



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



COVID-19 and human flourishing: The moderating role of gender

Lütfi Sürücü^{*}, Şenay Sahil Ertan, Evren Bağlarbaşı, Ahmet Maslakçı

European Leadership University, Faculty of Economics and Administrative Sciences, Gazi Mustafa Kemal Blv, Gazimağusa 99500, North Cyprus, Cyprus

ARTICLE INFO

Keywords:

COVID-19 fear
Human flourishing
Gender

ABSTRACT

COVID-19 fear restricts human freedom and decreases human flourishing. This paper examines the relationship between COVID-19 fear and human flourishing. Additionally, it tests gender's moderating effect in this relationship. Although studies show the relationship between COVID-19 fear and human flourishing, this study is a first attempt to determine gender's moderating role. Data were obtained from 326 hotel staff in the United States and analyzed using structural equation modeling and hierarchical regression. This study found that COVID-19 negatively affected human flourishing and gender moderated this relationship. The current study will contribute to the literature by clarifying that women's flourishing is more negatively affected than men due to COVID-19. This finding further indicates how to reduce women's COVID-19 fears from both practical and legal standpoints.

1. Introduction

After SARS-Cov-2 (COVID-19) first emerged at the end of 2019 in Wuhan Hubei, China, the virus rapidly spread to at least 210 countries and territories in 4 months. Official figures indicate over 174 million individuals were infected and 3.74 million 225,000 lost their lives as a result (Worldometers, 2020). Most countries responded by entering into a "lockdown." Such lockdowns generally require people to remain at home and close businesses. The consequences cause physical and financial problems and potential psychological issues (e.g., fear and isolation).

Witnessing the pandemic's development, social alienation, and financial instability will likely impact individuals' physical and mental well-being (Gao et al., 2020; Sibley et al., 2020). During a lockdown, people could only go out if they needed groceries, medical supplies, or treatment. They spent time with their families all day with limited personal space. Isolation and restriction of freedom may decrease human flourishing over the long term. Additionally, no empirical study has yet investigated whether COVID-19 fear lowers human flourishing.

Human flourishing has been explained as a combination of general well-being and effective functioning. It incorporates multiple concepts of high degrees of psychological, emotional, and social well-being (Huppert & So, 2013; Keyes, 2002). Human flourishing pertains to the lack of mental health issues that may include depression or anxiety (Huppert & So, 2013). When an individual is confronted with fear, it

negatively affects flourishing. Moreover, this reflects on their familial and social relationships. Fear is a negative emotion expressed by the avoidance of severe emotional levels associated with a certain stimulus (Perin et al., 2015). It is linked to clinical phobias and social anxiety disorders (Krueger et al., 2018). Therefore, the potentially high prevalence of fear among the public due to pandemics can trigger high levels of mental distress. This negatively impacts individuals' general well-being (Harper, Satchell, Fido, & Latzman, 2020).

Many COVID-19 moderators have been identified. Nevertheless, no study has specifically focused on gender's moderating role. In line with the gender role theory, this study asserts that gender's role may show differences when a negative relationship exists between COVID-19 fear and human flourishing. Women have a higher prevalence of fear than men (Palapattu, Kingery, & Ginsburg, 2006). However, no empirical research has examined gender differences in the relationship between COVID-19 fear and human flourishing.

This research examines that relationship and is supported by both psychological reactance and gender role theories. This research makes three main contributions to the literature: First, it expands our comprehension of how COVID-19 fear negatively affects human flourishing. Second, it is the first to examine gender's role in moderating the relationship between COVID-19 fear and human flourishing. Last, it identifies additional variables that moderate COVID-19 fear and its outcomes (Hamouche, 2020).

^{*} Corresponding author.

E-mail addresses: lutfi.surucu@elu.edu.tr (L. Sürücü), sahil@elu.edu.tr (Ş.S. Ertan), ebaglarbasi@elu.edu.tr (E. Bağlarbaşı), ahmet.maslakci@elu.edu.tr (A. Maslakçı).

<https://doi.org/10.1016/j.paid.2021.111111>

Received 19 September 2020; Received in revised form 18 June 2021; Accepted 29 June 2021

Available online 3 July 2021

0191-8869/© 2021 Elsevier Ltd. All rights reserved.

