

Islamic Faith Belief and Infodemic Toward Society's Compliance With Covid-19 Health Protocols

Sitti Raodhah*¹, Azman Arsyad²

¹ Master of Public Health Study Program, Universitas Islam Negeri Alauddin Makassar, Makassar, Indonesia

² Comparative Study Program of Mazhab and Law, Universitas Islam Negeri Alauddin Makassar, Makassar, Indonesia

DOI: [10.24252/al-sihah.v15i1.38052](https://doi.org/10.24252/al-sihah.v15i1.38052)

Received: 1 May 2023 / In Reviewed: 12 May 2023 / Accepted: 21 June 2023 / Available online: 30 June 2023

©The Authors 2023. This is an open access article under the CC BY-NC-SA 4.0 license

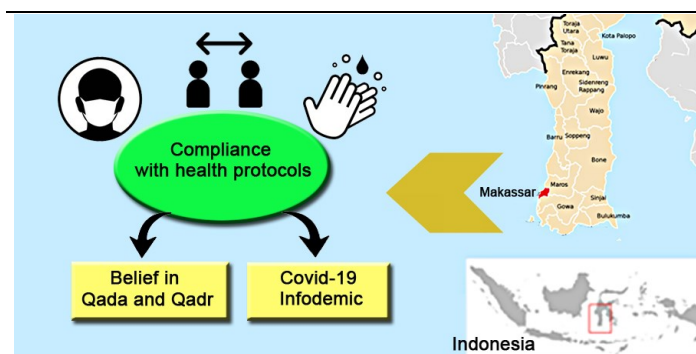
ABSTRACT

The implementation of health protocols during Covid-19 pandemic is very important to the prevention of virus transmission, but it had not been implemented optimally. Therefore, this study aimed to analyze the contribution of provisions in Islamic teachings and Infodemic to compliance with health protocols. The quantitative method was adopted with an observational study approach involving a total of 421 people. This sample was selected using the criteria of being Muslim, at least 18 years old, and willing to fill out a questionnaire online using the Google form. The results showed that the contribution of Islamic teachings in the form of *Qada* and *Qadr* belief and Covid-19 Infodemic had a positive effect on compliance with implementing the health protocols. Furthermore, the contribution of belief in Islamic teachings and Covid-19 Infodemic had a simultaneous positive effect on compliance with implementing health protocols. This study proved that religious and spiritual approaches can effectively increase community compliance in adhering to public health efforts.

ABSTRAK

Penerapan protokol Kesehatan pada masa pandemi Covid-19 sangat penting untuk mencegah penularan virus Covid-19, namun belum diterapkan secara maksimal Tujuan penelitian ini menganalisis kontribusi ketetapan dalam ajaran Islam serta infodemi terhadap kepatuhan protokol kesehatan Covid-19. Jenis penelitian yang digunakan adalah kuantitatif dengan pendekatan observasional studi. Sebanyak 421 orang yang dipilih dengan kriteria beragama Islam, berusia minimal 18 tahun dan bersedia mengisi kuesioner secara online dengan menggunakan google form. Hasil penelitian menunjukkan kontribusi ajaran Islam berupa kepercayaan *Qada'* dan *Qadar* dan infodemic Covid-19 mempunyai pengaruh positif secara terhadap kepatuhan melaksanakan protokol kesehatan Covid-19. Terdapat pengaruh infodemi Covid-19 terhadap kepatuhan melaksanakan protokol kesehatan Covid-19 di Sulawesi Selatan. Kontribusi kepercayaan dalam ajaran Islam serta infodemic Covid-19 mempunyai pengaruh positif secara simultan terhadap kepatuhan melaksanakan protokol kesehatan Covid-19. Studi ini membuktikan pendekatan keagamaan dan spiritual dapat digunakan dalam intervensi meningkatkan kepatuhan masyarakat melaksanakan kepatuhan yang terkait dengan upaya kesehatan masyarakat.

GRAPHICAL ABSTRACT



Keyword

covid-19
infodemic
islam
pandemics
qada qadr

* Correspondence

BTN Antara Blok A4 No. 4 Makassar P.O. Box 90245,
South Sulawesi, Indonesia
Email: sitti.raodhah@uin-alauddin.ac.id

INTRODUCTION

The issuance of health guidelines is a significant measure undertaken by various countries to effectively control the spread of Covid-19 virus since its occurrence in Wuhan around December 2019. In Indonesia, a Minister of Health Decree was issued, specifically to address Health Protocols for the Public in Places and Public Facilities in the Context of Prevention and Control of Corona Virus Disease 2019 (Covid-19). Despite this effort, the public has not fully complied with these health protocols. The implementation of health protocols in public service facilities in Indonesia has not been fully maximized, as highlighted by (Simanjuntak et al., 2020; Sukawana & Sukarja, 2021). This situation presented distinctive challenges for health academics and practitioners in their pursuit of understanding and ensuring sufficient public cooperation and compliance. Mobilizing the public to adhere to effective Covid-19 mitigation guidelines requires clear communication and trust (Tambo et al., 2021). Due to the challenges associated with enforcing risk measures, such as social distancing and the difficulty in enforcing self-quarantine, especially in democratic society, the public must understand and believe in the importance of compliance with health programs (Moon, 2020).

