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Compliance with COVID-19 health protocols for coffee shop visitors in Makassar City

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Abstract---The COVID-19 pandemic is a non-natural disaster faced by the medical sector in various countries in the world. This study aims to analyze the influence of COVID-19 health protocol compliance on Coffee Shop visitors in Makassar City. This research with the design of the study cross-sectional. Visitors to Coffee Shop 160 to determine the influence of COVID-19 health protocol compliance assessed age, education, knowledge, attitudes, and information messages. The chisquare analysis showed that 118 respondents (73, 8%) had higher education and 42 respondents (26.3%) had low education. Another factor contributing to the compliance of COVID-19 health protocols of Coffee Shop visitors was the information message from the task force 142 respondents (88.8%) received information 18 respondents (11.2%) did not receive information. In addition, the higher the education of visitors, the 0.505 times more compliant with COVID-19 health protocols and more information about COVID-19 then, compliance with COVID-19 health protocols will increase by 0.494 times. Education is the most influential variable feeding on the compliance of COVID 19 health protocols. It is recommended that the task force always provide information to the public to increase knowledge for the

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community to continue implementing COVID-19 health protocols to reduce the spread of COVID-19.

Keywords---Humans, Health Knowledge, Attitudes, Practice, Coffee, COVID-19, Pandemics.

Introduction

The COVID-19 pandemic is a non-natural disaster that occurred in the world. Its spread is necessary to stop immediately. The government of this pandemic outbreak has done all its means. The community must comply with health protocols in supporting the transmission of Covid 19 (Pangesti and Purnamaningsih, 2021). Knowledge, work and education. Non-health professionals need to be given socialization and supervision of personal hygiene by health workers (Butarbutar, Nurjazuli and Dewanti, 2021). COVID-19 is a new disease, and the transmission is fast. The community must increase its awareness of implementing the COVID-19 health protocol established by the government. So to suppress the spread of COVID-19, it is necessary to carry out activities to improve community compliance with health protocols (Yunita, Wahyusari and Isnawati, 2021).

The death toll is not tiny due to the COVID-19 pandemic; globally, fatalities reached 1.49 million, and Indonesia amounted to 17,199 people. Large-scale social restriction policies have been implemented by the Indonesian government (Fuadi and Irdalisa, 2020). With the global spread of the COVID-19 pandemic, domestic space has become essential in pandemic control and an environment that must meet the community's needs (Zarrabi, Yazdanfar and Hosseini, 2021). Rapid initial response to pandemic warnings, extensive experience in previous epidemics and the mass collection of medicines, prudent management of health resources, and unprecedented harmonization of the government and private sectors are essential factors for this success (AlFattani *et al.*, 2021).

Percentage can be low due to the ineffective implementation of some measures. A low percentage is not related to the behaviour of society itself—implications of efforts to contain the transmission of infectious diseases such as COVID-19 (Escolà-Gascón, 2022). The 2019 coronavirus disease (COVID-19) pandemic has caused great difficulties worldwide. Public health guidelines have been the first line of defence but rely on adherence to evolving recommendations and restrictions. Canada seeks to characterize compliance and perception of public health guidelines over one year during the pandemic (Levitt *et al.*, 2022). Research with the title "*Knowledge, Attitude and Practice toward the Novel Coronavirus (COVID-19)* Outbreak: A Population-Based Survey in Iran" There is an important relationship between the female sex, the elderly and higher education in terms of knowledge, attitudes and practices towards COVID19. People have an increased understanding of being optimistic about COVID-19 (Erfani *et al.*, 2020).

Research on the relationship of knowledge, attitudes and behaviour of the community towards preventing the COVID-19 pandemic in Tanjung Balai. The study of the behaviour of Covid19 health protocols showed that age and

education could affect it, but gender does not affect the behaviour of Covid19 health protocols. Educated people can more easily receive and understand information about health protocols provided to prevent the transmission of Covid19 and change their behaviour in everyday life (Supriyadi, Istanti and Erlita, 2021). Most of the respondents have knowledge, attitudes and behaviours that are relatively good. The respondents of this study have a negative status. COVID-19 (Ray, Samion and Lukito, 2021).

