Understanding Smoking Behavior in Productive-Age Men: A Survey in Padang City

Abdiana[1], Masrul [2*], Hardisman [3], Najirman[4]

[1]Doctoral Program in Public Health, Faculty of Medicine, Universitas Andalas, West Sumatra, Indonesia

[2]Department of Nutritional Sciences, Faculty of Medicine, Universitas Andalas, Padang, West Sumatra, Indonesia

[3]Department of Public Health-Community Medicine, Faculty of Medicine, Universitas Andalas, West Sumatra, Indonesia

[4]Department of Internal Medicine, Faculty of Medicine, Universitas Andalas, Padang, West Sumatra, Indonesia

* correspondence email : **masrulmuchtar@med.unand.ac.id**

ABSTRACT

Smoking is still a public health challenge in Indonesia. Nationally, the percentage of the population who smoke has increased from 28.26% in 2022 to 28.99% in 2024. This trend indicates the consistency of smoking habits in society, especially among the productive age group. Men mostly smoke. This can be detrimental to the health of the smoker himself and can also be detrimental to the health of the surrounding environment. There are three important clinical phases in tobacco addiction, namely, trying, sometimes using, and using every day. The purpose of this study was to determine the factors that influence smoking behavior in male adolescents. The method used in this study was a descriptive research type with a population of all productive-age men in Padang City. Sampling used the cluster random sampling technique with a total of 97 respondents. Data were collected through a structured questionnaire that adopted the Global Youth Tobacco Survey (GYTS) instrument. Data were analyzed with a frequency distribution in the form of a percentage. The results showed that 36.1% started smoking at the age of 13 years, the number of cigarettes smoked per day was 1-10 cigarettes (37.1%), the usual place to smoke in public places (30.9%), smoking when gathering with friends (52.6%), Smoking is fun (47.4%), Smoking helps reduce anxiety/anger/restlessness (49.5%), wanting to smoke in the morning immediately after waking up (33%), Getting cigarettes by buying them yourself (55.7%), and the type of cigarette smoked is filtered (39.2%). These findings will inform targeted interventions to reduce tobacco use and promote healthier lifestyles in economically active communities while increasing labor productivity.

Keywords: Keywords: age, number of cigarettes, place of Smoking, type of cigarette

INTRODUCTION

Smoking behavior among productive age groups (15–59 years) has become a worrying phenomenon globally and nationally. Data from the World Health Organization (WHO) shows that 34.5% of adults, or 70.2 million people, use tobacco. The percentage of tobacco use in men is 65.5% and in women 3.3% (World Health Organization.., 2021). In Indonesia, the 2021 Global Adult Tobacco Survey (GATS) results noted that 33.5% of the adult population aged over 15 years were active smokers, with the percentage of men being much higher than women, namely 65.5% in men and 3.3% in women. In adult men, the prevalence of Smoking reached around 62.9% (Handayani, 2023). This phenomenon is worrying, considering the impact of Smoking affects not only individual health but also economic productivity and family welfare. This indicates that the habit of Smoking is still very much attached to the age group that is the backbone of the economy and national development.

Smoking contributes to a variety of non-communicable diseases, such as lung cancer, heart disease, and respiratory disorders, which are a significant burden on Indonesia's health system, with thousands of deaths each year. In addition, smoking habits in productive-age men can reduce work capacity, increase medical costs, and reduce household income because funds are allocated for cigarettes, which reach hundreds of thousands of rupiah per person per year. The 2021 Global Adult Tobacco Survey (GATS) study showed that cigarette expenditures were above IDR 380,000 per

month, often exceeding expenditures on education or nutrition, thus exacerbating household poverty. (CDC, 2021; Word Health Organization., 2021).

Smoking behavior in productive-age men is influenced by multidimensional factors, including socio-cultural factors, aggressive cigarette advertising, peer group pressure, and the perception that Smoking is a symbol of masculinity. Weak policies in cigarette regulation and affordable cigarette prices also contribute to high tobacco consumption. Understanding these factors is important for designing effective interventions (Iffah, 2020; Nurarifah & Sukmawati, 2024).

