Kesmas

Volume 20
Issue 5 *Special Issue 1, July*

Article 12

7-31-2025

Socioeconomic Status, Environmental Health Knowledge, and Housewives' Behavior in Maintaining Healthy Housing at Subsidized Flats in East Jakarta, Indonesia

Alfitra Firizkia Luthfiana Dewi
Universitas Indonesia, Depok, alfitrafirizkia@gmail.com

Laila Fitria
Universitas Indonesia, Depok, lfitria@ui.ac.id

Recommended Citation

Dewi AF , Fitria L . Socioeconomic Status, Environmental Health Knowledge, and Housewives' Behavior in Maintaining Healthy Housing at Subsidized Flats in East Jakarta, Indonesia. *Kesmas*. 2025; 20(5): 99-106
DOI: 10.7454/kesmas.v20isp1.2108
Available at: https://scholarhub.ui.ac.id/kesmas/vol20/iss5/12

Dewi *et al. Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)*. 2025; 20 (Special Issue 1): 99-106
DOI: 10.7454/kesmas.v20isp1.2108

Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal)

Socioeconomic Status, Environmental Health Knowledge, and Housewives' Behavior in Maintaining Healthy Housing at Subsidized Flats in East Jakarta, Indonesia

Alfitra Firizkia Luthfiana Dewi[1], Laila Fitria[2*]

[1]Bachelor Program of Environmental Health, Department of Environmental Health, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
[2]Department of Environmental Health, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia

Abstract

Healthy behavior among housewives is a crucial aspect of efforts to maintain healthy housing. This study aimed to analyze the relationship of socioeconomic status (e.g., household income, level of education of family head and housewives, and family head's occupation) and environmental health knowledge with housewives' behavior (e.g., vector control, waste management, home ventilation, cigarette smoking, and hand sanitation hygiene) in maintaining healthy housing in the subsidized flats in East Jakarta, Indonesia. This cross-sectional study employed the two-proportion hypothesis test formula and a simple random sampling method, recruiting 137 housewives for interviews. Data were analyzed via logistic regression to determine factors related to housewives' behavior. Analysis demonstrated a significant relationship of housewives' level of education (OR = 2.883; 95% CI = 1.339−6.209), the family heads' level of education (OR = 3.856; 95% CI = 1.711−8.690), and housewives' environmental health knowledge (OR = 2.687; 95% CI = 1.304−5.294) with housewives' behavior. Multivariate analysis demonstrated that the level of education of family heads and the environmental health knowledge of housewives were the dominant factors influencing housewives' behavior in maintaining healthy housing. The findings offer useful insights for planning and maintaining flats in other areas, considering the growing number of residents.

Keywords: environmental health knowledge, health behavior, housewives, socioeconomic status

Introduction

Healthy housing is a complex system that goes beyond the physical structure of a home, encompassing the support of mental well-being by offering a sense of security, privacy, and protection from external factors.[1] A healthy housing aims to create a house that provides its occupants with security, comfort, and privacy.[2] The World Health Organization has identified factors (internal: physical, chemical, biological, and building factors; external: social factors) that influence residence and health.[1,2] Internal factors include being structurally sound, protection from the elements and excess moisture, and facilitation of comfortable temperature, adequate sanitation and illumination, sufficient space, safe fuel or electricity connection, and defense from pollutants, injury hazards, mold, and pests.[2] Alternatively, external factors refer to multifamily housing, high-rise housing, housing quality, and mental health.[2,3]

To date, regulations in Indonesia related to residential health are governed by the Ministry of Health Regulation Number 829 of 1999, which concerns Housing Health Requirements. These regulations were subsequently updated by Ministry of Health Regulation Number 1077 of 2011, concerning Guidelines for Indoor Air Health, and Ministry of Health Regulation Number 2 of 2023, which pertains to the implementation of Government Regulation Number 66 of 2014 concerning Environmental Health. In addition, Ministry of Public Works Regulation Number 60 of 1992 outlines the technical requirements for the construction of flats, which serve as the basis for planning, supervision, management, and development of flats to improve the quality of life among residents. These requirements are also intended to ensure their security, safety, health, and comfort.[4]

Correspondence:* *Laila Fitria, Department of Environmental Health, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia, Email: lfitria@ui.ac.id*