The government has made many efforts to suppress the spread of COVID-19 through public relations and various community services. Coffee shops have become a place for young people in big cities that develop to interact in meetings that discuss serious things and just joke and spend free time. Coffee shops provide wifi facilities connected to laptops and mobile phones. Coffee shops also offer services as centres of social interaction; they allow social members to gather, talk, write, read, and entertain each other (Fathoni, 2020). The high rate of Covid 19 is a significant challenge for almost all areas of life because the virus can spread rapidly from person to person. Therefore, it is crucial to follow the health protocol correctly. (Farokhah, Ubaidillah and Yulianti, 2021).Emphasize the possible importance of emotional intelligence subscales on adherence to health protocols (Aliyari *et al.*, 2022).

Data on Covid patients in South Sulawesi as of March 30, 2021, includes 1257 new confirmed active cases from 59536 confirmed cases, 910 deaths and 57369 declared cured of Covid 19 (Dinkes, 2021). On December 15, 2020, 95 patients proved positive for COVID-19. Consumer behaviour towards coffee influences daily activities. Coffee shops that exist for coffee enthusiasts are used as a place to hang out, meet friends and solve problems. With the Covid19 pandemic, the consumptive behaviour of coffee lovers has been hampered by government policies on social restrictions. As a result, the activity of meeting and sharing with some friends becomes limited (Sudarsono and Rahman, 2020).

As a means of interacting with others between individuals and groups, coffee shops provide an opportunity to bring together many people in one place or even be equalized. A physical distance policy requires you to stay away from others in this pandemic situation. The presence of crowds and interactions inside the café provides opportunities for COVID-19 transmission among visitors. Also, visitors wash their hands without wearing masks. In this new average era, many cafes continue to launch services to maintain the economy. Consuming coffee and snacks at coffee shops will make visitors take off their masks so that visitors get a great chance of being infected with COVID-19. When visiting a coffee shop, it is important to follow health protocols. Some factors that affect this compliance are coffee shop visitors' knowledge, attitudes, and behaviour. Education and age are also considered here. Another critical point is the role of public figures who encourage the general public and those who go to cafes to comply with health protocols. This study aimed to analyze factors that affect the compliance of COVID-19 health protocols among coffee shop visitors in Makassar City.

Method

Ten scopes conducted this study in Makassar from September to December 2021. is it quantitative using observational with a Cross-Sectional Study approach? The population of all people who visited was awarded ten coffee shops with accidental sampling techniques. Independent variables consist; of age, knowledge, attitude, education, and information messages from the covid 19 task force in complying with COVID-19 health protocols—data collection using observation, interviews, and distributing questionnaires to respondents. The data was analyzed using univariate, bivariate, and multivariate logistic regression and chi-square statistical tests with an error rate (a) of 0.05 with the help of SPSS 25. This research has received permission and approval from LPPM Polytechnic Sandi Karsa no: B-457 / PT19 / LPPM / SK / IX / 2021.

Results and Discussion

Table 1 results of the coffee shop visitor compliance statistics test as many as 160 respondents. Respondents are aged 14-25 years as many as 51 (25.6%), 26-45 respondents as 85 (53.1%), and respondents aged 46-65 years as many as 34 (21.3%). The education level of coffee shop visitors is 10 (6.3%), 32 (20.0%) elementary school students, 6 (3.8%) high school graduates, and 112 students (70.0%) who have completed DIII visitors to Coffeeshop Work as many as 27 (16.9%) traders, 79 (49.4%) civil servants / TNI / Polli, 36 (22.5%) private employees, 22.55% contracts / honorees 18 (11.3).