Despite numerous studies on Smoking, there is still a gap in data related to a comprehensive picture of smoking behavior. Most studies focus on health impacts, while behavioral aspects related to age of first Smoking, number of cigarettes smoked, usual places to smoke, when Smoking is done, reasons for Smoking types of cigarettes, and consumption patterns have not been widely explored. Mapping smoking behavior is needed as a basis for targeted preventive policies. Based on this background, this study aims to identify smoking behavior in productive-age men, including habits, reasons for Smoking, and efforts to quit. The results are expected to be a reference for the government, health workers, and stakeholders in designing promotive and preventive programs, such as anti-smoking campaigns, smoking cessation therapy, or strengthening tobacco regulations. Thus, it is hoped that the prevalence of Smoking can be reduced to improve the community's quality of life.

METHODS

This research is a descriptive study with a cross-sectional study approach. The study was conducted in Padang City, namely in the working area of the Ikur Koto Health Center, the working area of the Ulak Karang Health Center, and the working area of the Rawang Health Center. The study population was productive-age men in the working area of the Padang City Health Center in 2024. The research sample was part of productive-age men in Padang City in 2024 who met the inclusion and exclusion criteria.

The inclusion criteria for the research sample were willing respondents, men aged 15-59 years, and cooperative respondents during the study. At the same time, the exclusion criteria were incomplete data found in the variables studied. To determine the sample size using the Lamenshow sample formula. Based on the sample formula, a minimum sample size of 97 people was obtained. The sampling technique used was the cluster random sampling technique, and three health centers were selected, namely the Ikur Koto Health Center, the Ulak Karang Health Center, and the Rawang Health Center.

Data collection was carried out by interview using a questionnaire. The research instrument used was the Global Youth Tobacco Survey (GYTS) questionnaire to measure smoking behavior consisting of 10 questions containing the age of first trying to smoke, the number of cigarettes consumed per day in the last six months, where you usually smoke, whether you smoke when you are hanging out with friends, whether smoking is fun, whether smoking helps reduce anxiety/anger/restlessness, whether you have ever smoked or want to smoke in the morning after waking up, where you usually get cigarettes from and the types of cigarettes smoked (WHO, 2023). This questionnaire has been tested for validation and reliability. An instrument is valid if it can measure what is being measured. Data analysis was carried out univariately to obtain a picture of smoking behavior.

RESULTS

Respondent characteristics seen in this study include age, education, employment, and marital status. Knowing the characteristics of respondents (such as age, education, employment, and marital status) can identify the group of productive-age men who are most vulnerable to smoking habits. This allows for more targeted health interventions.

Table 1. Frequency Distribution of Respondent Characteristics

Variable	Category	f	Percentage (%)
Age	15-39 years	54	55,7
	40-59 years	43	44,3
Education	Low	30	30,9
	High	67	69,1
Occupation	Not working	10	10,3
	Employed	87	89,7
Marital Status	Single-married	33	34
	Married	64	66

Table 1 shows that the characteristics of respondents were primarily found in the 15-39 years age group (55.7%), higher education (69.1%), working (89.7%) and married status (66%).
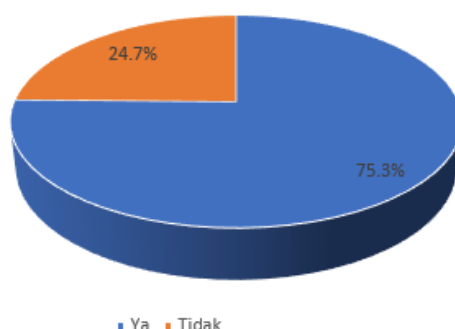
Picture 1. Frequency Distribution of Respondents About Having Tried Smoking Even Though Only One or Two Puffs

Figure 1 shows that most respondents have tried smoking even though only one or two puffs, amounting to 75.3%.

Table 2. Frequency Distribution of Respondents' Smoking Behavior

Variable	Category	f	Percentage (%)
Age of first Smoking	16 years and over	18	18,6
	14 or 15 years	20	20,6
	13 years	35	36,1
	Never smoked	24	24,7
Number of cigarettes smoked in the last 6 months	20 cigarettes per day	13	13,4
		24	24,7
	11-20 cigarettes per day	36	37,1
	1-10 cigarettes per day	24	24,7
Common Smoking Places	Places to play/hang out (kiosks, shops, internet cafes	26	26,8
	In public places (malls, markets, bus stops)	30	30,9
	At home	17	17,5
	I never smoke	24	24,7
Smoking while hanging out with friends	Yes	51	52,6
	No	9	9,3
	No more smoking	13	13,4
	Never smoked	24	24,7
Smoking is fun	Yes	46	47,4
	No	14	14,4
	No more smoking	13	13,4

