International Journal Of Health, Engineering And Technology (IJHET) *E-ISSN 2829 - 8683*
Volume 5, Number 1, May 2026, *Page. 40 - 48*
Email : editorijhess@gmail.com

Student Perceptions Of The Smoke-Free Area (Ktr) Regulations On The Faculty Of Medicine And Health Sciences (Fkik) Campus, University Of Jambi, In 2026

M. Dicky Dermawan[1)], Dwi Noerjoedianto[1)], M. Ridwan[1)], Budi Aswin[1)], Ashar Nuzulul Putra[1)]
[1)] Public Health Science Study Program, Jambi University, Jambi
[2,3,4,5)] Department Of Public Health, Faculty Of Medicine And Health Science University Of Jambi

*Corresponding Author
Email : dwi_noerjoedianto@unja.ac.id

Abstract

The implementation of smoke-free zones on campus still faces significant challenges. This phenomenon indicates that the existence of a policy (stimulus) does not automatically result in uniform compliance (response). These differences in response are heavily influenced by students' perceptions. The objective of this study is to conduct a deeper analysis of students' perceptions regarding the Smoke-Free Zone (SFZ) regulations at the Faculty of Medicine and Health Sciences, University of Jambi. The research method employed a quantitative approach using a survey. The study was conducted at the FKIK UNJA campus within the Public Health program. Results of this study indicated that the majority of respondents were 19 years old, totaling 35 respondents (63.6%). The majority of respondents were female, totaling 48 respondents (87.3%). The majority of respondents were non-smokers or had quit smoking, totaling 53 respondents (96.4%). Most respondents had good knowledge, totaling 47 respondents (85.5%). Most respondents had a positive perception of the implementation of smoke-free zones, totaling 34 respondents (61.8%). Conclusion In general, a high level of knowledge tends to be accompanied by a positive perception of the implementation of smoke-free zones on campus, thereby creating a healthy, smoke-free environment.

Keywords: Smoke-Free Zone, Active and Passive Smokers, Perception.

INTRODUCTION

Smoking is a health problem and has spread to become a social problem and can increase crime problems amidst economic problems in society. Control of health problems caused by tobacco needs to be carried out in a comprehensive, integrated and sustainable manner by involving community participation and empowerment. The Ministry of Health has made various efforts to control health problems caused by tobacco. In addition, the Minister of Health has also initiated the development of Smoke-Free Areas (KTR) in various regions, increasing capacity at the national and local levels. Cigarette consumption affects the local/household to national economy. On a household scale, cigarettes are the second highest expenditure after food and beverages (BPS, 2021). In BPS data for 2022, in Indonesia the percentage of smoking among the population aged ≥ 15 years decreased from 2020 to 2022, even tending to increase from 28.69 in 2020 to 28.96 in 2021. In the results of the global survey of tobacco use in adults *(Global Adult Tobacco Survey - GATS)* which was conducted in 2011 and repeated in 2021 over the past 10 years there has been a significant increase in the number of adult smokers by 8.8 million people, namely from 60.3 million in 2011 to 69.1 million smokers in 2021.

The reasons for implementing KTR are:everyone has the right to protection against the dangers of cigarettes, tobacco smoke is dangerous and has no safe limit, special smoking rooms and air circulation systems are not able to provide effective protection. So protection is only effective if a place is 100% free from cigarette smoke. [2] In the 2022 Performance Report of the Directorate General of Disease Prevention and Control, the number of districts/cities implementing KTR increased annually from 285 in 2020 to 316 in 2021 and 441 in 2022. However, the target for 2021 and 2022 has not yet been reached. Therefore, optimal efforts are needed so that the 2023-2025 target will be achieved. In addition, the implementation in question is still a quantitative target and has not yet reached the stage of implementing KTR with enforcement and imposing sanctions for KTR violations.