Characteristic n=160 % Age 14-25 year 25.641 26-45 year 85 53,1 46-65 year 34 21,3 Education Primary school 10 6,3 Junior high school 32 20,0 Senior High School 6 3,8 Bachelor 112 70,0 Work 2716,9 Trader Government employees 79 49,4 Private employees 36 22,5 Contract/Honorary Workers 18 11,3 Education Level Enough 118 73.8 Not enough 42 26,3 Knowledge Enough 88 73.8 Not enough 72 26,3

Table 1 Characteristics of respondents based on age, education, occupation, education level, knowledge, attitude, information message from the COVID-19 task force and compliance with health protocols (n=160)

Attitude		
Enough	115	71,9
Not enough	45	28,1
Order Information from the COVID-19 Task		
Force		
Enough	142	88,8
Not enough	18	11,2
Compliance with Health Protocols		
Enough	24	15,0
Not enough	136	85,0

The education categories were selected into two categories: high and low 118 (73.8%) visitors fall into "Higher Education". In contrast, 42 (26.3%) of coffee shop visitors descend into the category of "Low Education" 88 (55.0%) knowledge about coffee shop final health protocols is sufficient, but the category of lack of knowledge about the health protocol is 72 (45.0%). 115 (71.9%) respondents had acceptable attitudes towards health protocol compliance, and 45 (28.1%) had an unfavourable attitude towards health protocol compliance. On the other hand, 142 (88.8%) respondents received sufficient information from the COVID-19 Task Force, 18 (11.2%) respondents received less input from the COVID-19 Task Force, 24 (15.0%) respondents had the appropriate compliance rate, and 136 (85%) had a low compliance rate.

Table 2 Distribution of variables of age influence, education, knowledge, attitudes,information dissemination to health protocol compliance

	Hea	Health Protocol Compliance				– Total	
Age	Ob	Obedient		Not Obedient		- Iotai	
	n	%	n	%	n	%	
12-35	14	15,2	78	84,8	92	100	0.556
36-65	10	14,7	58	85,3	68	100	0.550
Total	24	15,0	136	85,0	160	100	
Education							
							0.02
high	13	11,0	105	89,0	118	100	
Low	15	83,3	31	73,8	42	100	
Total	24	15,0	136	85,0	160	100	
Knowledge							
							0.001
Enough	6	6,8	82	93,2	88	100	
Less	18	25,0	54	75,0	72	100	
Total	24	15,0	136	85,0	160	100	
Attitude							0.461
Positive	18	15,7	97	84,3	115	100	0.461
				,			
Negative	6	13,3	71	86,7	45	100	
Total	24	15,0	136	85,0	160	100	
Information Mess	sage						0.032

Enough	18	12,7	124	87,3	142	100
Less	6	33,3	12	66,7	66,7	100
Total	24	15,0	136	85,0	160	100

Table 2 Chi-square statistical test results in the age group with a value of ρ of 0.556. That all age groups remain dominated by non-compliance with the COVID-19 health protocol. The level of education is $\rho = 0.02$; there is an influence between education and adherence to health protocols. The results also showed that visitors who have higher education adhere more to health protocols than visitors who do not comply with health protocols. Knowledge of coffee shop visitors with a score of 0.001 means an influence between knowledge and adherence to health protocols. Visitors who lack knowledge in implementing COVID-19 health protocols are due to fear and compliance of the government or COVID-19 task force in implementing health protocols. Visitors are afraid of contracting and implementing health protocols but are not wary of covid19. Attitude, with a value of 0.461, does not affect the mood of visitors and adherence to health protocols. This shows that visitors with positive and negative attitudes are still dominated by non-compliance with health protocols. Order information with a value of = 0.032 that there is an influence between the information message from the covid9 task force and the compliance of visitors to the covid19 health protocol.

Table 3 Results	of Multiple	logistic regre	ession analysis
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Variable Independent	Exp (B)	Std. Err.	t	Sig.	[95% Conf. Interval	
independent		DII.			lower	upper
Level of education	0,505	0,2388	-1,44	0,149	0,2001	1,2762
Knowledge	0,316	0,1763	-2,06	0,039	0,106	0,943
Information Message	0,494	0,3040	-1,15	0,252	0,148	1,650
from the COVID-19						
Task Force						
Constan	15,647	6,906	6,23	0,000	6,587	37,168

Table 3 statistical test results with an education score of 0.505. This shows that the higher the education of visitors, the 0.505 times more compliant with health protocols. Knowledge is the same, and the higher the level of expertise, the higher the adherence to health protocols is 0.316 times higher. The task force message scores 0.494. The more information about COVID-19 becomes available, compliance with health protocols will increase by 0.494 times. Education has a positive impact on compliance with COVID-19 health protocols.

