

Smoking Ban on Public Transport: How do we protect and advocate for consumers?

Dewi Sulistianingsih¹✉, Yuli Prasetyo Adhi², Nabila Putri Syakila¹, Rahmawati Mohd Yusoff³

¹ Faculty of Law, Universitas Negeri Semarang, Semarang, Indonesia

² Faculty of Law, Universitas Diponegoro, Semarang, Indonesia

³ Department of Law, Universiti Teknologi MARA, Malaysia

✉ Corresponding email: dewisulistianingsih21@mail.unnes.ac.id

Abstract

Public transportation is very important for the mobility of Indonesian society and is used by millions of people every day, there is still a big problem related to smoking. Many regulations, implementation and law enforcement are still difficult. This study uses a normative legal research method with a legislative approach, a conceptual approach, and a comparative approach. Data collection is carried out through tracing primary and secondary legal materials and literature studies. In addition, this study develops a model of harmonization of laws and regulations for law enforcement of smoking bans on public transportation through an integrated regulatory framework approach to consumer protection, health, and transportation regulations. It aims to identify weaknesses in the regulatory and law enforcement system, and to formulate more effective strategies to protect the rights of public transportation

consumers to a smoke-free environment, so that it can provide more optimal protection for the health and safety of public transportation users in Indonesia.

Keywords

Advocacy, Consumer Protection, Public Transportation, Smoking Ban, Smoke-Free Areas

A. Introduction

The condition of public transportation usage in Indonesia shows complex challenges, along with the increasing need for community mobility and the growth in the number of private vehicles. Many big cities, including Jabodetabek, face severe congestion due to the dominance of high private vehicle usage, which drives the need for more effective public transportation solutions.¹ The high level of traffic congestion shows that even though there are various modes of public transportation, including Bus Rapid Transit (BRT), the use of public transportation is still relatively low, resulting in increased dependence on private vehicles.²

People in Indonesia have various motivations in choosing public transportation. Research conducted in Banjarmasin shows that people choose public transportation due to various factors such as more efficient costs and accessibility.³ The condition of public transportation usage in Indonesia, especially in metropolitan areas such as Jabodetabek,

¹ Forino, Bryant Daniel, and Leksmono Suryo Putranto. "Persepsi Pengguna Transportasi Umum di Jabodetabek Terhadap Integrasi Tarif PT Jaklingko Indonesia." *JMTS: Jurnal Mitra Teknik Sipil* 6, no. 1 (2023): 71-84; Ningsih, Khistiara, and I. Gusti Ayu Andani. "Potensi Pengembangan Fasilitas Parkir dan Menumpang (Park and Ride) untuk Mendukung Pelayanan Bus Rapid Transit (BRT) di Kawasan Perkotaan Purwokerto." *Jurnal Penataan Ruang* 18, no. 1 (2023): 22-32.

² Wirawan, Panji Wisnu, Djalal Er Riyanto, and Khadijah Khadijah. "Pemodelan Graph Database untuk Moda Transportasi Bus Rapid Transit." *Jurnal Informatika Ahmad Dahlan* 10, no. 2 (2016): 1271-1279

³ Pratama, Muhammad Aditya, Nur Syahda Arisanti, and Muhammad Hafi Arsyad. "Pengamatan Terhadap Penggunaan Transportasi Umum di Banjarmasin." *Jurnal Nirwasita* 5, no. 1 (2024): 1-6.

still faces various challenges despite the many modes of transportation available. Research shows that even though users have the option to use public transportation, many of them still choose private vehicles due to congestion and discomfort in public transportation.⁴ Integration of fares and improvement of public transport services are essential to support more sustainable modal shifts.

The phenomenon of smoking in public places in Indonesia is also a major concern, given its risky nature to public health. Research shows that smoking in public places contributes to air pollution and increases health risks for passive smokers, especially children and other vulnerable groups.⁵ People exposed to cigarette smoke in public environments are often unaware of the dangers they face, so increasing awareness and policies related to health protection need to be improved.⁶ Cigarette smoke, which is included in the WHO's list of known carcinogens, is a serious threat to public health in densely populated areas.⁷

Cigarette use has a direct impact on a country's health and economic problems. Cigarettes have a substantial risk of various diseases such as Stroke, Heart Disease, Tuberculosis, Diabetes Mellitus, and Chronic Obstructive Pulmonary Disease (COPD). Exposure to

⁴ Mafliyanti, Febriska Fitria, and Muhammad Halley Yudhistira. "Pengaruh Biaya Perjalanan Terhadap Perubahan Pilihan Moda Transportasi: Studi Kasus Pekerja Komuter Jabodetabek." *Jurnal Pembangunan Wilayah dan Kota* 18, no. 4 (2022): 400-413.

⁵ Alifiana, Winanda, et al. "Analisa Perilaku Merokok pada Usia Produktif terhadap Kesehatan di Wilayah Kerja Puskesmas Cilodong: Analysis of Smoking Behavior in the Productive Age on Health in the Cilodong Community Health Center Work Area." *Journal of Public Health Education* 3, no. 2 (2024): 34-41; Stefani, Maria, and Andy Setiawan. "Hubungan Asap Rokok terhadap Derajat Keparahan Pneumonia Anak Usia di Bawah 5 Tahun." *Sari Pediatri* 23, no. 4 (2021): 235-41.

⁶ Tarigan, Ingan U., and Anni Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia." *Jurnal Penelitian dan Pengembangan Pelayanan Kesehatan* 3, no. 2 (2019): 123-130.

⁷ Farlikhatun, L. "Hubungan Paparan Asap Rokok dari Suami pada Ibu Hamil dengan Kejadian Bayi Berat Lahir Rendah." *Jurnal Antara Kebidanan* 3, no. 3 (2020): 230-237; Ramadhani, Yasmin Nabila, Deddy Herman, and Mefri Yanni. "Perilaku Merokok dan Sikap Mahasiswa Tahun 3 Kedokteran Unand Terkait Program Berhenti Merokok." *Jurnal Ilmu Kesehatan Indonesia* 2, no. 4 (2021): 270-278.

cigarette smoke on public transportation has a significant negative impact on the health of users. According to data from the Ministry of Health in 2022, cigarette smoke contains more than 7,000 chemicals with at least sixty-nine of them being carcinogenic. Short-term exposure to cigarette smoke can cause eye irritation, headaches, coughing, and worsen respiratory diseases such as asthma. While long-term exposure can increase the risk of heart disease, stroke, lung cancer, and other chronic respiratory diseases.⁸ In closed spaces such as public transport, the concentration of harmful substances in cigarette smoke can reach five times that in open spaces, making exposure more dangerous.⁹

