

**HUBUNGAN ANTARA PENGETAHUAN KOTA TEMPAT TINGGAL
DENGAN PENGETAHUAN COVID19 PADA GENERASI MUDA SURABAYA**

**CORRELATION BETWEEN KNOWLEDGE OF THE CITY OF RESIDENCE
AND COVID19 ON YOUTH GENERATIONS IN SURABAYA**

**Ricky Indra Alfaray¹, Lionardy Yodianto¹, Kartika Afrida Fauzia^{1,2}, Astri
Dewayani^{1,3}, Dwiki Noni Armyta¹, Yudith Annisa Ayu Rezkitha^{1,4}, Reny
I'tishom^{1,5}, Muhammad Miftahussurur^{1,6*}**

¹Institute of Tropical Disease, Universitas Airlangga, Surabaya 60132,
Indonesia.

²Department of Public Health and Preventive Medicine, Universitas Airlangga,
Surabaya 60115, Indonesia

³Department of Anatomy and Histology, Universitas Airlangga, Surabaya
60132, Indonesia.

⁴Faculty of Medicine, University of Muhammadiyah Surabaya, Surabaya,
60113, Indonesia.

⁵Department of Medical Biology, Faculty of Medicine, Universitas Airlangga,
Surabaya, 60131, Indonesia

⁶Gastroentero-Hepatology Division, Department of Internal Medicine, Faculty
of Medicine-Dr. Soetomo Teaching Hospital, Universitas Airlangga, Surabaya,
60131, Indonesia

e-mail: muhammad-m@fk.unair.ac.id

abstract

COVID19 pandemic became the primary focus of health problems by the government since the case was increasing every month in 2020. The impact of this pandemic was spread quickly across many areas, including Surabaya city. The youth generation is often found to be a silent source of infection. Furthermore, young people's behavior often ignores health prevention policy, making the infection more easily spread. This condition might be because of their knowledge regarding COVID19 was not enough. The factors that might affect their knowledge are varied, including knowledge of city of residence. This study aims to evaluate the correlation between knowledge about city of residence with youth generation knowledge of COVID19 as this factor has not yet been studied before in Indonesia. We conducted an analytical cross-sectional with an online survey for the youth generation across Surabaya to understand their knowledge concerning Surabaya and COVID19. A total of 57 participants were voluntarily enrolled in this study. The result data were analyzed statistically. There is significant positive correlation between participants' knowledge of Surabaya city with knowledge of COVID19 ($r=0.314$; $p=0.017$). Furthermore, knowledge of COVID19 was significantly different between youth who have a better knowledge of Surabaya than lower knowledge ($p=0.021$). Knowledge of Surabaya city was correlated with knowledge of COVID19. The youth who have a better knowledge regarding their city of residence seem to have better knowledge of COVID19.



10.20473/jlm.v5i1.2021.116-122



Knowledge concerning city of residence proven to be important in order to increase knowledge of COVID19 in youth generation.