Historical records indicate that the failure to contain the diseases spread in a country is mainly caused by conspiracy theories (Chen et al., 2020; Jolley & Douglas, 2017; Romer & Jamieson, 2020). According to (Khan et al., 2020; Kwok et al., 2021), several doubts can affect public compliance with health programs, such as suspicions of poor vaccine quality, questions about dosage recommendations, religious prohibitions, and rumors related to the presence of active viruses in vaccines. These claims constitute some of the primary factors hindering effective Covid-19 mitigation programs and they arise despite the efforts made by

the Indonesian government to handle and prevent the larger impacts of Covid-19 spread. The claims are supported by various challenges faced by the government in the process of accelerating vaccination, including the availability of supporting facilities to maintain vaccine quality, vaccine expiration, inter-island vaccine distribution, public anxieties regarding vaccination, and vaccine effectiveness against new coronavirus variants (Lin et al., 2021; Mills & Salisbury, 2021; Rahimi & Abadi, 2021).

To overcome the pandemic, the government was confronted with high hesitancy and doubt regarding Covid-19 due to the spread of Infodemic worldwide (Lin et al., 2022). A recent study in the UK in 2020 reported an 18% rate of Covid-19 and vaccine hesitancy (Robertson et al., 2021). Similarly, a study in the US in 2021 reported that 18.4% of those surveyed refused to receive Covid-19 vaccine (Tram et al., 2022). In Asia, where the pandemic is relatively under control, vaccine hesitancy percentages are much higher. Hesitancy reached 37.9% in Japan in January 2021 (Machida et al., 2021), and 25.5% in Hong Kong (Luk et al., 2021). In Indonesia, data from the Ministry of Communication and Information found 474 hoax issues related to Covid-19 spread across 1,125 digital platforms such as Facebook, Instagram, Twitter, and Youtube (Juditha, 2020). The circulation of negative Infodemic about Covid-19 through social media messages has caused confusion among the public. These Infodemic ranged from information contradicting the actual situation, sensationalized news, data manipulation of cases, and threatening messages (López-García et al., 2021). Therefore, the circulation of Infodemic and hoaxes regarding Covid-19 on social media can potentially contribute to public non-compliance with Covid-19 health protocols. These varied incidents necessitate a study on the impact of Infodemic on compliance with health protocols.

South Sulawesi is a region outside of Java that received priority in pandemic management. The confirmed Covid-19 cases in South Sulawesi reached 2,997 active cases as of February 12, 2022 and a death rate of 1.99%. Due to the high number of cases, South Sulawesi is categorized as one of the provinces at high risk, necessitating prompt intervention and accelerated vaccination (South Sulawesi Provincial Government, 2022).

Several studies have been conducted on compliance and perception of the public in implementing Covid-19 health programs (Gagneux-Brunon et al., 2021; Lazarus et al., 2021; Murphy et al., 2021; Paul et al., 2021; Schwarzsinger et al., 2021; Wang et al., 2021; Yang et al., 2021; Zhang et al., 2021). However, these studies showed no correlation between the level of public compliance and their belief in the determinations within Islamic teachings. According to (Plohl & Musil, 2021), the high cases in Makassar City have drawn attention to examining the public compliance level using Health Compliance Model approach. Islamic belief emphasizes the obligation of faithful servant to belief in fate and determinations (*Qada* and *Qadr*), including Covid-19 pandemic occurring in various parts of the world, which is considered as God's decree (Al-Asqalani, 2020). In Uganda, the traditional African, Islamic, and Christian faith communities belief that the pandemic brings people closer to religion and spirituality due to fear, panic, and associated uncertainties (Isiko, 2020). Therefore this study aimed to analyze the contribution of Islamic teachings (*Qada* and *Qadr*) and Covid-19 Infodemic to compliance with Covid-19 health protocols during the pandemic.

METHODS

This quantitative study uses an observational approach with a cross-sectional design. The population consists of the residents of Ma-

kassar City who are above 18 years old, as obtained from the General Election Commission (KPU) website. Specifically, the number of registered voters in the 2022 mayoral election in Makassar City is 1,427,001 people based on Data from South Sulawesi General Election Commission in 2015. The unit of analysis in this study is the Muslim population of South Sulawesi, consisting of 421 respondents. This is consistent with the calculated sample size needed using the Slovin formula. The sample criteria include respondents living in the Makassar City area for the past year, being above 18 years old, considered capable and able to answer the questions in the questionnaire regarding belief in fate within Islamic teachings, and willing to participate by providing informed consent. The questionnaire was developed based on the theory of fate within Islamic teachings, specifically belief in God's decree (*Qada* and *Qadr*), Covid-19 Infodemic, and compliance with health protocols. Furthermore, the questionnaire was pilot-tested and validated for its validity and reliability. The study used several instruments from compliance model developed by Plohl & Musil (2021), and also developed questions for each variable based on the study by Lin et al. (2021). The questionnaire covers (1) demographic characteristics, which include gender, age, marital status, and education, (2) understanding of Infodemic, and (3) understanding of religious teachings.

