

# Social media use and various factors affecting Indonesian mental health during the COVID-19: a pathway to remember

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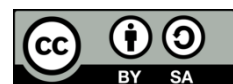
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## ABSTRACT

In the middle of the COVID-19 pandemic, Indonesia is experiencing a crisis in mental health, and it appears that social media is making the issue much worse. This study examines the impact of social media use and its elements on Indonesians' mental health as a first step towards identifying potential disasters. The study uses a convergent mixed methods approach, utilizing both quantitative data measured by social networking activity intensity scale (SNAIS) and general anxiety disorder 7 scale (GAD-7), and qualitative data collected through open-ended questions answered by 347 Indonesians aged 17-65 years old. The results indicate a significant link ( $p < 0.05$ ) between excessive social media use during the pandemic and unfavorable impacts on users' mental health, specifically the development of anxiety. The study also finds that hoaxes and rumors on social media about COVID-19 infections, inadequate health facilities, and the Indonesian government's slow response contributed to the population's uneasiness. According to the studies, social media literacy is needed to managing social media use during times of crisis. This study adds to the social media-mental health literature. It illuminates Indonesians' challenges, providing insights that might improve public health policies, mental health therapies, and educational efforts to encourage good social media practises.

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## 1. INTRODUCTION

The COVID-19 outbreak was first declared by the World health organization (WHO) in March 2020. Several countries adopted a lockdown policy but for economic reasons, Indonesia prefers to implement social distancing. Social distancing is the practice of widening the distance between people in an effort to reduce the chances of reducing disease transmission [1]. This outbreak is escalating the health problems of stress. The symptoms of stress, worry, depression, sleeplessness, denial, fury, and dread are all heightened by this unforeseen outbreak, which also causes tremendous mental and emotional suffering around the world [2], [3]. The described symptoms are commonly known as anxiety which part of mental health. Further, it characterized by persistent negative emotions and fear, followed by autonomic symptoms of palpitations, excessive sweating, and abdominal or chest discomfort. The individuals will be afraid about problems at job, health, finances, or family [4]. Furthermore, there are several symptoms of anxiety including high blood pressure, shaking, dizziness and fast heartbeat [5]. To be more specific, generalized anxiety disorder (GAD)

is not the same as everyday anxiety. It is persistent and fills one's day with excessive anxiety and tension, even when there is no cause for it. Symptoms of anxiety include fatigue, headaches, muscle tension, shaking, twitching, irritability, sweating, and hot flashes. It appears that there are certain people who become worried when they encounter information related to COVID-19. There are also those who say they experience physical symptoms such as shortness of breath after reading about COVID-19 in the news and should see a doctor to find out the cause. This is also reinforced by the fact that COVID-19 overload due to the use of social media has caused Gen Z users to experience psychological pressure [6].

In today's century, widespread and easy access to information through social media platforms such as Facebook, Instagram, Twitter, and Whatsapp is everywhere, causing various psychological consequences for its users [7]. In addition, there has been an increase in the amount of information available online, resulting in excessive use of social media. According to a study on COVID-19, the majority of social media posts mentioning them are unreliable and untrustworthy [8], [9]. This is in line with findings in the field that at the start of the emergence of COVID-19 in Indonesia, social media consistently reported negative information about COVID-19 and even unreliable news or hoaxes, which created negative feelings, fear and anxiety about possible future scenarios and be disastrous as predicted. Social media misinformation has been widely considered by the United Nations and WHO to be dangerous to public health, especially in efforts to control the spread of COVID-19.

With all of the various social media sites to choose from, students could experience several detrimental side effects to their overall study habits, grade point average, and lifestyle [10]. The many factors, we take the factor of social media use because during the pandemic, especially the lockdown, there was an increase in online activity or use of social media. Positioning Indonesia regarding to social media user rating, after the Philippines, Brazil, and Colombia [11], Indonesia was predicted to have the fourth-highest average time spent on social media in 2019. Indonesians spend an average of eight hours a day on the internet using their cell phones to access social media and other online services. Indonesian internet users also use social networking applications on their cellphones because it is the most popular way to access the internet in the country. With the country's new social media filtering law, most Indonesians are now allowed to browse social media at any time without censors. COVID-19 information is common on social media platforms such as WhatsApp, Facebook, and Instagram in Indonesia, however this is not necessarily accurate.