The urgency of consumer protection from exposure to cigarette smoke is extremely high, especially in the context of using public transportation. In public transportation, which is often in a confined space, the risk for passive smokers increases. Research shows that 70.8% of public transportation users experience exposure to dangerous cigarette smoke.¹⁰ This shows the need for stricter protection to prevent the negative impacts of smoking behavior in the environment. Health research also supports the importance of stricter smoking ban policies so that people, especially non-smokers, can enjoy clean air and better health.¹¹

The policy of no smoking in public transportation is a crucial step in creating a safer environment for all users. The implementation of Smoke-Free Areas (KTR) in all public sectors, including in public transportation modes, not only protects users but also encourages social change in people's habits.¹² Law enforcement regarding the smoking

⁸ Tim Promkes RSST-RSUP dr. Soeradji Tirtonegoro Klaten. *Kandungan Rokok yang Berbahaya Bagi Kesehatan*. Kementerian Kesehatan, 2022.

⁹ DLH DKI JAKARTA. *Struktur Organisasi Dinas Lingkungan Hidup Provinsi DKI Jakarta*. Dinas Lingkungan Hidup Provinsi Jakarta, 2021.

¹⁰ Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia."

¹¹ Rustam, Revandi, Fenty U. Puluhulawa, and Rusdianto U. Puluhulawa. "Penerapan Aturan Terhadap Pengendara Yang Merokok Saat Berlalu lintas di Satuan Lalu Lintas (Satlantas) Gorontalo Kota." *Journal of Comprehensive Science (JCS)* 2, no. 5 (2023): 1271-1276.

¹² Siregar, Putra Apriadi. "Implementasi Peraturan Gubernur Nomor 35 Tahun 2012 Tentang Kawasan Tanpa Rokok: Studi Kasus di Rumah Sakit Umum Haji." *Inovasi* 18, no. 2 (2021): 251-263.

ban also needs to be strengthened, one of which is through technology and applications that warn users when they violate the smoking ban policy.¹³ With an integrated approach to transportation policy and health protection, it is hoped that a healthier and more comfortable environment can be created for every individual in society. The phenomenon of violations of the smoking ban that still often occurs in public transportation not only reflects weaknesses in law enforcement, but also the lack of public understanding of the health hazards caused by cigarette smoke, especially in closed spaces such as public transportation.

According to Noviyanti, Candradewini, and Dai in their article, the implementation of Smoke-Free Areas (*Kawasan Tanpa Rokok/KTR*) is not meant to completely prohibit smoking activities, but rather to regulate them in order to protect non-smokers from the dangers of secondhand smoke. The regulation aims to create a healthier environment, especially in public spaces, by limiting smoking activities in specific areas such as educational institutions, health facilities, and public transport. Their research highlights that the effectiveness of KTR policies greatly depends on public awareness, law enforcement, and community participation.¹⁴

Handayani, et al. with the research, *Tobacco-Free Areas in Semarang City (Observational Study of TFA Regulation)*, stated that 100% of public areas and 100% of public transportation areas were found to have the smell of cigarette smoke, cigarette butts, and visitors who smoke. Cigarette packs were still found in all areas (seven), with the highest percentage in government offices (50%). So, it can be concluded that the implementation of the KTR PERDA in Semarang City is still not optimal.¹⁵

¹³ Gunarsih, Nurul Arifiah, Slamet Wiyono, and Dwi Intan Afidah. "Aplikasi Deteksi Pelanggaran Merokok di Tempat Larangan Merokok." *Jurnal Informatika Polinema* 10, no. 3 (2024): 351-358.

¹⁴ Noviyanti, Siti, Candradewini Candradewini, and Ratna Meisa Dai. "Implikasi Pelaksanaan Kawasan Tanpa Rokok." *Responsive: Jurnal Pemikiran dan Penelitian Administrasi, Sosial, Humaniora dan Kebijakan Publik* 3, no. 4 (2020): 207-213.

¹⁵ Handayani, Novia, et al. "Kawasan Tanpa Rokok di Kota Semarang (Studi Observasional Perda KTR)." *An-Nadaa: Jurnal Kesehatan Masyarakat (e-Journal)* 7, no. 2 (2020): 115-121.

Hasa et al., in their study "*Smoker Detection in Smoke-Free Areas Using YOLOv5*," highlight that with the advancement of technology, particularly in the field of artificial intelligence, several innovative solutions have emerged to monitor smoking activities in designated smoke-free areas. One such solution involves the application of deep learning techniques. The study employs the YOLOv5 (You Only Look Once version 5) object detection algorithm to enable real-time identification of smoking behavior. To train and evaluate the model, the researchers utilized a dataset comprising 435 images, which were partitioned into training, validation, and testing sets with a distribution ratio of 77:15:8, respectively.¹⁶

Based on previous studies, this study has a novelty adopted from consumer rights to security and safety guaranteed in the Consumer Protection Law. This study also develops a model of harmonization of laws and regulations in enforcing the smoking ban on public transportation through an integrated regulatory framework approach that integrates aspects of consumer protection, public health, and transportation regulations, an in-depth study of the legal aspects of consumer protection in enforcing the smoking ban on public transportation is very relevant and urgent. A deeper and more comprehensive analysis is needed to be able to identify various weaknesses in the regulatory system and the applicable law enforcement mechanisms, as well as to create a more optimal strategy in ensuring the protection of public transportation consumers' rights to an environment free from cigarette smoke.

This study focuses on the legal regulation regarding the smoking ban on public transportation from the perspective of consumer protection in Indonesia and compares the legal certainty of consumer protection with developed countries such as Singapore, Australia, and Japan. This study is also important to encourage improvements in policies and implementation of smoking bans on public transportation, so that it can provide more optimal protection for the health and safety of public transportation users in Indonesia.

¹⁶ Hasa, Muh Fadli, et al. "Deteksi Perokok di Kawasan Bebas Rokok Menggunakan YOLOv5." *Indonesian Journal on Software Engineering (IJSE)* 10, no. 1 (2024): 18-25.

