

Community Diagnosis of Knowledge, Attitudes, and Practices Towards COVID-19 Prevention in Koja, DKI Jakarta Province, Indonesia

Agus Sugiharto^{1*}, Damar P Susilaradeya², Reza Haryo Yudanto², Rasyad Khalifah², Anastasia Asmoro², Dian Aris Priyanti², Julietta Tantri³

¹Department of Community Medicine, Faculty of Medicine, Universitas Indonesia

²Faculty of Medicine, Universitas Indonesia

³Koja Community Health Centre, Jakarta, Indonesia

*Corresponding author: Agus Sugiharto

Email: agus.sugiharto@ui.ac.id

Abstract

Background: The spread of COVID-19 in Indonesia was happening rapidly. The DKI Jakarta Province was the province with the highest prevalence of COVID-19. Thus, all areas in DKI Jakarta Province require special attention in the spread of COVID-19, one of which is Koja District, North Jakarta. This study was conducted to find out community diagnoses related to knowledge, attitudes, and practices regarding COVID-19 prevention.

Methods: This study uses community diagnostic steps and quantitative analysis with a cross-sectional approach. The study was conducted from May 26 until June 5, 2020. The population was 115 people who seek treatment at the Koja Health Center, North Jakarta. Socio-demographic characteristics, as well as knowledge, attitudes, and practices related to COVID-19 prevention, were collected through a self-reported questionnaire. Data analysis were used by IBM SPSS version 26.0.

Results: Among 115 respondents, 58.3% had good knowledge, 64.3% had a positive attitude, and 55% had positive practices related to COVID-19 prevention. The median values of knowledge, attitudes, and practices are 8, 24, and 25. The median value of knowledge is higher than the mean value, and others are almost the same as the mean value. The percentage of correct knowledge is above 90%, except for knowledge about people infected with COVID-19 who are asymptomatic (64.3%) and children who cannot be seriously ill/die if exposed to COVID-19 (33.9%). More than half of the participants had positive attitudes and practices towards the preventive measures in question, except attitudes about family members at home having to keep their distance and wearing masks inside the house (48.7%) and practices about continuing to travel outside the house (36.5%).

Conclusion: Community diagnosis in Koja District, North Jakarta, more than half of the community has a sufficient level of knowledge, positive attitudes, and practices towards COVID-19 prevention. These findings still require further intervention, so that people's knowledge, attitudes, and practices regarding COVID-19 prevention are better, especially regarding children infected with COVID-19, the importance of keeping a distance and using masks at home, and traveling outside the home. So that the provision of education and counseling to the community is essential.

Keywords: COVID-19, knowledge, attitude, practice, community diagnosis, Jakarta

Abstrak

Latar belakang: Penyebaran COVID-19 di Indonesia terjadi dengan pesat. Provinsi DKI Jakarta menjadi provinsi yang tertinggi dalam penyebaran COVID-19, sehingga semua wilayah di Provinsi DKI Jakarta memerlukan perhatian khusus dalam penyebaran COVID-19, salah satunya adalah Kecamatan Koja, Jakarta Utara. Penelitian ini dilakukan untuk mengetahui diagnosis komunitas terkait pengetahuan, sikap, dan praktik terkait pencegahan COVID-19.

Metode: Penelitian ini menggunakan langkah diagnostik komunitas dan analisis kuantitatif dengan pendekatan cross sectional. Penelitian dilakukan pada tanggal 26 Mei sampai dengan 5 Juni 2020. Populasi adalah 115 orang yang berobat di Puskesmas Koja, Jakarta Utara. Karakteristik sosio-demografi, serta pengetahuan, sikap, dan praktik terkait pencegahan COVID-19 dikumpulkan melalui kuesioner. Analisis data menggunakan IBM SPSS 26.0.