Received : September 11, 2024
Accepted : July 7, 2025
Published: July 31, 2025

Several important aspects in the design of flats that support the achievement of these goals include ventilation, lighting, building durability, water access, waste and wastewater management, and the building's floor area. The maintenance of healthy housing is primarily related to the behavior of residents, particularly in terms of their health. Specifically, health behavior refers to a personal attribute, characteristic, behavioral pattern, action, or habit related to the maintenance, restoration, and improvement of health.[5] It must be practiced at home to support the achievement of access to a habitable and healthy home amid increasing population growth.[1] In line with its function, a house as a basic need of humans denotes a decent place to live, a means of family development, a reflection of the dignity and honor of a family, and an asset for its owner.[6,7] This need continues to intensify and becomes increasingly important, as it provides shelter and protection for its occupants with changes in demographic and climate conditions.[1,8]

Globally, 1.2 billion people, or 20% of the population, live in slums with uninhabitable housing quality.[7] This condition can lead to health risks for occupants, which include diarrhea and tuberculosis.[1] In 2019, 1.53 million deaths due to diarrhea were recorded worldwide, and 32.72% of these cases occurred in toddlers.[9] In addition, 3.8 million deaths worldwide are due to indoor air pollution.[1] High housing density also caused 3,500 deaths per year in Europe as of 2016.[1]

As one of the largest cities in Indonesia, access to decent housing in Jakarta remained at 40% as of 2021.[11] This scenario is further exacerbated by the high cost of land and building materials, the heightened need for community housing, and an increasingly narrow land area.[10] As a result, this condition most affects people who belong to low economic brackets.[10,11] In response to this problem, the government has built flats that can be rented at affordable prices to rejuvenate slum areas in urban areas.[10,12] This program targets low-income communities and accommodates households affected by relocation. The establishment of these flats is expected to benefit low-income communities, as mandated by Law Number 20 of 2011 concerning flats. However, the rental status of these flats induces low levels of concern among residents regarding the housing and settlement environment.[13,14] Alternatively, the level of education and knowledge of residents plays a major role in maintaining healthy housing.[15]

In 2017, the Jakarta Provincial Government surveyed 23 rental flats, with results demonstrating that 79.5% of subsidized flats were allocated to relocated families.[16] One of the subsidized flats was built for residents relocated from a slum eviction site in the Ciliwung River basin area, and the residents may possess different characteristics. This study aimed to investigate whether the level of socioeconomic status has a positive impact on the perception of environmental health aspects among residents of the subsidized flat compared to their previous homes.[17] The fact that subsidized flats are mainly intended for low-income communities renders importance to socioeconomic status in assessing the quality of housewives' behavior. Additionally, the health knowledge of housewives affects the health of their families.[18] In other words, the role of housewives is critical in maintaining healthy housing in flats.[19] For this reason, this study is required regarding the relationship between socioeconomic status and health knowledge with housewives' behaviors toward disease vectors, waste management, home ventilation, exposure to cigarette smoke, and hand sanitation hygiene in maintaining healthy housing in the subsidized flat, in East Jakarta.

Method

This study used a cross-sectional design. Data collection was conducted from May to June 2023, in one of the subsidized flats in East Jakarta, Indonesia. The Special Capital Region of Jakarta Provincial Government built this subsidized flat in 2013 and inaugurated it in 2015. This flat consists of two towers (A and B), each with 16 floors. The total number of units owned by this flat is 518, with Tower A having 19 housing units per floor and Tower B having 18 housing units per floor. Out of the available units, 420 are allocated for relocation residents (mainly from Kampung Pulo, an ethnic community region in West Java Province, Indonesia), and 98 are reserved for general residents. The floor area measures 30 m^2, featuring the following facilities: two bedrooms, one bathroom, and a room that can be combined to serve as a living room and kitchen. The rental fee is USD 18 for residents who are scheduled to relocate and USD 28 for general residents (approximately 1 USD = IDR 16,340). These rates exclude water and electricity costs, which are directly charged to the residents according to usage. The authors obtained official permission from the flat management (research permit number 1634/KL.03.03) before the data collection.

The population consisted of housewives residing in the subsidized flat, with inclusion criteria that included housewives living in the flat for at least one year prior to 2023, who had to provide informed consent after being given a brief explanation of the study. Meanwhile, the exclusion criteria were housewives who were unwilling to continue the interview and those undergoing a lease extension to another person during the period from May to June 2023. The sample was calculated using the two-proportion hypothesis test formula. The calculation used α 5% and β 10% and two

proportions; P_1 (63.4%) and P_2 (34.2%), which were derived from a study on knowledge and health behavior and conducted in Lampung Province.[20] A minimum sample of 120 was obtained. To address sampling errors, this study increased the minimum number of samples by 10% of the minimum number, resulting in a total sample size of 134.