In compiling this article, the author uses a normative legal research method, which is a method that focuses on the statutory approach is used to analyze the provisions of positive law that apply and are relevant to the issues studied, especially those related to consumer protection, public health, traffic, and regulations regarding the prohibition of smoking in public places. The conceptual approach is used to explore, understand, and interpret legal concepts related to the research topic, such as the definition of consumer protection, the right to health, and public space. Meanwhile, the comparative approach is intended to compare the legal norms applicable in Indonesia with similar legal norms applied in other countries, to obtain a more comprehensive perspective and as evaluation material for legal regulations in Indonesia. study of legal norms contained in laws and legal doctrines that develop in society. The approaches used in this study include three types, namely the statute approach, the conceptual approach, and the comparative approach. The research used a paradigmatic study approach, examining theories, concepts, principles, and questions, specifically within the critical paradigm.

B. Analysis of Legal Regulations Prohibiting Smoking on Public Transportation

Consumer protection is an important aspect in guaranteeing the rights of consumers to obtain quality and safe goods and services. In Indonesia, consumer protection is regulated in Law No. 8 of 1999 concerning Consumer Protection, which is the legal basis for regulating the rights and obligations of consumers and business actors.¹⁷ Consumers, as users of goods and services, have the right to clear information about the products they purchase, protection from fraudulent practices, and the right to obtain goods or services that are

¹⁷ Maharani, Alfina, and Adnand Darya Dzakra. "Fungsi Perlindungan Konsumen dan Peran Lembaga Perlindungan Konsumen di Indonesia: Perlindungan, Konsumen dan Pelaku Usaha (Literature Review)." *Jurnal Ekonomi Manajemen Sistem Informasi* 2, no. 6 (2021): 659-666; Syahrani, Laila, and Ika Juwita Lubis. "Analisis Pengaruh Transaksi Online dalam Hukum Perlindungan Hukum Konsumen di Era Digital." *Jurnal Al Wadih* 1, no. 2 (2023): 187-199.

appropriate and safe.¹⁸ In this context, various consumer protection institutions play an important role in providing education and advocacy to the public regarding their rights.¹⁹

Consumer legal protection is a component of both public and private law.²⁰ It is called public law because this is where the government's role lies, protecting consumers and the public from consequences that could cause harm. As consumers, consumers have the right to a healthy and good environment. A healthy and good environment is also a right for every human being on this earth. Therefore, there are at least three areas of law that provide general protection for consumers: civil, criminal, and state administrative law. Civil protection arises from the conflict of interests between members of society. If someone feels aggrieved by another member of society, they naturally sue that other parties hold them legally accountable for their actions. Criminal prosecution is pursued to protect the public from violations of their rights by another party. In state administrative law, the protection provided is usually more indirect, preventative, and proactive. The government typically issues various normative provisions that burden business actors with certain obligations.²¹

Based on Law Number 8 of 1999 concerning Consumer Protection, consumers have the right to obtain clear and correct information regarding the transportation services they use. This includes information on fares, departure schedules, travel routes, and services offered. The right to receive transparent information is crucial for consumers to make informed and informed decisions before using transportation services.

¹⁸ Bagaskara Modjo, Rizky Dwitama, and Nirwan Junus. "Perlindungan Konsumen Terhadap Kerusakan Barang Yang Diakibatkan Oleh Perusahaan." *Journal of Comprehensive Science (JCS)* 2, no. 5 (2023): 1455–1460.

¹⁹ Maharani, and Dzikra. "Fungsi Perlindungan Konsumen dan Peran Lembaga Perlindungan Konsumen di Indonesia: Perlindungan, Konsumen dan Pelaku Usaha (Literature Review)."

²⁰ Tampubolon, Wahyu Simon. "Upaya Perlindungan Hukum Bagi Konsumen Ditinjau dari Undang Undang Perlindungan Konsumen." *Jurnal Ilmiah Advokasi* 4, no. 1 (2016): 53-61.

²¹ Shidarta, Shidarta. *Hukum Perlindungan Konsumen Indonesia*. Jakarta: PT Grasindo, 2004.

In addition to the right to obtain information, consumers also have the right to obtain security and safety while using public transportation. This is in accordance with the provisions of the Traffic and Road Transportation Law which states that public transportation organizers are responsible for the safety of their passengers.²² In this context, transportation service providers must ensure that the vehicles used are in good condition, well maintained, and meet safety standards. If an accident occurs due to the negligence of the service provider, the consumer's right to receive compensation in the form of compensation must also be respected.²³

The quality of public transportation services affects consumer satisfaction. Research shows that factors such as reliability, comfort, and responsiveness to user needs are important elements in determining the level of consumer satisfaction. Consumers have the right to receive satisfactory service, which means that transportation service providers must not ignore the quality of service. In this case, there is a need for periodic evaluation of the services provided to ensure that the established standards are still met.

The use of public transportation in Indonesia shows a diverse trend. Based on the Indicator survey, it shows that the public agrees to strongly agree (92.6%) that public transportation makes it easier for people to move from one place to another. Then the public agrees to strongly agree (84.2%) that public transportation improves the community's economy. Then the public agrees to strongly agree (74.3%) that public transportation can create equitable development.²⁴ The survey also shows that the most widely used mode of transportation is city buses, followed by intercity and interprovincial buses (AKAP), ships, commuter lines, trains, and airplanes. The dominance of city buses

²² Hidayati, Hidayati. "Perlindungan Konsumen Penumpang Bis Pariwisata Pasca Kecelakaan Lalu Lintas." *Action Research Literate* 8, no. 5 (2024): 1-9.

²³ Hidayati.

²⁴ Kemenhub. *Hasil Survey Nasional Indikator: 72% Masyarakat Puas Dengan Kinerja Kementerian Perhubungan*. Kementerian Perhubungan Republik Indonesia, 2024. Retrieved from <https://kemenhub.go.id/post/read/hasil-survey-nasional-indikator--72--masyarakat-puas-dengan-kinerja-kementerian-perhubungan>

indicates accessibility and efficiency of services in urban areas²⁵. The Ministry of Transportation noted that the use of public transportation nationally increased by 11% in 2024 compared to the previous year. This data shows how vital the role of public transportation is in the lives of Indonesian people. In this context, smoking on public transportation is a fundamental problem.