The dependent variable (Y) is compliance with Covid-19 health protocols, with several indicators, such as 1) wearing masks, 2) handwashing with soap and running water, and 3) maintaining social distancing when outside the house. The independent variables are belief in God's decree (X_1). This includes respondents' belief in God's decree regarding Covid-19 infection, such as knowledge of God's determinations, the habit of increasing supplications and blessings during the pandemic, as well as

Table 1
The Characteristics of Respondents

Characteristics of Respondents	n	%
Gender		
Male	147	34.92
Female	274	65.08
Marital Status		
Unmarried	367	87.17
Married	52	12.35
Widower/Widow	2	0.48
Age		
18-28	385	91.45
29-39	14	3.33
40-50	15	3.56
51-61	8	1.90
62 and above	1	0.24
Education Level		
No education	2	0.48
Elementary School graduate	1	0.24
Junior High School graduate	2	0.48
Senior High School graduate	326	77.43
Diploma	16	3.80
Bachelor's degree	74	17.58

Note: n= number of respondents; % = percentage

actions of effort and prayer in times of calamity. The other independent variable is Infodemic (X_2), including all information spread on social media, print, and electronic media, as well as information from healthcare facilities, such as primary health centers, hospitals, and other institutions related to Covid-19.

Data were collected through an online survey using Google Forms, which was distributed via social media platforms for effective data collection. This study was conducted from March to August 2022, a period when South Sulawesi was still implementing limited Community Activity Restrictions (PPKM) Level 4 to prevent the spread of Covid-19 between data collectors and respondents. The univariate analysis was adopted for respondent characteristics while variables were analyzed descriptively. Multiple linear regression analysis was to determine the contribution of belief in God's decree (*Qada* and *Qadr*) and Covid-19 Infodemic to compliance with Covid-19 health protocols. Several assumptions tests were conducted be-

fore the analysis to assess the effect of the independent variables on the dependent. Meanwhile, This study has received ethical approval from the Research Ethics Committee of the Faculty of Medicine and Health Sciences, under letter number No.C.73/KEPK/FKIK/II/2022.

RESULTS

Table 1 showed that 65.08% of the respondents were female and mostly unmarried, with only 2 being widows/widowers. The majority of respondents, accounting for 91.45% are within the age group of 18-28 years. Similarly, in terms of the highest education level, most respondents (77.43%) had completed Senior High School.

Based on table 2, the univariate analysis of respondents' answers for the variables showed a mean of 35.16 ± 4.607 for belief in God's decree (*Qada* and *Qadr*). The mean score for Covid-19 Infodemic and compliance with health protocols are 10.67 ± 7.112 and 4.76 ± 1.240 , respectively.

Table 2
Descriptive Analysis

Variable	n	Min	Max	Mean±SD	Median
Belief in God's Decree (<i>Qada</i> and <i>Qadr</i>)	421	8	40	35.16±4.607	35.00
Covid-19 Infodemic	421	2	45	10.67±7.112	9.00
Compliance with Covid-19 Health Protocols	421	0	6	4.76±1.240	5.00

Note: n = number of respondents' responses; SD = standard deviation

The normality test using the Kolmogorov-Smirnov test yielded a p-value of 0.246, indicating that the data is normally distributed, as shown in table 3. The linearity test is used to determine the linear relationship between variables X and Y. Based on the linearity test results, Variable X₁ showed a p-value, indicating a relationship with Variable Y. On the other hand, the p-value of Variable X₂ was above the 5% significance level, indicating no linear relationship. Furthermore, the Glejser test was conducted to identify the presence of heteroskedasticity. The test results showed that variable X₁ had a p-value indicating no heteroskedasticity issue, while variable X₂ had heteroskedasticity issues. The autocorrelation test between predictors X₁ and X₂ with variable Y yielded a calculated d value of 2.018. Compared to the values in the Durbin-Watson table, the calculated d value falls between dU and 4-dU, which is 1.846 < 2.018 < 2.154, indicating no autocorrelation in the predictor variables. The multicollinearity test showed a VIF value of < 10, indicating no multicollinearity, which implies that the regression model is suitable for use. The F-test was carried out to determine the simultaneous influence of variables X₁ and X₂ on variable Y and the result yielded F_{count} > F_{table} 4.536 > 3.14, with a p-value of 0.011. These values indicate a simultaneous influence of variables X₁ and X₂ on variable Y. Furthermore, both the independent and dependent variables have positive coefficients. Based on the partial test results using the t-test, the influence of variable X₁ on Y was obtained with a t_{count} of 2.993 >

t_{table} 1.997, and a p-value of 0.003. This result showed that variable X₁ has a positive influence on variable Y. The partial test results on the influence of variable X₂ on Y showed a t_{count} of 0.175 < t_{table} 1.997, with a p-value of 0.861.

In table 4, the estimation parameter testing results yielded a p-value of 0.003 for variable X₁, indicating its significance in relation to Y. On the other hand, variable X₂ yielded a p-value of 0.861, indicating that variable X₂ is not significant in relation to Y. After conducting the parameter estimation test, the multiple linear regression equation for the contribution of belief in God's decree and Covid-19 infodemic to compliance with health protocols (Y) is as follows:

$$Y = 3.370 + 0.039X_1 + 0.001X_2 + \varepsilon \quad (1)$$

The interpretation of the equation (1) shows that the constant value of 3.370 means that without belief in God's decree and Covid-19 Infodemic, compliance with Covid-19 health protocols would be 3.370. When belief in God's decree (X₁) increases, it will cause an increase (due to the positive sign) of 0.039 in compliance with health protocols. Similarly, an increase in Covid-19 Infodemic (X₂) will increase compliance with health protocols by 0.001.