Much literature states that there is a relationship between the use of social media, especially flooding information, hoax news, and anxiety. Misinformation concerning COVID-19 has been widely spread on social media sites like Twitter, YouTube, and Facebook, which may be to blame for this confusion. Social media misinformation has been widely deemed by the UN and WHO to be harmful to public health, especially in efforts to control the spread of COVID-19 [12]. There has been previous research examining social media use and anxiety, but it is still rare to research respondents ranging from teenagers to late adults. Previous studies have used more quantitative methods only. The current research using the mixed method is expected to produce more comprehensive findings. So that issues related to the use of social media and anxiety are important for research to support controlling the spread of COVID-19. Based on the problems above, it encourages researchers to investigate i) whether there is a relationship between the use of social media and the anxiety experienced by Indonesian people during the COVID-19 outbreak ii) find out what caused the Indonesian people to feel anxious during the pandemic.

## 2. RESEARCH METHOD

A mixed-method convergent design was employed in this investigation. Since quantitative and qualitative data enables comparisons like confirmation, rejection, and cross-validation to be made by researchers (see Figure 1). Respondents for the quantitative and qualitative research were 347 people aged 17-65 years living in Indonesia. A minimum sample of 300 respondents is considered sufficient numbers for the general population to form an adequate sample [13]. The consent form delivered and approved including assent were obtained from respondent. Procedures were officially accepted by a centralized Institutional Review Board (Gadjah Mada University, Yogyakarta, protocol number: #KE/FK/0961/EC).

This study measured the effect of using social media during a pandemic on the anxiety level of the respondents. Two scales used to obtain the data. the first was general anxiety disorder-7 scale (GAD-7) used as measurement of anxiety disorder. GAD-7 was developed and validated for Indonesian context use only. Internal validity and reliability for Indonesian version of GAD-7 were satisfactory with validity coefficient of 0.648 to 0.800 ( $p < 0.01$ ) and Cronbach's alpha value of 0.867 [14]. The GAD-7 consists of seven measures that were used to assess general anxiety, with the primary questions ("Over the last 2 weeks, how often have you been bothered by the following problems?" e.g., "Worrying too much about different things") " ) e.g., "worrying too much about"). It is responded on a 4-point Likert scale ranging from "not at all in two weeks" (0) to "a few days in two weeks" (1), "more than half days in two weeks" (2), and "nearly every day in two weeks" (3). Secondly, Social networking activity intensity scale (SNAIS) was used to measure the use of

social media [15]. The SNAIS has 12 items (e.g., responses to remarks made by social networking friends) and is scored on a 6-point Likert scale ranging from 0 (never) to 5 (always). Internal validity and reliability based on the entire sample was acceptable for the SNAIS (Cronbach's  $\alpha = 0.890$ ) and (Spearman  $r = 0.30$  to  $0.40$ ,  $p < 0.001$ ). The analysis for this quantitative research used Pearson Correlation analysis.

The Qualitative data were collected with open-ended questions, "What causes you anxiety during the COVID-19 Pandemic?". Open-ended questions are used because they allow the respondent to express themselves freely on a given subject. Besides that, open-ended questions provide the audience with quotes to illustrate significant points, gaps in knowledge, and details about individual experiences that are disaggregated [16]. Pandemic conditions also made it impossible for researchers to conduct in-person interviews. For the analysis, researchers used descriptive analysis. Researchers identify patterns and themes through coding, classifying, and categorizing based on emerging themes.