As the flat complex features two towers (A and B), the sample size for both was proportionally determined according to the number of housewives living in each tower. The results indicated that 69 and 65 housewives belonged to Towers A and B, respectively. The authors conducted sampling on both towers using simple random sampling via the random.org generator and used a sampling framework in the form of a list of residents obtained from the Flats Management Unit. The data consisted of secondary and primary data. Secondary data included 518 occupied units, 598 family heads, 2,122 residents, and other supporting information obtained from the Flats Management Unit. Primary data were collected through interviews with housewives selected as samples using a questionnaire.

The questionnaire in this study was divided into four parts: (A) Demographics: age of housewives', number of family members, and type of apartment residents; (B) Socioeconomic status: housewives' level of education, family head's level of education, household income, and family head's employment status; (C) housewives' environmental health knowledge such as disease vectors, waste management, home ventilation, exposure to cigarette smoke, and hand sanitation hygiene; and (D) behaviors of housewives toward disease vectors, waste management, home ventilation, exposure to cigarette smoke, and hand sanitation hygiene.

Prior to statistical analysis, the researchers processed the data using the following steps. Data on socioeconomic status were based on the housewives' level of education, the family head's level of education, household income, and the family head's occupational status. Socioeconomic status was considered high if the housewife and family head's level of education was equal to or higher than junior high school, the household income was above regional minimum wage, and the family head's occupational status was employed. The Environmental Health Knowledge section in the questionnaire consisted of 30 statements on disease vectors, waste management, home ventilation, exposure to cigarette smoke, and hand sanitation hygiene, with the following response options: "do not know," "wrong," and "true." The housewives' level of environmental health knowledge was calculated based on the scores obtained. The responses of "do not know" and "wrong" were given a score of 0, while "true" was given a score of 1, with a maximum score of 30. The median value of the scores was then calculated to determine the categories of poor and good knowledge. Poor knowledge indicated a score of less than the median, while good knowledge corresponded to a score that is more than or equal to the median. This knowledge score was then converted into a value of 100 by dividing the median score for knowledge by 100 and multiplying by 100%. In this manner, the overall knowledge value would be obtained by the conversion result of the knowledge score calculation expressed in percentage units.

The "Housewife's Behavior" section in the questionnaire consisted of 20 questions on disease vectors, waste management, home ventilation, exposure to cigarette smoke, and hand sanitation hygiene, with the following response options: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, and 4 = always. However, the score for the cigarette question was calculated in reverse (4 = never, 3 = rarely, 2 = sometimes, 1 = often, and 0 = always). The maximum score was 80. The median value of the scores was then calculated to determine the categories of poor and good behavior. A score below the median indicates poor behavior, while a score equal to or above the median implies good behavior. This behavior score was then converted into a value of 100 by dividing the median by 100 and multiplying by 100%. In this manner, the overall behavioral value would be obtained through the results of the conversion of the behavioral score calculation expressed in percentage units. Data were then analyzed using IBM SPSS Statistics 22 (free version). Descriptive analysis was conducted to describe the dependent variable (environmental health behavior) and the independent variables (socioeconomic status and environmental health knowledge) in the form of frequency distributions for each variable. The objective was to obtain a description of the characteristics of housewives' level of education, family head's level of education, household income, family head's employment status, knowledge of environmental health, and housewives' behavior. Statistical analysis was performed using the Chi-square test and multivariate analysis with logistic regression to examine the relationship between the independent and dependent variables.

Results

To facilitate the subsequent statistical analysis, the level of education among housewives and family heads was grouped into two categories: below junior high school and equal to or higher than junior high school. This study recruited 137 housewives, most of whom had completed junior high school or higher (70.8%). The same results were observed for

family heads. Of 137 family heads, most of them completed junior high school or higher (73%). This study demonstrated that the average household income was USD 153.37, resulting in most respondents (86.9%) having a household income below the minimum wage in the Special Capital Region of Jakarta Province (USD 300.75). Of 137 family heads, only 10 were unemployed. Furthermore, the level of education of housewives and family heads, household income, and family heads' occupational status were then combined into a socioeconomic status variable consisting of two categories: low and high. The results indicated that 123 respondents had low socioeconomic status (89.8%) (Table 1).