DISCUSSION

Qada and *Qadr* are belief in Islamic teachings, representing decree of God that ne-

Table 3
Assumption Test Results

Variable	Kolmogorov-Smirnov		Linearity		Durbin Watson	Multi-collinearity	Simultaneous		Partial	
	Value	P	Value	P	Value	VIF	F	P	Value	P
X ₁	0.072	0.246	9.515	0.002	2.018	1.003	4.536	2.018	2.993	0.003
X ₂			0.109	0.742		1.003			0.75	0.861

Note: X₁= belief in God's decree ; X₂= Covid-19 infodemic ; P = probability value ; VIF = Variance Inflation Factor

cessitates acceptance and belief. According to these teachings, everything that happens is regarded as the will of God. Regardless of an individual location, God's destiny always accompanies every human being (Huda et al., 2019). However, when faced with challenging circumstances predetermined by fate, individuals find it difficult to change their perspective and immediately seek solutions. This applied to the current situation with Covid-19, which is believed to be determined by God. In response, humans are tasked with safeguarding their well-being by diligently adhering to health protocols, such as handwashing, maintaining distance, wearing masks, and other forms of self-protection (Rizky, 2022).

Based on the results, the majority of Muslim respondents, accounting for 99.0% belief in God's decree because they are pillars of faith. The responses provided by respondents' answers regarding belief in God's decree in relation to Covid-19 reaffirmed their belief that every occurrence in this world, including Covid-19, is due to decree of God. Before the process of life, God has already written down everything that will happen, comprising goodness, badness, life, or death. This means that Covid-19 pandemic has been determined by God long before humans discovered the virus variant. The results of this study showed that belief in belief in God's decree has a positive and significant influence on compliance with Covid-19 health protocols. This statistical test result proved that belief in *Qada* and *Qadr*, which is decree of God, encouraged respondents to avoid Covid-19

by adhering to health protocols, such as wearing masks, washing hands with soap, and maintaining distance. It is also supported by respondents' statements that by implementing health protocols, they can protect themselves from Covid-19. Moreover, these individuals express a profound sense of surrender to God after faithfully adhering to the prescribed health protocols (Gan et al., 2023).

In this study, Infodemic is defined as information disseminated through social media, print, and electronic media, as well as healthcare facilities. Infodemic occurs due to the massive circulation of information on social media, accompanied by the simultaneous presence of misinformation (infodemiology) (Zielinski, 2021). Individuals received information about Covid-19 from unofficial sources, such as social media accounts posting about Covid-19, and various social media platforms, which are often considered unreliable and prone to hoaxes. Other sources include exaggerated rumors from neighbors, unofficial and unclear news sources, friends, neighbors, and relatives who only hear brief information about Covid-19. Therefore, respondents do not trust the information circulating on official websites, especially regarding the implementation of health protocols.

Covid-19 Infodemic has spread widely among communities worldwide and the abundance of inaccurate information has caused overlapping belief among the public. Individuals now find it difficult to trust because Infodemic is created with both hoax and non-hoax

Table 4
Health Protocols Parameter Estimation Test Results

Variable	Estimate	p-value
Constant	3.37	0
X ₁	0.039	0.003*
X ₂	0.001	0.861

Note: X₁= belief in God's decree ; X₂= Covid-19 infodemic; * = significant at α level of 5%.

framings. Several publications were made without scientific evidence or are not aligned with science (Ioannidis, 2020). However, respondents who obtain information from official sources, such as health promotion in Public health centers, newspapers, television media, official government websites, and the World Health Organization (WHO) are more likely to trust the information.

The statistical test results showed that an increase in the sources of Covid-19 Infodemic is not accompanied by an improvement in compliance with Covid-19 health protocols. This is because the massive information about Covid-19 in various media, including social media, mostly originates from unofficial sources, such as hoaxes circulating on WhatsApp, Facebook, Instagram, and Twitter. Online media coverage also tends to provide inaccurate information and sometimes causes anxiety among the public, leading to a phobia of Covid-19.

A study in Spain revealed that 432,058 stories were published on social media from January to April 2020. Among the several stories circulated, the largest known avalanche of misinformation began to spread (Masip et al., 2020). Hoaxes circulating on social media regarding Covid-19 health protocols led to efforts to prevent and control the virus (Apuke & Omar, 2021). Consequently, Covid-19 handling was carried out from the national level to the Neighborhood Association (RT), but due to the massive reporting from unreliable sources through social media, people are careless and do not comply with health protocols.

Geldsetzer (2020) showed that problem-

atic social media use could be related to psychological distress and insomnia among a sample of 1078, either directly or indirectly. The exposure to a higher volume of misinformation and misconceptions about Covid-19 through social media platforms contributes to increased anxiety levels among individuals, resulting in psychological stress (Lin et al., 2022). Another study showed that information related to internet media, traditional media, and from relatives was associated with the highest level of fear of outbreaks (Ho et al., 2020). An online survey in the US found that around two-thirds of participants were concerned about getting infected while seeking necessary medical help. It was also found that 95% of the participants changed their behaviors due to fear of infection and adopted health protocols-compliant behaviors (Nelson et al., 2020). A study conducted in Iraq found that fear and panic about Covid-19 were higher among social media users and had a negative impact on the mental health status of approximately half of the users in the country (Ahmad & Murad, 2020). Interestingly, in China, it was found that the impact of misinformation on mental health depends on the duration. This implies that a longer duration of exposure to social media results in increased levels of anxiety and depression (Yao, 2020).