Keywords: Knowledge, City of residence, Surabaya, COVID19, Youth

abstrak

Pandemi COVID19 menjadi fokus utama masalah kesehatan oleh pemerintah sejak kasusnya meningkat setiap bulan pada tahun 2020. Dampak pandemi ini menyebar dengan cepat ke berbagai wilayah termasuk Kota Surabaya. Generasi muda sering ditemukan sebagai sumber infeksi yang diam-diam. Selain itu, perilaku remaja yang sering mengabaikan kebijakan pencegahan kesehatan membuat penularan lebih mudah menyebar. Kondisi ini bisa jadi karena pengetahuan mereka tentang COVID19 relatif kurang. Faktor yang mempengaruhi pengetahuan mereka bervariasi termasuk pengetahuan kota tempat tinggal. Penelitian ini bertujuan untuk mengevaluasi hubungan antara pengetahuan tentang kota tempat tinggal dengan pengetahuan generasi muda tentang COVID19 karena faktor tersebut belum pernah diteliti sebelumnya di Indonesia. Penelitian ini merupakan penelitian cross-sectional analitik dengan survei online kepada generasi muda di seluruh Surabaya untuk memahami pengetahuan mereka tentang Surabaya dan COVID19. Sebanyak 57 peserta secara sukarela terdaftar dalam penelitian ini. Data hasil dianalisis secara statistik. Hasil penelitian menunjukkan ada hubungan positif yang signifikan antara pengetahuan peserta tentang kota Surabaya dengan pengetahuan tentang COVID19 ($r = 0,314$; $p = 0,017$). Lebih lanjut, pengetahuan tentang COVID19 berbeda secara signifikan antara remaja yang memiliki pengetahuan lebih baik tentang Surabaya dibandingkan dengan pengetahuan rendah ($p = 0,021$). Pengetahuan tentang kota Surabaya berhubungan dengan pengetahuan tentang COVID19. Anak muda yang memiliki pengetahuan lebih baik tentang kota tempat tinggalnya tampaknya memiliki pengetahuan yang lebih baik tentang COVID19. Pengetahuan tentang kota tempat tinggal terbukti penting untuk meningkatkan pengetahuan tentang COVID19 pada generasi muda.

Kata Kunci : Pengetahuan, Kota Tempat Tinggal, Surabaya, COVID19, Remaja

INTRODUCTION

Indonesia has been facing with the new Corona Virus Diseases 2019 (COVID19) pandemic, and the infection case has been increasing up throughout 2020. Data from the Health Ministry of Indonesia revealed that COVID19 infection cases have spread nationwide and the highest prevalence was located in Java islands including Surabaya city, the second biggest city in Indonesia (KEMENKES-RI 2020; BAPPEKO-Surabaya 2016). Data from the Health Ministry of Indonesia shows that Surabaya has a high level of COVID19 spread in pandemic and the patients were varies including youth generation (KEMENKES-RI 2020).

Youth age is often found to be a silent source of infection for COVID19 (Geng et al. 2020; He et al. 2020). The symptoms of COVID19 were often not detected in youth therefore they may not feel sick especially for the early period of the infection. Unfortunately, this silent source of infection that mainly in young adults threatens the elderly because the elderly often already has chronic diseases that may severing their condition (Geng, et al. 2020).

The silent infection itself also horrifying for COVID19 spreading control because they are often asymptomatic and cannot easily be detected (Tan et al. 2020). This condition will be worst if their knowledge towards COVID19 is low so they are not going to the health center because they think their condition is not severe, "it is not their illness" or they are immune (Ayalon 2020). To prevent this condition, youth generation knowledge

concerning COVID19 should be improved and factors affecting their knowledge also need to be studied.

The youth generation should have good knowledge of COVID19. Good knowledge will correct their perception, therefore improve a good attitude towards prevention policy since they behavior often ignores the health prevention recommendation (e.g., social distancing) (Abbott et al. 2020). Many factors regarding youth generation knowledge of COVID19 have already been studied but the correlation between their knowledge of this disease with knowledge of city of residence has not yet been studied before in Indonesia. In this study we analyzed the correlation between youth generation knowledge of COVID19 with their knowledge regarding Surabaya city as their city of residence. The result is important in order to understand and improve the youth generation's perception and preventing them to become silent source of infection.

COMMUNITY SERVICE METHODS

This study aims to explore whether there is a significant correlation between the knowledge about COVID19 disease and the knowledge about Surabaya city. The design of this study is analytical cross-sectional. The participants recruited include the youth generation in Surabaya city. To recruit the participants, the authors distributed several promotional posters at different university campuses, schools, and social media platforms. The youth generation is selected because they take a unique role in society as agents of change.

The sample is collected through purposive method. The inclusion criteria include people residing in Surabaya city and age between 15 and 30 years old. The age criteria conform to the definition of youth as elaborated by the World Health Organization (WHO) and United Nations Children's Fund (UNICEF). Out of 100 participants collected from registration process, we recruited 86 participants according to the inclusion criteria. We exclude participants who were not willing to follow the procedure of the survey. Finally, 57 participants successfully completed all of the questions without missing any information required. The data from these participants were then analyzed.

