Journal of Health Literacy and Qualitative Research
E-ISSN: 2775-7005
Volume. 4, Issue 2, September 2024
Page No:64-75

Do you know? Factors Affecting Market Cleanliness that Should Not Be Ignored

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Received : August 15, 2024
Accepted : September 27, 2024
Published : September 30, 2024

Citation: Amalinda, F., Dunggio, F., & Rismawati, N., (2024). Do you know? Factors Affecting Market Cleanliness that Should Not Be Ignored. Journal of Health Literacy and Qualitative Research, 4(2). 64-75.

ABSTRACT: The Bunta Traditional Market still looks dirty due to the rubbish left by traders strewn all over the place. Storage facilities, collection methods, temporary waste storage areas, and transportation methods do not meet health requirements, and waste processing still needs to be created. This research aimed to determine the factors related to the cleanliness of the Bunta People's Market, Banggai Regency. The research method used is quantitative, using an analytical survey design with a cross-sectional approach. Based on the research results, which were proven in statistical tests with a value of ρ = 0.645 (ρ value ≤ 0.05), there is no relationship between market cleanliness and SPAL conditions at the Bunta People's Market, Banggai Regency. The value is 0.008 (ρ value ≤ 0.05); namely, there is a relationship between market cleanliness and the condition of the trash bins at the Bunta People's Market, Banggai Regency. The value of ρ = 0.00 (ρ value ≤ 0.05) is that there is a relationship between market cleanliness and the behaviours of traders, visitors, and the public at the Bunta People's Market, Banggai Regency. It is expected that traders, visitors, the public, and market managers will always maintain the cleanliness of the market environment and that market managers will make every effort to provide rubbish bins so that the market remains clean.

Keywords: Cleanliness, Market, Rakyat Bunta.

INTRODUCTION

Cleanliness is an effort to monitor several physical environmental factors that influence humans, especially things that have effects, such as damaging physical development, health and survival (Kim et al., 2022; Shimamoto et al., 2022; Smith & Shiffman, 2016; Wang et al., 2023). In simple terms, sanitation is an effort made to ensure public health and environmental cleanliness, both water, air and land (Kathambi et al., 2019). Indonesia is a country with a tropical climate that has two seasons and is vulnerable to the impacts of climate change, both global and regional. Vector-borne diseases are environmental-based diseases that are influenced by the physical, biological and socio-cultural environment. These three factors mutually influence the incidence of vector-borne diseases in the areas where they spread.

Data from the Indonesian Ministry of Environment and Forestry (KLHK), the amount of waste generated in Indonesia in 2021 is 29.565 million tons/year. The most common source of waste comes from households (40.8%), and the most common type of waste is food waste (40.5%) (Kuczmarski et al., 2023; Smith & Shiffman, 2016). Food waste is organic waste that rots easily if buried for days and can be used by fly vectors as a nest in their breeding process (4). Waste is the remains of daily human activities and/or natural processes in solid form (RI Law No. 18 of 2008 concerning Waste Management). According to the Dictionary of Environmental Terms (Suweda, 2012) waste is material that has no value or is worthless for ordinary or primary purposes in the manufacture or use of damaged or defective goods in manufacturing or excess or rejected or discarded materials and anything that is no longer needed by the owner, the problem causes the environment to be dirty, generally the waste consists of a composition of food waste, leaves, plastic, hard cloth, rubber, soil and others (Bing et al., 2023; Clair et al., 2022; Moon et al., 2022).

Traditional markets are markets built and managed by the government, private sector, cooperatives or non-governmental organizations with business premises in the form of shops, stalls, booths and tents, which are owned or managed by small and medium traders, and cooperatives, with small scale businesses and small capital, and with the process of buying and selling through bargaining (Forkuor & Agyemang, 2018; Hussain et al., 2012; "The Participation of Non-Governmental Organizations in the Philippine Population Program.," 1989). Traditional markets are a very important economic sector for the majority of the population in Indonesia (Kalter et al., 2023; Unger-Saldaña et al., 2023; Zhang et al., 2023).