2. Literature review and hypotheses

2.1. COVID-19 fear

The COVID-19 outbreak causes stress, fear, and anxiety that affect the well-being and health of global populations (Reznik, Gritsenko, Konstantinov, Khamenka, & Isralowitz, 2020). Ahorsu et al. (2020) stated that pandemics are distinct in the magnitude of fear induced among significant portions of the population. Fear is a negative emotion expressed by the avoidance of severe emotional levels associated with a certain stimulus (Perin et al., 2015). It is linked with clinical phobias and social anxiety disorders (Krueger et al., 2018). Extraordinary situations like pandemics can heighten public fear levels (Pakpour & Griffiths, 2020), and thereby trigger high levels of mental distress in the population (Harper et al., 2020). Garfin, Silver, and Holman (2020) found that COVID-19 causes maladaptive anxiety levels in individuals. This leads to increased unnecessary behaviors associated with some disorders. Studies conducted in different countries found that COVID-19 fear increases individuals' fear and anxiety levels (Javier, Lamela, Faber, & Amrami, 2020). Brooks et al. (2020), show that inadequate materials and knowledge create a significant source of stress on individuals. This is magnified by boredom, which is an important stress factor (Martarelli & Wolff, 2020). Boredom also leads to an increase in depression and maladaptive behavior levels (Brodeur et al., 2020; Martarelli & Wolff, 2020). Studies on boredom show that men have a higher boredom tendency than women (Vodanovich & Kass, 1990). Moreover, age is negatively related to boredom (Isacescu, Struk, & Danckert, 2017). Higher boredom tendencies have been associated with less attachment to social distancing and a higher likelihood of contracting COVID-19 (Wolff, Martarelli, Schler, & Bieleke, 2020). Wolff and Martarelli (2020) found boredom is associated with pandemic measures. It can lead to strong behavioral changes and should also be considered as a risk factor that endangers well-being and effective functioning. The factors experienced during the pandemic negatively affect the PERMA (positive emotions, engagement, relationships, meaning in life, and achievement) elements and individuals' well-being (Seligman, 2018). Reznik et al. (2020) stated COVID-19 fear varies according to different factors like religion, pioussness, gender, educational status, and country. COVID-19 fear and social isolation are highly interconnected with anxiety and depression symptoms in both young and old people. Manderson and Levine (2020) stated COVID-19 fear emerges less than the risk of infection. However, this fear is the most important factor behind economic, social, and individual collapse. The pandemic's psychological effects on women, young people, those with a pre-existing mental disorder, and low economic status are higher (Pun et al., 2021; Fitzpatrick, Harris, & Drawve, 2020; Xiong et al., 2020).

2.2. Relationship between COVID-19 fear and human flourishing

The human flourishing scale measures an individual's self-perception of the degree to which they are successful in areas of significance, including relationships, self-confidence, optimism, and motivation (Diener et al., 2010). This concept covers social and psychological well-being and the ideal degree of well-being (Diener et al., 2010; Keyes, 2002). According to Keyes (2002), human flourishing is associated with psychosocial functioning, incorporating improved emotional well-being, increased participation in daily life activities, a reduction in days missed from work, and a reduction in days where work is less productive (Keyes, 2002). Yildirim (2019) showed that higher fear of happiness was significantly correlated with lower resilience, life satisfaction, affect balance, and human flourishing. An increase in the fear of happiness decreased life satisfaction and human flourishing.

Here, psychological reactance theory may link COVID-19 fear and human flourishing. According to Miron and Brehm (2006), the psychological reactance theory explains that if people believe that any free behaviors have been removed, or there is a threat of removal, the

motivational condition of psychological reactance arises. They found that people who perceive a threat generally experience a sense of discomfort, hostility, aggressiveness, dissatisfaction, and psychological destruction (Rains, 2013). People experienced self-isolation and restricted themselves from many activities during the lockdown period. Individuals limited behaviors, and this negatively affected them. The uncertainty and unpredictability surrounding the COVID-19 pandemic threaten individuals' physical and mental well-being (Li et al., 2020). Thus, based on the abovementioned arguments, this study proposes the following hypothesis:

H1. There is a negative relationship between COVID-19 fear and human flourishing.