According to (Sahoo & Patel, 2021), hoax news will continue to occupy the top position due to society inclination to swiftly embrace information without verifying its truthfulness, such as following health protocols including self-isolation. Stigmatized individuals generally avoid seeking medical care due to the

fear of being ostracized and conceal their potential health risks and medical history to avoid becoming targets of ridicule and aggression. Unfortunately, such behaviors contributed to an increased risk of transmission within the community and impose a burden on healthcare system in assessing and containing the spread (Dubey et al., 2020).

The statistical test results in this study demonstrated that there is no influence of Infodemic sources on compliance with Covid-19 health protocols. This indicated that despite a significant portion of information about Covid-19 originating from unofficial sources, respondents showed a lack of trust in the circulating information and continue to adhere to Covid-19 health protocols. Furthermore, the results of partial hypothesis testing on the variable of Covid-19 Infodemic on compliance with health protocols showed that an increase in Covid-19 Infodemic sources is not accompanied by an increase in compliance with protocols.

The implementation of Infoveilans systems and technologies is an alternative approach to address Covid-19 Infodemic. These systems and technologies aimed to monitor, detect, alert, and counter hoaxes accurately through communication channels from scientific and sanitation authorities, using accessible language and approval from trusted institutions. Similar to vaccines that contain Infodemic, this approach involves investing in health education actions and promoting digital literacy in engaging and creative ways. As a result, the information accessed can be evaluated through individual and collective responsibility. Government institutions and media outlets should consider shifting from purely persuasive communication to strategies that ensure scientific content and facilitate public adaptation, as well as promote education as the best path forward (Raquel et al., 2022).

Based on the field observations and the results of partial influence testing, it is evident

that Covid-19 Infodemic circulating in society mostly originates from unofficial media sources, and does not significantly affect compliance with health protocols. However, compliance with health protocols is largely determined by the level of faith in *Qada* and *Qadr* (Divine Decree), as well as the official information about Covid-19, disseminated through online, social, and visual media, such as television, information from community health centers and hospitals. Other media include the Ministry of Health of Indonesia, the Ministry of Communication and Informatics, and the World Health Organization (WHO). Furthermore, the majority of respondents believe in *Qada* and *Qadr* as God's decree but still follow health protocols as an effort on their part. In this study analysis, respondents believe that Covid-19 outbreak is God's decree, which cannot be avoided, but there are efforts to avoid being infected with the virus. In carrying out health protocols, official and unofficial information regarding Covid-19 influenced the respondent's decision to comply with health protocols. Based on the regression model, the effect is relatively small compared to belief in God's decree .

CONCLUSIONS

In conclusion, belief in the predetermined nature of Islamic teachings and Covid-19 Infodemic contributed to compliance with Covid-19 health protocols. These factors have a positive and simultaneous influence on compliance with Covid-19 health protocols. Furthermore, this study identified the influence of Covid-19 Infodemic on compliance with Covid-19 protocols in South Sulawesi. The combined contribution of belief in God's decree and Covid-19 Infodemic positively influenced compliance with Covid-19 health protocols in the region. This demonstrates that religious teachings and belief can be supportive variables in public health intervention programs. Although this

study aimed to demonstrate the role of religion in controlling the pandemic, it still has limitations that can affect public compliance with vaccination. One of the limitations is that Covid-19 mitigation measures often intersect with political preferences in society. Additionally, the measurement of perceived information can be subject to inaccuracies and may vary over time. This study did not explain the gap between individual vaccine acceptance and uptake due to the availability of vaccine stock during the period it was conducted. Compliance may occur due to pressure from friends, family, social environment, or certain forced vaccine policies in certain communities. A well-designed longitudinal study with more objective Infodemic measurements is recommended to deepen the analysis of various understandings of other religious teachings in Indonesia.

The rapid development in technology and media presents significant challenges in countering the spread of misinformation, which can impede vaccination efforts. On the other hand, it can be a fast medium for disseminating health information and religious motivation in efforts to control future outbreaks. Several steps need to be implemented to control this Infodemic threat to calm the world from the grip of this pandemic. Religious leaders and social media need to play a strong role in creating awareness, promoting healthy lifestyles, and enhancing psychosocial well-being. Most importantly, the government must play an active role in carrying out regulations, as well as producing policies that can regulate the media in mitigating Infodemic threats.

ACKNOWLEDGEMENT

The authors are grateful to the respondents who are willing to be interviewed. The authors are also grateful to the service and study institutions, the study ethics institute, and the enumerators in charge of collecting data.

FUNDING

This study was funded by LP2M Universitas Islam Negeri

Alauddin Makassar grant number 72/2022.

AUTHORS' CONTRIBUTIONS

Sitti Raodhah design the study, writing the original draft, analyzed the data, revised manuscript and approved the final version to be published. Azman Arsyad acquired data, critically review the article and approved the final version to be published.

AUTHORS' INFORMATION

Dr. Sitti Raodhah, SKM., M.Kes, is an assistant professor and head of department in Master of Public Health Study Program, Postgraduate Program at Universitas Islam Negeri Alauddin Makassar, Makassar, Indonesia. Dr. Azman Arsyad, M.Ag is an associate professor Comparative Study Program of Mazhab and Law, Faculty of Sharia and Law, Universitas Islam Negeri Alauddin Makassar, Makassar, Indonesia.