Hasil: Dari 115 responden, 58,3% memiliki pengetahuan baik, dan 64,3% memiliki sikap positif, sedangkan 55% memiliki praktik positif terkait pencegahan COVID-19. Nilai median pengetahuan, sikap, dan praktik adalah 8, 24, dan 25. Nilai median pengetahuan lebih tinggi dari nilai rata-rata, dan yang lainnya hampir sama dengan nilai rata-rata. Persentase pengetahuan benar di atas 90% kecuali pengetahuan tentang orang terinfeksi COVID-19 yang tidak menunjukkan gejala (64,3%) dan anak yang tidak dapat sakit parah /meninggal jika terkena COVID-19 (33,9%). Lebih dari separuh peserta memiliki sikap dan praktik positif terhadap tindakan pencegahan yang dimaksud, kecuali sikap tentang anggota keluarga di rumah harus menjaga jarak dan memakai masker di dalam rumah (48,7%) dan praktik tentang terus bepergian ke luar rumah (36,5%)

Kesimpulan: Diagnosa masyarakat di Kecamatan Koja, Jakarta Utara, lebih dari separuh masyarakat memiliki tingkat pengetahuan, sikap, dan praktik yang cukup terhadap pencegahan COVID-19. Hal ini masih memerlukan intervensi lebih lanjut agar pengetahuan, sikap, dan praktik masyarakat mengenai pencegahan COVID-19 menjadi lebih baik, terutama mengenai anak yang terinfeksi COVID-19, pentingnya menjaga jarak dan menggunakan masker di rumah, serta bepergian ke luar rumah. Sehingga pemberian pendidikan dan penyuluhan kepada masyarakat sangat penting.

Kata kunci: COVID-19, pengetahuan, sikap, praktek, diagnosis komunitas, Jakarta

Introduction

The respiratory disease called coronavirus disease 2019 (COVID-19) is caused by Severe Acute Infection Respiratory Syndrome Virus 2 (SARS-CoV-2)¹. This virus belongs to the Coronavirus family along with other viruses, namely severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV)^{1,2}. On March 11, 2020, has declared the novel coronavirus (COVID-19) outbreak a global pandemic by The World Health Organization (WHO)^{3,4}. The rapid spread of this disease throughout the world, and as of May 6, 2022, there were 513,955,910 confirmed cases of COVID-19, including 6,249,700 deaths⁵.

In Indonesia, the COVID-19 outbreak as a non-natural national disaster was officially declared on March 14, 2020^{6,7}. As of May 7, 2022, there were 6.048.204 confirmed cases of COVID-19, including 156.371 deaths⁸. So far, the aim of the program carried out by the Indonesian government is the same as that of several other countries, which aims to flatten the curve of the Covid-19 case by trying to stop the spread of this disease through physical distancing^{9,10}, the use of masks^{9,10}, washing hands¹⁰, and vaccinations^{10,11}. Education on "pola hidup bersih dan sehat" (PHBS) and the implementation of "Pembatasan Sosial Berskala Besar" (PSBB) were also carried out^{10,12}.

The spread of COVID-19 in Indonesia, one of which is in DKI Jakarta Province, is happening rapidly. DKI Jakarta is the starting point for the spread of the Coronavirus in Indonesia. Until now, it has been included as the largest contributor to COVID-19 cases in Indonesia. DKI Jakarta is a province with 1,248,952 cases and the number of deaths of 15,281 people, the most in Indonesia^{13,14}. Some factors that cause the high number of cases detected by COVID-19 in DKI Jakarta are the high number of COVID-19 test examinations compared to other regions and the behavior of people who are starting to ignore Covid-19¹⁵. In addition, DKI Jakarta is the capital city and also a transit point for people from various regions. The community's mobility is very high in it, not from the population alone but some of its buffer areas¹⁶ and DKI Jakarta is a densely populated area. Hence, the risk of spreading COVID-19 is also high, including in Koja Districts, North Jakarta.

In Koja District, the number of covid-19 cases increased from the beginning of only two positive

cases in March 2020, increasing to 117 cases at the end of May 2020, until May 14, 2022, to 23,229 cases with a total of 356 deaths^{13,17}. In the COVID-19 pandemic, the most important is preventing the spread of COVID-19¹⁸. Therefore, increasing knowledge, attitudes, and practices regarding COVID-19 prevention is essential^{19,20}. We carried out community diagnostics to discover the knowledge, attitude, and practice of preventing COVID-19 cases in Koja Koja District.