2.3. Gender's moderating role

The COVID-19 pandemic has negatively impacted people's psychology because of social isolation and the fear of illness. Garfin et al. reported the pandemic has potentially created collective trauma (Garfin et al., 2020). The ongoing COVID-19 pandemic has caused anxiety and increased stress worldwide (Garfin et al., 2020). People with enhanced levels of fear of the pandemic have taken their own lives. They did this with the belief that they have the infection, even though they did not, according to the autopsies (Mamun & Griffiths, 2020). COVID-19 fear is based on four fundamental pillars: fear of the body, significant others, lack of certainty, and action or inaction. People have little tolerance for uncertainty. This is the dispositional fear underpinning emotional challenges. The intolerance for uncertain situations is regarded as the primary element underlying anxiety disorders. It is expected that uncertainty intolerance is a negative predictor of well-being.

It is important to study the different impacts of the negative relationship between COVID-19 fear and human flourishing according to gender since there are two genders within the studied population women and men. This study aimed to examine gender's effects on COVID-19 fear and human flourishing. Men and women generally have distinct attitudinal and behavioral orientations (Kim et al., 2010). The gender role theory suggests that the main domains for men and women are work, home, and family. Hence, it would be expected that the family work index levels of men would be higher. Subsequently, the work-family index levels would be higher for women.

During the pandemic, many occupations, such as teaching, nursing, and other careers were affected. In addition to increased occupational responsibilities for women, they were responsible for childcare (Erhel & Guergoat-Larivire, 2013). Homeschooling became more common. This may affect women more than men. Even women with continuous work responsibilities started to adapt their lives to childcare and other caring responsibilities. As such, this brought many uncertainties (Shortall et al., 2017). Women feel a greater psychological vulnerability than men during the pandemic because of the additional responsibilities at home. Thus, its psychological impact is significantly higher among women. Moreover, their stress, anxiety, insomnia, perceived stress, adjustment disorder, and depression levels are generally higher than men's (Rossi et al., 2020). This study proposes the following hypothesis:

H2. There is a negative relationship between the COVID-19 pandemic and human flourishing as moderated by gender.

3. Method

3.1. Participants and procedure

Research data were obtained from hotel staff in the United States in July 2020. The negative effects of the COVID-19 pandemic continued around the world when the study was conducted. Therefore, an electronic survey method was preferred. An international research company was contacted, and the hotel staff was asked whether they would like to participate. The research company designed the questionnaire's layout

as prepared by the researchers. Five hundred questionnaires were sent to hotel employees via e-mail. From these, 326 were returned (return rate: 65%). The returned questionnaires were evaluated based on [Byrne's \(2016\)](#) recommendations. According to [Byrne \(2016\)](#), 11 survey items were removed from the study because 50% of participants did not answer those items on the questionnaires. As a result, 315 completed surveys with valid data were obtained. The data were analyzed according to gender (women and men). Participants' demographic characteristics are in [Table 1](#). The different groups' characteristics (women and men) are a good representation of the overall sample's characteristics. Additionally, the *t*-test indicates that no significant difference exists between groups regarding demographic features ($p < 0.01$).

3.2. Measures

The survey contains 18 items, including three items to determine participants' demographic characteristics. The originally developed forms for COVID-19 pandemic fear and human flourishing scales were used.

3.2.1. COVID-19 fear

This scale consists of seven statements created by [Ahorsu et al. \(2020\)](#). It measures participants' COVID-19 pandemic fear level. The items are rated from "Strongly Disagree" (1) to "Strongly Agree" (5). Questions include: "I am most afraid of coronavirus-19," "I am afraid of losing my life to coronavirus-19," and "My heart races or palpitates when I think about getting coronavirus-19." This scale is well established and has been widely employed in recent studies ([Harper et al., 2020](#)).

3.2.2. Human flourishing

This scale contains eight items designed by [Diener et al. \(2010\)](#) to determine participants' human flourishing levels. The items are rated from "Strongly Disagree" (1) to "Strongly Agree" (7). Sample questions include: "My social relationships are supportive and rewarding," "I actively contribute to the happiness and well-being of others," and "I am optimistic about my future." The human flourishing scale is well established and has been widely utilized in recent studies ([Davis, Fowler, Best, & Both, 2020](#)).