COMPETING INTERESTS

The authors confirm that all of the text, figures, and tables in the submitted manuscript work are original work created by the authors and that there are no competing professional, financial, or personal interests from other parties.

REFERENCES

- Ahmad, A. R., & Murad, H. R. (2020). The impact of social media on panic during the COVID-19 pandemic in Iraqi Kurdistan: online questionnaire study. *Journal of medical Internet research*, 22(5), e19556. <https://doi.org/10.2196/19556>
- Al-Asqalani, I. H. (2020). *Kitab Wabah dan Taun dalam Islam*. Jakarta: Tuross Pustaka.
- Apuke, O. D., & Omar, B. (2021). Fake news and COVID-19: modelling the predictors of fake news sharing among social media users. *Telematics and Informatics*, 56, 101475. <https://doi.org/10.1016/j.tele.2020.101475>
- Chen, J. Y., Fox, S. A., Cantrell, C. H., Stockdale, S. E., & Kagawa-Singer, M. (2006). Health Disparities And Prevention: Racial/ethnic Barriers To Flu Vaccinations. *Journal of Community Health*, 32(1), 5–20. <https://doi.org/10.1007/s10900-006-9031-7>
- Cherniak, A. D., Pirutinsky, S., & Rosmarin, D. H. (2023). Religious Beliefs, Trust In Public Figures, And Adherence to COVID-19 Health Guidelines among American Orthodox and Non-Orthodox Jews. *Journal of religion and health*, 62(1), 355-372. <https://doi.org/10.1007/s10943-022-01718-y>
- Dinas Kesehatan Provinsi Sulawesi Selatan. (2021). *Data Pantauan Covid-19 di Sulawesi Selatan*.
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes and Metabolic Syndrome: Clinical Research and Reviews*, 14(5), 779–788. <https://doi.org/10.1016/j.dsx.2020.05.035>
- Gagneux-Brunon, A., Detoc, M., Bruel, S., Tardy, B., Rozaire, O., Frappe, P., & Botelho-Nevers, E. (2021). Intention to get vaccinations against COVID-19 in French healthcare workers during the first pandemic wave: a cross-sectional survey. *Journal of Hospital Infection*, 108, 168–173. <https://doi.org/https://doi.org/10.1016/j.jhin.2020.11.020>