Variable	Category	f	Percentage (%)
	Never smoked	24	24,7
Smoking helps reduce feelings of anxiety/anger/restlessness.	Yes	48	49,5
	No	12	12,4
	No more smoking	13	13,4
	Never smoked	24	24,7
Want to smoke in the morning right after waking up?	Yes	32	33
	No	28	28,9
	No more smoking	13	13,4
	Never smoked	24	24,7
Where to Get Cigarettes	buy it yourself at a shop/stall/hawker	54	55,7
	From a friend	6	6,2
	No longer smokes	13	13,4
	Never smoked	24	24,7
Types of cigarettes smoked	Filter cigarettes/kretek	38	39,2
	Cigars	22	22,7
	No longer smoke	13	13,4
	Never smoked	24	24,7

Table 2 shows that smoking behavior was found at the age of first Smoking more at the age of 13 years (36.1%), the number of cigarettes smoked per day 1-10 cigarettes (37.1%), the usual place to smoke in public places (30.9%), smoking when gathering with friends (52.6%), Smoking is fun (47.4%), Smoking helps reduce anxiety/anger/restlessness (49.5%), wanting to smoke in the morning immediately after waking up (33%), Getting cigarettes by buying them yourself (55.7%). The type of cigarette smoked is cigars (39.2%).

DISCUSSION

The characteristics of smoking behavior in productive-age men include the dominance of men as active smokers. The results of the study illustrate that most respondents have tried smoking, even if only one or two puffs, of 75.3%. The study shows that smoking behavior is very much dominated by men, especially in the productive age group (15-64 years). The proportion of active male smokers reaches more than 60% to 80% in various studies, indicating that the risk of Smoking in men is much higher than in women. The productive age, especially the 18-47 year range, is a group with a high prevalence of Smoking. The risk of smoking increases with age in the young to middle-aged adult group, with a peak at 25-34 years of age. This group generally already has jobs and income that allow easier access to cigarettes. (Iffah, 2020; Siagian et al., 2024).

The high prevalence of smokers requires identification of the age at which someone first started smoking. The results showed that 36.1% of productive-age males started smoking at the age of 13. This finding indicates that the habit of Smoking started in early adolescence, which is a critical period in the formation of behavior. The results of this study are in line with research on the prevalence of smokers among junior high school (SMP) children, reaching 19.2% in 2019, with most starting Smoking before the age of 14 (Nurhalimah et al., 2024). Behavioral Theory explains that smoking intentions are influenced by attitudes, subjective norms (e.g., perceptions that Smoking is "cool"), and behavioral control (ease of access to cigarettes). Smoking begins in adolescence and can progress to dependence in adulthood. The prevalence of Smoking at age 13 suggests that preventive interventions should begin in childhood. The implications emphasize the importance of a multisectoral approach to reducing early smoking initiation (Priyoto, 2014).

The study showed that 37.1% of productive-age men consumed 1-20 cigarettes daily. This finding indicates that consumption of 1-10 cigarettes/day is classified as moderate Smoking, while 11-20 cigarettes/day is categorized as heavy according to WHO. This means that most respondents have a smoking habit that is a high risk for health. This figure reflects the habit of Smoking that has become a

daily routine, possibly related to work activities or stress. Factors that may influence are the affordable price of cigarettes that allow consumption in large quantities, the habit of Smoking among workers as a form of relaxation, and the lack of awareness of the dangers of moderate-heavy cigarette consumption. Misbakhul's study found that the majority of respondents smoked 1-10 cigarettes per day, with a total of 32 respondents (64%), so that smoking behavior is categorized as light smokers (Munir, 2019). Around 23% of Indonesian smokers consume an average of 1-10 cigarettes/day, with the highest prevalence in the 15-24 age group. Data from The Indonesian Family Life Survey (IFLS) found that Judging from the number of cigarettes smoked in a day, most teenagers were a light smoker who smokes a maximum of 10 cigarettes per day (63.47%) (Ilmaskal et al., 2022).

The Stages of Change Theory by Prochaska and DiClemente is a model that explains the process of individual behavior change, especially in the context of health and addiction. This model is also known as the Transtheoretical Model (TTM). Consumption of 1-20 cigarettes/day indicates that respondents are in the "contemplation" or "preparation" stage to change but have not taken serious action to quit (Priyoto, 2014). The finding that 37.1% of respondents consumed 1-20 cigarettes per day shows a worrying consumption pattern with serious health risks. This result is consistent with research in other developing countries but significantly different from developed countries with strict regulations. Policy implications must target aspects of price, access, and education to reduce daily cigarette consumption in the productive age population.