Data Collection Procedures

A group of young people voluntarily participated in this survey. The study was started in September 2020 and ended in October 2020. The authors informed the participants that the survey was voluntary and the participants had the right to refuse to answer any question they deemed as irrelevant or inappropriate.

The questionnaire includes demographic data of the participants. The authors also created a self-validated questionnaire comprising quantitative and qualitative components in assessing the knowledge of Surabaya City and COVID19 disease. They are presented as a set of multiple-choice questions. COVID19 questions were divided into 5 categories: etiology, transmission of infection, diagnostic method, prevention, and complication. The participants attempted the survey online while the investigators monitored them through a video conference platform to ensure the integrity of the whole procedure.

Data Analysis

The authors input the questionnaire results in SPSS Statistics for Windows, version 16.0 (SPSS Inc., Chicago, Ill., USA) to conduct statistical analyses. Quantitative data were analyzed using descriptive statistics. The authors analyzed the correlation between knowledge of Surabaya City and Covid19 disease using linear regression. We also group both knowledge of Surabaya City and Covid19 disease as high or low based on the mean value and subsequently analyze their comparison using Chi-square tests. Each estimated effect was assessed with 5% level of significance and 95% confidence interval. We analyzed the qualitative data and grouped similar responses into different categories.

RESULTS AND DISCUSION

Sociodemographic characteristics of the participants

Out of 57 participants enrolled, the genders of the participants were dominated by females (39, 68.4%). The mean age of participants was 20.6±2.4 years. Most of the participants were under 20 years old (35, 61.4%). Education level were dominated by Bachelor degree (45, 78.9%) and the occupation of participants was mostly university students (46, 80.7%).

The sociodemographic characteristics of the participants varied as shown in table 1.

Table 1. Sociodemographic characteristics of the participants (n = 57)

Variables	n	%
Gender		
Male	18	31.6
Female	39	68.4
Age		
≤20 year	35	61.4
>20 year	22	38.6
Education		
Senior High School	5	8.8
Diploma		
Medicine and Health	5	8.8
Others	2	3.5
Bachelor		
Medicine and Health	20	35.1
Others	25	43.9
Occupation Status		
University Students	46	80.7
Workers	7	12.3
Others	4	7.0
Citizen		
Surabaya	17	29.8
Others	40	70.2

Participants Knowledge Regarding Surabaya and COVID19

This study was conducted to assess the knowledge of Surabaya and COVID19 of the youth generation with multiple-choice questions. There were 5 categories of questions. The variety of results is shown in Figure 1.