In Law Number 8 of 1999 concerning Consumer Protection (UUPK) is an important legal foundation in protecting consumer rights in Indonesia. As stated in Article 4 and Article 7 of Law Number 8 of 1999, UUPK is designed to guarantee consumer rights, including the right to obtain clear information, the right to choose, the right to be treated fairly, and the right to receive compensation if consumers experience losses due to the use of goods and services.²⁶

Consumers also have the right to be critical and provide input or complaints about the services they receive. The role of consumer protection institutions is important in providing effective complaint channels for users of transportation services. Through an efficient complaint mechanism, consumers can report poor service or any form of abuse by service providers.²⁷ In addition, the ban on smoking in public places in Indonesia is regulated in various laws and regulations, one of the main legal bases is Law Number 36 of 2009 concerning Health which aims to protect public health and create a smoke-free environment. As in article 115 paragraph 1, which emphasizes the importance of creating a clean environment from the influence of cigarette smoke, especially in public places.²⁸ This law also emphasizes that everyone has the right to a healthy environment, and smoking in

²⁵ Depbhub. "Budayakan menggunakan transportasi umum massal untuk beraktivitas", retrieved from <https://dephub.go.id/post/read/budayakan-menggunakan-transportasi-umum-massal-untuk-beraktivitas>

²⁶ Prayuti, Yuyut, et al. "Perlindungan Konsumen Dalam Transaksi Produk Kesehatan Online: Analisis Regulasi dan Praktik." *Syntax Idea* 6, no. 4 (2024): 1581-1590.

²⁷ Rahman, Irsan, Riezka Eka Mayasari, and Tia Nurapriyanti. "Hukum Perlindungan Konsumen di Era E-Commerce: Menavigasi Tantangan Perlindungan Konsumen dalam Lingkungan Perdagangan Digital." *Jurnal Hukum dan HAM Wara Sains* 2, no. 8 (2023): 683-691.

²⁸ Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia."

public areas has the potential to threaten the health of others, including passive smokers.

In addition, each region also has a Regional Regulation (*Perda*) that regulates Smoke-Free Areas (KTR). For example, DKI Jakarta Regional Regulation Number 2 of 2005 concerning Air Pollution Control, Surabaya City Regional Regulation Number 5 of 2008 concerning Smoke-Free Areas and Limited Smoking Areas and Perda Number 9 of 2019 concerning KTR in Surakarta City, which explicitly prohibit smoking in public facilities such as hospitals, schools, and other public areas. Research conducted in various regions shows that the implementation of the smoking ban is often still ineffective, with many violations occurring and a lack of public awareness of this policy.²⁹

Another relevant legal basis is Government Regulation Number 109 of 2012 concerning the Protection of Materials Containing Addictive Substances in the Form of Tobacco for Health. This regulation emphasizes the obligation to provide special places for smoking in certain areas and the prohibition of smoking in areas protected by law.

In addition, the Regulation of the Minister of Transportation of the Republic of Indonesia has a vital role in regulating public transportation in Indonesia, especially related to bus transportation which is one of the main modes of mass transportation. Some relevant regulations in this context include:

1. Regulation of the Minister of Transportation Number 27 of 2015 concerning Minimum Service Standards for Public Transportation. This regulation stipulates minimum service standards or SPM that must be met by public transportation organizers. Both in terms of safety, security, comfort, affordability, regularity, and equality.
2. Regulation of the Minister of Transportation Number 26 of 2015 concerning Technical Safety Standards and vehicles including buses used. Covers requirements for vehicles, drivers, roads, and traffic management.

²⁹ Siregar, "Implementasi Peraturan Gubernur Nomor 35 Tahun 2012 Tentang Kawasan Tanpa Rokok: Studi Kasus di Rumah Sakit Umum Haji."

3. Regulation of the Minister of Transportation Number KM 15 of 2010 concerning the Blueprint for Intermodal/Multimodal Transportation. This regulation contains strategies and directions for the development of an integrated, efficient, and sustainable transportation/multimodal system in Indonesia.
4. Regulation of the Minister of Transportation Number 118 of 2018 concerning Special Rental Transportation. This regulation regulates the procedures for violations of special rental transportation, including licensing, operations, and technical requirements for vehicles and drivers.

These regulations require transportation operators to pay attention to various aspects, including driver training, vehicle maintenance, and good service to passengers. Research shows that good implementation of these regulations can have a significant impact on the safety and comfort of users.

In addition, Government Regulation Number 109 of 2012 concerning the safety of materials containing addictive substances in the form of tobacco products for Health. This regulation is designed to regulate the safety of materials containing addictive substances, especially tobacco products. To protect Health widely. One of them, with the regulations in article 49 and article 50 paragraph 1, namely:

Article 49 *"In order to organize the security of materials containing Addictive Substances in the form of Tobacco Products for health, the Government and Regional Governments are required to realize Smoke-Free Areas"* and,

Article 50 paragraph 1 *"Smoke-Free Areas as referred to in Article 49 include: a. health service facilities; b. teaching and learning places; c. places for children to play; d. places of worship; e. public transportation; f. workplaces; and g. public places and other designated places."*

This policy is related to the Smoke-Free Area (KTR) which is further regulated in the relevant ministerial regulations. The KTR policy was introduced to prevent exposure to cigarette smoke in public places, such as health facilities, schools, and other areas that have the

potential to endanger public health.³⁰ The implementation of KTR is expected to reduce the number of passive smokers exposed to cigarette smoke, especially in high-risk areas, and support a healthy lifestyle in the community.

Law enforcement against violations of the smoking ban in public places is important. The law on the smoking ban in public transportation in Indonesia requires a deep understanding of the harmonization of related laws and regulations. Harmonization in this context is important to ensure that existing regulations are not only effective, but also acceptable and obeyed by the community. The existence of harmonious laws contributes to justice, legal certainty, and the fulfillment of public rights related to health.³¹

However, in its implementation, several inconsistencies were found in various regulations. In Law No. 22 of 2009 concerning road traffic and transportation (LLAJ) and Government Regulation No. 109 of 2012 concerning the protection of addictive substances in the form of tobacco for health. In the LLAJ Law, it regulates aspects of safety, order, and smoothness of traffic and road transportation, including public transportation. However, it does not specifically regulate the planting of addictive substances such as tobacco or cigarettes in public transportation environments. And if in the Government Regulation concerning the protection of addictive substances in the form of tobacco for Health, which is a derivative of Law No. 36 of 2009 Health, it regulates the protection, prohibition, and control of tobacco products, including the prohibition of smoking in certain places and the protection of Public Health from exposure to addictive substances.

In addition, there is no direct harmonization between the LLAJ Law and the PP on securing addictive substances related to the prohibition of smoking in public transportation. The LLAJ Law does not explicitly mention the prohibition of smoking in public transportation, so that the enforcement of the prohibition of smoking in public transportation, so that the enforcement of the prohibition of

³⁰ Siregar.