To implement the Smoke-Free Area (KTR), Jambi City has made efforts to protect children and the community from cigarette smoke, as demonstrated by the enactment of Regional Regulation

No. 3 of 2017 concerning Smoke-Free Areas. Implementing the KTR PERDA is inseparable from the role of the community, one of which was initiated by the Jambi City Health Office in establishing the Cool Smoke-Free Village.

Higher education institutions play a strategic role in creating a healthy and environmentally conscious generation. In response to these health threats, the Indonesian government has established a strong legal framework through Law No. 17 of 2023 concerning Health , which requires educational institutions to establish Smoke-Free Areas (KTR). Campuses are designated as "Zero Tobacco" zones to protect students from exposure to secondhand smoke and reduce the number of new smokers among intellectuals.

These differences in response are heavily influenced by student perceptions . Based on *the Stimulus-Organism-Response* (SOR) theory, each individual processes policy information differently depending on their internal factors. Students with low levels of knowledge regarding the long-term impacts of smoking tend to view the KTR as a mere formality. On the other hand, students' smoking status is also a major determinant ; smokers often perceive the KTR as a restriction on their right to privacy and comfort, while non-smokers see it as a form of protection for their human right to clean air.

The disparity in perception between smoking and non-smoking student groups, as well as the influence of varying levels of knowledge, creates dynamics that influence the successful implementation of regulations in practice. Without a thorough understanding of how students perceive these policies, university efforts to enforce the KTR will be *top-down* and vulnerable to resistance.

Therefore, this study is important to conduct a deeper analysis of student perceptions of the 2026 Smoke-Free Area (KTR) regulation on the Faculty of Medicine and Health Sciences, University of Jambi. By understanding the factors that shape these perceptions, such as smoking status and level of knowledge, campus management can formulate more effective, persuasive, and targeted socialization and supervision strategies to create a healthy and smoke-free campus environment.

RESEARCH METHODS

Research uses a quantitative approach with a survey. A survey approach is a quantitative research approach that uses structured questions, and then the answers to these questions are recorded, processed, and analyzed. The research instrument in this method is a questionnaire, which is then distributed to respondents. This method will support the data collection and processing process. Respondents' answers in this survey method can help researchers draw conclusions about the population in this study. [33] The research was conducted at the Faculty of Medicine and Health Sciences, University of Jambi in the Public Health Science Study Program. This research was conducted from February 2026 to March 2026.

The population in this study was all students of the Faculty of Medicine and Health Sciences, University of Jambi. Based on data obtained during the initial data collection, the population in the Public Health Science Study Program was 1,032 students. A sample is a subset of the population's population size and characteristics. Based on the data obtained during the research , the sample size was 55 people.

The collected data will be processed manually through several stages such as editing , coding , data entry , and cleaning . Data processing stages . This quantitative research uses univariate analysis, also known as descriptive analysis, which is an analysis that describes the characteristics of each variable in detail. The analysis was carried out statistically using SPSS 24 *software*.

RESULTS AND DISCUSSION

Respondent Characteristics

Based on the results of data collection, the respondents in this study were fourth-semester students of the Faculty of Medicine and Health Sciences, Jambi University. Their characteristics are as follows.

Table 1 Characteristics of Research Respondents

Respondent's Initials	Age (Years)	Gender	Semester
ZZ	19	Woman	4
SAM	19	Woman	4
SP	20	Woman	4
DY	19	Woman	4
DS	20	Woman	4
AJ	19	Woman	4
GL	20	Man	4
C	19	Woman	4
MB	19	Woman	4
LC	19	Woman	4
M	19	Woman	4
SAM	20	Woman	4
SK	20	Woman	4
LA	20	Woman	4
WA	20	Woman	4
Science	19	Woman	4
TDS	19	Woman	4
FR	20	Man	4
FH	20	Woman	4
DE	19	Woman	4
KP	18	Woman	4
ST	19	Woman	4
FT	19	Man	4
IS	19	Woman	4
SS	19	Woman	4
SB	19	Woman	4
AM	19	Woman	4
MR	20	Man	4
SE	19	Woman	4
EG	19	Man	4
LP	19	Woman	4
JN	20	Woman	4
NSA	19	Woman	4
CC	19	Woman	4
ML	20	Woman	4
NKH	19	Woman	4
TQ	21	Man	4
JC	20	Woman	4
NR	19	Woman	4
ZF	19	Woman	4
AL	20	Woman	4
VL	19	Woman	4
SA	19	Woman	4
LK	19	Woman	4
AP	19	Woman	4
SCA	19	Woman	4