The results of the study showed that 30.9% of male respondents of productive age usually smoke in public places. This indicates several problems, such as Violation of Regional Regulations with Government Regulation No. 109/2012, which prohibits Smoking in public facilities (Peraturan Pemerintah Republik Indonesia, 2012). Research in Indonesia found that 51.4% of people were exposed to cigarettes in the workplace, and 38.4% of offices that allow Smoking in the workplace. 66.4% were exposed to cigarettes in government offices, 55.3% in universities, 40.3% in schools or other educational facilities, 17.9% in religious facilities, 18.4% in health facilities, 91.8% in bars or clubs, and 70.8% in public transportation (Tarigan & Yulianti, 2019). Based on Riskesdas data, the national smoking prevalence was 28.5 in 2018. The Planned Behavior Theory (Ajzen) states that Attitude is the perception that Smoking in public is a personal right. Subjective norm: The environment does not reprimand smokers. Perceived control: Belief that you can smoke without consequences. Smoking in public places causes exposure to cigarette smoke for other people around, especially passive smokers who have even higher health risks than active smokers, such as respiratory problems, lung cancer, and heart disease. (Rosalina et al., 2023). This poses a significant public health burden. The results of this study demand integrated action from the government, society, and related institutions to reduce Smoking in public places for better health and social and environmental purposes.

The results of this study found that 52.6% of respondents smoked when gathering with friends, indicating a typical social pattern. Research in Indonesia on children found that the main social factor that drives smoking behavior is peer influence. Peers are the primary source of information, access, and motivation for children to try and use cigarettes or e-cigarettes. Social pressure from groups and ease of access also strengthen children's tendency to smoke (Ayuningrum & Sudaryanto, 2023). At a productive age, Smoking is also associated with cognitive dissonance, where smokers are aware of the negative impacts of Smoking but still do it, which can be triggered by social pressure and habits formed in friendships or work environments (Ardhaniswari et al., 2024). Social Identity Theory (Tajfel & Turner) states that Smoking is an identity marker for male workers—the function of forming in-group solidarity (McLeod, 2023). Strategic implications in the form of community-based interventions can be carried out. Evidence-based peer-driven intervention approaches with social environmental modifications can be carried out to reduce prevalence, especially by utilizing the unique characteristics of Indonesian culture. Transforming group norms from pro-smoking to pro-health is the key to long-term success.

The results of the study revealed that 47.4% of respondents perceived Smoking as a pleasurable activity, indicating the psycho-social complexity behind this habit. The pleasure of Smoking arises from immediate sensations, such as dopamine stimulation that occurs only 8-20 seconds after the first puff, as well as the ritualistic aspect—from lighting a cigarette to exhaling smoke, which creates a satisfying sensory experience (Berridge & Robinson, 2016). Smoking provides

positive experiences, including feelings of peace and attracting the attention of the opposite sex, and negative experiences, including feelings of guilt, physical-psychological problems, and social stigma(Yari et al., 2022). The pleasure that smokers experience, primarily through dopamine stimulation and the ritual of Smoking, suggests that this habit is driven not only by physical addiction but also by a psychological need for a satisfying sensory and emotional experience. By understanding the psycho-social complexities behind the perception of Smoking as a pleasurable activity, smoking control and prevention efforts can be designed to be more effective and sustainable. At a productive age, the perception that smoking is fun still persists and is the main reason why someone continues to smoke, even though they are aware of the health risks. The need for smoking prevention and control programs must consider the psychosocial aspects and the fun perception of smoking in their intervention design.

The research findings revealed that 49.5% of respondents used cigarettes to cope with emotional conditions such as anxiety, anger, or restlessness, indicating a significant role for cigarettes as a form of self-medication. Self-Medication Hypothesis, where nicotine functions as a mood regulator through complex neurochemical mechanisms. Within 7-10 seconds after inhalation, nicotine stimulates the $\alpha4\beta2$ nAChR receptors in the brain, triggering the release of neurotransmitters that affect mood, including dopamine, norepinephrine, and serotonin. The effects are biphasic—at low doses, it provides stimulation, while at high doses, it produces a sedative effect. (D & Markou, 2011; Mineur & Picciotto, 2010)

Research by Husna found a significant positive relationship between anxiety levels and smoking behavior in adolescents in Tangerang Regency, with a moderate correlation ($r = 0.431$, $p < 0.05$). This study shows that the higher the anxiety, the higher the tendency to smoke as a way to cope with emotions (anxiety) (Husna Rumasoreng et al., 2023).