³¹ Barlian, Aristo Evandy A. "Konsistensi Pembentukan Peraturan Daerah Berdasarkan Hierarki Perundang-undangan dalam Prespektif Politik Hukum." *Fiat Justisia: Jurnal Ilmu Hukum* 10, no. 4 (2016): 605-622.

smoking in public transportation is more dependent on health regulations.³²

Regulations related to smoking bans on public transportation are a health policy that focuses on protecting the health of individuals in environments that have a high potential for exposure to cigarette smoke. Developed countries such as Singapore, Australia, and Japan have strict regulations regarding smoking bans on public transportation. And this can be a comparison to the regulations in Indonesia.

Furthermore, Singapore has strong regulations regarding smoking bans on public transportation and covers all forms of public transportation. Including buses and MRT (Mass Rapid Transit). This is regulated in the "*Smoke-Free Public Places*" policy and violations of this regulation can be subject to significant fines. And specifically, the smoking ban area includes a certain radius (5 meters) from bus stops and MRT stations. In addition, there are many public education campaigns about the dangers of smoking, thereby increasing public awareness of the importance of smoke-free areas, placement of smoking ban signs and consistent supervision are carried out to ensure public compliance, and to create a more comfortable transportation environment for passengers.

Australia also has strict regulations regarding smoking bans on public transportation. With a combination of federal and state regulations with a general framework at the national level and detailed implementation at the state level. Each part of Australia has laws prohibiting smoking on public transport, with clear sanctions for violators. For example, in New South Wales, all forms of public transport, including buses and trains, are prohibited from smoking in public areas, whether they have a roof or not. Support for law enforcement is supported by public awareness that continues to encourage cleanliness and health in public spaces.

Meanwhile, in Japan, it has a slightly different approach, not all public transport is free from smoking. In some metropolitan areas, there are separate smoking areas, but in some other places, especially on public

³² Siswanto, Krisna Nur Alfian, and Hudi Yusuf. "Efektivitas Peraturan Pemerintah Nomer 109 Tahun 2012 dalam Pengamanan Zat Adiktif Pada Produk Tembakau." *Jurnal Intelek Insan Cendikia* 1, no. 9 (2024): 5282-5291.

transport, smoking bans are emphasized. The strengthening of this regulation is to improve overall public health and reduce the number of smokers, especially in public transport spaces. Various educational approaches with an emphasis on social ethics (smoking manners) continue to be carried out by the government and private institutions to raise awareness of the risks of smoking.

TABLE 1. Comparison of Provisions on Smoking Bans on Public Transportation

Country	Regulation
Indonesia	Law Number 36 of 2009 concerning Health and Government Regulation Number 109 of 2012
Australia	The Smoke-free Environment Act 2000
Japan	Health Promotion Act, No. 103 of 2002
Singapore	The Smoking (Prohibition in Certain Places) Regulations 2018

From this comparison, developed countries such as Singapore, Australia and Japan have developed strong and consistent regulations to protect public health from the dangers of smoking on public transportation, while Indonesia has challenges in implementing and enforcing the law.

C. Strategy to Increase Protection of Public Transport Consumers from Exposure to Cigarette Smoke

Consumer protection in the public transportation sector from exposure to cigarette smoke is becoming an increasingly pressing issue in the context of public health. Public transportation, as a crowded public space used by various groups, should be a sterile area from harmful substances such as cigarette smoke.³³ But in reality, many passengers are still exposed to cigarette smoke during the trip, whether at bus stops, terminals, or inside vehicles such as buses, public transportation, and trains. Exposure to cigarette smoke not only endangers the smokers themselves, but also endangers non-smoking passengers, including children, the elderly, pregnant women, and individuals with respiratory

³³ Hasa, et al. "Deteksi Perokok di Kawasan Bebas Rokok Menggunakan YOLOv5."

disorders. They become victims of passive smoking, which in the long term can increase the risk of various serious disease.³⁴

Research shows that the implementation of the smoke-free zone (KTR) policy in the public transportation sector still faces various challenges. Although there are regulations that determine public transportation as a smoke-free zone, implementation in the field is often inconsistent. Smoking activities are still often found in areas that should be sterile, even by drivers or vehicle crews themselves.³⁵ This indicates laxity in supervision and weak law enforcement against violations of the rules. In some cases, public ignorance about KTR rules or lack of education about the impacts of cigarette smoke are also factors that worsen this condition.³⁶

Strategies that can be implemented to strengthen consumer protection include increasing the implementation of KTR policies comprehensively, especially in public transportation modes. Stricter and more consistent law enforcement against violations of the smoking ban on public transportation can be an effective step to create healthier public spaces. This includes the imposition of administrative sanctions, such as fines or driving bans for drivers who are proven to have violated them. Strict law enforcement must also be balanced with an efficient public reporting system so that passengers can participate in monitoring the implementation of these regulations.

Another strategy that can be done to increase the protection of public transportation consumers from exposure to cigarette smoke, a strategy that can be implemented is the use of alternative tobacco products such as IQOS. This product is marketed as a cleaner and lower-risk smoking method compared to conventional cigarettes, by converting tobacco into vapor without burning (*heat-not-burn*

³⁴ Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia."

³⁵ Handayani, et al. "Kawasan Tanpa Rokok di Kota Semarang (Studi Observasional Perda KTR)."

³⁶ Artanti, Kurnia D., et al. "Survei Opini Publik dengan Perspektif Ketersediaan Sarana yang Bebas Asap Rokok di Surabaya." *IPTEK Journal of Proceedings Series* 3, no. 5 (2017).

technology).³⁷ IQOS use can reduce exposure to cigarette smoke for people around the user, especially in open spaces, because the emissions produced are less compared to traditional cigarette smoke, but it is important to consider that despite the lower emissions, this product is not completely risk-free. This is important considering that various studies have shown that exposure to cigarette smoke can cause significant health impacts, both for active and passive smokers.³⁸ In the context of public transportation, where many individuals are gathered in a confined space, reducing exposure to secondhand smoke becomes even more crucial.

In addition, effective prevention strategies also involve educating the public about the dangers of smoking. This educational program can influence public knowledge about the health impacts of exposure to cigarette smoke.³⁹ Studies show that this education can increase public awareness of the health risks of cigarette smoke, as well as encourage the development of smoke-free environments around public places, including public transportation.⁴⁰ Implementing a strict smoke-free policy in public transportation is an important step to protect passengers from health hazards.⁴¹

³⁷ Janah, Miftahul, and Santi Martini. "Hubungan antara paparan asap rokok dengan kejadian prehipertensi relationship between secondhand smoke and prehypertension." *Jurnal Manajemen Kesehatan Yayasan RS. Dr. Soetomo* 3, no. 2 (2017): 131-144.