Based on a preliminary survey that has been carried out, the Bunta people's market still looks dirty due to vegetable and plastic waste scattered everywhere. Storage facilities, collection methods, temporary waste storage areas and transportation methods do not meet health requirements and waste processing does not yet exist. Apart from that, sanitation facilities are still not good, there is open drainage so that rubbish enters and causes the drainage to become blocked, the available rubbish bins do not meet the requirements and are still lacking (Forkuor & Agyemang, 2018; Harangozó & Zilahy, 2015; "The Participation of Non-Governmental Organizations in the Philippine Population Program.," 1989).

METHOD

The method used is quantitative research using an analytical survey research design with a cross sectional approach where the dependent variable and independent variables are collected at the same time. The research was carried out at the Bunta People's Market, Banggai Regency. The time of the research was carried out in June 2023. The population in this study were traders, market visitors and people who were at the Bunta People's Market, Banggai Regency and the sample in this study was 50 respondents, the sampling method was total population (Cui et al., 2022; Hasan, 2013; McCabe & Deng, 2018). In this research, data collection was carried out in two ways, namely primary data obtained from traders and buyers at the Bunta People's Market, Banggai Regency, while secondary data was data obtained from market managers, cleaning officers and the local government (Hasan, 2013; Kennedy & Dornan, 2009; Martin & Olson, 2023).

RESULT AND DISCUSSION

Univariate Analysis

Table 1. Number of Respondents Based on Flowing SPAL Conditions At the Bunta People's Market, Banggai Regency

SPAL condition	Frequency (f)	Percentage (%)
Good	30	60 %
Not good	20	40 %
Total	50	100 %

Source: Primary Data, 2023

Based on Table 1, it shows that out of 50 respondents based on Good SPAL Condition, there were 30 respondents (60%) while the SPAL condition was not good as many as 20 respondents (40%).

Table 2. Number of Respondents Based on Trash Conditions At the Bunta People's Market, Banggai Regency

Trash Condition	Frequency (f)	Percentage (%)
Good	32	64 %
Not good	12	24 %
Total	44	88 %

Source: Primary Data, 2023

Based on Table 2, it shows that out of 50 respondents based on Good Trash Conditions, there were 32 respondents (64%). Meanwhile, 12 respondents (24%) had poor conditions in trash bins.

Table 3. Number of Respondents Based on Trader Behavior and Buyers at the Bunta People's Market, Banggai Regency

Behavior	Frequency (f)	Percentage (%)
Sorting	25	50 %
Processing	9	18 %
Total	34	68 %

Source: Primary Data, 2023

Based on Table 3, it shows that of the 50 respondents based on the condition of the waste bins, 25 were sorting. respondents (50%). Meanwhile, 9 respondents (18%) were processing the waste bins.

Table 4. Number of Respondents Based on Cleanliness in the Market Bunta People, Banggai Regency

Market Cleanliness Level	Frequency (F)	Percentage (%)
Low/Medium	26	52 %
High/very High	7	14 %
Total	33	66 %

Source: Primary Data, 2023

Based on Table 4, it shows that out of 50 respondents based on the level of market cleanliness, there were 26 respondents (52%). Meanwhile, the level of market cleanliness was 7 respondents (14%).

Bivariate Analysis

Table 5. Relationship between SPAL Condition and Related Factors with the Cleanliness of the People's Market Bunta, Banggai Regency

SPAL condition	Market Cleanliness				Total		P Value
	Low/Medium		High/Very high				
	f	%	f	%	f	%	
Not good	4	20	16	80	20	100	0.645
Good	6	20	24	80	30	100	
Total	10	20	40	80	50	100	

Source: Primary Data, 2023

Table 5 of the research results shows that of the 50 respondents who had high and good knowledge of SPAL conditions, there were 24 people (80%) while 6 people (20%) had low knowledge and said they had good knowledge of SPAL conditions. For high knowledge and stating that the condition of SPAL is not good, there are 16 respondents (80%) while low knowledge and stating that the condition of SPAL is not good is 4 respondents (20%). Based on the Chi-Square test, the value of $\varrho = 0.645$ (ϱ Value ≤ 0.05), so there is a relationship between the condition of the SPAL and the cleanliness of the Bunta People's Market.