The finding that 33% of respondents had a strong desire to smoke immediately after waking up indicates a high level of nicotine dependence. This is the main criterion in the Fagerström Test for Nicotine Dependence (FTND), which considers Smoking as a significant marker of addiction, especially since the body experiences nicotine fast for 8 hours or more during sleep. Physiologically, nicotine receptors in the brain become most sensitive after the night fasting. At the same time, the decreased basal dopamine levels (about 40% lower than during the day) also trigger intense cravings (Schwartz & Benowitz, 2010). A study in the city of Bandung stated that smoking in the morning or after waking up increases health risks due to higher levels of carcinogens in the body compared to Smoking at other times (Ruhyat & Audia, 2025).

A study found that positive affect levels in the morning were negatively associated with the intensity of cigarette cravings later in the day. When someone feels more positive in the morning, their cigarette cravings tend to be lower throughout the day. Smoking immediately after waking up has profound health implications and is more dangerous than smoking at other times of the day. This is because in the morning, the body experiences nicotine fast during sleep, so nicotine receptors in the brain become very sensitive, and basal dopamine levels decrease significantly, triggering intense cravings and greater nicotine consumption. In addition, smoking in the morning also increases the levels of carcinogenic substances (such as NNAL) in the body, which are much higher than Smoking at other times, thereby increasing the risk of chronic diseases such as bronchitis, emphysema and chronic obstructive pulmonary disease (COPD) (Benson et al., 2023).

The results of this study obtained respondents who obtained cigarettes by buying them themselves (55.7%). At productive ages, smoking behavior is greatly influenced by ease of access and the ability to buy cigarettes independently. Research shows that many teenagers and young adults buy cigarettes in retail, mainly stick cigarettes, because the price is cheaper and easier to reach with pocket money or their income (Nurarifah & Sukmawati, 2024). Financial factors such as pocket money or income are the main determinants of interest in buying cigarettes in this productive age group. Sufficient money allows them to buy cigarettes regularly, while peer influence and the social environment also strengthen this habit (Ependi, 2022). Therefore, controlling smoking behavior at productive ages must pay attention to factors of access and purchasing cigarettes by increasing education about the impacts of Smoking and involving families and the social environment in prevention efforts.

According to the Theory of stress and coping, individuals of productive age often use Smoking as a way to reduce stress and increase concentration, even though this behavior carries the risk of causing long-term health problems (Indah et al., 2024). In addition, cognitive dissonance is also an important concept that explains how productive-age smokers experience internal conflict between knowledge about the dangers of Smoking and the smoking behavior that is maintained, which has an impact on their work productivity and mental health (Ardhaniswari et al., 2024). Physiologically, nicotine in cigarettes causes increased blood pressure and the risk of hypertension, which is one of the main risk factors for cardiovascular disease at productive age (trio, 2024). Therefore, smoking behavior at a productive age not only has an impact on individual health but also creates a significant economic and social burden (Indah et al., 2024).

In this study, the type of cigarette that respondents most smoked was filter cigarettes at 39.2%. Filter cigarettes are the type of cigarette that people in various regions in Indonesia most consume. A study from the Indonesia Family Life Survey (IFLS 5) data shows that 46% of smokers started smoking as teenagers, and the type of cigarette that is often used is filter kretek cigarettes (Salsabila et al., 2022). Another study stated that the majority of smokers choose filter cigarettes because they are considered safer, relatively cheaper, and easier to get. Filter cigarettes are the most popular choice among smokers, especially young people (Nurhalimah et al., 2024)

Filter cigarettes are the most common type of cigarette used by smokers in Indonesia because they are considered to be able to filter harmful substances, are lighter, and are easier to obtain. However, even so, filtered cigarettes are still dangerous to health and contribute to various diseases. Preventing smoking behavior requires cooperation between the government, health institutions, schools, families, and communities to create an environment that supports a healthy lifestyle and reduces exposure to cigarette smoke.