- Gan, S. K. E., Wong, S. W. Y., & Jiao, P. D. (2023). Religiosity, theism, perceived social support, resilience, and well-being of university undergraduate students in Singapore during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 20(4), 3620. <https://doi.org/10.3390/ijerph20043620>
- Geldsetzer, P. (2020). Knowledge and perceptions of COVID-19 among the general public in the United States and the United Kingdom: a cross-sectional online survey. *Annals of internal medicine*, 173(2), 157-160. <https://doi.org/10.7326/M20-0912>
- Ho, H. Y., Chen, Y. L., & Yen, C. F. (2020). Different impacts of COVID-19-related information sources on public worry: An online survey through social media. *Internet interventions*, 22, 100350. <https://doi.org/10.1016/j.invent.2020.100350>
- Huda, M., Sudrajat, A., Muhamat, R., Mat Teh, K. S., & Jalal, B. (2019). Strengthening divine values for self-regulation in religiosity: insights from Tawakkul (trust in God). *International Journal of Ethics and Systems*, 35(3), 323-344. <https://doi.org/10.1108/IJOES-02-2018-0025>
- Ioannidis, J. P. A. (2020). Coronavirus disease 2019: The harms of exaggerated information and non-evidence-based measures. *European Journal of Clinical Investigation*, 50(4), 1–5. <https://doi.org/10.1111/eci.13222>
- Ioannidis, J. P. A. (2020). Coronavirus disease 2019: The harms of exaggerated information and non-evidence-based measures. *European Journal of Clinical Investigation*, 50(4), 1–5. <https://doi.org/10.1111/eci.13222>
- Isiko, A. P. (2020). Religious construction of disease: An exploratory appraisal of religious responses to the COVID-19 pandemic in Uganda. *Journal of African Studies and Development*, 12(3), 77–96. <https://doi.org/10.5897/JASD2020.0573>
- Jolley, D., & Douglas, K. M. (2017). Prevention is better than cure: Addressing anti-vaccine conspiracy theories. *Journal of Applied Social Psychology*, 47(8), 459–469. <https://doi.org/10.1111/jasp.12453>
- Juditha, C. (2020). Perilaku Masyarakat Terkait Penyebaran Hoaks Covid-19 People Behavior Related To The Spread Of Covid-19's Hoax. *Jurnal Pekommas*, 5(2), 105–116. <https://doi.org/10.30818/jpkm.2020.2050201>
- Khan, Y. H., Mallhi, T. H., Alotaibi, N. H., Alzarea, A. I., Alanazi, A. S., Tanveer, N., & Hashmi, F. K. (2020). Threat of COVID-19 vaccine hesitancy in Pakistan: the need for measures to neutralize misleading narratives. *The American Journal of Tropical Medicine and Hygiene*, 103(2), 603–604. <https://doi.org/10.4269%2Fajtmh.20-0654>
- Komisi Pemilihan Umum Sulawesi Selatan. (2015). *KPU Tetapkan DPT Pilgub Sulsel 6.022.087 Jiwa*.
- Kowalczyk, O., Roszkowski, K., Montane, X., Pawlitzak, W., Tylkowski, B., & Bajek, A. (2020). Religion and faith perception in a pandemic of COVID-19. *Journal of religion and health*, 59, 2671-2677. <https://doi.org/10.1007/s10943-020-01088-3>
- Kwok, K. O., Li, K.-K., Wei, W. I., Tang, A., Wong, S. Y. S., & Lee, S. S. (2021). Influenza vaccine uptake, COVID-19 vaccination intention and vaccine hesitancy among nurses: A survey. *International Journal of Nursing Studies*, 114, 103854. <https://doi.org/10.1016/j.ijnurstu.2020.103854>
- Lazarus, J. V., Ratzan, S. C., Palayew, A., Gostin, L. O., Larson, H. J., Rabin, K., Kimball, S., & El-Mohandes, A. (2021). A global survey of potential acceptance of a COVID-19 vaccine. *Nature Medicine*, 27(2), 225–228. <https://doi.org/10.1038/s41591-020-1124-9>
- Lin, C., Tu, P., & Beitsch, L. M. (2021). Confidence and Receptivity for COVID-19 Vaccines: A Rapid Systematic Review. *Vaccines*, 9(1), 16. <https://doi.org/10.3390/vaccines9010016>
- Lin, C. Y., Broström, A., Griffiths, M. D., & Pakpour, A. H. (2020). Investigating mediated effects of fear of COVID-19 and COVID-19 misunderstanding in the association between problematic social media use, psychological distress, and insomnia. *Internet interventions*, 21, 100345. <https://doi.org/10.1016/j.invent.2020.100345>
- Lin, F., Chen, X., & Cheng, E. W. (2022). Contextualized impacts of an infodemic on vaccine hesitancy: The moderating role of socioeconomic and cultural factors. *Information Processing & Management*, 59(5), 103013. <https://doi.org/10.1016/j.ipm.2022.103013>
- López-García, X., Costa-Sánchez, C., & Vizoso, Á. (2021). Journalistic fact-checking of information in pandemic: Stakeholders, hoaxes, and strategies to fight disinformation during the COVID-19 crisis in Spain. *International journal of environmental research and public health*, 18(3), 1227. <https://doi.org/10.3390/ijerph18031227>
- Luk, T. T., Zhao, S., Wu, Y., Wong, J. Y. H., Wang, M. P., & Lam, T. H. (2021). Prevalence and determinants of SARS-CoV-2 vaccine hesitancy in Hong Kong: A population-based survey. *Vaccine*, 39(27), 3602-3607. <https://doi.org/10.1016/j.vaccine.2021.05.036>
- Machida, M., Nakamura, I., Kojima, T., Saito, R., Nakaya, T., Hanibuchi, T., Takamiya, T., Odagiri, Y., Fukushima, N., Kikuchi, H., Amagasa, S., Watanabe, H., & Inoue, S. (2021). Acceptance of a COVID-19 Vaccine in Japan during the COVID-19 Pandemic. *Vaccines*, 9(3), 210. <https://doi.org/10.3390/vaccines9030210>
- Masip, P., Aran-Ramspott, S., Ruiz-Caballero, C., Suau, J., Almenar, E., & Puertas-Graell, D. (2020). Consumo informativo y cobertura mediática durante el confinamiento por el Covid-19: sobreinformación, sesgo ideológico y sensacionalismo. *El Profesional de La Información*, 29(3), 1–12. <https://doi.org/10.3145/epi.2020.may.12>
- Mills, M. C., & Salisbury, D. (2021). The challenges of distributing COVID-19 vaccinations. *EclinicalMedicine*, 31. <https://doi.org/10.1016/j.eclinm.2020.100674>
- Moon, M. J. (2020). Fighting COVID-19 with agility, transparency, and participation: Wicked policy problems and new governance challenges. *Public administration review*, 80(4), 651-656. <https://doi.org/10.1111/puar.13214>
- Murphy, J., Vallières, F., Bentall, R. P., Shevlin, M., McBride, O., Hartman, T. K., McKay, R., Bennett, K., Mason, L., & Gibson-Miller, J. (2021). Psychological characteristics associated with COVID-19 vaccine hesitancy and resistance in Ireland and the United Kingdom. *Nature Communications*, 12(1), 1–15. <https://doi.org/10.1038/s41467-020-20226-9>
- Nelson, L. M., Simard, J. F., Oluyomi, A., Nava, V., Rosas, L. G., Bondy, M., & Linos, E. (2020). US public concerns about the COVID-19 pandemic from results of a survey given via social media. *JAMA internal medicine*, 180(7), 1020-1022. <http://www.doi.org/10.1001/jamainternmed.2020.1369>

