makes a difference: the impact of the first wave of the COVID-19 pandemic on life satisfaction in Germany. *Applied Research in Quality of Life*, *17*, 1389–1405.
- Brodeur, A., Gray, D., Islam, A., & Bhuiyan, S. (2021). A literature review of the economics of COVID-19. *Journal of Economic Surveys*, *35*(4), 1007–1044.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S. W., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, *395*(10227), 912–920.
- Clark, A. E., & Lepinteur, A. (2022). Pandemic policy and life satisfaction in Europe. *Review of Income and Wealth*, *68*(2), 393–408.
- Cornell, S., Nickel, B., Cvejic, E., Bonner, C., McCaffery, K. J., Ayre, J., & Dodd, R. (2022). Positive outcomes associated with the COVID-19 pandemic in Australia. *Health Promotion Journal of Australia*, *33*(2), 311–319.
- Coupe, T., & Obrizan, M. (2016). The impact of war on happiness: The case of Ukraine. *Journal of Economic Behavior & Organization*, *132*, 228–242.
- Cunha, C. M., Dens, N., & Granic, G. (2022). University students' well-being and engagement in activities in the early days of COVID-19. *Applied Research in Quality of Life*, 1–25.
- Erden, G., Özdoğru, A. A., Çoksan, S., Ögel-Balaban, H., Azak, Y., Altunoğlu-Dikmeer, İ., & Baytemir, G. (2021). Social contact, academic satisfaction, COVID-19 knowledge, and subjective well-being among students at Turkish Universities: a nine-university sample. *Applied Research in Quality of Life*, *17*(3), 2017–2039.

- Escudero-Castillo, I., Mato-Díaz, F. J., & Rodríguez-Alvarez, A. (2022). Psychological well-being during the COVID-19 lockdown: Labour market and gender implications. *Applied Research in Quality of Life*, 1–21
- Frijters, P. (2021). Vanuit een geluksperspectief zijn de kosten van de coronamaatregelen veel hoger dan de baten [From a happiness perspective, the costs of the corona measures are much higher than the benefits]. *Economisch Statistische Berichten (ESB)*, 105(4791), 510–513.
- Greyling, T., Rossouw, S., & Adhikari, T. (2021a). A tale of three countries: What is the relationship between COVID-19, lockdown and happiness? *South African Journal of Economics*, 89(1), 25–43.
- Greyling, T., Rossouw, S., & Adhikari, T. (2021b). The good, the bad and the ugly of lockdowns during Covid-19. *PLoS One*, 16(1), e0245546.
- Grimes, A. (2022). Measuring pandemic and lockdown impacts on wellbeing. *Review of Income and Wealth*, 68(2), 409–427.
- Hale, T., Angrist, N., Goldszmidt, R., Kira, B., Petherick, A., Phillips, T., Webster, S., Cameron-Blake, E., Hallas, L., Majumdar, S., & Tatlow, H. (2021). A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker. *Nature Human Behaviour*. <https://doi.org/10.1038/s41562-021-01079-8>
- Hagedorn, R. L., Wattick, R. A., & Olfert, M. D. (2022). My entire world stopped”: college students’ psychosocial and academic frustrations during the COVID-19 pandemic. *Applied Research in Quality of Life*, 17(2), 1069–1090.
- Kelley, S., Evans, M. D. R., & Kelley, J. (2022). Happily distant or bitter medicine? The impact of social distancing preferences, behavior, and emotional costs on subjective wellbeing during the epidemic. *Applied Research in Quality of Life*.
- Kroesen, M. (2022). Working from home during the corona-crisis is associated with higher subjective well-being for women with long (pre-corona) commutes. *Transportation Research Part A: Policy and Practice*, 156, 14–23.
- Li, S., Wang, Y. U., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: A study on active Weibo users. *International Journal of Environmental Research and Public Health*, 17, 1–9.
- Lins-Kusterer, L., De Azevedo, C. F., Netto, E. M., Menezes, M. S., Aguiar, C. V. N., De Azevedo, R. A., & Brites, C. (2022). Impact of anxiety on health-related quality of life and symptoms of burnout in multi-professional residents in Brazil during the COVID-19 pandemic. *Applied Research in Quality of Life*, 1–19
- Marroquín, B., Vine, V., & Morgan, R. (2020). Mental health during the COVID-19 pandemic: Effects of stay-at-home policies, social distancing behavior, and social resources. *Psychiatry Research*, 293, 113419.
- Mohan, K. P., Peungposop, N., & Kalra, P. (2022). Psychosocial influences on coping and wellbeing during the COVID-19 lockdown in the early days of the pandemic: A mixed methods research. *Applied Research in Quality of Life*, 1–31
- Moradian, S., Bäuerle, A., Schweda, A., Musche, V., Kohler, H., Fink, M., & Teufel, M. (2021). Differences and similarities between the impact of the first and the second COVID-19-lockdown on mental health and safety behaviour in Germany. *Journal of Public Health*, 43(4), 710–713.
- Morrison, P. S., Rossouw, S., & Greyling, T. (2022). The impact of exogenous shocks on national wellbeing. New Zealanders’ reaction to COVID-19. *Applied Research in Quality of Life*, 17(3), 1787–1812.
- Petherick, A., Goldszmidt, R., Andrade, E. B., Furst, R., Hale, T., Pott, A., & Wood, A. (2021). A worldwide assessment of changes in adherence to COVID-19 protective behaviours and hypothesized pandemic fatigue. *Nature Human Behaviour*, 5(9), 1145–1160.
- Prati, G., & Mancini, A. D. (2021). The psychological impact of COVID-19 pandemic lockdowns: a review and meta-analysis of longitudinal studies and natural experiments. *Psychological Medicine*, 51(2), 201–211.
- Rehdanz, K., Welsch, H., Narita, D., & Okubo, T. (2015). Well-being effects of a major natural disaster: The case of Fukushima. *Journal of Economic Behavior & Organization*, 116, 500–517.
- Sánchez, A., & Jiménez-Fernández, E. (2022). European Union Cohesion Policy: Socio-economic vulnerability of the regions and the COVID-19 shock. *Applied Research in Quality of Life*, 1–34
- Sarracino, F., Greyling, T. M., O’Connor, K., Peroni, C., & Rossouw, S. (2021). *Trust predicts compliance with COVID-19 containment policies*. Evidence from ten countries using big data. IZA Discussion Paper No. 15171
- Sarracino, F., & O’Connor, K. (2022). Neo-humanism and COVID-19: Opportunities for a socially and environmentally sustainable world. *Applied Research in Quality of Life*, 1–33.