Discussion

The effect of education on compliance with COVID-19 health protocols

Education is an essential component in a person's decision-making in action and behaviour. Education is also very influential on the higher knowledge of education in line with the knowledge possessed. In line with the study results (Samidah, Murwati and Sulastri, 2021) that education is influential in carrying out COVID-

19 health protocols, increasing knowledge can be helpful for the public about COVID-19 health protocols. Different from the results of the study (Muhith *et al.*, 2021), that attitude affects the compliance with the implementation of COVID-19 health protocols. Public health guidelines have been the first line of defence but rely on adherence to evolving recommendations and restrictions (Levitt *et al.*, 2022). Most previous research on public health behaviour during the COVID-19 pandemic was based on data from a single country or a small group of countries, representing a narrow scope of cultural background (Lin *et al.*, 2021). Infrastructure optimization, improvement of management decisions and improvement of human resources in a crisis can affect performance quality and job satisfaction. (Fereidouni *et al.*, 2022).

In addition, socio-demographic characteristics that affect public adherence to health protocols include; perception of the effectiveness of self-isolation, concern for Covid19 news, concern about travelling out of the house, gender, and education level (Riyadi and Larasaty, 2021). During the COVID-19 pandemic, at the beginning of the adaptation of new habits, adolescents mostly limit/do not do outdoor activities (Haerana *et al.*, 2021). Harnessing and empowering residents rather than instilling fear or other precautions is a more practical approach to improving compliance with government directives during the COVID-19 pandemic and ensuring compliance with current and potential future stay-at-home orders for outbreak outbreaks (Kaim *et al.*, 2021). Communication and coordination between education actors, families, students and the health community need to be strengthened, and protection protocols must be implemented (Ahmed and Sintayehu, 2022).

Despite solid evidence of its importance to people's well-being, education has been relatively overlooked as a policy priority before and during the COVID-19 pandemic. (Neuman and Powers, 2022). Psychological harm from previous pandemics in the population, especially the well-being of health professionals (Rathod et al., 2020). K believes in science in explaining various levels of compliance with COVID-19 prevention guidelines (Plohl and Musil, 2021). Heterogeneity limits how policymakers can learn from cross-border experiences (Becher et al., 2021). Practical, evidence-based skills training framework ensures high compliance with healthcare-related COVID-19 infection prevention (Liow et al., 2022). The effects may differ based on age, maturity, and socioeconomic class. We have little data on results, but many surveillance organizations have tried to set guidelines, express concerns, and extrapolate from previous experience (Hoofman and Secord, 2021). Implementing the proposed policies will help avoid or mitigate the impact of future disasters and pandemic events and meet educational requirements in the fourth and possibly fifth industrial revolutions (Uwizeyimana, 2022). One way to improve awareness can be done with education about the COVID-19 health protocol (Suprapto, 2021).

Conclusion

The study concluded that knowledge affects compliance in implementing COVID-19 health protocols for diners of sanitized coffee. It is recommended to increase knowledge about the dangers of COVID-19 so that the public can carry out health protocols in coffee shops through education and providing information to the entire community. Compliance with health protocols is essential when visiting a coffee shop. Some of the things that affect this compliance are knowledge, attitudes and behaviour of coffee shop visitors. In addition, education and age are also considered in this regard. Another critical point is the role of community leaders to appeal to the public or coffee shop visitors to remain in compliance with health protocols.