Table 6. The relationship between the condition of the trash can and factors related to the cleanliness of the Bunta People's Market, Banggai Regency

Trash Condition	Market Cleanliness				Total		P Value
	Low/Medium		High/Very high				
	f	%	f	%	f	%	
Not good	10	28.6	25	71.4	35	100	0.018
Good	0	0	15	100	15	100	
Total	10	20	40	80	50	100	

Source: Primary Data, 2023

Table 6 of the research results shows that of the 50 respondents who had high and good knowledge of the condition of the trash bin, there were 15 respondents (100%) while knowledge was low and said it was good about the condition of the trash bin, namely 0 respondents (0%). There were 25 respondents (71.4%) with high knowledge and stating that the condition of the trash bin was not good, while for low knowledge and stating that the condition of the trash bin was not good, there were 10 respondents (28.6%). Based on the Chi-Square test, the value of ϱ = 0.018 (ϱ Value ≤ 0.05), so there is a relationship between the condition of the trash can and the cleanliness of the Bunta People's Market.

Table 7. Relationship between behavior and related factors With the cleanliness of the Bunta People's Market, Banggai Regency

Behavior	Market Cleanliness				Total		P Value
	Low/Medium		High/Very high				
	f	%	f	%	f	%	
Not good	10	100	0	0	10	100	0.00
Good	0	0	40	100	40	100	
Total	10	20	40	80	50	100	

Source: Primary Data, 2023

Table 7 of the research results shows that of the 50 respondents who had high and good knowledge of waste handling, there were 40 respondents (100%) while the knowledge was low and they said they were good about behaviour, namely 0.00. respondents (0%). For high knowledge and stating bad behaviour is 0.00. respondents (0%) while knowledge was low and stated that they were not good towards waste handlers, namely 10 respondents (100%). Based on the Chi-Square test, the value of ϱ = 0.00 (ϱ Value ≤ 0.05), so there is no relationship between knowledge and behaviour at the Bunta People's Market.

SPAL condition

Based on the results of univariate analysis, it shows that out of 50 respondents based on good SPAL conditions, there were 30 respondents (60%) while the SPAL condition was not good as many as 20 respondents (40%). Bivariate analysis using the Chi-square test shows that the value of

ϱ = 0.645 (ϱ Value ≤ 0.05). The results of research in the field are that there is no relationship between the condition of the SPAL and the cleanliness of the Bunta People's Market. This is because the majority of market traders still lack awareness and knowledge about environmental cleanliness. This research is in line with research conducted by Desi (2021). The statistical test results obtained a significant (p) value of 0.001, indicating that the p value was ≤ 0.05. This means that there is a significant relationship between work and inspection of waste water disposal recommendations (SPAL) in Kel. Sukaraya District. OKU 2021 (6).

Trash Condition

Based on the results of univariate analysis, it shows that out of 50 respondents, 32 were based on good trash can conditions respondents (64%). Meanwhile, 12 respondents (24%) said that the condition of the trash bin was not good. Bivariate analysis using the Chi-square test shows that the value of ϱ = 0.018 (ϱ Value ≤ 0.05). The results of research in the field are that there is a relationship between the condition of the trash can and the cleanliness of the Bunta People's Market. This is because the majority of people still have awareness and knowledge about environmental cleanliness. This research is in line with research conducted by Sudiharti Solikhah (2012). A statistical test with a significant value (p) of 0.002 shows that the p value is ≤ 0.05. This means that there is a strong and positive relationship between the level of knowledge and the behavior of nurses in disposing of medical waste at PKU Muhammadiyah Hospital Yogyakarta.