CONCLUSIONS

Smoking behavior can be identified by knowing the age of first Smoking, the number of cigarettes smoked per day, the usual place to smoke, smoking when gathering with friends, the assumption that Smoking is fun, Smoking helps reduce anxiety/anger/restlessness, wanting to smoke in the morning immediately after waking up, getting cigarettes by buying them yourself, and the type of cigarette smoked is filtered. Smoking increases the risk of various serious diseases such as heart disease, stroke, lung cancer, chronic respiratory disease, and immune system disorders. Therefore, smoking behavior is a significant risk factor that must be prevented to reduce the burden of disease in society.

To prevent and stop smoking behavior, people of productive age, especially men, are advised to commit to quitting Smoking and to reduce cigarette consumption gradually. It is also important to manage smoking triggers by avoiding situations that provoke the desire to smoke and replacing them with positive activities such as exercise. Social support from family, friends, and health workers is important in strengthening the motivation to quit. In addition, counseling about the dangers of Smoking is very important because counseling can promote the dangers caused by cigarettes. Further research uses qualitative research to analyze smoking behavior and the factors that influence it.

ACKNOWLEDGMENT

REFERENCES

Ardhaniswari, T., Aulia Ryansyah, G., Aulia Qotrunnada, G., Safitri, D., Studi Sarjana Ilmu Komunikasi, P., Negeri Jakarta Jl Rawamangun Muka Raya, U., Jakarta Timur, K., & Khusus Ibukota Jakarta, D. (2024). Analisis Disonansi Kognitif Perokok terhadap Produktivitas di Usia Produktif. *COMMUNICATIONS*, *6*(2), 147–164. https://doi.org/Communications6.2.3

Ayuningrum, I. Y., & Sudaryanto, W. T. (2023). Smoking behavior in school-aged children in Indonesia: analysis of the 2019 Global Youth Tobacco Survey. *Paediatrica Indonesiana(Paediatrica Indonesiana)*, *63*(6), 506–510. https://doi.org/10.14238/pi63.6.2023.506-10

Benson, L., Chen, M., De La Torre, I., Hébert, E. T., Alexander, A., Ra, C. K., Kendzor, D. E., & Businelle, M. S. (2023). Associations Between Morning Affect and Later-Day Smoking Urges and Behavior. *Psychology of Addictive Behaviors*, *38*(3), 277–295. https://doi.org/10.1037/adb0000970

Berridge, K. C., & Robinson, T. E. (2016). Liking, wanting, and the incentive-sensitization theory of addiction. *American Psychologist*, *71*(8), 670–679. https://doi.org/10.1037/amp0000059

D, M. S., & Markou, A. (2011). *Neuronal Mechanisms Underlying Development of Nicotine Dependence: Implications for Novel Smoking-Cessation Treatments*.

Ependi, E. (2022). Pengaruh Faktor Finansial pada Minat Beli Rokok pada Remaja. *Literatus*, *4*(1), 292–300. Https://Doi.Org/10.37010/Lit.V4i1.782

Handayani, L. (2023). Gambaran Kebiasaan Merokok Pada Usia Dewasa Di Indonesia: Temuan Hasil Global Adult Tobacco Survey (Gats) 2021 Description of Smoking Habit among Adults in Indonesia: Finding of Global Adult Tobacco Survey (GATS) 2021. *Jurnal WINS* /, *3*(4). http://ojs.uho.ac.id/index.php/winsjo

Husna Rumasoreng, N., Megasari Winahyu, K., Yoyoh Program Studi Sarjana Keperawatan, I., & Ilmu Kesehatan, F. (2023). Hubungan antara Tingkat Kecemasan dan Perilaku Merokok pada Remaja di Kabupaten Tangerang. *Jurnal Ilmiah Keperawatan Indonesia*, *7*(1), 2023. https://jurnal.umt.ac.id/index.php/jik/index78

Iffah, N. (2020). Faktor Yang Berhubungan Dengan Tindakan Merokok Pada Usia Produktif Di Indonesia Analisis Indonesia Family Life Survey (Ifls 5). *Bravo's : Jurnal Program Studi Pendidikan Jasmani Dan Kesehatan*, *8*(4), 197. Https://Doi.Org/10.32682/Bravos.V8i4.1751

Ilmaskal, R., Wati, L., Hamdanesti, R., & Suci, H. (2022). Adolescent Smoking Behavior In Indonesia; A Longitudinal Study. *Eduvest-Journal Of Universal Studies*, *2*(1), 41–47. Http://Eduvest.Greenvest.Co.Id

Indah, N., Susanti, N., Andini, Z., Al, F., & Marpaung A A Mahasiswa, H. (2024). Hubungan Perilaku Merokok Dengan Hipertensi Pada Usia Produktif The Relationship Between Smoking Behavior And Hypertension In Productive Age. *Kp. Tengah, Deli Serdang*, *23*(2), 20353.