Methods

Study Design and Setting

This study uses community diagnostic steps, starting from identifying and analyzing problems health, finding priority problems, and developing solutions to alternative problem solving²¹. Using this approach, problems in the community can be gradually identified, and we find that in the COVID-19 pandemic it is very important to analyze knowledge, attitudes, and practices about COVID-19 prevention. We used a cross-sectional survey design to evaluate knowledge, attitudes, and public practices about COVID-19 prevention during the COVID-19 pandemic. The study was conducted from May 26 until June 5 2020 at Koja Community Health Centre (Puskesmas), North Jakarta, Indonesia. Respondents for the survey were recruited consecutively and briefed before answering the survey. All subjects were given information about the purpose of the study, confidentiality clauses, required to provide written informed consent, and allowed to exit the study at any time without consequences. The sample size was tabulated using the transversal formula²², and considering a 10% dropout, minimal samples were 106 respondents. Inclusion criteria applied were age older than 18 years old (ensuring adequate sexual health knowledge), reading and writing, and giving written informed consent to join the study. Exclusion criteria were the non-response subjects, those who were not completely fulfilling the questionnaire, health professional background, and presence of cognitive or sight disorder. The study was approved by the faculty committee and community health center director.

Study Tool and Validation

The questionnaire was developed from a literature search of a questionnaire that has been validated in previous studies^{23,24}, which were then translated to

Bahasa Indonesia and modified to match the context of the study. The questionnaire encompassed two primary sections, including (1) socio-demographic characteristics and (2) knowledge, attitude, and practice. Socio-demographic characteristics included age, sex, domicile village, academic level, profession, and some household members.

The final section aimed to investigate the participants' knowledge, attitude, and practice toward the COVID-19 disease. Knowledge was assessed using a 9-item questionnaire encompassing various areas of COVID-19 disease. Each correct answer accounts for one point with a maximum score of 9 points. Assessment of attitude consisted of 8 questions each using a four-point Likert scale (strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1). and assessment of practice consisted of 8 questions each using a four-point Likert scale (very frequently = 4, frequently = 3, occasionally = 2, never = 1). Higher knowledge, attitude, and behavioral scores indicated favorable perceptions.

Statistical analysis

Data responses were collected and managed with the MS Excel for Office 365. Subsequently, data were analyzed using the statistical software (IBM SPSS 26.0). Descriptive statistical methods were used to summarize data on socio-demographic characteristics, activities outside the home, travel places, and responses to questions concerning knowledge, perceptions, and attitude toward COVID-19. Data were summarized as frequencies (n) and percentages (%) for categorical variables. Knowledge score was categorized as sufficient (if \geq median) and insufficient (if $<$ median). Attitude scores were categorized as positive (if \geq median) and negative (if $<$ median). Practice scores were categorized as positive (if \geq median) and negative (if $<$ median) (25,26).

Results

Demographic characteristics of subjects

There were 115 respondents in this study. Table 1 shows the socio-demographic characteristics of the studied participants. Most participants were female (75.7%). Nearly half of the participants (44.4%) were aged between 18 to 30 years, 24.3% were aged between 31 to 45 years, whereas only 24.3% were aged 45 years and above. Most of the participants (44.4%) resided in

the Lagoa areas. Nearly half (47%) were in senior high school, 20.9% were university graduates and junior high school, and 5.2% were in primary school. Only 6% were no education. More than half (54.8%) were housewives, more than one-third of them (34.8%) were workers, and 60% number of households were 4 people and above.