- Paul, E., Steptoe, A., & Fancourt, D. (2021). Attitudes towards vaccines and intention to vaccinate against COVID-19: Implications for public health communications. *The Lancet Regional Health - Europe, 1*, 100012. <https://doi.org/https://doi.org/10.1016/j.lanep.2020.100012>
- Plohl, N., & Musil, B. (2021). Modeling compliance with COVID-19 prevention guidelines: the critical role of trust in science Modeling compliance with COVID-19 prevention guidelines: the critical role of trust in science. *Psychology, Health & Medicine, 26*(1), 1–12. <https://doi.org/10.1080/13548506.2020.1772988>
- Rahimi, F., & Abadi, A. T. B. (2021). Implications of the Emergence of a New Variant of SARS-CoV-2, VUI-202012/01. *Archives of Medical Research. https://doi.org/10.1016/j.arcmed.2021.01.001*
- Ramly, R. M. (2022). Theological Issues of Pandemic Covid-19 in Malaysia: The Views of the Muslims Theologians. *Jurnal THEOLOGIA, 33*(1), 1–18. <https://doi.org/10.21580/teo.2022.33.1.11521>
- Raquel, C. P., Ribeiro, K. G., Alencar, N. E. S., de Souza, D. F. O., Barreto, I. C. de H. C., & de Andrade, L. O. M. (2022). Scientific ways to confront covid-19 fake news. *Saude e Sociedade, 31*(4), 1–16. <https://doi.org/10.1590/S0104-12902022210601en>
- Rizky, M. H. K. (2022). Corona Virus Disease 19 On Islamic Theological Reflection. *Sophist: Jurnal Sosial Politik Kajian Islam dan Tafsir, 4*(1), 21-41. <https://doi.org/10.20414/sophist.v4i1.62>
- Robertson, E., Reeve, K. S., Niedzwiedz, C. L., Moore, J., Blake, M., Green, M., Katikireddi, S. V., & Benzeval, M. J. (2021). Predictors of COVID-19 vaccine hesitancy in the UK household longitudinal study. *Brain, behavior, and immunity, 94*, 41-50. <https://doi.org/10.1016/j.bbi.2021.03.008>
- Romer, D., & Jamieson, K. H. (2020). Conspiracy theories as barriers to controlling the spread of COVID-19 in the US. *Social Science & Medicine, 263*, 113356. <https://doi.org/10.1016/j.socscimed.2020.113356>
- Sahoo, B. P., & Patel, A. B. (2021). Social stigma in time of COVID-19 pandemic: evidence from India. *International Journal of Sociology and Social Policy, 41*(11/12), 1170-1182. <https://doi.org/10.1108/IJSSP-01-2021-0012>
- Schwarzinger, M., Watson, V., Arwidson, P., Alla, F., & Luchini, S. (2021). COVID-19 vaccine hesitancy in a representative working-age population in France: a survey experiment based on vaccine characteristics. *The Lancet Public Health. https://doi.org/10.1016/S2468-2667(21)00012-8*
- Simanjuntak, D. R., Napitupulu, T. M., Wele, A. M., & Yanie, R. (2020). Gambaran kepatuhan masyarakat menerapkan protokol kesehatan Covid-19 di tempat umum periode September 2020 di DKI Jakarta. 204–210. <https://doi.org/10.30818/jpkm.2020.2050201>
- Tambo, E., Djuikoue, I. C., Tazemda, G. K., Fotsing, M. F., & Zhou, X. N. (2021). Early stage risk communication and community engagement (RCCE) strategies and measures against the coronavirus disease 2019 (COVID-19) pandemic crisis. *Global Health Journal, 5*(1), 44-50. <https://doi.org/10.1016/j.glohj.2021.02.009>
- Tram, K. H., Saeed, S., Bradley, C., Fox, B., Eshun-Wilson, I., Mody, A., & Geng, E. (2022). Deliberation, dissent, and distrust: understanding distinct drivers of coronavirus disease 2019 vaccine hesitancy in the United States. *Clinical Infectious Diseases, 74*(8), 1429-1441. <https://doi.org/10.1093/cid/ciab633>
- Wang, D., Marmo-Roman, S., Kruse, K., & Phanord, L. (2021). Compliance with preventative measures during the COVID-19 pandemic in the USA and Canada: Results from an online survey. *Social Work in Health Care, 1–16. https://doi.org/10.1080/00981389.2020.1871157*
- Yang, F., Li, X., Su, X., Xiao, T., Wang, Y., Hu, P., Li, H., Guan, J., Tian, H., Wang, P., & Wang, W. (2021). A study on willingness and influencing factors to receive COVID-19 vaccination among Qingdao residents. *Human Vaccines & Immunotherapeutics, 17*(2), 408–413. <https://doi.org/10.1080/21645515.2020.1817712>
- Yao, H. (2020). The more exposure to media information about COVID-19, the more distressed you will feel. *Brain, behavior, and immunity, 87*, 167. <https://doi.org/10.1016/j.bbi.2020.05.031>
- Zhang, Y., Luo, X., & Ma, Z. F. (2021). Willingness of the general population to accept and pay for COVID-19 vaccination during the early stages of COVID-19 pandemic: a nationally representative survey in mainland China. *Human Vaccines & Immunotherapeutics, 1–6. https://doi.org/10.1080/21645515.2020.1847585*
- Zielinski, C. (2021). Infodemics and infodemiology: A short history, a long future. *Revista Panamericana de Salud Publica/Pan American Journal of Public Health, 45*, 1–8. <https://doi.org/10.26633/RPSP.2021.40>
- South Sulawesi Provincial Government, 2022. *Kasus Covid-19 Melonjak, BOR ICU dan Isolasi di Sulsel.Terkendali*. Access on 13 February 2022. <https://humas.sulselprov.go.id/index.php/tag/covid-19/>
- Sukawana, I. W., & Sukarja, I. M. (2021). Gambaran Kepatuhan Masyarakat Mawang Kelod Dalam Menerapkan Protokol Pencegahan Covid-19 di Tempat Umum Bulan September 2020. *Community Publ Nurs, 9*(2),