Table 1. Distribution of Respondents' Characteristics

Variables	n	%
Housewives' level of education (detailed)		
Less than elementary school	6	4.4
Elementary school	34	24.8
Junior high school	35	25.5
Senior high school	54	39.4
Higher education	8	5.8
Housewives' level of education (categorized)		
<Junior high school	40	29.2
≥Junior high school	97	70.8
Family heads' level of education (detailed)		
Uneducated	5	3.6
Less than elementary school	32	23.4
Elementary school	29	21.2
Junior high school	64	46.7
Senior high school	7	5.1
Family heads' level of education (categorized)		
<Junior high school	37	27
≥Junior high school	100	73
Household income (detailed)*		
USD 76.69	16	11.7
USD 76.69 to < USD 153.37	38	27.7
USD 153.37 to <USD 230.06	41	29.9
USD 230.06 to <USD 306.75	24	17.5
≥USD 306.75	18	13.1
Household income (categorized)		
<Regional minimum wage	119	86.9
≥Regional minimum wage	18	13.1
Family heads' occupation status		
Unemployed	10	7.3
Civil/public servant	0	0
Private employee	32	23.4
Service provider (e.g., electronics device, cleaning service, security personnel, taxi bike, and online driver)	40	29.2
Tradesman	34	24.8
Factory workers	19	13.9
Other (daily wager)	2	1.5
Family heads' occupational status		
Unemployed	10	7.3
Employed	127	92.7
Socioeconomic status		
Low	123	89.8
High	14	10.2
Total	**137**	**100**

*) approximately 1 USD = IDR 16,340

Table 2. Distribution of Housewives' Environmental Health Knowledge and Behavior

Variables	n	%
Housewives' environmental health knowledge		
Poor	56	40.9
Good	81	59.1
Housewives' behavior		
Poor	64	46.7
Good	73	53.3
Total	**137**	**100**

The environmental health knowledge of housewives was described using 30 statements related to disease vectors, waste management, ventilation use, smoking behavior, and hand sanitation hygiene. The results for the knowledge category were divided and grouped according to <median and ≥median scores. The median value of housewives'

environmental health knowledge was more than or equal to 27 out of a maximum value of 30. If converted into a percentage, the value of the environmental health knowledge among housewives has reached 90%, indicating that it is good. Furthermore, the results highlighted that 81 housewives' (59.1%) exhibited good environmental health knowledge.

The behavior of housewives was examined using 20 statements. The results of the knowledge category were then grouped according to <median and ≥median scores. The median value of housewives' behavior reached more than or equal to 66 out of the maximum value of 80. If converted into a percentage, the value of housewives' behavior reached 82.5%, categorized as good. Furthermore, the results indicated that 73 housewives (53.3%) exhibited good health behavior.

The results of the statistical analysis emphasized significant relationships of housewives' behavior in maintaining healthy housing with housewives' level of education (OR 2.89, 95% CI 1.34–6.21), family heads' level of education (OR 3.86, 95% CI 1.71–8.69), and housewives' environmental health knowledge (OR 2.69, 95% CI 1.30–5.29). Meanwhile, although the study did not observe a statistically significant relationship between household income and family heads' occupational status, the OR values were relatively high (OR = 1.90 [household income], OR = 2.87 [family heads' occupational status]) (Table 3). Multivariate analysis demonstrated that, among the factors of socioeconomic status, the level of education of family heads was the dominant factor related to housewives' behavior in maintaining healthy housing (adjusted OR: 3.39, 95% CI = 1.49–7.78). Another variable was housewives' environmental health knowledge (adjusted OR = 2.25, 95% CI = 1.09–4.67).