3.3. Data analysis

Data analysis was performed using the IBM SPSS 24 and AMOS 18. SPSS 24 was used for descriptive statistics and correlation analyses. Factor analysis was performed with the Amos 18 program to estimate the research model's consistency and construct validity. The process macro (Model 1) developed by [Hayes \(2017\)](#) was used to investigate gender's moderating role.

Table 1
Participants demographic characteristics.

Items	Types	All (n = 315)		Women (n = 185)		Men (n = 130)	
		Frequency	(%)	Frequency	(%)	Frequency	(%)
Marital Status	Married	142	45.1	84	45.6	58	44.6
	Single	173	54.9	101	54.6	72	55.4
Age	18–29	92	29.2	54	29.2	38	29.2
	30–44	81	25.7	50	27.0	31	23.8
	45–60	99	31.4	56	30.3	43	33.1
	>60	43	13.7	25	13.5	18	13.9
Education	Vocational Training	76	24.1	62	33.5	25	19.2
	Associate Degree	128	40.6	71	38.4	59	45.4
	Bachelor's Degree	90	28.6	45	24.3	34	26.2
	Graduate Degree	21	6.7	7	3.8	12	9.2
Household Income	0 \$ – 49,999 \$	124	39.4	73	39.5	51	39.2
	50,000 \$ – 99,999 \$	110	34.9	72	38.9	48	29.2
	>100,000 \$	81	25.7	40	21.6	41	31.6

4. Results

4.1. Preliminary and correlational analyses

First, CFA estimated the validity and reliability of all study variables ([Table 2](#)). The Cronbach's alpha and CR values of all variables exceed the lower threshold of 0.7 ([Hair et al., 2010](#)). As seen in [Table 2](#), the average variance extracted (AVE) values for each structure was greater than 0.5, as suggested in the literature ([Fornell & Larcker, 1981](#)). Additionally, the square root of the variables' AVE value was larger than their correlation. The scales had convergent and discriminant validity ([Hair et al., 2010](#)). Finally, the results of confirmatory factor analysis conducted to validate the data measurement model ($\chi^2/df = 2.66$, GFI = 0.907, TLI = 0.938, CFI = 0.949, RMSEA = 0.73) showed that structural invariance was met. Both groups perceived the factor structure similarly ([Kline, 2015](#)).

Subsequently, the data's normality was checked. The results presented in [Table 3](#) show that the skewness (0.144, to -0.778) and kurtosis (-0.674 to 1.019) values for all variables indicate that the data were normally distributed ([Kline, 2015](#)). The Pearson correlation coefficient between variables in the study was calculated separately for both female and male participants. While COVID-19 fear was significantly and negatively correlated with human flourishing among women ($r = -0.202$, $p < 0.05$), COVID-19 fear and human flourishing were not correlated ($r = -0.112$, $p > 0.05$) among men ([Table 3](#)).

4.2. Moderation analyses

Process Macro V3.4, developed by [Hayes \(2017\)](#), was used to

Table 2
Construct reliability and validity analyses.

Construct	Items	Items loadings	CR	AVE	α
COVID-19 fear	FOC1	0.658	0.914	0.608	0.919
	FOC2	0.694			
	FOC3	0.836			
	FOC4	0.770			
	FOC5	0.759			
	FOC6	0.853			
	FOC7	0.864			
Flourishing	FLOU1	0.750	0.907	0.550	0.906
	FLOU2	0.745			
	FLOU3	0.777			
	FLOU4	0.769			
	FLOU5	0.796			
	FLOU6	0.700			
	FLOU7	0.688			
	FLOU8	0.690			

CR; composite reliability, AVE; average variance extracted, α ; Cronbach's Alpha.

Table 3
Mean, standard deviation, and Pearson's correlation.

Variables	Mean	Standard deviation	1	2
Total Sample (n = 315)				
COVID-19 fear	2.883	1.045	1	
Flourishing	5.136	1.120	-138**	1
Women (n = 185)				
COVID-19 fear	2.852	0.998	1	
Flourishing	5.239	1.013	-0.202**	1
Men (n = 130)				
COVID-19 fear	2.929	1.111	1	
Flourishing	4.499	1.246	-0.112	1
Skewness	-	-	0.144	-0.674
Kurtosis	-	-	-0.778	1.019

Bold data shows correlation coefficients.