Behaviour

Based on the results of the univariate analysis, it shows that of the 50 respondents based on the condition of the waste bins, 25 were sorting. respondents (50%). Meanwhile, 9 respondents (18%) processed the condition of the trash bins. Bivariate analysis using the Chi-Square test had a value of ϱ = 0.00 (ϱ Value ≤ 0.05), so that there was a relationship between knowledge and behaviour at the Bunta People's Market. This is in line with research conducted by (9,10,11,12). Based on the results of bivariate analysis using the chi square test, a p value of 0.022 was obtained. So, the p value is ≤ 0.05, with this research finding that there is a relationship between waste disposal behaviour, indicating that there is a significant relationship between knowledge and visitor actions.

Public Health Implications

Food Contamination: Markets often deal with perishable items and food products. Poor hygiene practices, improper storage, and inadequate sanitation can lead to food contamination, causing foodborne illnesses like salmonella, E. coli, or listeria.

Waste Management: Improper waste disposal can attract pests like rats, flies, and cockroaches, which can spread diseases. Accumulated waste can also emit foul odors and serve as breeding grounds for bacteria and other pathogens.

Water Quality: Water used for cleaning produce, utensils, or for drinking should meet quality standards. Contaminated water sources or improper storage of water can lead to waterborne diseases like cholera or typhoid fever.

Sanitation Facilities: Lack of proper sanitation facilities such as toilets and handwashing stations can contribute to the spread of infectious diseases. Inadequate sanitation increases the risk of fecal-oral transmission of pathogens.

Pest Control: Insects like flies and pests like rodents can carry pathogens and spread diseases. Proper pest control measures, such as regular pest inspections and maintaining cleanliness, are essential to prevent infestations.

Cross-Contamination: Mixing of raw and cooked foods, or using the same utensils and surfaces for both, can lead to cross-contamination. This can result in the transfer of harmful bacteria and viruses from one food item to another, increasing the risk of foodborne illnesses.

Personal Hygiene: Poor personal hygiene practices among market vendors and staff, such as not washing hands after handling money or using the restroom, can contribute to the spread of diseases. Proper training and enforcement of hygiene practices are necessary to mitigate this risk.

Temperature Control: Improper temperature control during food storage and transportation can lead to the proliferation of bacteria. Perishable foods should be stored at the appropriate temperature to prevent spoilage and foodborne illnesses.

Chemical Hazards: Improper use of pesticides, cleaning chemicals, or food additives can pose health risks to consumers. Market vendors should adhere to regulations regarding the use and handling of chemicals to minimize exposure and contamination.

Public Awareness: Lack of awareness among consumers about the importance of cleanliness and food safety practices can exacerbate public health risks. Education campaigns and signage promoting hygiene practices can help raise awareness and encourage behavior change.

Cautions and Limitations

Cultural and Socioeconomic Factors: Cultural practices and socioeconomic conditions can influence cleanliness standards in markets. Implementing changes without considering these factors may lead to resistance or unintended consequences. It's essential to engage with the local community to understand their perspectives and tailor interventions accordingly.

Resource Constraints: Market vendors, especially those operating in low-income areas, may face resource constraints in maintaining cleanliness. Simply advocating for cleanliness without addressing underlying resource limitations may not yield sustainable results. Support mechanisms such as access to affordable cleaning supplies or waste management services are crucial.

Infrastructure Challenges: Markets located in informal settlements or remote areas may lack adequate infrastructure such as proper waste disposal systems or sanitation facilities. Improving cleanliness in such environments requires long-term investments in infrastructure development and urban planning.

Regulatory Compliance: While regulations play a vital role in ensuring market cleanliness, overregulation or inconsistent enforcement can be counterproductive. Excessive bureaucratic hurdles may deter compliance or drive informal markets underground, where oversight is even more challenging.

Behavioral Change Complexity: Changing entrenched behaviors related to cleanliness and hygiene is a complex process that requires more than just issuing directives or regulations. It involves addressing underlying beliefs, attitudes, and social norms through targeted education, awareness campaigns, and community involvement.