Table 3. Distribution of Housewives' Behavior Based on Socioeconomic Status and Environmental Health Knowledge

Variables	Housewives' Behavior				Total	p-value	OR (95% CI)
	Poor		Good				
	n	%	n	%			
Housewives' level of education							
<Junior high school	26	65	14	35	40	**0.006**	2.88
≥Junior high school	38	39.2	59	60.8	97		(1.34–6.21)
Family heads' level of education							
<Junior high school	26	70.3	11	29.7	37	**0.001**	3.86
≥Junior high school	38	38	62	62	100		(1.71–8.69)
Household income							
<Regional minimum wage	58	48.7	61	51.3	119	0.222	1.90
≥Regional minimum wage	6	33.3	12	66.7	18		(0.67–5.40)
Family heads' occupational status							
Unemployed	7	70	3	30	10	0.125	2.87
Employed	57	44.9	70	55.1	127		(0.71–11.59)
Socioeconomic status							
Low	58	47.2	65	52.8	123	0.760	1.19
High	6	42.9	8	57.1	14		(0.39–3.63)
Housewives' environmental health knowledge							
Poor	34	60.7	22	39.3	65	**0.006**	2.63
Good	30	37	51	63	72		(1.30–5.29)

Table 4. Socioeconomic Status and Environmental Health Knowledge Association with Housewives' Behavior in Maintaining Healthy housing

Variables	p-value	OR (95% CI)
Family heads' level of education		
<Junior high school	**0.004**	3.39 (1.49–7.78)
Housewives' environmental health knowledge		
Poor	**0.029**	2.25 (1.09–4.67)

Discussion

This study measured socioeconomic status based on the following variables: the level of education of housewives and family heads, household income, and the occupational status of family heads. This indicator of socioeconomic status was used to examine its relationship with housewives' behavior. A previous study stated that socioeconomic status influences a person's level of insight into sanitation, environment, and housing.[20] In addition, another study found that socioeconomic status influenced indoor environmental quality.[21] This study's results revealed that 70.8% housewives and 73% family heads had graduated from Junior High School or higher, 92.7% of the family heads were employed, but most of the household income was less than the Special Capital Region of Jakarta Province's minimum wage (86.9%). These variables were then combined and categorized, resulting in 89.8% of households having a low socioeconomic status.

Housewives' level of education was significantly associated with the housewives' behavior in maintaining healthy housing (OR = 2.88, 95% CI = 1.34–6.21). Housewives with levels of education below junior high school displayed a 2.88 times greater chance of having poor behavior in maintaining healthy housing. Family heads' level of education also exhibited a significant relationship with housewives' behavior in maintaining healthy housing (OR = 3.86, 95% CI = 1.71–8.69), which meant that if family heads obtained a level of education below junior high school, then the chance of housewives to display poor behavior toward the maintenance of healthy housing was 3.86 times greater. These findings align with a previous study, which stated that the level of education plays a crucial role in improving public health.[20] In addition, another study identified a significant relationship between housewives' level of education (below junior high school) and their clean and healthy living behaviors (OR = 5.37).[22] These findings were also in line with the theory that a good level of education will determine a person's ability to absorb information, make decisions, and behave.[5,23]

This study found that household income was not significantly associated with housewives' behavior in maintaining healthy housing (OR = 1.90, 95% CI = 0.67–5.40). Although not significant, the OR value was relatively high, which could be interpreted as follows: a household with an income less than the minimum regional wage has a 1.90 times greater chance of housewives adopting poor behaviors in maintaining healthy housing. A previous study has pointed to a relationship between income and the health behaviors of housewives. The reason is that income is part of the social determinant of health; therefore, income also influences behavior.[24]

The occupational status of family heads was not significantly associated with housewives' behavior in maintaining healthy housing (OR = 2.87; 95% CI = 0.71–11.59). Although not significant, the OR value was also relatively high. Housewives whose family head's occupational status was unemployed obtained a 2.87 times greater chance of adopting poor behaviors in maintaining healthy housing. According to a previous study, occupational status influences household income.[23] Moreover, income is part of the social determinant of health which can influence health behavior.[24] In other words, occupational status has an indirect influence on health behavior.

Socioeconomic status and the composite of variables (i.e., housewives' and family heads' level of education, family heads' occupational status, and household income) were analyzed into poor and good behavior. The results of statistical analysis for the composite variable were poor, given that no significant association was noted between housewives' behavior in maintaining healthy housing and a low OR value. Thus, this study inferred that the composite variable was insufficient for analyzing its relationship with the housewives' behavioral variables. Knowledge is the result of sensing a particular object so that someone becomes aware. Without knowledge, people will make decisions based on a foundation.[25] Knowledge is closely related to the level of education. As such, good education can influence one's decision-making. Additionally, good education influences the acceptance of proposed health interventions.[20] Therefore, high levels of education could lead to the easy absorption and practice of materials related to increasing capacity and knowledge.