** $p < 0.05$, (2-tailed test).

determine gender's moderating role. Model 1 was selected for the analysis performed with 5000 bootstrap samples within the range of 95% confidence intervals. The results are shown in Table 4.

The bootstrap results indicated COVID-19 fear had a significant negative effect on flourishing ($\beta = -0.0268$, 95% CI = $[-0.0911, -0.1448]$, $t = 0.448$, $p < 0.05$). Moreover, gender played a moderating role in the relationship between COVID-19 fear and flourishing ($\beta = -0.3406$, 95% CI = $[-0.5758, -0.1053]$, $t = 2.014$, $p < 0.05$). These findings confirmed Hypotheses 1 and 2.

A simple slope regression chart, proposed by Aiken, West, and Reno (1991), was formed to determine gender's moderating effect on COVID-19 fear's influence on flourishing. This furthered the analysis (Fig. 1).

The simple slope regression graph shows COVID-19 fear's impact on flourishing varies when it comes to women and men. While COVID-19 fear in women negatively affected flourishing at a significant level ($\beta = -0.2269$, 95% CI = $[0.0547, 0.3990]$, $t = 2.5934$, $p < 0.01$), COVID-19 fear had no effect on flourishing in men ($\beta = -0.1137$, 95% CI = $[0.2747, 0.0466]$, $t = -1.3954$, $p > 0.01$). Thus, as COVID-19 fear increased in women, flourishing perception decreased.

5. Discussion, conclusion, and implications

COVID-19 fear is a new field of study. COVID-19 fear affects human flourishing negatively. Few empirical studies indicated there was a negative relationship between COVID-19 fear and human flourishing. Gender's moderating effect was studied first. This study examines gender's moderating role on COVID-19 fear and its negative effect on human flourishing with 315 hotel employees from the US to address a gap in the literature.

This is the first study to analyze gender's moderating role in the relationship between COVID-19 fear and human flourishing. Some research examined health problems related to COVID-19. For example, Fore (2020) stated that as COVID-19 cases rise worldwide and threaten to overwhelm critical health systems, a significant risk is posed to mothers' and children's lives. Sibley et al. (2020) examined mental well-being and determined even when populations safeguard communities (and remain at home to protect lives), this has a detrimental

Table 4
Bootstrap results.

Variables	Coeff	SE	t	p	LLCI	ULCI
Constant	5.1306	0.0622	82.465	0.000	5.0081	5.2530
COVID-19 fear	-0.0268	0.0600	0.448	0.004	-0.0911	-0.1448
Gender	0.2545	0.1264	2.014	0.044	0.0058	0.5031
Int_1	-0.3406	0.1196	-2.849	0.003	-0.5758	-0.1053
R ²	0.0387					
R ² -chg	0.0251					
F	8.1150					

n = 315.

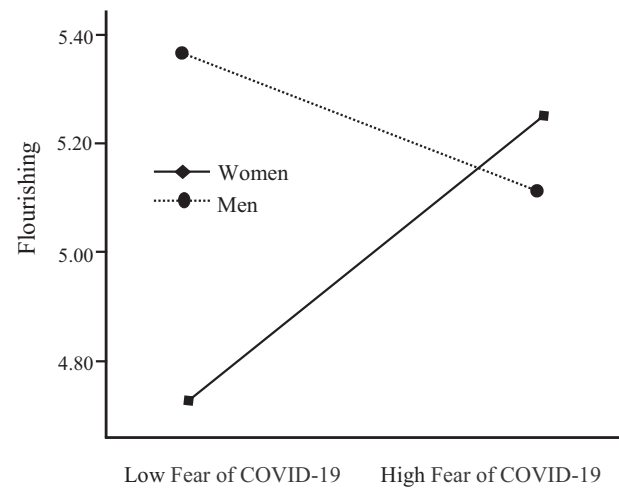


Fig. 1. Interaction of Gender and COVID-19 fear on flourishing.

psychological impact. Ongoing attempts to monitor pandemic responses and social efforts aimed at containing the virus will be critical. This is in addition to timely interventions that foster societal and psychological well-being, despite the current priority on physical health.