Respondent's Initials	Age (Years)	Gender	Semester
EN	20	Woman	4
NH	20	Woman	4
MA	19	Woman	4
NI	19	Woman	4
RD	20	Woman	4
PJ	20	Man	4
BD	19	Woman	4
HF	19	Woman	4
MR	19	Woman	4
Total	**55 Respondents**		

Source: SPSS Data 2026

Analysis by Age and Gender

The distribution of research respondents based on the characteristics of the Age and Gender variables is shown in the following table.

Table 2 Distribution of Respondents by Age and Gender

Variables	Frequency (n)	Percentage (%)
Age		
18 years	1	1.8
19 years old	35	63.6
20 years	18	32.7
21 years	1	1.8
Gender		
Man	7	12.7
Woman	48	87.3
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.2, the majority of respondents were 19 years old (35 respondents (63.6%). Respondents aged 20 years and over were 18 (32.7%). Meanwhile, those aged 18 years and over were 1 (1.8%) and 21 years old were 1 (1.8%).

Furthermore, based on Table 4.2, the majority of respondents were female (48 respondents (87.3%), while the remaining 7 respondents (12.7%) were male.

Respondents' Smoking Status

Table 3 Distribution of Respondents Based on Smoking Status

Variables	Frequency (n)	Percentage (%)
Smoking Status		
Yes, every day	1	1.8
Yes, sometimes	1	1.8
Don't smoke at all/have quit	53	96.4
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.3, the majority of respondents (53 respondents or 96.4%) did not smoke at all or had quit. The remaining respondents (1.8%) smoked daily and 1 respondent (1.8%) smoked occasionally.

Table 4 Distribution of Smoking Areas on Campus

Variables	Frequency (n)	Percentage (%)
Smoking Area on Campus		
Special smoking area (*Smoking Area*)	2	3.6
I am a non-smoker/don't smoke on campus	53	96.4
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.4, the majority of respondents were non-smokers or did not smoke on campus (53 respondents (96.4%), while the remaining respondents were respondents who smoked in the campus smoking area (*smoking area*), amounting to 2 respondents (3.6%).

Knowledge about KTR

The distribution of the knowledge variable about KTR is divided into 2 parts, namely the analysis of question items and the level of respondent knowledge.

Table 5 Distribution of Knowledge Question Items

Variable (Item)	Frequency (n)	Percentage (%)
C1		
Correct	53	96.4
Wrong	2	3.6
C2		
Correct	3	5.5
Wrong	52	94.5
C3		
Correct	52	94.5
Wrong	3	5.5
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.5, for item C1 (implementation of KTR), the majority of respondents answered correctly (53 respondents (96.4%). For item C2 (electronic cigarettes in KTR areas), 52 respondents (94.5%) answered incorrectly. Meanwhile, for item C3 (passive smoking), the majority of respondents answered correctly (52 respondents (94.5%) .

Table 6 Distribution of Respondents' Knowledge Level

Variables	Frequency (n)	Percentage (%)
Knowledge about KTR		
Not enough	8	14.5
Good	47	85.5
Total	**55**	**100**

Based on Table 4.6, the majority of respondents (47 respondents) had good knowledge, while the remaining 8 respondents (14.5%) had poor knowledge.

Perceptions about KTR

The distribution of respondents regarding their perceptions regarding KTR is also divided into 2 parts, namely analysis of respondent answer items and respondent perceptions regarding KTR.