³⁸ Mufida, Nada, and Khoiriyah Isni. "Pengaruh Edukasi Bahaya Merokok Terhadap Tingkat Pengetahuan Masyarakat di Dusun Kandangan 02/03, Margodadi, Seyegan, Sleman." *Insan Cita: Jurnal Pengabdian Kepada Masyarakat* 4, no. 2 (2022): 1-8.

³⁹ Mufida, and Isni. "Pengaruh Edukasi Bahaya Merokok Terhadap Tingkat Pengetahuan Masyarakat di Dusun Kandangan 02/03, Margodadi, Seyegan, Sleman"; Sutha, Diah Wijayanti, et al. "Sekolah dasar bebas asap rokok: Menciptakan lingkungan sehat dan ramah anak." *Kumawula: Jurnal Pengabdian Kepada Masyarakat* 7, no. 1 (2024): 69-74.

⁴⁰ Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia."

⁴¹ Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia"; Lestari, Kusuma S., et al. "Kualitas Udara pada Tempat Tertutup dan Aktivitas Merokok di Kota Surabaya Tahun 2015." *IPTEK Journal of Proceedings Series* 3, no. 5 (2017).

In addition, to support the IQOS strategy and smoke-free policies, it is important to involve the community in the design and implementation of these programs. Research shows that community involvement in anti-smoking programs can increase the effectiveness of public health policies. Communities that are educated about the dangers of smoking will be more motivated to support policies that prioritize public health, thereby reducing the prevalence of smoking habits, especially in public areas.⁴²

The importance of public education in this effort cannot be ignored. Consistent and targeted educational campaigns can increase public awareness of the dangers of smoking, both for active and passive smokers. Studies show that public awareness of the dangers of cigarette smoke can be triggered through the use of strong slogans, visualization of health impacts, and dissemination of information through social media and conventional media.⁴³ Participatory approaches involving the community in educational activities such as public discussions, counseling at terminals, and local community involvement can also help shape new social norms that reject smoking behavior in public spaces. For example, campaigns involving students and youth groups to become ambassadors for smoke-free areas can help create social pressure against violations that occur.

Educational efforts also need to be directed at transportation operators and drivers, who in many cases are the main violators. Routine training on KTR rules, the impact of passive smoking, and social responsibility in maintaining passenger health need to be included in the transportation company's standard operating procedures (SOP). With this approach, it is hoped that there will not only be changes in individual behavior, but also the emergence of collective awareness among transportation service providers to create more environmentally friendly and health-friendly services.

In addition to regulatory and educational approaches, the role of technology in efforts to improve consumer protection from cigarette smoke is also significant. One solution that can be implemented is the

⁴² Lestari, et al.

⁴³ Najmah, Najmah, et al. "Studi Intervensi Klaster Kawasan Tanpa Rokok pada Tingkat Rumah Tangga." *Kesmas* 9, no. 4 (2015): 375-381.

use of a sensor-based monitoring system that can automatically detect the presence of cigarette smoke. This technology can be integrated into public vehicles and supporting facilities such as terminals and bus stops, with a warning system that is directly connected to the monitoring center or to the public reporting application.⁴⁴ With this technology, violations can be detected in real-time, and the recorded evidence will facilitate the process of action by the authorities.

The use of data from this monitoring system can also be used to create more responsive and evidence-based policies. For example, data on violation trends on certain routes or locations can be the basis for more strategic placement of supervisors. In addition, this system can also provide periodic reports that can be used to evaluate the effectiveness of KTR campaigns and determine the need for intervention in certain areas.

On the other hand, improving the quality of public transportation services also plays a vital role in consumer protection strategies from cigarette smoke. When people feel comfortable and safe using public transportation, the level of trust and use of this mode will increase. With the increasing number of public transportation users, more parties will urge a smoke-free environment as a minimum service standard. In the long term, this creates a positive cycle where clean and healthy public transportation becomes the main choice for the community.⁴⁵ Modern, integrated, punctual public transportation with high cleanliness standards will also automatically minimize smoking activities because the system is more organized and supervised.⁴⁶

The involvement of local governments in designing environmentally friendly and healthy transportation policies must be

⁴⁴ Hakim, Lukman Nur. *Prototype Sistem Monitoring Asap Rokok Pada Ruangan Berbasis IoT dan Wemos D1 R1 ESP 8266*. Diss. Semarang: Universitas Islam Sultan Agung, 2023.

⁴⁵ Purwoko, Budi Aji, Chotib Chotib, and Lin Yola. "Strategi Integrasi Layanan Transportasi di Stasiun Kereta Api Bekasi Pasca Pandemic Covid-19." *Jurnal Transportasi Multimoda* 20, no. 1 (2022): 8-18.

⁴⁶ Efendi, Ade Irfan, Sam Deli Imanuel Dudung, and Eko Sudriyanto. "Faktor Yang Mempengaruhi Kepuasan dan Loyalitas Pengguna Angkutan Umum Menggunakan Pemodelan Partial Least Squares (PLS-SEM)." *Jurnal Penelitian Sekolah Tinggi Transportasi Darat* 14, no. 2 (2023): 96-107.

intensified. The government can make the smoke-free policy part of the vision of a healthy city or a livable city, with clear and measurable performance indicators. For example, the number of smoke-free fleets, a decrease in reports of KTR violations, and the level of user satisfaction with a clean transportation environment can be used as benchmarks in assessing the performance of local transportation agencies.

With a combination of strategies involving law enforcement, public education, utilization of technology, and improvement of service quality, the protection of public transportation consumers from exposure to cigarette smoke can be significantly improved. This requires cooperation from various parties: the government as regulators, operators as service providers, the community as users, and non-governmental organizations as supervisors and education partners. This collective effort will result in a healthier, safer, and more comfortable public transportation environment, and support long-term efforts to reduce the burden of cigarette-related diseases in Indonesia. Thus, an integrated multi-sector approach is not only ideal but also necessary to create real consumer protection in the public transport sector. A smoke-free environment should be the norm, not the exception, and all elements of society have a role to play in making it happen.