Table 1. Socio-demographic characteristics of the participants (n=115)

Socio-demographic characteristics	N, %
Age-group (years)	
18-30	51 (44.4)
31-45	36 (31.3)
≥ 45	28 (24.3)
Gender	
Male	28 (24.3)
Female	87 (75.7)
Place of current residence	
Koja	16 (13.9)
Lagoa	51 (44.4)
Tugu Utara	23 (20)
Tugu Selatan	6 (5.2)
Rawa Badak Utara	10 (8.7)
Rawa Badak Selatan	9 (7.8)
Education	
Primary school	6 (5.2)
Junior high school	24 (20.9)
Senior High School	54 (47)
University	24 (20.9)
No education	7 (6)
Occupation	
Housewife	63 (54.8)
Worker	40 (34.8)
Students	2 (1.7)
Unemployed	10 (8.7)
Number of household members	
< 4	46 (40)
≥ 4	69 (60)

Knowledge, attitude, and practice of COVID-19 prevention

The median score for knowledge, attitude, and practice were 8, 24, and 25, respectively. More than half of the respondents had a sufficient level of knowledge, positive attitude, and positive practice toward COVID-19 (Table 2).

Table 2. Knowledge, attitude, and practice of COVID-19 prevention among the participants (n=115)

Knowledge	
Score (median (IQR))	8 (6-9)
Attitude	
Score (median (IQR))	24 (22-27)
Positive (n,%)	74 (64.3)
Negative (n,%)	41 (35.7)
Practice	
Score (median (IQR))	25 (20-29)
Positive (n,%)	63 (55)
Negative (n,%)	52 (45)

Knowledge of COVID-19 prevention

Table 3 explains that, generally, the respondent's knowledge is quite good. It can be seen from the percentage of correct knowledge above 90%, except for knowledge about people infected with COVID-19 who have no symptoms (64.3%) and children who can't be seriously ill/died if they get COVID-19 (33.9%).

Attitude and practice toward COVID-19 prevention

Participants' attitudes toward prevention measures to limit the spread of COVID-19 and their responses are presented in Table 4. The positive indicates that the participants have good attitudes and practices about items of COVID-19 prevention. More than half of the participants had positive attitudes and practices towards different items of the preventive measures in the question of the inquired preventive measures, except attitude about a family member at home should keep their distance and wear a mask inside the house (48.7%) and practice about still traveling outside the house (36.5%).

Table 3. Responses to knowledge items of COVID-19 prevention among the participants (n=115)

Knowledge items	Correct (n,%)
COVID-19 can cause symptoms of fever, cough, or shortness of breath	114 (99.1)
Everyone must wear a mask when leaving the house	114 (99.1)
The risk of transmission can be obtained from home, public places, or any area	114 (99.1)
If you have COVID-19 with mild symptoms, you need to self-isolate for 14 days	110 (95.7)
Older people are more at risk of serious illness/death if exposed to COVID-19	109 (94.8)
Everyone with symptoms of fever, cough, or runny nose must report to the Puskesmas	106 (92.2)
COVID-19 can be spread through saliva splashes while talking	104 (90.4)
There are people infected with COVID-19 who do not have symptoms	74 (64.3)
Children who can't be seriously ill/died if they get COVID-19	39 (33.9)

Discussion

This study aims to diagnose the community regarding the community's knowledge, attitudes, and practices in carrying out COVID-19 prevention in Koja District, North Jakarta. The demographic characteristics of the respondents found that there were more women (75.7%) than men (24.3%). It might happen because most of the participants in this study are housewives. This is also found in other KAP studies^{23,27,28}. This study shows that many women visit the Puskesmas. This is following the study of the utilization of Puskesmas to prevent COVID-19 in Bengkulu City²⁹. The most recent education of the majority of respondents was in senior high school (47%) and university (20.9%). Education with a higher level answers knowledge items better so that they have positive attitudes and practices towards COVID-19 prevention^{23,27,30}. This is also found in this study. The age range of most respondents is 18-30 years, there are 51 (44.4%) people, who can be categorized in the adult stage which is of productive

Table 4. Responses to attitude and practice items of COVID-19 prevention among the participants (n=115)