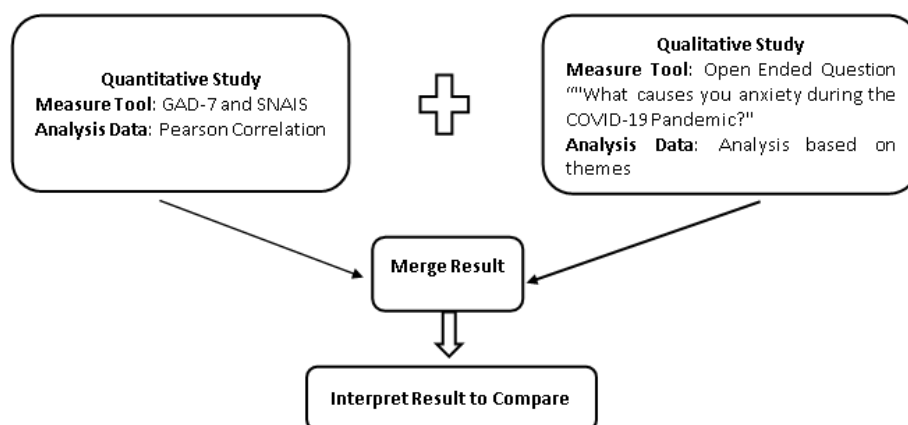


Figure 1. Mixed method convergent design

### 3. RESULTS AND DISCUSSION

#### 3.1. Result of the quantitative study

##### 3.1.1. Analysis pearson correlation

In general, these findings demonstrate that there is a positive association between social media use and anxiety in Indonesian culture as shown in Table 1. About 17% of the anxiety experienced by Indonesian citizens during the pandemic is driven by social media use, with the remaining 83% being influenced by other causes. This is confirmed by numerous earlier studies that show how social media use affects anxiety [17].

Table 1. Analysis pearson correlation

Anxiety*SocialMediaUse	N	R	R squared	Sig. (2-tailed)
	347	.130	.017	.016

##### 3.1.2. Anxiety levels in Indonesian people during the COVID-19 pandemic

Table 2 shows that mild anxiety dominates the degree of anxiety among Indonesians who have GAD-7, while nearly half of Indonesians do not suffer anxiety as a result of the COVID-19 pandemic (Table 2). This is also consistent with studies [18], which found that between 50% and 80% of respondents did not experience any anxiety, with the remaining respondents reporting moderate to severe anxiety.

Table 2. Anxiety levels in Indonesian people during the COVID-19 pandemic

Anxiety level	Number	Ratio
Normal	200	57.6%
Mild	112	32.3%
Moderate	20	5.8%
Severe	15	4.3%
Total	347	100%

### 3.2. Result of the qualitative study

#### 3.2.1. Aspects that cause anxiety and positive lessons among Indonesians during the pandemic

As a result of the epidemic, Indonesians are concerned about hoaxes and news of rising COVID-19 cases circulating on social media, according to the study. Health issues (self and family), uncertainty (when the pandemic will end), a slumping economy, limited school facilities and infrastructure for supporting school and work from home, limited space for traveling and going home, praying in mosque or church, were all factors that contributed to the anxiety of Indonesians during the pandemic. Increasing criminality, ostracizing COVID-19 sufferers, and a sluggish response from the Indonesian government are also contributing factors as shown in Table 3. In summary, the data show that social media use is strongly linked to anxiety in Indonesian culture. Using Pearson's correlation coefficient, these hypotheses were tested. That social media can raise Indonesian concern in the event of a COVID-19 pandemic is demonstrated here. A qualitative study also suggests that the existence of false news about COVID-19 and the growing number of COVID-19 patients spread on social media is one of the sources of concern in Indonesians. COVID-19 news has been flooded with unsubstantiated information in Indonesia, including a growing number of COVID-19 victims who have perished. This has heightened public worry. Anxiety and even depression have been linked to excessive social media use, according to numerous research [19], [20].

Table 3. Aspects that cause anxiety among Indonesians during the pandemic

No.	Issues that make Indonesian people anxious
1.	Health issue (Personal and family)
2.	Limited for school facilities and infrastructure for support school and work from home
3.	a slumping economic condition
4.	limited space for traveling, going hometown, praying in mosque or church
5.	hoaxes and news about covid patients
6.	Uncertainty (when the pandemic ends)
7.	Increase in crime
8.	Ostracizing COVID-19 patients
9.	The Indonesian government is slow and less firm in handling COVID-19