Correlating with the latter, this study found that COVID-19 fear decreased human flourishing. When an individual lacks freedom, human flourishing decreases. According to reactance theory, when COVID-19 fear increases (Miron & Brehm, 2006), the restriction of free behaviors makes people feel uncomfortable, hostile, aggressive, unsatisfied, and psychologically destroyed (Rains, 2013). This affects human flourishing negatively—defined as the combination of multiple notions of increased degrees of psychological, emotional, and social well-being (Huppert & So, 2013; Keyes, 2002).

Second, gender's moderating role on COVID-19 fear and its outcomes has been studied. Gender moderated the relationship between COVID-19 fear and human flourishing. This builds on Hamouche (2020), by showing that women's human flourishing was more affected by COVID-19 fear than men. According to the gender role theory, work is the primary domain of men. However, women's primary responsibility is the home and family. Therefore, during COVID-19 pandemic, women were affected in terms of psychological vulnerability than men. Women were more psychologically impacted by factors like increased stress, insomnia, anxiety, perceived stress, adjustment disorder, and depression levels (Rossi et al., 2020). Furthermore, there was an increased negative effect on women's human flourishing and well-being.

5.1. Managerial implications

Organizations must have flexible policy tools to address women's concerns as the effects of COVID-19 evolve. First, women's vulnerability should be considered. Moreover, managerial decisions should be made to lower the psychological impact of COVID-19 fear on women with specific policies. For instance, when the government decides to reopen schools, they should also consider how this decision will affect women's lives and their psychological state. Women will have many concerns sending children to school. Furthermore, COVID-19 fear will increase if the opposite decision is taken. Thus, this might affect careers when women keep children at home to ensure their safety and security. Governmental and managerial decisions should take these findings into account to find ways that women's human flourishing will not be as affected.

Second, online classes and counseling schemes should offer material targeted toward women. An online group counseling scheme could be practically implemented at the organizational level. One may employ positive psychology (flourishing) to promote optimism among women

when they experience crises resulting from psychological and non-psychological transformations. This could make women more capable of handling these crises when faced with the ongoing pandemic.

Third, COVID-19 fear's impact on women may continue even after the pandemic. Governmental decisions should also promote continuous support for women's well-being in the business industry. During and after the pandemic, managerial and governmental decisions may consider these findings and provide psychological support in the workplace to decrease the impact of COVID-19 fear among women.

5.2. Limitations and future research

This study had some limitations. First, self-report surveys may result in a common method bias. Also, this study was only performed in the United States and was purely based on the hotel sector. This study's implications may not be generalizable to other countries and contexts. As women's roles vary in different societies, future studies should research other societies or sectors.

Future studies can make important contributions to the field. First, this study examined gender's short-term effects. However, as the COVID-19 pandemic is ongoing, gender's long-term effects will require clarification. Second, women's work-life balance regarding COVID-19 fear merits further study. Third, this study used a quantitative research method. However, qualitative research may also be beneficial.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

CRedit authorship contribution statement

Lütfi Sürücü: Methodology, Data curation, Project administration. **Şenay Sahil Ertan:** Conceptualization, Software, Writing – original draft, Writing – review & editing. **Evren Bağlarbaşı:** Writing – original draft, Writing – review & editing, Visualization. **Ahmet Maslakçı:** Supervision, Conceptualization, Investigation, Software, Validation.

Declaration of competing interest

The authors have no personal interest or benefit arising from the application of the research.

Acknowledgement

No acknowledgement.