Environmental Impact: Some cleaning practices or interventions aimed at improving market cleanliness may have unintended environmental consequences. For example, excessive use of chemical disinfectants may pollute water sources or harm beneficial microorganisms in the ecosystem. It's crucial to adopt environmentally sustainable approaches to cleanliness.

Equity Considerations: Efforts to improve market cleanliness should be equitable and inclusive, considering the needs of all market stakeholders, including marginalized groups and informal vendors. Neglecting equity considerations may exacerbate social disparities or exclude vulnerable populations from benefiting from cleanliness initiatives.

External Factors: Market cleanliness can be influenced by external factors such as weather conditions, seasonal variations, or public events. These factors may affect the feasibility and effectiveness of cleanliness interventions and require adaptive strategies to maintain hygiene standards under changing circumstances.

Intersectoral Collaboration: Achieving and sustaining market cleanliness requires collaboration across multiple sectors, including health, environment, urban planning, and commerce. Siloed approaches or lack of coordination among relevant stakeholders can hinder progress and lead to fragmented outcomes.

Continuous Monitoring and Evaluation: Ensuring long-term success in maintaining market cleanliness requires ongoing monitoring and evaluation to assess the effectiveness of interventions, identify areas for improvement, and adapt strategies accordingly. Neglecting monitoring and evaluation can result in stagnation or regression in cleanliness standards over time.

Future Research Recommendation

It is hoped that it can become reference material for future students. Suggestions for future researchers are that researchers can take references for writing their thesis and contributing ideas, as well as being able to develop knowledge, especially regarding the importance of cleanliness at the Bunta People's Market, Banggai Regency. The advice for traders, visitors, the public and market managers is to keep the market environment clean and for market managers to try to always provide rubbish bins so that the market remains clean.

CONCLUSION

Based on the results of research at the Bunta People's Market, Banggai Regency, which is written in the discussion, a conclusion can be drawn, namely that there is no relationship between market cleanliness and the condition of the Waste Water Sewerage Channel (SPAL) at the Bunta People's Market, Banggai Regency with a value of ϱ = 0.645 (ϱ Value ≤ 0.05). There is a relationship between market cleanliness with the condition of the trash can at the Bunta People's Market, Banggai Regency with a value of ϱ = 0.008 (ϱ Value ≤ 0.05). There is a relationship between market cleanliness with the behavior of traders, visitors and the public at the Bunta People's Market, Banggai Regency with a value of ϱ = 0.00 (ϱ Value ≤ 0.05).

Author Contribution

Research and Data Collection: Authors who conduct thorough research and collect reliable data on market cleanliness contribute significantly to understanding the extent of the problem and identifying specific areas for improvement. This data serves as a foundation for evidence-based interventions and policy decisions.

Policy Analysis and Advocacy: Authors who analyze existing policies related to market cleanliness and advocate for reforms or improvements play a crucial role in shaping regulatory frameworks and institutional mechanisms. Their efforts can lead to the implementation of more effective and enforceable regulations that promote cleanliness and public health.

Innovative Solutions Development: Authors who propose innovative solutions or technologies for improving market cleanliness contribute to the development of practical interventions that address specific challenges faced by market vendors and authorities. These solutions may include novel sanitation systems, waste management techniques, or hygiene promotion strategies.

Community Engagement and Empowerment: Authors who emphasize community engagement and empowerment in their work foster ownership and sustainability of cleanliness initiatives among market stakeholders. By involving vendors, consumers, and local residents in decision-making processes and implementation efforts, they ensure that interventions are culturally appropriate and responsive to local needs.

Education and Behavior Change Communication: Authors who develop educational materials and behavior change communication campaigns focused on market cleanliness raise awareness about the importance of hygiene practices and promote behavior change among vendors and consumers. Their efforts contribute to creating a culture of cleanliness and hygiene in market settings.