Anxiety and sadness have become more common during the COVID-19 epidemic as a result of social media's harmful effects [21]. The COVID-19 pandemic, on the other hand, is not necessarily harmed by the use of social media; in fact, social media has been proven to boost the number of customers during the epidemic [22]. Online shopping is also popular among Indonesians. Then, the government or policymakers can utilize social media to spread information on COVID-19, such as advice on how to avoid or handle a disaster [23]. Users of social media who are members of Generation Z have seen a negative impact on their mental health as a direct result of the prevalence of content related to COVID-19 that is available on social media. The perceived volume of information also contributed to an increase in social media users' exhaustion and their fear of COVID-19, which, in turn, contributed to an increase in the users' desire to withdraw from social media [12]. This could be owing to the fact that the vast majority of COVID-19 disinformation is communicated via social media platforms such as Twitter, YouTube, and Facebook, and that there is a lot of material regarding COVID-19 on social media that isn't necessarily correct [24]. The UN and WHO believe that health disinformation on social media is hazardous to public health, especially efforts to limit COVID-19 spread. Some Indonesians believe social media news is unreliable.

This study found that the average level of anxiety is 4.56, which falls within the range of mild anxiety bordering on mild. The majority of individuals were worried about the COVID-19 pandemic, but it was not a significant concern. Despite the fact that the government has set restrictions on all community events in order to prevent the virus from spreading further, they may go about their daily lives as usual due to their level of care. Religion is one of the factors that contributed to the fact that the majority of participants did not experience significant dread when confronted with this outbreak. In addition to reducing the likelihood of having anxiety, a high level of religiosity also reduces the likelihood of experiencing depression [25]. Stress is perceived as a challenge by those who have a high level of religious and spiritual convictions. For Muslims, tests are a gift from God, and gratitude should be given, even in the face of adversity and struggle [26]. The religious culture of the community also contributes to a lack of concern for the disease. Indonesians have a cultural heritage that is strongly influenced by Islamic teaching and values. Since its independence in 1945, Indonesia has followed the Pancasila (the Five Principles) as its national philosophy [9]. The national concept of Pancasila leads Indonesians' way of life. The first and one of the Republic of Indonesia's Five Principles is "belief in the One and Only God." It demonstrates that religion is extremely important to Indonesians. This could be related to the high level of surrender and personal value if God has determined when each person's life/death will end gracefully. Some Indonesians believe COVID-19 is a

fraud and a scheme by a specific nation, thus they don't follow the health regimen when going outside. It causes Indonesians to neglect health protocols.

According to the results of the open-ended question, the factors that contribute to the respondent's anxiety during the COVID-19 pandemic are personal and family health factors, economic problems, and hoax news on social media. According to the qualitative data collected, several factors have contributed to the Indonesians' anxiety during the COVID-19 pandemic. These include limited school facilities and infrastructure to support the school and work from home, limited space for socialization (social distancing), uncertainty as to when the pandemic will end, an increase in crime, the isolation of COVID-19 patients in the community, and policies of the Indonesian government that are deemed to be slow in implementing measures to combat COVID-19. A range of circumstances, including personal and family health issues and fear of contracting or transmitting the COVID-19 virus to their families, trigger anxiety [8], including the economic effects of the epidemic, specifically the loss in economic activity [27]. The pandemic has the greatest impact on economic operations due to restrictions imposed during the outbreak. This is supported by other data from open questionnaires that have been made public, which demonstrates that merchants are concerned about the pandemic's effect on the economy and the reduction in customer activity.

Another contributing factor to anxiety is the fear of losing one's job and income. As with other nations, this pandemic has had a devastating effect on numerous sectors of many nations [27]. In developing nations such as Indonesia, this circumstance will begin to appear anomalous. In normal circumstances, it is tough for Indonesians to find job; the pandemic worsens this problem, making it considerably more difficult to find work. Some companies in Indonesia to choose to do a termination of employment (hereinafter called PHK) that resulted in the number of employees who are not able to work [28]. Another problem seems to be that there aren't many sellers open their stores, which makes it hard for stores and supermarkets to keep enough food in stock [29]. The economic problems, directly and indirectly, increase crime in society. Numerous respondents are concerned about the education sector, particularly college students and infrastructure workers, because the internet network in Indonesia is not yet evenly distributed, some people are not ready to use technology in online teaching, and parents are unable to maximize in teaching their children due to time and knowledge constraints. Most educators are still afraid to use online teaching tools. India, for example, is one of several developing nations impacted by this problem [30].