References

- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 scale: development and initial validation. *International Journal of Mental Health and Addiction*, 1-9. <https://doi.org/10.1007/s11469-020-00270-8>.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). Multiple regression: Testing and interpreting public health compliance in the COVID-19 pandemic. In *Interactions*. Sage.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., 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. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8).
- Brodeur, A., Gray, D., Islam, A., & Bhuiyan, S. (2020). A literature review of the economics of COVID-19. *Journal of Economic Surveys*, 1–38. <https://doi.org/10.1111/joes.12423>.
- Byrne, B. M. (2016). *Structural equation modelling with AMOS: Basic concepts, applications, and programming*. New York: Routledge.
- Davis, L. L., Fowler, S. A., Best, L. A., & Both, L. E. (2020). The role of body image in the prediction of life satisfaction and flourishing in men and women. *Journal of Happiness Studies*, 21(2), 505–524. <https://doi.org/10.1007/s10902-019-00093-y>.
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156.
- Erhel, C., & Guergoat-Larivière, M. (2013). Labor market regimes, family policies, and women's behavior in the EU. *Feminist Economics*, 19(4), 76–109. <https://doi.org/10.1080/13545701.2013.842649>.
- Fitzpatrick, K. M., Harris, C., & Drawwe, G. (2020). Living in the midst of fear: Depressive symptomatology among US adults during the COVID-19 pandemic. *Depression and Anxiety*, 37(10), 957–964. <https://doi.org/10.1002/da.23080>.
- Fore, H. H. (2020). A wake-up call: COVID-19 and its impact on children's health and wellbeing. *The Lancet Global Health*, 8(7), e861–e862. [https://doi.org/10.1016/S2214-109X\(20\)30238-2](https://doi.org/10.1016/S2214-109X(20)30238-2).
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., ... Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PLoS One*, 15(4), Article e0231924. <https://doi.org/10.1371/journal.pone.0231924>.
- Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology*, 39(5), 355–357. <https://doi.org/10.1037/hea0000875>.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: Global perspective*. New Jersey, Upper Saddle River: Pearson Education.
- Hamouche, S. (2020). COVID-19 and employees' mental health: Stressors, moderators and agenda for organizational actions. *Emerald Open Research*, 2(15), 15. <https://doi.org/10.35241/emeraldopenres.13550.1>.
- Harper, C. A., Satchell, L. P., Fido, D., & Litzman, R. D. (2020). Functional fear predicts public health compliance in the COVID-19 pandemic. *International Journal of Mental Health and Addiction*, 1–14. <https://doi.org/10.1007/s11469-020-00281-5>.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- Huppert, F. A., & So, T. T. C. (2013). Flourishing across Europe: Application of a new conceptual framework for defining well-being. *Social Indicators Research*, 110(3), 837–861. <https://doi.org/10.1007/s11205-011-9966-7>.
- Isacescu, J., Struk, A. A., & Danckert, J. (2017). Cognitive and affective predictors of boredom proneness. *Cognition and Emotion*, 31(8), 1741–1748. <https://doi.org/10.1080/02699931.2016.1259995>.
- Javier, R. A., Lamela, M., Faber, A., & Amrami, Y. (2020). Special Issue on the COVID-19 pandemic and psycholinguistic research: A call for papers. *Journal of Psycholinguistic Research*, 49(3), 351–354. <https://doi.org/10.1007/s10936-020-09704-9>.
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43(2), 207–222.
- Kim, J. S., Lee, K. B., Roh, H., Ahn, M. Y., & Hwang, H. W. (2010). Gender differences in the functional recovery after acute stroke. *Journal of Clinical Neurology*, 6(4), 183–188. <https://doi.org/10.3988/jcn.2010.6.4.183>.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling. Principles and practice of structural equation modeling*. New York: The Guilford Press.
- Krueger, R. F., Kotov, R., Watson, D., Forbes, M. K., Eaton, N. R., Ruggero, C. J., ... Zimmermann, J. (2018). Progress in achieving quantitative classification of psychopathology. *World Psychiatry*, 17(3), 282–293. <https://doi.org/10.1002/wps.20566>.
- Li, P., Fu, J. B., Li, K. F., Liu, J. N., Wang, H. L., Liu, L. J., ... Yan, J. B. (2020). Transmission of COVID-19 in the terminal stages of the incubation period: A familial cluster. *International Journal of Infectious Diseases*, 96, 452–453. <https://doi.org/10.1016/j.ijid.2020.03.027>.
- Mamun, M. A., & Griffiths, M. D. (2020). First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. *Asian Journal of Psychiatry*, 51. <https://doi.org/10.1016/j.ajp.2020.102073>.
- Manderson, L., & Levine, S. (2020). COVID-19, risk, fear, and fall-out. *Medical Anthropology*, 39(5), 367–370. <https://doi.org/10.1080/01459740.2020.1746301>.
- Martarelli, C. S., & Wolff, W. (2020). Too bored to bother? Boredom as a potential threat to the efficacy of pandemic containment measures. *Humanities and Social Sciences Communications*, 7(1), 1–5. <https://doi.org/10.1057/s41599-020-0512-6>.
- Miron, A. M., & Brehm, J. W. (2006). Reactance theory – 40 years later. *Zeitschrift für Sozialpsychologie*, 37(1), 9–18. <https://doi.org/10.1024/0044-3514.37.1.9>.
- Pakpour, A. H., & Griffiths, M. D. (2020). The fear of COVID-19 and its role in preventive behaviors. *Journal of Concurrent Disorders*, 2(1), 58–63.
- Palapattu, A. G., Kingery, J. N., & Ginsburg, G. S. (2006). Gender role orientation and anxiety symptoms among African American adolescents. *Journal of Abnormal Child Psychology*, 34(3), 441–449.
- Perin, C., Beghi, M., Cerri, C. G., Peroni, F., Viganò, B., & Cornaggia, C. M. (2015). Experience of group conversations in rehabilitation medicine: Methodological approach and pilot study. *Journal of Medicine and the Person*, 13(2), 96–104. <https://doi.org/10.1007/s12682-015-0208-7>.
- Pun, B. T., Badenes, R., La Calle, G. H., Orun, O. M., Chen, W., Raman, R., ... Villamizar, P. R. (2021). Prevalence and risk factors for delirium in critically ill patients with COVID-19 (COVID-D): A multicentre cohort study. *The Lancet Respiratory medicine*, 9(3), 239–250. [https://doi.org/10.1016/S2213-2600\(20\)30552-X](https://doi.org/10.1016/S2213-2600(20)30552-X).
- Rains, S. A. (2013). The nature of psychological reactance revisited: A meta-analytic review. *Human Communication Research*, 39(1), 47–73.
- Reznik, A., Gritsenko, V., Konstantinov, V., Khamenka, N., & Isralowitz, R. (2020). COVID-19 fear in Eastern Europe: Validation of the Fear of COVID-19 Scale. *International Journal of Mental Health and Addiction*, 1-16. <https://doi.org/10.1007/s11469-020-00283-3>.
- Rossi, R., Succi, V., Talevi, D., Mensi, S., Niolu, C., Pacitti, F., Di Marco, A., Rossi, A., Siracusano, A., & Di Lorenzo, G. (2020). COVID-19 pandemic and lockdown measures impact on mental health among the general population in Italy. *Frontiers in Psychiatry*, 11, 790. <https://doi.org/10.3389/fpsy.2020.00790>.