Capacity Building and Training: Authors who provide training and capacity-building support to market vendors, authorities, and public health professionals enhance their knowledge and skills in maintaining cleanliness standards and implementing effective sanitation practices. Capacity building efforts strengthen institutional capacity and ensure the sustainability of cleanliness initiatives over time.

Monitoring and Evaluation: Authors who design monitoring and evaluation frameworks to assess the impact of cleanliness interventions and track progress over time contribute to accountability

and learning. By systematically measuring outcomes and identifying lessons learned, they facilitate continuous improvement and refinement of cleanliness strategies.

Cross-Sector Collaboration: Authors who promote cross-sector collaboration and partnerships between government agencies, non-governmental organizations, academic institutions, and private sector entities strengthen collective efforts to improve market cleanliness. Collaborative approaches leverage diverse expertise and resources to address complex cleanliness challenges more effectively.

Advocacy for Equity and Social Justice: Authors who advocate for equity and social justice in cleanliness initiatives ensure that interventions prioritize the needs of marginalized communities and address underlying socioeconomic disparities. Their advocacy efforts promote inclusive approaches that aim to reduce health inequities and promote social cohesion.

Knowledge Dissemination and Exchange: Authors who disseminate their findings through publications, conferences, and knowledge exchange platforms facilitate learning and knowledge sharing among practitioners, policymakers, researchers, and other stakeholders. Knowledge dissemination contributes to replicating and adapting successful cleanliness interventions in different contexts.

Conflict of Interest Statement

Transparency regarding potential conflicts of interest is essential in discussions and decision-making processes related to market cleanliness. Stakeholders involved in initiatives aimed at improving market cleanliness should disclose any affiliations, financial interests, or personal biases that may influence their perspectives or actions.

Failure to acknowledge and address conflicts of interest can undermine the integrity and credibility of cleanliness interventions, leading to biased outcomes or perceptions of favoritism. Therefore, it is incumbent upon all stakeholders, including market authorities, vendors, researchers, policymakers, and advocacy groups, to adhere to ethical standards and disclose any conflicts of interest that may arise.

For example, market vendors or businesses selling cleaning products may have a financial interest in promoting specific cleanliness interventions that benefit their products or services. Similarly, policymakers or government officials responsible for regulating markets may face pressure from vested interests or industry lobbyists, potentially compromising their decision-making process.

To mitigate conflicts of interest and uphold the public trust, stakeholders should adopt transparent disclosure practices and establish mechanisms for managing and mitigating conflicts when they arise. This may include recusal from decision-making processes, establishing independent oversight bodies, or implementing safeguards to ensure that cleanliness interventions are guided by evidence-based principles and the public interest.

Ultimately, promoting transparency and accountability regarding conflicts of interest is essential for maintaining the credibility and effectiveness of efforts to improve market cleanliness and safeguard public health."

Acknowledgement
We would like to extend our sincere appreciation to all individuals and organizations whose contributions have been instrumental in advancing initiatives aimed at enhancing market cleanliness and promoting public health.

First and foremost, we acknowledge the dedication and hard work of market vendors, whose commitment to maintaining cleanliness standards and adopting hygienic practices is essential for ensuring the safety and well-being of consumers.

We also express our gratitude to market authorities and regulatory agencies for their efforts in implementing and enforcing sanitation regulations, conducting inspections, and providing guidance to market vendors on best practices.

Furthermore, we acknowledge the invaluable support and collaboration of public health professionals, researchers, and academic institutions in generating evidence-based knowledge, conducting research, and developing interventions to address cleanliness challenges in market settings.

We also recognize the vital role of non-governmental organizations (NGOs), community-based organizations, and civil society groups in raising awareness, advocating for policy changes, and mobilizing resources to support cleanliness initiatives in markets, particularly in underserved or marginalized communities.

Additionally, we appreciate the cooperation and engagement of consumers, residents, and local communities in supporting cleanliness efforts, providing feedback, and participating in behavior change campaigns aimed at promoting a culture of cleanliness and hygiene.