When it comes to outside activities such as traveling, worshipping at a mosque or church, and coming home to Indonesian citizens are concerned about a restricted space for movement. A new policy mandating citizens to limit non-essential activities like gathering, touring, picnics, and returning to one's hometown has been adopted by the Indonesian government since the COVID-19 case was made public in the country. This follows the results of previous research that the pandemic limits social interaction in society [31], [32]. As a result, the local economy, notably tourism, suffers. Tourism has been particularly hard hit by this outbreak [33]. Indonesia is one of the world's most varied countries. Despite this variety, inside Indonesian culture a shared identity has emerged, defined by a national language, ethnic diversity, and religious plurality. Despite the fact that Indonesia is not an Islamic country, it is home to the world's biggest Muslim population, with 86.1% of Indonesians identifying as Muslims. Nonetheless, the Indonesian government recognized five more religions on an official level, including Protestantism, Roman Catholicism, Hinduism, Buddhism, and Confucianism. It demonstrates how important religion is to the Indonesian people. This gives one of them concern that they would be unable to pray freely at the mosque or participate in religious studies. Most Indonesians are also concerned about the seclusion of COVID-19 sufferers in their communities. When exposed to the COVID-19 virus, people experience a tremendous mental toll because of the widespread belief that medical professionals and their families should avoid contact with anyone who has been exposed to the virus. As a result, the Indonesian government's delayed and indecisive tactics in dealing with COVID-19 during the pandemic are also a matter for concern.

#### 4. CONCLUSION

The usage of social media during the COVID-19 outbreak has the potential to make Indonesians feel even more terrified. Limiting the amount of time spent on social media and being more cautious about the information that one consumes while on social media are both good ways to protect one's mental health during a pandemic. Health, the economy, education, limited space for mobility and religious activities, uncertainty over the conclusion of the pandemic, the exclusion of COVID-19 sufferers, and measures judged slow and indecisive by the Indonesian government in dealing with COVID-19 are all causes for concern in relation to this pandemic. The results highlight the importance of promoting social media literacy and encouraging responsible social media use, particularly during times of crisis. Implementing strategies that help individuals manage their social media usage can potentially mitigate the negative impact on mental health. The study sheds light on the challenges faced by individuals in Indonesia and emphasizes the need for

targeted public health policies, mental health interventions, and educational campaigns. These initiatives can help promote healthy social media practices, provide accurate information, and alleviate anxiety and other mental health issues related to social media use.