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References

- Ahmed, A. and Sintayehu, B. (2022) 'Implementation of COVID-19 protection protocols and its implication on learning & teaching in public schools', *Heliyon*, 8(5), p. e09362. doi: 10.1016/j.heliyon.2022.e09362.
- Akbarov, A. N., & Xabilov, D. N. U. (2021). The condition of the oral cavity in patients who have had a viral infection COVID-19. International Journal of Health & Medical Sciences, 4(4), 381-383. https://doi.org/10.21744/ijhms.v4n4.1796
- AlFattani, A. *et al.* (2021) 'Ten public health strategies to control the COVID-19 pandemic: the Saudi Experience', *IJID Regions*, 1, pp. 12–19. doi: 10.1016/j.ijregi.2021.09.003.
- Aliyari, F., Bakhtiari, M. and Kianimoghadam, A. S. (2022) 'Evaluation Correlations between Emotional Intelligence Subscales and Adherence to Health Protocols during the COVID-19 Pandemic', *NeuroQuantology*, 20(5), pp. 100–106. doi: 10.14704/nq.2022.20.5.NQ22152.
- Becher, M. et al. (2021) 'Ideology and compliance with health guidelines during the COVID-19 pandemic: A comparative perspective', *Social Science Quarterly*, 102(5), pp. 2106–2123. doi: 10.1111/ssqu.13035.
- Butarbutar, D. H., Nurjazuli, N. and Dewanti, N. A. Y. (2021) 'Personal Hygiene Practices Associated with Preventing COVID-19 in Semarang City', *Al-Sihah: The Public Health Science Journal*, 13(2), p. 150. doi: 10.24252/alsihah.v13i2.23349.
- Dinkes, K. M. (2021) 'Info Penanggulangan COVID-19 Kota Makassar'. Go to reference in article.
- Erfani, A. *et al.* (2020) 'Knowledge, attitude and practice toward the novel coronavirus (COVID-19) outbreak: a population-based survey in Iran', *Bull world Health organ*, 30(10.2471).
- Escolà-Gascón, Á. (2022) 'Statistical indicators of compliance with anti-COVID-19 public health measures at European airports', *International Journal of Disaster Risk Reduction*, 68, p. 102720. doi: 10.1016/j.ijdrr.2021.102720.
- Farokhah, L., Ubaidillah, Y. and Yulianti, R. A. (2021) 'COVID-19 Health Protocol Discipline Extension in Gandul Village, Cinere District, Depok City', in Prosiding Seminar Nasional Pengabdian Masyarakat LPPM UMJ.
- Fereidouni, A. et al. (2022) 'Relationships between Job Satisfaction of Operating Room Nurses and hospital's Compliance with Protective Guidelines (Guidance) during COVID-19 Pandemic from the perspective of operating room nurses; A Cross-Sectional Study, Iran', Journal of PeriAnesthesia Nursing. doi:

10.1016/j.jopan.2022.03.007.