- Seligman, M. (2018). PERMA and the building blocks of well-being. *Journal of Positive Psychology, 13*(4), 333–335. <https://doi.org/10.1080/17439760.2018.1437466>.
- Shortall, S., Sutherland, L., McKee, A., & Hopkins, J. (2017). *Women in farming and the agriculture sector*. Edinburgh, Scotland: Scottish Government.
- Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H. J., ... Barlow, F. K. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *American Psychologist, 75*(5), 618–630. <https://doi.org/10.1037/amp0000662>.
- Vodanovich, S. J., & Kass, S. J. (1990). A factor analytic study of the boredom proneness scale. *Journal of Personality Assessment, 55*(1-2), 115–123. <https://doi.org/10.1080/00223891.1990.9674051>.
- Wolff, W., & Martarelli, C. S. (2020). Bored into depletion? Toward a tentative integration of perceived self-control exertion and boredom as guiding signals for goal-directed behavior. *Perspectives on Psychological Science, 15*(5), 1272–1283. <https://doi.org/10.1177/1745691620921394>.
- Wolff, W., Martarelli, C. S., Sch uler, J., & Bieleke, M. (2020). High boredom proneness and low trait self-control impair adherence to social distancing guidelines during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health, 17*(15), 5420–5430. <https://doi.org/10.3390/ijerph17155420>.
- Worldometers. (2020). Coronavirus statistics. Retrieved from <https://www.worldometers.info/coronavirus/>.
- Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., et al. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders, 277*(1), 55–64. <https://doi.org/10.1016/j.jad.2020.08.001>.
- Yildirim, M. (2019). Mediating role of resilience in the relationships between fear of happiness and affect balance, satisfaction with life, and flourishing. *Europe's Journal of Psychology, 15*(2), 183–198. <https://doi.org/10.5964/ejop.v15i2.1640>.