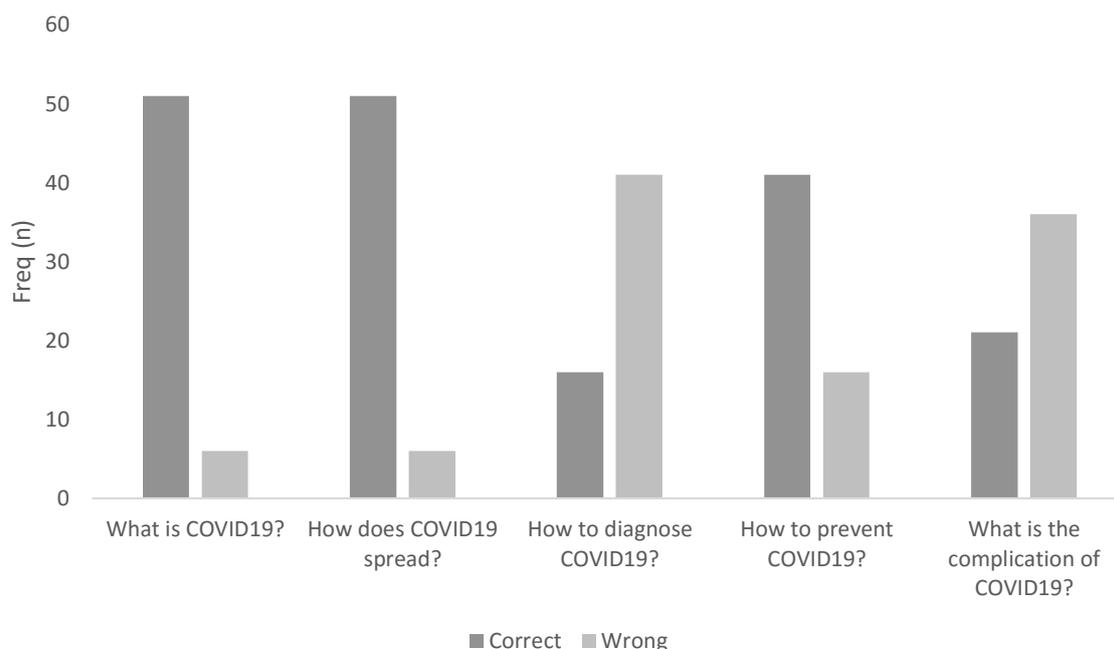


Figure 1. The participant's answer for five categories questions about the knowledge in COVID19

The results revealed that most of the participants had correct answer for aetiology, transmission of infection and prevention of COVID19 but mostly wrong for diagnostic method and complication of COVID19. Further analysis showed that total score of COVID19 knowledge was not significant difference in gender, age and education level groups.

Correlation of the participants' knowledge regarding Surabaya to the knowledge of COVID19

There was a positively weak yet significant correlation between participants' knowledge regarding Surabaya and the knowledge of COVID19 ($r= 0.314$; $p= 0.017$). Furthermore, when we make two group for Knowledge of Surabaya based on the mean value into high score (28, 48.8%) and lower score (29, 50.2%), the result revealed that there was a significant different concerning their knowledge of COVID19 ($p= 0.021$).

DISCUSSION

This study evaluates the correlation between knowledge of youth generation concerning their knowledge about COVID19 with their knowledge of the city of residence. The sociodemographic of youth generation as participants in this study was varies including both medical and non-medical background. The results from the five categories question showed that most of the participants were wrong to answer the diagnostic method and complication of COVID19. The statistical analysis showed that there was a positive correlation of participants' knowledge regarding COVID19 to the knowledge of Surabaya as their city of residence. Furthermore, the analysis also revealed that there was a significant difference concerning their knowledge of COVID19 between group who has high and low score knowledge of Surabaya.

Our results showed that most of the participants were incapable to answer the right answer for the diagnostic method and correct complication of COVID19. Two possible

explanations that might be affecting this result. First, is the information regarding these two categories was rarely exposed by health promotion or rarely understood by the community. People only focus on etiology and prevention but not as detail as correct diagnostic choice methods and complications that may happen when patients are diagnosed with COVID19. The second is miss information that is often found on the internet especially social media (Ali 2020). This miss information often makes people confuse therefore get wrong perception concerning COVID19. Coronavirus articles are usually accurate, yet relatively less likely to be shared than inaccurate ones (Obiala et al. 2020). Youth generation that closes the flow of information technology can be easily affected by this kind of misinformation.

There was a positive correlation between the youth knowledge of COVID 19 with Surabaya as their city of residence. This means that higher knowledge of Surabaya might affect higher knowledge of the disease. This result might be explained by a theory of Social Capital (SC). The theory explained that there were seven dimensions of SC that can contribute to the field of health knowledge especially in developing countries (Eriksson 2011; Ehsan et al. 2019; Story 2013). In this research, knowledge about Surabaya city could be included as a component of social capital that increases the sense of community. Increasing the sense of community contribute to health promotion, therefore, increase the knowledge of the community regarding COVID19 in Surabaya. Further analysis also proved that youth who have a better knowledge of Surabaya had significantly different knowledge of COVID19 than those who have lower knowledge.

CONCLUSION

Increasing youth knowledge regarding their own city could give positive correlation to their knowledge of diseases. Knowledge concerning city of residence proven to be important in order to increase knowledge of COVID19 in the youth generation. This result might help further health promotion policy that targeting the youth generation.