- Fuadi, T. M. and Irdalisa (2020) 'Covid 19: Antara Angka Kematian dan Angka Kelahiran', Jurnal Sosiologi Agama Indonesia (JSAI), 1(3), pp. 199–211. doi: 10.22373/jsai.v1i3.767.
- Haerana, B. T. et al. (2021) 'Compliance of the COVID-19 prevention protocols on daily activities among adolescents in early-adopting new habits, South Sulawesi Province, Indonesia', Gaceta Sanitaria, 35, pp. S463–S467. doi: 10.1016/j.gaceta.2021.07.025.
- Hoofman, J. and Secord, E. (2021) 'The Effect of COVID-19 on Education', *Pediatric Clinics of North America*, 68(5), pp. 1071–1079. doi: 10.1016/j.pcl.2021.05.009.
- Kaim, A. et al. (2021) 'Factors that enhance or impede public compliance with governmental regulation of lockdown during COVID-19 in Israel', International Journal of Disaster Risk Reduction, 66, p. 102596. doi: 10.1016/j.ijdrr.2021.102596.
- Levitt, E. E. et al. (2022) 'Public health guideline compliance and perceived government effectiveness during the COVID-19 pandemic in Canada: Findings from a longitudinal cohort study, *The Lancet Regional Health - Americas*, 9, p. 100185. doi: 10.1016/j.lana.2022.100185.
- Lin, T. et al. (2021) 'A multi-national test on self-reported compliance with COVID-19 public health measures: The role of individual age and gender demographics and countries' developmental status', Social Science & Medicine, 286, p. 114335. doi: 10.1016/j.socscimed.2021.114335.
- Liow, M. H. L. et al. (2022) 'Personal protective equipment training for nonhealthcare workers in the COVID-19 pandemic: Effectiveness of an evidencebased skills training framework', *Infection, Disease & Health*, 27(1), pp. 38–48. doi: 10.1016/j.idh.2021.09.040.
- Muhith, S. et al. (2021) 'Compliance Analysis of the Implementation of COVID-19 Health Protocols', Jurnal 'Aisyiyah Medika, 6(2). doi: 10.36729/jam.v6i2.651.
- Neuman, M. J. and Powers, S. (2022) 'Political prioritization of early childhood education during the COVID-19 pandemic: A comparative policy analysis of low- and middle-income countries, *Early Childhood Research Quarterly*, 60, pp. 287–297. doi: 10.1016/j.ecresq.2022.01.006.
- Pangesti, N. A. and Purnamaningsih, E. R. (2021) 'Analysis of Factors Affecting Compliance with COVID-19 Prevention Health Protocols in Families with Pre-School Age Child Development Stages', Jurnal Ilmu Keperawatan Jiwa, 4(3), pp. 623–632.
- Plohl, N. and Musil, B. (2021) 'Modeling compliance with COVID-19 prevention guidelines: the critical role of trust in science', *Psychology, Health & Medicine*, 26(1), pp. 1–12. doi: 10.1080/13548506.2020.1772988.
- Rathod, S. *et al.* (2020) 'Psychological impact of COVID-19 pandemic: Protocol and results of first three weeks from an international cross-section survey focus on health professionals', *Journal of Affective Disorders Reports*, 1, p. 100005. doi: 10.1016/j.jadr.2020.100005.
- Ray, V. N. M., Samion, M. and Lukito, A. (2021)' Relationship Between Knowledge, Attitudes, and Behavior of the Community Towards the Prevention of the Covid 19 Pandemic in Tanjung Balai City', Jurnal Kedokteran STM (Sains dan Teknologi Medik), 4(1), pp. 39–45.
- Riyadi, R. and Larasaty, P. (2021) 'Factors That Affect Public Compliance with Health Protocols in Preventing the Spread of COVID-19', Seminar Nasional

Official Statistics, 2020(1), pp. 45–54. doi: 10.34123/semnasoffstat.v2020i1.431.

- Samidah, I. D. A., Murwati, M. and Sulastri, S. (2021) 'The Influence of Health Education in Complying with COVID-19 Health Protocols in Pondok Batu Village, Mukomuko Regency in 2020The Influence of Health Education in Complying with COVID-19 Health Protocols in Pondok Batu Village, Mukomuko Regency in 2020', *Journal of Nursing and Public Health*, 9(1), pp. 35–39.
- Sudarsono, B. and Rahman, M. T. (2020) 'Impact of Coronavirus Diseases (Covid 19) on Consumer Behavior of Girls Coffee Fans in East Java', *Eco-Entrepreneur*, 6(1), pp. 15–24.
- Suprapto, S. (2021) 'Education on Clean and Healthy Living Behavior and Food Delivery during the COVID-19 Pandemic: *CARADDE: Jurnal Pengabdian Kepada Masyarakat*, 3(3). doi: https/doi.org/10.31960/caradde.v3i3.624.
- Suryasa, I. W., Rodríguez-Gámez, M., & Koldoris, T. (2021). The COVID-19 pandemic. International Journal of Health Sciences, 5(2), vi-ix. https://doi.org/10.53730/ijhs.v5n2.2937
- Uwizeyimana, D. E. (2022) 'Analyzing the importance of e-government in times of disruption: The case of public education in Rwanda during COVID-19 lockdown', *Evaluation and Program Planning*, 91, p. 102064. doi: 10.1016/j.evalprogplan.2022.102064.
- Yunita, R., Wahyusari, S. and Isnawati, I. A. (2021) 'Strategies to improve compliance with health protocols during the Covid 19 pandemic', JMM (Jurnal Masyarakat Mandiri), 5(4), pp. 1243–1251. doi: :https://doi.org/10.31764/jmm.v5i4.4761.
- Zarrabi, M., Yazdanfar, S.-A. and Hosseini, S.-B. (2021) 'COVID-19 and healthy home preferences: The case of apartment residents in Tehran', *Journal of Building Engineering*, 35, p. 102021. doi: 10.1016/j.jobe.2020.102021.