McLeod, S. (2023). Social Identity Theory In Psychology Tajfel amp Turner 1979. *Simply Psychology*.

Mineur, Y. S., & Picciotto, M. R. (2010). Nicotine receptors and depression: Revisiting and revising the cholinergic hypothesis. In *Trends in Pharmacological Sciences* (Vol. 31, Issue 12, pp. 580–586). https://doi.org/10.1016/j.tips.2010.09.004

Munir, M. (2019). Gambaran Perilaku Merokok Pada Remaja Laki-Laki. *Jurnal Kesehatan*, *12*(2), 112. Https://Doi.Org/10.24252/Kesehatan.V12i2.10553

Nurarifah, & Sukmawati. (2024). Perspektif Remaja tentang Dampak Kebiasaan Merokok: Sebuah Tantangan. *Jurnal Penelitian Kesehatan Forikes*, 242–250. https://doi.org/10.33846/sf15214

Nurhalimah, Putri, F. Y., Haryati, O., & Dinarti. (2024). Pengaruh Iklan Rokok Terhadap Perilaku Merokok Remaja. *JHCN Journal of Health and Cardiovascular Nursing*. https://doi.org/10.36082/jhcn.v4i1.1505

Peraturan Pemerintah Repiblik Indonesia. (2012). *Pengamanan Bahan Yang Mengandung Zat Aditif Berupa Produk Tembakau Bagi Kesehatan*.

Priyoto. (2014). *Teori Sikap dan Perilaku dalam Kesehatan*.

Rosalina, sari, D., Pratama Sutisna, D., & Dwi Apriliani. (2023). Hubungan Merokok Dengan Kejadian Penyakit Jantung Koroner. *Jurnal Ilmiah Wijaya*, *15*(1), 2723–3448. Www.Jurnalwijaya.Com;

Ruhyat, E., & Audia, S. S. (2025). Studi Kasus Perilaku Merokok sebelum dan Saat Pandemi Covid-19 Kelurahan Cicaheum Kota Bandung Tahun 2022. *Jurnal Kesehatan Komunitas (Journal of Community Health)*, *11*(1), 100–109. https://doi.org/10.25311/keskom.Vol11.Iss1.1576

Salsabila, N. N., Indraswari, N., & Sujatmiko, B. (2022). Gambaran Kebiasaan Merokok Di Indonesia Berdasarkan Indonesia Family Life Survey 5 (Ifls 5). *Jurnal Ekonomi Kesehatan Indonesia*, *7*(1), 13. Https://Doi.Org/10.7454/Eki.V7i1.5394

Schwartz, R. S., & Benowitz, N. L. (2010). Mechanisms Of Disease Nicotine Addiction. In *N Engl J Med* (Vol. 362).

Siagian, H., Imran, L., Nirawaty, N., M, I. D., & Perwitasari, P. (2024). Analisis Perilaku Merokok, Dampak Kesehatan Dan Strategi Pengendalian Tembakau. *Jurnal Kesehatan Terapan*, *11*(1), 29–40. Https://Doi.Org/10.54816/Jk.V11i1.730

Tarigan, I. U., & Yulianti, A. (2019). Gambaran Kesadaran Masyarakat terhadap Kawasan Tanpa Rokok di Indonesia. *Jurnal Penelitian Dan Pengembangan Pelayanan Kesehatan*, 123–130. https://doi.org/10.22435/jpppk.v3i2.2655

WHO. (2021). *GATS/Global Adult Tobacco Survey Fact Sheet Indonesia 2021*.

WHO. (2023). *Global Youth Tobacco Survey (GYTS) Core Questionnaire with Optional Question*.

Word Health Organization.. (2021). *Global Adult Tobacco Survey (GATS) Indonesia Report 2021*.

Yari, A., Toghroli, R., & Khani Jeihooni, A. (2022). Lived Experience of Smoking Students: A Phenomenological Study. *Tobacco and Health*, *1*(3), 109–113. https://doi.org/10.34172/thj.2022.17