The attitude toward preventive behavior items	Positive (n,%)	The Practices of preventive behavior items	Positive (n,%)
I think it's important to keep a distance of at least 2 meters from other people if you have to leave the house	110 (95.7)	I wash my hands with water and soap or hand sanitizer inside or outside the house	108 (93.9)
I believe wearing a mask is useful to reduce the transmission of COVID-19	109 (94.8)	I wear a mask when I have to leave the house	105 (91.3)
I think it's important to stay at home avoiding crowds	109 (94.8)	I keep a minimum distance of 2 meters from other people if I have to leave the house	99 (86.1)
I believe washing hands with soap and water or hand sanitizer is useful for preventing the transmission of COVID-19	106 (92.2)	I just stay at home and avoid crowded places	89 (77.4)
Everyone's behavior does not affect the increase in the number of COVID-19 cases	77 (67)	I immediately take a shower or change clothes after traveling from outside the house	87 (75.7)
In my opinion, neighbors/family members who have a fever, cough, runny nose, or are said to be positive for COVID-19 should stay away from me	66 (57.4)	I clean my things from outside the house after arriving home (such as cellphones, wallets, bags, glasses, etc.)	76 (66.1)
I think it's okay if there are household members who are still traveling outside the house	62 (53.9)	I don't touch my face with my hands before washing my hands	72 (62.6)
I think every family member at home should keep their distance and wear a mask inside the house	56 (48.7)	I'm still traveling outside the house	42 (36.5)

age and has good grasping and thinking power so that they can understand the information obtained. This is supported by the adult phase in complying with the COVID-19 prevention protocol. In this study, 69 (60%) respondents live in a house with 4 people and above. This needs to be a concern in making and determining policy strategies for preventing COVID-19, especially within the family, which is part of the community. This study was conducted in the first wave of COVID-19. So, if there is a second wave of COVID-19, the community will be better prepared to deal with the spread of COVID-19.

Knowledge is one of the important things to pay attention to in handling COVID-19 cases. Public knowledge, especially in preventing the spread of the SARS-CoV-2 virus, is very useful for suppressing the transmission of the virus³¹. The results of this study indicate that public knowledge in carrying out COVID-19 prevention, in general, is in the sufficiency

category (58.3%). This result is in line with previous research which found that most people have sufficient knowledge about COVID-19 prevention health protocols, including knowledge of the importance of social distancing, washing hands, wearing masks, and avoiding crowds^{32,33}. The results of another study on 1,102 respondents in Indonesia indicated that 99% of respondents had a sufficient level of knowledge regarding the importance of social distancing in preventing the transmission of COVID-19³⁴. The results of the study found that 33.9% of respondents still knew that children infected with COVID-19 could not be seriously ill or die. This is contrary to the findings of cases in the field that children infected with Covid-19 can have severe clinical symptoms even though the percentage of occurrence is smaller than the age group >45 years. In a case report, a child patient with Covid-19 was reported who had severe symptoms resembling Toxic Shock Syndrome^{35,36}, and multisystem

inflammatory syndrome^{37,38}.

Most of the respondents in this study have a positive attitude (64.3%) towards implementing the COVID-19 prevention health protocol. Supported by previous research in DKI Jakarta Province, 722 respondents (70.7%) had a good attitude regarding the prevention of COVID-19³⁹. Other research also shows that the community has a good attitude towards implementing COVID-19 prevention^{24,27}. In this study, community practices in implementing the COVID-19 prevention health protocol were in a positive category (55%). This result is in line with other research (23,24,33). However, based on the data obtained, it shows that the attitude of every family member at home must maintain a distance and the use of masks in the house is still below half of the total respondents (48.7%), and practice about still traveling outside the house (36.5%). This indicated special concern in the COVID-19 prevention strategy in the family, which is part of the community.

There are still problems related to knowledge, attitudes, and practices in preventing the spread of COVID-19. So, The government and health workers are required to provide health education through the massive public education campaign about children infected with COVID-19, the importance of always keeping a distance, and using masks at home. However, government and every individual must adopt the behaviors recommended by the World Health Organization guidelines to prevent coronavirus disease⁴⁰.