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## REFERENCES

- [1] R. Djalante *et al.*, "Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020," *Progress in Disaster Science*, vol. 6, p. 100091, Apr. 2020, doi: 10.1016/j.pdisas.2020.100091.
- [2] J. Gao *et al.*, "Mental health problems and social media exposure during COVID-19 outbreak," *PLOS ONE*, vol. 15, no. 4, p. e0231924, Apr. 2020, doi: 10.1371/journal.pone.0231924.
- [3] Z. Nuryana, "Promoting mental health related to self-esteem during COVID-19: insights from an Indonesian teacher," *Asia Pacific Journal of Public Health*, p. 101053952211071, Jun. 2022, doi: 10.1177/10105395221107132.
- [4] J. Sadock, Benjamin, A. Sadock, Virginia, and P. Ruiz, *Kaplan & sadock's comprehensive textbook of psychiatry*, Tenth Edit., vol. 1. New York.: Wolters Kluwer, 2016.
- [5] C. Gale and O. Davidson, "Generalised anxiety disorder," *British Medical Journal*, vol. 334, no. 7593, pp. 579–581, 2007, doi: 10.1136/bmj.39133.559282.BE.
- [6] Z. Tian, A. Liu, and L. I. Jing, "Mediating effect of belief in a just world and self-esteem on relationship between childhood abuse and subjective well-being in college students," *Chinese Mental Health Journal*, no. 12, pp. 312–318, 2017.
- [7] N. Tarnoto and Z. Nuryana, "Digital intervention and peer-support group to promote mental health of children and adolescents during COVID-19: practical guidelines from Indonesia," *Asia Pacific Journal of Public Health*, vol. 34, no. 8, pp. 883–884, Nov. 2022, doi: 10.1177/10105395221129104.
- [8] A. Khanam, S. A. Dar, Z. A. Wani, N. N. Shah, I. Haq, and S. Kousar, "Healthcare providers on the frontline: a quantitative investigation of the stress and recent onset psychological impact of delivering health care services during COVID-19 in Kashmir," *Indian Journal of Psychological Medicine*, vol. 42, no. 4, pp. 359–367, 2020, doi: 10.1177/0253717620933985.
- [9] J. L. Jaafar *et al.*, "The sources of happiness to the Malaysians and Indonesians: data from a smaller nation," *Procedia - Social and Behavioral Sciences*, vol. 65, no. ICIBSoS, pp. 549–556, 2012, doi: 10.1016/j.sbspro.2012.11.164.
- [10] A. Dhir, Y. Yossatorn, P. Kaur, and S. Chen, "Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety and depression," *International Journal of Information Management*, vol. 40, pp. 141–152, 2018, doi: 10.1016/j.ijinfomgt.2018.01.012.
- [11] Simon Kemp, "Digital 2020: 3.8 billion people use social media," *We Are Social*. 2020.
- [12] J. R. Bautista, S. Rosenthal, T. Tsui-Chuan Lin, and Y. L. Theng, "Psychometric evaluation of the Smartphone for Clinical Work Scale to measure nurses' use of smartphones for work purposes," *Journal of the American Medical Informatics Association*, vol. 25, no. 8, pp. 1018–1025, 2018, doi: 10.1093/jamia/ocy044.
- [13] P. Kline, "A handbook of test construction (psychology revivals)," *A Handbook of Test Construction (Psychology Revivals)*, 2015, doi: 10.4324/9781315695990.
- [14] A. Budikayanti, A. Larasari, K. Malik, Z. Syeban, L. A. Indrawati, and F. Octaviana, "Screening of generalized anxiety disorder in patients with epilepsy: using a valid and reliable Indonesian version of generalized anxiety disorder-7 (GAD-7)," *Neurology Research International*, vol. 2019, 2019, doi: 10.1155/2019/5902610.
- [15] L. Jibin *et al.*, "Validation of the social networking activity intensity scale among junior middle school students in China," *PLoS ONE*, vol. 11, no. 10, pp. 1–14, 2016, doi: 10.1371/journal.pone.0165695.
- [16] S. Chintakindi *et al.*, "Beyond the numbers: qualitative analysis of open-ended responses for identifying student success indicators intersection: a journal at the intersection of assessment and learning," *Intersection: A Journal at the Intersection of Assessment and Learning*, vol. 3, no. 1, pp. 1–16, 2022.
- [17] A. Shensa, J. E. Sidani, M. A. Dew, C. G. Escobar-Viera, and B. A. Primack, "Social media use and depression and anxiety symptoms: A cluster analysis," *American Journal of Health Behavior*, vol. 42, no. 2, pp. 116–128, 2018, doi: 10.5993/AJHB.42.2.11.
- [18] Z. Zulfritri, D. Maghfirah, M. R. A. Eljatin, S. Firdausi, and Z. Zahra, "Anxiety level and functional dyspepsia incidence during COVID-19 pandemic," *International Journal of Public Health Science*, vol. 12, no. 1, pp. 409–416, 2023, doi: 10.11591/ijphs.v12i1.22215.
- [19] J. H. Yoo and E. J. Jeong, "Psychosocial effects of SNS use: A longitudinal study focused on the moderation effect of social capital," *Computers in Human Behavior*, vol. 69, pp. 108–119, 2017, doi: 10.1016/j.chb.2016.12.011.
- [20] G. A. de Almeida, L. H. C. Pinochet, V. I. Pardim, M. C. de Azevedo, and L. M. Onusic, "Identifying factors and the relationship between problematic social media use and anxieties in instagram users: a deep investigation-based dual-stage SEM-ANN Analysis," *Procedia Computer Science*, vol. 221, pp. 466–473, 2023, doi: 10.1016/j.procs.2023.08.002.
- [21] J. M. First, H. Shin, Y. S. Ranjit, and J. B. Houston, "COVID-19 stress and depression: examining social media, traditional media, and interpersonal communication," *Journal of Loss and Trauma*, vol. 26, no. 2, pp. 101–115, 2021, doi: 10.1080/15325024.2020.1835386.
- [22] A. N. Mason, J. Narcum, and K. Mason, "Social media marketing gains importance after COVID-19," *Cogent Business and Management*, vol. 8, no. 1, 2021, doi: 10.1080/23311975.2020.1870797.
- [23] J. G. Myrick and J. F. Willoughby, "A mixed methods inquiry into the role of tom hanks' COVID-19 social media disclosure in shaping willingness to engage in prevention behaviors," *Health Communication*, vol. 00, no. 00, pp. 1–9, 2021, doi: 10.1080/10410236.2020.1871169.
- [24] P. Tayal and V. Bharathi. S, "Reliability and trust perception of users on social media posts related to the ongoing COVID-19 pandemic," *Journal of Human Behavior in the Social Environment*, vol. 00, no. 00, pp. 1–15, 2020, doi: 10.1080/10911359.2020.1825254.
- [25] A. Ayten and S. Korkmaz, "The relationships between religiosity, prosociality, satisfaction with life and generalised anxiety: a study on Turkish Muslims," *Mental Health, Religion and Culture*, vol. 22, no. 10, pp. 980–993, 2019, doi: 10.1080/13674676.2019.1695246.