- Shams, K., & Kadow, A. (2022). COVID-19 and subjective well-being in urban Pakistan in the beginning of the pandemic: A socio-economic analysis. *Applied Research in Quality of Life*, 1–21.
- Shek, D. T. (2021). COVID-19 and quality of life: Twelve reflections. *Applied Research in Quality of Life*, 16(1), 1–11.
- Shek, D. T., Li, X., Yu, L., Lin, L., & Chen, Y. (2022). Evaluation of Electronic Service-Learning (e-Service-Learning) projects in mainland China under COVID-19. *Applied Research in Quality of Life*, 17, 3175–3198.
- Schmidtko, J., Hetschko, C., Schöb, R., Stephan, G., Eid, M., & Lawes, M. (2021). *The effects of the COVID-19 pandemic on the mental health and subjective well-being of workers: An event study based on high-frequency panel data*. IAB-Discussion Paper, No. 13/2021.
- Sibley, C. G., Greaves, L., Satherley, N., Wilson, M., Lee, C., Milojev, P., & Barlow, F. (2020). Short-term effects of the COVID-19 pandemic and a nationwide lockdown on institutional trust, attitudes to government, health and wellbeing. *American Psychological Association*, 75(5), 618–663.
- Spoorthy, M. S., Pratapa, S. K., & Mahant, S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review. *Asian Journal of Psychiatry*, 51, 102119.
- Tan, C. M., Owuamalam, C. K., & Ng, P. K. (2021). Stay at home, protect the NHS and save lives! Confidence in government moderates the negative effects of staying at home on mental health. *Personality and Individual Differences*, 179, 110948.
- Tubadji, A., Boy, F. J., & Webber, D. J. (2022). Narrative economics, public policy and mental health. *Applied Research in Quality of Life*, 1–28.
- Tull, M. T., Edmonds, K. A., Scamaldo, K. M., Richmond, J. R., Rose, J. P., & Gratz, K. L. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life. *Psychiatry research*, 289, 113098.
- Veenhoven, R. (2000). The four qualities of life. *Journal of Happiness Studies*, 1(1), 1–39.
- Veenhoven, R., Burger, M., & Pleeging, E. (2021). Effect van de COVID-19 pandemie op geluk in Nederland. *Mens & Maatschappij*, 96(3), 307–330.
- Veenhoven, R. (2022). Bibliography of happiness. World database of happiness, erasmus happiness economics research organization, Erasmus University Rotterdam, Netherlands. Available at: <https://worlddatabaseofhappiness.eur.nl/collections/bibliography/>
- Wan, M., Yunus, W. M. A., Badri, S. K. Z., Panatik, S. A., & Mukhtar, F. (2021). The unprecedented movement control order (lockdown) and factors associated with the negative emotional symptoms, happiness, and work-life balance of Malaysian University students during the coronavirus disease (COVID-19) pandemic. *Frontiers in Psychiatry*, 11, 566221.
- Wang, J., Xu, X., Wang, S., He, S., & He, P. (2021). Heterogeneous effects of COVID-19 lockdown measures on air quality in Northern China. *Applied Energy*, 282, 116179.
- Wijngaards, I., Sisouw de Zilwa, S. C., & Burger, M. J. (2020). Extraversion moderates the relationship between the stringency of COVID-19 protective measures and depressive symptoms. *Frontiers in Psychology*, 11, 568907.
- Ye, B., Hu, J., Xiao, G., Zhang, Y., Liu, M., Wang, X., & Xia, F. (2022). Access to epidemic information and life satisfaction under the period of COVID-19: The mediating role of perceived stress and the moderating role of friendship quality. *Applied Research in Quality of Life*, 17(3), 1227–1245.
- Zhang, J., Hong, L., & Ma, G. (2022). Socioeconomic status, peer social capital, and quality of life of high school students during COVID-19: A mediation analysis. *Applied Research in Quality of Life*, 17, 300–3021

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