Some limitations of this study should be acknowledged. First, our study did not explore other attitudinal factors associated with COVID-19 behavior, such as communication factors or other perceived barriers that might affect public knowledge, including seeking information, using the media, or processing information. Second, the data collected was analyzed using descriptive statistics, so we suggest that further studies are needed, to look at other variables and their relationship to knowledge, attitudes, and practices to prevent the spread of COVID-19. However, this study uses integrated quantitative community diagnostic measures to better understand the lack of knowledge, attitudes, and practices of COVID-19, as a potential barrier for vulnerable populations in preventing COVID-19 at the community level in Indonesia's capital city. Furthermore, the previous questionnaire has been validated and produces fair reliability, thus further ensuring the validity of our findings.

Conclusion

Community diagnosis in Koja sub-district, North Jakarta, more than half of the community has a sufficient level of knowledge, positive attitudes, and practices towards COVID-19 prevention. This shows that more than half of the population has important concerns about this new pandemic. The lack of knowledge about COVID-19 prevention is that children infected with COVID-19 should not be seriously ill or die. The attitude toward preventing COVID-19 is still not related to the attitude of family members at home must keep their distance and use masks at home. Meanwhile, the COVID-19 prevention practice that still needs to be emphasized is to keep traveling outside the house. This study implies that efforts are needed to increase knowledge, attitudes, and practices in the community regarding the prevention of COVID-19, especially regarding children infected with COVID-19, the importance of keeping a distance and using masks at home and traveling outside the home, so that all people understand the importance of prevention in handling the COVID-19 pandemic. These findings can be used as parameters for making public policies to prepare the public to face the prevention of the COVID-19 pandemic or other outbreaks. We recommend providing education and counseling to the community.

Supplementary Information

Acknowledgments

This study was carried out thanks to the pre-internship module, Faculty of Medicine, University of Indonesia. We also thank the Koja Community Health Center, the North Jakarta Sub-Department of Health Office, and the Department of Community Medicine.

Authors' contributions

All the authors substantially contributed to the study and approved the final version of the manuscript

Funding

This study does not accept anything special grants from funding agencies in the community

Availability of data and materials

The datasets used and/or analyzed during the current

study are data from the community diagnosis report, which is one of the outputs of the pre-internship module, and which was approved and signed by all authors.

Competing interests

The author has stated that there is no interest.