In this study, the factors examined to assess housewives' environmental health knowledge included disease vector control, waste management, use of ventilation, indoor smoking behavior, and hand sanitation hygiene behavior. The housewives generally exhibited good environmental health knowledge, with a knowledge score conversion percentage of 90%. Moreover, the proportions of housewives with levels of education above or equal to junior high school (70.8%) and environmental health knowledge that belong under the good category (59.1%) were the largest. The results demonstrated that environmental health knowledge was associated with housewives' behavior in maintaining healthy housing (OR = 2.63, 95% CI = 1.30–5.29). Housewives with poor environmental health knowledge were 2.63 times more likely to exhibit poor behavior in maintaining healthy housing. This can be supported by the experiences of others or knowledge obtained from the respondents, which aligned with the components of the Health Belief Model, specifically perceived benefits. According to the theory, perceived benefits are a result of actions taken.[5] In addition, another study supported these findings, stating that environmental health knowledge plays a significant role in maintaining environmental health.[17]

Studies on this topic were relatively scarce. Most studies have been conducted in settlements and focused on the condition of units, not assessing socioeconomic status, environmental health knowledge, and health behavior in subsidized flats from public and environmental health perspectives, as this study does. In addition, studies conducted in subsidized flats primarily focus on assessments in the fields of economics, social sciences, and engineering, particularly civil engineering and architecture. This study had several limitations, including the difficulty of finding articles that examine similar variables. Therefore, in compiling the study, the authors referred to articles that are most closely aligned with the current context: clean and healthy living behaviors. Conversely, this study analyzed self-reported data, particularly on behaviors, which were prone to social desirability and recall bias. Another limitation was the sample size calculation, which only partially justified the effect size or power assumption. This study did not account for potential

confounding variables, such as cultural factors and access to healthcare services, which could also influence behavior. Therefore, measuring cultural factors, access to health services, and other confounding factors associated with housewives' behavior in maintaining healthy housing should also be considered in the future studies.

Conclusion

The education level of family heads and the environmental health knowledge of housewives were key factors influencing housewives' behavior in maintaining healthy housing in the subsidized flat in East Jakarta, Indonesia. The Flat Management Unit should offer counseling programs to enhance housewives' knowledge of environmental health, considering local conditions like flat infrastructure, accessibility, and socioeconomic factors. The need for strict enforcement of facility maintenance to ensure a quality living environment also needs to be emphasized. This study offers useful insights for public health efforts in developing and managing other flat housing areas amid growing urban residency. Further research is required to assess other related variables that influence housewives' behavior in maintaining healthy housing, including factors of socioeconomic status and environmental health knowledge, among others, by creating specific and in-depth interview questions.

Abbreviations

Not applicable.

Ethics Approval and Consent to Participate

This research underwent an ethical review procedure and was approved for implementation by the Research Expert and Research Ethics Commission of the Faculty of Public Health, Universitas Indonesia, as stated in Ethical Clearance Letter Number: Ket-546/UN2.F10.D11/PPM.00.02/2023, dated: June 26, 2023. The participants provided written informed consent prior to the study.

Competing Interest

The authors declare no conflict of interest. This study was conducted with the authors' personal funding.

Availability of Data and Materials

Not applicable.

Authors' Contribution

AFLD conceptualized, designed, and interpreted the data. LF prepared the initial draft and edited the manuscript.

Acknowledgments

This research was conducted with permission from the West Jatinegara Subsidized Flats Management Unit, East Jakarta, Indonesia. The authors thank all the staff of the Management Unit who supported the research.