D. Conclusion

Consumer protection and advocacy for the public-on-public transportation in Indonesia, especially related to the smoking ban. The public has the right to a smoke-free environment for their health and safety. However, the challenge in law enforcement is still a major problem, where even though there are regulations governing the prohibition of smoking, their implementation is often ineffective. This is further exacerbated by the lack of public awareness and weak law enforcement. Exposure to cigarette smoke on public transportation has a substantial risk to health, especially for vulnerable groups such as children, the elderly and pregnant women. Based on the data, it shows that many public transportation users are exposed to cigarette smoke, which can cause various health problems. Comparison with developed countries such as Singapore, Australia and Japan shows that they have stricter and more effective regulations in prohibiting smoking on public

transportation, which can be a reference for Indonesia to improve policies and law enforcement. Stricter and consistent law enforcement against violations of the smoking ban on public transportation. Clear sanctions and a community reporting system must be strengthened to improve compliance. In addition, ongoing and targeted education campaigns need to be carried out to increase public awareness of the dangers of smoking and the importance of smoke-free areas. Education must include all levels of society, including transportation operators and drivers. The use of technology, such as sensor-based monitoring systems to detect cigarette smoke, can also assist in law enforcement and increase the effectiveness of smoke-free areas policies. Improving the quality of public transportation services can attract more users, which in turn will drive demand for a smoke-free environment as a standard of service. Finally, cooperation between the government, transportation operators, the community, and non-governmental organizations is needed to create a safer and healthier transportation environment.

E. References

- Alifiana, Winanda, et al. "Analisa Perilaku Merokok pada Usia Produktif terhadap Kesehatan di Wilayah Kerja Puskesmas Cilodong: Analysis of Smoking Behavior in the Productive Age on Health in the Cilodong Community Health Center Work Area." *Journal of Public Health Education* 3, no. 2 (2024): 34-41.
- Artanti, Kurnia D., et al. "Survei Opini Publik dengan Perspektif Ketersediaan Sarana yang Bebas Asap Rokok di Surabaya." *IPTEK Journal of Proceedings Series* 3, no. 5 (2017).
- Bagaskara Modjo, Rizky Dwitama, and Nirwan Junus. "Perlindungan Konsumen Terhadap Kerusakan Barang Yang Diakibatkan Oleh Perusahaan." *Journal of Comprehensive Science (JCS)* 2, no. 5 (2023): 1455–1460.
- Barlian, Aristo Evandy A. "Konsistensi Pembentukan Peraturan Daerah Berdasarkan Hierarki Perundang-undangan dalam Prespektif Politik Hukum." *Fiat Justisia: Jurnal Ilmu Hukum* 10, no. 4 (2016): 605-622.
- Depbhub. "Budayakan menggunakan transportasi umum massal untuk beraktivitas", retrieved from

- <https://dephub.go.id/post/read/budayakan-menggunakan-transportasi-umum-massal-untuk-beraktivitas>
- DLH DKI JAKARTA. *Struktur Organisasi Dinas Lingkungan Hidup Provinsi DKI Jakarta*. Dinas Lingkungan Hidup Provinsi Jakarta, 2021.
- Efendi, Ade Irfan, Sam Deli Imanuel Dudung, and Eko Sudriyanto. "Faktor Yang Mempengaruhi Kepuasan dan Loyalitas Pengguna Angkutan Umum Menggunakan Pemodelan Partial Least Squares (PLS-SEM)." *Jurnal Penelitian Sekolah Tinggi Transportasi Darat* 14, no. 2 (2023): 96-107.
- Farlikhatun, L. "Hubungan Paparan Asap Rokok dari Suami pada Ibu Hamil dengan Kejadian Bayi Berat Lahir Rendah." *Jurnal Antara Kebidanan* 3, no. 3 (2020): 230-237.
- Forino, Bryant Daniel, and Leksmono Suryo Putranto. "Persepsi Pengguna Transportasi Umum di Jabodetabek Terhadap Integrasi Tarif PT Jaklingko Indonesia." *JMTS: Jurnal Mitra Teknik Sipil* 6, no. 1 (2023): 71-84.
- Gunarsih, Nurul Arifiah, Slamet Wiyono, and Dwi Intan Afidah. "Aplikasi Deteksi Pelanggaran Merokok di Tempat Larangan Merokok." *Jurnal Informatika Polinema* 10, no. 3 (2024): 351-358.
- Hakim, Lukman Nur. *Prototype Sistem Monitoring Asap Rokok Pada Ruang Berbasis IoT dan Wemos D1 R1 ESP 8266*. Diss. Semarang: Universitas Islam Sultan Agung, 2023.
- Handayani, Novia, et al. "Kawasan Tanpa Rokok di Kota Semarang (Studi Observasional Perda KTR)." *An-Nadaa: Jurnal Kesehatan Masyarakat (e-Journal)* 7, no. 2 (2020): 115-121.
- Hasa, Muh Fadli, et al. "Deteksi Perokok di Kawasan Bebas Rokok Menggunakan YOLOv5." *Indonesian Journal on Software Engineering (IJSE)* 10, no. 1 (2024): 18-25.
- Hidayati, Hidayati. "Perlindungan Konsumen Penumpang Bis Pariwisata Pasca Kecelakaan Lalu Lintas." *Action Research Literate* 8, no. 5 (2024): 1-9.
- Janah, Miftahul, and Santi Martini. "Hubungan antara paparan asap rokok dengan kejadian prehipertensi relationship between secondhand smoke and prehypertension." *Jurnal Manajemen Kesehatan Yayasan RS. Dr. Soetomo* 3, no. 2 (2017): 131-144.