References

1. Wu YC, Chen CS, Chan YJ. The outbreak of COVID-19: An overview. *J Chinese Med Assoc.* 2020;83(3):217–20.
2. Hui DS, I Azhar E, Madani TA, Ntoumi F, Kock R, Dar O, et al. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health — The latest 2019 novel coronavirus outbreak in Wuhan, China. *Int J Infect Dis.* 2020;91:264–6.
3. Organization WH. WHO Director-General’s opening remarks at the media briefing on COVID-19-11 March 2020. Geneva, Switzerland; 2020.
4. Cucinotta D, Vanelli M. WHO declares COVID-19 a pandemic. *Acta Biomed.* 2020;91(1):157–60.
5. World Health Organization. WHO Coronavirus (COVID-19) Dashboard (Global Situation) [Internet]. 8 mei 2022. 2022. Available from: <https://covid19.who.int/>
6. PRESIDEN, INDONESIA R. Keputusan Presiden No 12 TH 2020 Tentang Penetapan Bencana Non alam Penyebaran Corona Virus Disease 2019 Sebagai Bencana Nasional. 2020.
7. Badan Nasional Penanggulangan Bencana. Presiden Tetapkan COVID-19 Sebagai Bencana Nasional [Internet]. 2020. Available from: <https://bnpb.go.id/berita/presiden-tetapkan-covid19-sebagai-bencana-nasional>
8. Satuan Tugas Penanganan COVID-19. Data Sebaran Covid 19 Indonesia [Internet]. 8 mei 2022. 2022. Available from: <https://covid19.go.id/>
9. Chu DK, Akl EA, Duda S, Solo K, Yaacoub S, Schünemann HJ, et al. Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *Lancet.* 2020;395(10242):1973–87.
10. Kementerian Kesehatan RI. PEDOMAN PENCEGAHAN DAN PENGENDALIAN CORONAVIRUS DISEASE (COVID-19). 5th ed. dr. Listiana Aziza, Sp.KP; Adistikah Aqmarina, SKM; Maulidiah Ihsan S, editor. Kementerian Kesehatan RI;
11. Si R, Yao Y, Zhang X, Lu Q, Aziz N. Investigating the Links Between Vaccination Against COVID-19 and Public Attitudes Toward Protective Countermeasures: Implications for Public Health. *Front Public Heal.* 2021;9(July):1–11.
12. Presiden RI. Peraturan Pemerintah Republik Indonesia No 21 TAHUN 2020 Tentang Pembatasan Sosial Berskala Besar Dalam Rangka Percepatan Penanganan Corona Virus Disease 2019 (COVID-19). 2020.
13. DKI Jakarta.go.id. Data Pemantauan COVID-19 DKI Jakarta [Internet]. corona.jakarta.go.id. 2022. Available from: <https://corona.jakarta.go.id/id/data-pemantauan>
14. Kantor Pusat Andra Farm. Tabel COVID-19 di Provinsi DKI Jakarta [Internet]. m.andrafarm.com. 2022. Available from: https://m.andrafarm.com/_andra.php?_i=daftar-co19-kota&noprovkot=6&corke=1000&urut=2&asc=01100000000
15. Djalante R, Lassa J, Setiamarga D, Sudjatma A, Indrawan M. Review and analysis of current responses to COVID-19 in Indonesia : Period of January to March 2020 ☆. 2020;(January).
16. Zakianis, Adzania FH, Fauzia S, Aryati GP, Mahkota R. Sociodemographic and environmental health risk factor of COVID-19 in Jakarta, Indonesia: An ecological study. *One Heal [Internet].* 2021;13(July):100303. Available from: <https://doi.org/10.1016/j.onehlt.2021.100303>
17. Kantor Pusat Andra Farm. Pandemi Harian Corona (COVID-19) DKI Jakarta [Internet]. m.andrafarm.com. 2022. Available from: https://m.andrafarm.com/_andra.php?_i=daftar-covid19-jakarta&inikec=1#posisiurut
18. Lotfia M, Hamblin MR, Rezaei N. COVID-19: Transmission, prevention, and potential therapeutic opportunities. *Clin Chim Acta [Internet].* 2020;508(January):254–66. Available from: www.elsevier.com/locate/cca Review
19. Kundu S, Al Banna MH, Sayeed A, Begum MR, Brazendale K, Hasan MT, et al. Knowledge, attitudes, and preventive practices toward the COVID-19 pandemic: an online survey among Bangladeshi residents. *J Public Heal.* 2021;
20. Maude RR, Jongdeepaisal M, Skuntaniyom S, Muntajit T, Blacksell SD, Khuenpetch W, et al. Improving knowledge, attitudes and practice to prevent COVID-19 transmission in healthcare workers and the public in Thailand. *BMC Public Health.* 2021;21(1):1–14.
21. Sugiarto A, Werdhani RA, Khoe LC, Friska D, Afian F, Ilyas M, et al. Modul” Modul Sistem Pelayanan Kesehatan Primer 2018-2019”. 2020.
22. Charan J, Biswas T. How to calculate sample size for different study designs in medical research? *Indian J Psychol Med.* 2013;35(2):121–6.
23. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, et al. Knowledge, attitudes, and practices towards COVID-19 among chinese residents during the rapid rise period of the COVID-19 outbreak: A quick online cross-sectional survey. *Int J Biol Sci.* 2020;16(10):1745–52.
24. Abdelhafiz AS, Mohammed Z, Ibrahim ME, Ziady HH, Alorabi M, Ayyad M, et al. Knowledge, Perceptions, and Attitude of Egyptians Towards the Novel Coronavirus Disease (COVID-19). *J Community Health [Internet].* 2020;45(5):881–90. Available from: <https://doi.org/10.1007/s10900-020-00827-7>
25. Sitorus Z, Suherman S, Wahyuni MS. Model Pemetaan Terhadap Metode Cut Point Untuk Mengetahui Lokasi Ruang ICU Rumah Sakit. *It J Res Dev.* 2018;2(2):90–6.
26. Giovanni LY, Suryadinata H, Sofiatin Y, Rakhmilla LEVA, Ruslami R. Knowledge, attitude, and practice of undergraduate medical students in Indonesia on the COVID-19 prevention. *J Prev Med Hyg.* 2021;62(3):E598–604.
27. Khaled A, Siddiqua A, Makki S. The knowledge and attitude