ACKNOWLEDGMENT

This study was funded by grant from Universitas Airlangga named "Pengabdian Masyarakat Internal Universitas Airlangga" No. 1082/UN3.14/PT/2020.

REFERENCES

- Abbott, A., N. Askelson, A. M. Scherer, and R. A. Afifi. 2020. "Critical Reflections on Covid-19 Communication Efforts Targeting Adolescents and Young Adults." *J Adolesc Health* 67, no. 2 (Aug): 159-160. <https://dx.doi.org/10.1016/j.jadohealth.2020.05.013>.
- Ali, Sana. 2020. "Combatting against Covid-19 & Misinformation: A Systematic Review." *Human Arenas*: 1-16. <https://dx.doi.org/10.1007/s42087-020-00139-1>.
- Ayalon, L. 2020. "There Is Nothing New under the Sun: Ageism and Intergenerational Tension in the Age of the Covid-19 Outbreak." *Int Psychogeriatr* 32, no. 10 (Oct): 1221-1224. <https://dx.doi.org/10.1017/S1041610220000575>.
- BAPEKO - Badan Perencanaan Pembangunan Kota Surabaya. 2016. *Profil of Surabaya City*. Surabaya, Indonesia.

Ricky Indra Alfaray, dkk: *Hubungan Antara Pengetahuan Kota Tempat Tinggal Dengan Pengetahuan Covid19 Pada Generasi Muda Surabaya*

Ehsan, A., H. S. Klaas, A. Bastianen, and D. Spini. 2019. "Social Capital and Health: A Systematic Review of Systematic Reviews." *SSM Popul Health* 8 (Aug): 100425. <https://dx.doi.org/10.1016/j.ssmph.2019.100425>.

Eriksson, M. 2011. "Social Capital and Health--Implications for Health Promotion." *Glob Health Action* 4 (Feb 8): 5611. <https://dx.doi.org/10.3402/gha.v4i0.5611>.

Geng, J., J. Yu, T. Lu, Y. Wang, and Y. Cao. 2020. "A Silent Infection Pandemic of Covid-19: Epidemiological Investigation and Hypothetical Models." *Can J Infect Dis Med Microbiol* 2020: 5120253. <https://dx.doi.org/10.1155/2020/5120253>.

He, G., W. Sun, P. Fang, J. Huang, M. Gamber, J. Cai, and J. Wu. 2020. "The Clinical Feature of Silent Infections of Novel Coronavirus Infection (Covid-19) in Wenzhou." *J Med Virol* 92, no. 10 (Oct): 1761-1763. <https://dx.doi.org/10.1002/jmv.25861>.

KEMENKES-RI. 2020. "Distribution Map of Covid-19 (Indonesia: Peta Sebaran Covid-19)." The Ministry of Health Republic Indonesia (Indonesian: Kementerian Kesehatan Republik Indonesia (KEMENKES-RI)). Accessed 4 November 2020, 2020. Form of Item. <https://covid19.go.id/peta-sebaran>

Obiala, J., K. Obiala, M. Manczak, J. Owoc, and R. Olszewski. 2020. "Covid-19 Misinformation: Accuracy of Articles About Coronavirus Prevention Mostly Shared on Social Media." *Health Policy Technol* (Nov 1). <https://dx.doi.org/10.1016/j.hlpt.2020.10.007>.

Story, W. T. 2013. "Social Capital and Health in the Least Developed Countries: A Critical Review of the Literature and Implications for a Future Research Agenda." *Glob Public Health* 8, no. 9: 983-99. <https://dx.doi.org/10.1080/17441692.2013.842259>.

Tan, Jie, Shousheng Liu, Likun Zhuang, Lizhen Chen, Mengzhen Dong, Jie Zhang, and Yongning Xin. 2020. "Transmission and Clinical Characteristics of Asymptomatic Patients with Sars-Cov-2 Infection." *Future Virology*: 10.2217/fvl-2020-0087. <https://dx.doi.org/10.2217/fvl-2020-0087>.