- Kemenhub. *Hasil Survey Nasional Indikator: 72% Masyarakat Puas Dengan Kinerja Kementerian Perhubungan*. Kementerian Perhubungan Republik Indonesia, 2024. Retrieved from <https://kemenhub.go.id/post/read/hasil-survey-nasional-indikator--72--masyarakat-puas-dengan-kinerja-kementerian-perhubungan>
- Mafliyanti, Febriska Fitria, and Muhammad Halley Yudhistira. "Pengaruh Biaya Perjalanan Terhadap Perubahan Pilihan Moda Transportasi: Studi Kasus Pekerja Komuter Jabodetabek." *Jurnal Pembangunan Wilayah dan Kota* 18, no. 4 (2022): 400-413.
- Maharani, Alfina, and Adnand Darya Dzikra. "Fungsi Perlindungan Konsumen dan Peran Lembaga Perlindungan Konsumen di Indonesia: Perlindungan, Konsumen dan Pelaku Usaha (Literature Review)." *Jurnal Ekonomi Manajemen Sistem Informasi* 2, no. 6 (2021): 659-666.
- Mufida, Nada, and Khoiriyah Isni. "Pengaruh Edukasi Bahaya Merokok Terhadap Tingkat Pengetahuan Masyarakat di Dusun Kandangan 02/03, Margodadi, Seyegan, Sleman." *Insan Cita: Jurnal Pengabdian Kepada Masyarakat* 4, no. 2 (2022): 1-8.
- Najmah, Najmah, et al. "Studi Intervensi Klaster Kawasan Tanpa Rokok pada Tingkat Rumah Tangga." *Kesmas* 9, no. 4 (2015): 375-381.
- Ningsih, Khistiara, and I. Gusti Ayu Andani. "Potensi Pengembangan Fasilitas Parkir dan Menumpang (Park and Ride) untuk Mendukung Pelayanan Bus Rapid Transit (BRT) di Kawasan Perkotaan Purwokerto." *Jurnal Penataan Ruang* 18, no. 1 (2023): 22-32.
- Noviyanti, Siti, Candradewini Candradewini, and Ratna Meisa Dai. "Implikasi Pelaksanaan Kawasan Tanpa Rokok." *Responsive: Jurnal Pemikiran dan Penelitian Administrasi, Sosial, Humaniora dan Kebijakan Publik* 3, no. 4 (2020): 207-213.
- Nugraheni, Dwi, Farah Liliana, Rahel Putri, and Gabriella Natasya. "The Impact of Tobacco Control Policies on Health Justice: A Case Study of Indonesia's Smoking Epidemic". *Indonesian Health Justice Review* 1, no. 3 (2024).

- Pratama, Muhammad Aditya, Nur Syahda Arisanti, and Muhammad Hafi Arsyad. "Pengamatan Terhadap Penggunaan Transportasi Umum di Banjarmasin." *Jurnal Nirwasita* 5, no. 1 (2024): 1-6.
- Prayuti, Yuyut, et al. "Perlindungan Konsumen Dalam Transaksi Produk Kesehatan Online: Analisis Regulasi dan Praktik." *Syntax Idea* 6, no. 4 (2024): 1581-1590.
- Purwoko, Budi Aji, Chotib Chotib, and Lin Yola. "Strategi Integrasi Layanan Transportasi di Stasiun Kereta Api Bekasi Pasca Pandemic Covid-19." *Jurnal Transportasi Multimoda* 20, no. 1 (2022): 8-18.
- Rahman, Irsan, Riezka Eka Mayasari, and Tia Nurapriyanti. "Hukum Perlindungan Konsumen di Era E-Commerce: Menavigasi Tantangan Perlindungan Konsumen dalam Lingkungan Perdagangan Digital." *Jurnal Hukum dan HAM Wara Sains* 2, no. 8 (2023): 683-691.
- Ramadhani, Yasmin Nabila, Deddy Herman, and Mefri Yanni. "Perilaku Merokok dan Sikap Mahasiswa Tahun 3 Kedokteran Unand Terkait Program Berhenti Merokok." *Jurnal Ilmu Kesehatan Indonesia* 2, no. 4 (2021): 270-278.
- Rustam, Revandi, Fenty U. Puluhulawa, and Rusdianto U. Puluhulawa. "Penerapan Aturan Terhadap Pengendara Yang Merokok Saat Berlalulintas di Satuan Lalu Lintas (Satlantas) Gorontalo Kota." *Journal of Comprehensive Science (JCS)* 2, no. 5 (2023): 1271-1276.
- Shidarta, Shidarta. *Hukum Perlindungan Konsumen Indonesia*. Jakarta: PT Grasindo, 2004.
- Siregar, Putra Apriadi. "Implementasi Peraturan Gubernur Nomor 35 Tahun 2012 Tentang Kawasan Tanpa Rokok: Studi Kasus di Rumah Sakit Umum Haji." *Inovasi* 18, no. 2 (2021): 251-263.
- Siswanto, Krisna Nur Alfian, and Hudi Yusuf. "Efektivitas Peraturan Pemerintah Nomer 109 Tahun 2012 dalam Pengamanan Zat Adiktif Pada Produk Tembakau." *Jurnal Intelek Insan Cendikia* 1, no. 9 (2024): 5282-5291.
- Stefani, Maria, and Andy Setiawan. "Hubungan Asap Rokok terhadap Derajat Keparahan Pneumonia Anak Usia di Bawah 5 Tahun." *Sari Pediatri* 23, no. 4 (2021): 235-41.

- Sutha, Diah Wijayanti, et al. "Sekolah dasar bebas asap rokok: Menciptakan lingkungan sehat dan ramah anak." *Kumawula: Jurnal Pengabdian Kepada Masyarakat* 7, no. 1 (2024): 69-74.
- Syahrani, Laila, and Ika Juwita Lubis. "Analisis Pengaruh Transaksi Online dalam Hukum Perlindungan Hukum Konsumen di Era Digital." *Jurnal Al Wadih* 1, no. 2 (2023): 187-199.
- Tampubolon, Wahyu Simon. "Upaya Perlindungan Hukum Bagi Konsumen Ditinjau dari Undang Undang Perlindungan Konsumen." *Jurnal Ilmiah Advokasi* 4, no. 1 (2016): 53-61.
- Tarigan, and Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia"; Lestari, Kusuma S., et al. "Kualitas Udara pada Tempat Tertutup dan Aktivitas Merokok di Kota Surabaya Tahun 2015." *IPTEK Journal of Proceedings Series* 3, no. 5 (2017).
- Tarigan, Ingan U., and Anni Yulianti. "Gambaran kesadaran masyarakat terhadap kawasan tanpa rokok di Indonesia." *Jurnal Penelitian dan Pengembangan Pelayanan Kesehatan* 3, no. 2 (2019): 123-130.
- Tim Promkes RSST-RSUP dr. Soeradji Tirtonegoro Klaten. *Kandungan Rokok yang Berbahaya Bagi Kesehatan*. Kementerian Kesehatan, 2022.
- Wirawan, Panji Wisnu, Djalal Er Riyanto, and Khadijah Khadijah. "Pemodelan Graph Database untuk Moda Transportasi Bus Rapid Transit." *Jurnal Informatika Ahmad Dahlan* 10, no. 2 (2016): 1271-1279.

Acknowledgment

None

Funding Information

None

Conflicting Interest Statement

The authors states that there is no conflict of interest in the publication of this article.

Publishing Ethical and Originality Statement

All authors declared that this work is original and has never been published in any form and in any media, nor is it under consideration for publication in any journal, and all sources cited in this work refer to the basic standards of scientific citation.

Generative AI Statement Statements

N/A