Finally, we acknowledge the financial support, technical assistance, and partnerships provided by governmental agencies, philanthropic organizations, and private sector entities in funding cleanliness projects, building institutional capacity, and fostering cross-sector collaboration to address market cleanliness challenges. (Hasan, 2013)

REFERENCE

Daeli, D. (2017). *Hubungan tingkat pengetahuan dan sikap pasien hipertensi dengan upaya pengendalian hipertensi di UPTD Puskesmas Kecamatan Gunungsitoli Selatan Kota Gunungsitoli* [Skripsi, Universitas Sumatra Utara].

Dwi Meidyana Putri, & Ni Made. (2019). *Gambaran tingkat kepadatan lalat di Pasar Kangkung Desa Pemogan Kecamatan Denpasar Selatan tahun 2019* [Tugas akhir Diploma, Politeknik Kesehatan Kemenkes Denpasar].

Devi Hardiana. (2018). Perilaku masyarakat dalam menjaga kebersihan lingkungan pantai Kecamatan Sasak Pasisie Kabupaten Pasaman Barat. *Jurnal Buana*, *2*(2).

Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro.

Handiny, N. F., Gusni Rahma, S. K. M., Rizyana, N. P. (2020). *Buku ajar pengendalian vektor*. Ahlimedia Book.

Ikhwan, Z. (2013). Faktor individu dan keadaan saluran pembuangan air limbah (SPAL) rumah tangga dengan kejadian diare di RT 01 RW 09 Kelurahan Sei Jang Kecamatan Bukit Bestari Kota Tanjung Pinang. *Jurnal Kesehatan*.

Iskandar, A. A. (2018). Pentingnya memelihara kebersihan dan keamanan lingkungan secara partisipatif demi meningkatkan gotong royong dan kualitas hidup warga. *Jurnal Ilmiah Pena: Sains dan Ilmu Pendidikan*, *1*.

Kementerian Negara Lingkungan Hidup. (2003). *Peraturan Menteri Negara Lingkungan Hidup Nomor 112 Tahun 2003 tentang Baku Mutu Limbah Air Domestik*. Jakarta.

Notoatmodjo, S. (2012). *Pengukuran pengetahuan, sikap dan perilaku manusia I*. Jogjakarta.

Notoatmodjo, S. (2014). *Pengukuran pengetahuan, sikap dan perilaku manusia II*. Jogjakarta.

Kementerian Kesehatan Republik Indonesia. (2017). *Peraturan Menteri Kesehatan tentang Standar Baku Mutu Kesehatan Lingkungan dan Persyaratan Kesehatan untuk Vektor dan Binatang Pembawa Penyakit serta Pengendaliannya*. Jakarta.

SIPSN KLHK RI. (2021). *Capaian kinerja pengelolaan sampah*. Sistem Informasi Pengelolaan Sampah Nasional (SIPSN) – Kementerian Lingkungan Hidup dan Kehutanan.

Sudiharti, & Solikhah. (2012). *Hubungan pengetahuan dan sikap dengan perilaku perawat dalam membuang sampah medis di Rumah Sakit PKU Muhammadiyah Yogyakarta* [Skripsi, Universitas Ahmad Dahlan].

Subekti, S. (2014). *Pengelolaan sampah rumah tangga 3R berbasis masyarakat*. Jakarta.

World Health Organization. (2022). *Sanitasi: Pengertian dan tujuannya*. Global Waters, IHE Delft Institute for Water Education.

Wibowo, I. (2019). Pola perilaku kebersihan, studi psikologi lingkungan tentang penanggulangan sampah perkotaan. *Makara Human Behavior Studies in Asia*, *13*(1), 37–47.

Winda Virganti, & Ni Kadek. (2019). *Hubungan tingkat pengetahuan, sikap, dan tindakan pedagang makanan dalam pengendalian lalat dengan kepadatan lalat di Pasar Umum Negara tahun 2019* [Tugas akhir Diploma, Poltekkes Denpasar].