- [26] H. Abu-Raiya and Q. Agbaria, "Religiousness and Subjective well-being among israeli-palestinian college students: direct or mediated links?," *Social Indicators Research*, vol. 126, no. 2, pp. 829–844, 2016, doi: 10.1007/s11205-015-0913-x.
- [27] A. Rose, "COVID-19 economic impacts in perspective: A comparison to recent U.S. disasters," *International Journal of Disaster Risk Reduction*, vol. 60, no. May, p. 102317, 2021, doi: 10.1016/j.ijdrr.2021.102317.
- [28] P. Thalib, Herman, S. Winarsi, F. Kurniawan, and W. Aliansa, "Company policy on termination of employment at pandemic COVID-19 from a fair and justice perspective," in *2nd International Conference on Law, Governance and Social Justice (ICOLGAS 2020)*, 2020, vol. 499, no. March, pp. 741–747, doi: 10.2991/assehr.k.201209.359.
- [29] J. J. Szczygielski, P. R. Bwanya, A. Charteris, and J. Brzeszczyński, "The only certainty is uncertainty: An analysis of the impact of COVID-19 uncertainty on regional stock markets," *Finance Research Letters*, p. 101945, 2021, doi: 10.1016/j.frl.2021.101945.
- [30] K. Chaturvedi, D. K. Vishwakarma, and N. Singh, "COVID-19 and its impact on education, social life and mental health of students: A survey," *Children and Youth Services Review*, vol. 121, no. December 2020, p. 105866, 2021, doi: 10.1016/j.childyouth.2020.105866.
- [31] M. Borgschulte and Y. Chen, "Youth disconnection during the COVID-19 pandemic," *Labour Economics*, vol. 78, p. 102241, Oct. 2022, doi: 10.1016/j.labeco.2022.102241.
- [32] B. Goyal, A. Sabharwal, V. Chauhan, and L. M. Joshi, "Psychological health of Indian youth during COVID-19: a study through three chronological surveys," *International Journal of Public Health Science (IJPHS)*, vol. 12, no. 2, pp. 752-763, Jun. 2023, doi: 10.11591/ijphs.v12i2.22420.
- [33] J. Abbas, R. Mubeen, P. T. Iorember, S. Raza, and G. Mamirkulova, "Exploring the impact of COVID-19 on tourism: transformational potential and implications for a sustainable recovery of the travel and leisure industry," *Current Research in Behavioral Sciences*, vol. 2, no. March, p. 100033, 2021, doi: 10.1016/j.crbeha.2021.100033.

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