- of the community from the aser region, saudi arabia, toward covid-19 and their precautionary measures against the disease. *Risk Manag Healthc Policy*. 2020;13:1825–34.
28. Sen LT, Hutauruk PMS, Putra MRA, Maulida SB, Ramadhan A, Sugiharto A. Scrutinizing the knowledge and stigma of HIV/AIDS in the community level in Indonesia and the correlation to risk groups aversion to screening. *IOP Conf Ser Earth Environ Sci* [Internet]. 2021;716(1):12089. Available from: <http://dx.doi.org/10.1088/1755-1315/716/1/012089>
 29. Oktarianita O, Sartika A, Wati N, Pratiwi BA. Utilization of Puskesmas in Efforts to Prevent COVID-19 in Bengkulu City. *Dis Prev Public Heal J*. 2021;16(1):16–24.
 30. Tien TQ, Tuyet-Hanh TT, Linh TNQ, Hai Phuc H, Van Nhu H. Knowledge, Attitudes, and Practices Regarding COVID-19 prevention among Vietnamese Healthcare Workers in 2020. *Heal Serv Insights*. 2021;14.
 31. Shinan-Altman S, Levkovich I. COVID-19 precautionary behavior: the Israeli case in the initial stage of the outbreak. *BMC Public Health*. 2020;20(1):1–7.
 32. Al-Hanawi MK, Angawi K, Alshareef N, Qattan AMN, Helmy HZ, Abudawood Y, et al. Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. *Front Public Heal*. 2020;8(May):1–10.
 33. Lee M, Kang BA, You M. Knowledge, attitudes, and practices (KAP) toward COVID-19: a cross-sectional study in South Korea. *BMC Public Health*. 2021;21(1):1–10.
 34. Yanti B, Wahyudi E, Wahiduddin W, Novika RGH, Arina YMD, Martani NS, et al. Community Knowledge, Attitudes, and Behavior Towards Social Distancing Policy As Prevention Transmission of Covid-19 in Indonesia. *J Adm Kesehat Indones*. 2020;8(2):4.
 35. Greene A, Saleh M, Roseman E, Sinert R. Toxic shock-like syndrome and COVID-19: A case report of multisystem inflammatory syndrome in children (MIS-C). *Am J Emerg Med*. 2020 Jun 1;38.
 36. Ajmi H, Besghaier W, Kallala W, Trabelsi A, Abroug S. A fatal toxic shock-like syndrome post COVID-19 infection in a child. *Ital J Pediatr*. 2021;47(1):1–5.
 37. Whittaker E, Bamford A, Kenny J, Kaforou M, Jones CE, Shah P, et al. Clinical Characteristics of 58 Children with a Pediatric Inflammatory Multisystem Syndrome Temporally Associated with SARS-CoV-2. *JAMA - J Am Med Assoc*. 2020;324(3):259–69.
 38. Toubiana J, Poirault C, Corsia A, Bajolle F, Fourgeaud J, Angoulvant F, et al. Kawasaki-like multisystem inflammatory syndrome in children during the covid-19 pandemic in Paris, France: prospective observational study. *BMJ*. 2020;369:m2094.
 39. Utami RA, Mose RE, Martini M. Pengetahuan, Sikap dan Keterampilan Masyarakat dalam Pencegahan COVID-19 di DKI Jakarta. *J Kesehat Holist*. 2020;4(2):68–77.
 40. Bates BR, Moncayo AL, Costales JA, Herrera-Cespedes CA, Grijalva MJ. Knowledge, Attitudes, and Practices Towards COVID-19 Among Ecuadorians During the Outbreak: An Online Cross-Sectional Survey. *J Community Health* [Internet]. 2020;45(6):1158–67. Available from: <https://doi.org/10.1007/s10900-020-00916-7>.