References

1. World Health Organization. Promoting healthy housing for all – Towards an implementation strategy for the WHO Housing and health guidelines. Geneva: World Health Organization; 2021.
2. World Health Organization. WHO housing and health guidelines. Geneva: World Health Organization; 2018.
3. World Health Organization. Healthy housing: Raising standards, reducing inequalities. Geneva: World Health Organization; 2019.
4. Menteri Pekerjaan Umum Republik Indonesia. Peraturan Menteri Pekerjaan Umum Nomor 05/PRT/M/2007 Tahun 2007 Tentang Pedoman Teknis Pembangunan Rumah Susun Sederhana Bertingkat Tinggi. Jakarta: Kementerian Pekerjaan Umum dan Perumahan Rakyat Republik Indonesia; 2007.
5. Glanz K, Rimer BK, Viswanath K. Health behavior: Theory, research, and practice. 5th ed. Wiley; 2015.
6. Presiden Republik Indonesia. Undang-Undang Republik Indonesia Nomor 1 Tahun 2011 Tentang Perumahan dan Kawasan Permukiman. Jakarta: Pemerintah Pusat; 2011.
7. United Nations Human Settlements Programme. Envisaging the Future of Cities. Kenya: United Nations Human Settlements Programme; 2022.
8. United Nations. World Urbanization Prospects: The 2018 Revision. New York: United Nations; 2018.
9. Dattani S, Spooner F, Ritchie H, et al. Diarrheal diseases. Our World in Data; 2023.
10. Swope C, Hernández D. Housing as a determinant of health equity: A conceptual model. Soc Sci Med. 2019; 243 (112571). DOI: 10.1016/j.socscimed.2019.112571.
11. World Bank. Indonesia public expenditure review: Spending for better results. USA: World Bank Group; 2020.
12. Presiden Republik Indonesia. Undang-Undang Republik Indonesia Nomor 20 Tahun 2011 Tentang Rumah Susun. Jakarta: Pemerintah Pusat; 2011.
13. Wulandari DW, Mori S. Social Living Environment in Kost Private Rental Housing Based on Tenants' Experience: A case of urban settlement in Jakarta, Indonesia. J Archit Plann. 2019; 84 (757): 527–536. DOI: 10.3130/aija.84.527.
14. Candrawati RD, Wiguna PK, Malik MF, et al. Promosi dan perilaku kesehatan. Jawa Tengah: Eureka Media Aksara; 2023.

15. Hermawan Y. Hubungan Antara Tingkat pendidikan dan persepsi dengan perilaku ibu rumah tangga dalam pemeliharaan kebersihan lingkungan. J Bumi Lestari. 2015; 5 (2): 5.
16. Pemerintah Provinsi DKI Jakarta. Potensi Pengembangan Perekonomian di Rumah Susun DKI Jakarta 2017. Jakarta: Pusat Pelayanan Statistik Dinas Komunikasi Informatika dan Statistik Pemerintah Provinsi DKI Jakarta; 2017.
17. Sari DAP, Madonna S, Fitriani A. Environmental health evaluation for Jatinegara apartment from the perception of Kampung Pulo displaced people. Int J Eng Technol. 2018; 7 (2.14): 224–228. DOI: 10.31227/osf.io/a58ht.
18. Suryanegara W, Simanjuntak EGM. The Relationship between Housewives' Knowledge and Attitudes towards Clean and Healthy Living Behavior. Int J Trop Dis Heal. 2024; 45 (7): 117–25. DOI: 10.9734/ijtdh/2024/v45i71567.
19. Islam N, Istiadi Y. Hubungan antara pengetahuan pencemaran lingkungan dan kecerdasan emosional dengan partisipasi ibu rumah tangga dalam menjaga kesehatan lingkungan. J Pendidik Lingkung Hidup. 2017; 5 (1):12–22.
20. Adliyani ZON, Angraini DI, Soleha TU. Pengaruh pengetahuan, pendidikan dan ekonomi terhadap perilaku hidup bersih dan sehat pada masyarakat Desa Pekonmon Kecamatan Ngambur Kabupaten Pesisir Barat. Majority. 2017; 7 (1): 6–13.
21. Diaz LPE, Siegel JA. Indoor environmental quality in social housing: A literature review. Build Environ. 2018; 131: 231–241. DOI: 10.1016/j.buildenv.2018.01.013.
22. Herutomo T. Hubungan pengetahuan dan sikap keluarga dalam praktek perilaku hidup bersih dan sehat (PHBS) di Kabupaten Purwakarta. J Holist Health Sci. 2022; 6 (1): 1–8. DOI: 10.51873/jhhs.v6i1.162.
23. Pinem M. Pengaruh pendidikan dan status sosial ekonomi kepala keluarga bagi kesehatan lingkungan masyarakat. J Ilmu Pemerintah Sos Polit UMA. 2016; 4 (1): 96–106. DOI: 10.31289/jppuma.v4i1.896.
24. Short SE, Mollborn S. Social determinants and health behaviors: conceptual frames and empirical advances. Curr Opin Psychol. 2015; 5 (10): 78–84. DOI: 10.1016/j.copsyc.2015.05.002.
25. Pakpahan M, Siregar D, Susilawaty A, et al. Promosi kesehatan dan perilaku kesehatan. Medan: Yayasan Kita Menulis; 2021.