Table 7 Distribution of Respondents' Answers Regarding KTR Perceptions

Variables	Frequency (n)	Percentage (%)
D1		
Strongly disagree	1	1.8
Neutral	1	1.8
Agree	6	10.9
Strongly agree	47	85.5
D2		
Strongly disagree	1	1.8
Neutral	1	1.8
Agree	4	7.3
Strongly agree	49	89.1
D3		
Strongly disagree	1	1.8
Neutral	1	1.8
Agree	6	10.9
Strongly agree	47	85.5
D4		
Strongly agree	12	21.8
Agree	6	10.9
Neutral	8	14.5

Variables	Frequency (n)	Percentage (%)
Don't agree	16	29.1
Strongly disagree	13	23.6
D5		
Strongly agree	16	29.1
Agree	14	25.5
Neutral	17	30.9
Don't agree	5	9.1
Strongly disagree	3	5.5
D6		
Strongly agree	16	29.1
Agree	21	38.2
Neutral	16	29.1
Don't agree	2	3.6
D7		
Neutral	13	23.6
Agree	16	29.1
Strongly agree	26	47.3
D8		
Strongly disagree	3	5.5
Don't agree	11	20.0
Neutral	15	27.3
Agree	19	34.5
Strongly agree	7	12.7
D9		
Neutral	15	27.3
Agree	26	47.3
Strongly agree	14	25.5
D10		
Neutral	1	1.8
Agree	11	20.0
Strongly agree	43	78.2
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.7, the majority of respondents' perceptions showed a tendency to answer agree and strongly agree based on the questions asked to respondents regarding the implementation of KTR. In items D1, D2, D3 and D10, the majority of respondents answered strongly agree with the percentage of respondents as many as 47 respondents (85.5%), 49 respondents (89.1%), 47 respondents (85.5%), and 43 respondents (78.2%), respectively.

However, in question D4, respondents' answers were quite different and were negative, resulting in some varied responses, with the majority responding with 16 (29.1%) and 13 (23.6%) disagreeing and strongly disagreeing. In items D5 and D6, respondents' answers tended to be more varied, with a relatively even distribution across several categories.

Table 8 Distribution of Perceptions of KTR

Variables	Frequency (n)	Percentage (%)
Perception of KTR		
Not enough	21	38.2
Good	34	61.8
Total	**55**	**100**

Source: SPSS Data 2026

Based on Table 4.8, the majority of respondents (34 respondents) had a positive perception of the implementation of KTR, while the remaining 21 respondents (38.2%) had a negative perception of the implementation of KTR.

DISCUSSION

Based on the research that has been conducted, the characteristics of the majority of respondents who participated were aged 19 years, as many as 35 respondents (63.6%) and respondents aged 20 years, as many as 18 respondents (32.7%). Respondents at this age are included in the late adolescent category, this shows that respondents are in the phase of undergoing higher education and are active in the campus environment. Because their activities are mostly in the campus environment, especially in the health sector, of course they are more exposed to topics related to smoke-free areas (KTR).

When looking at the gender of the respondents in this study, the majority were women (87.3%). This may influence the perceptions regarding KTR, as women smoke less frequently than men. This is consistent with previous research that predominantly used male respondents and is also supported by research showing a higher prevalence of male smokers than female smokers.

The results of this study indicate that the respondents were active students with numerous campus activities, making them highly suitable for this study. Similarly, based on gender, they were predominantly female, as the undergraduate public health program at the university had a higher proportion of female students than male students each semester.

Based on the results of this study, the majority of respondents had the status of not smoking at all/had quit, as many as 53 respondents (96.4%). The majority of respondents were non-smokers or did not smoke on campus, as many as 53 respondents (96.4%). This shows that the majority of respondents did not have a smoking habit. This habit is certainly accompanied by the knowledge of IKM UNJA students regarding the dangers of smoking. In various studies, it has been stated that there is a relationship between someone's smoking behavior and their poor knowledge, especially among health students.

Good knowledge about the dangers of smoking can act as a protective factor against heavy smoking behavior. Conversely, lack of knowledge can increase an individual's risk of engaging in heavy smoking behavior. Therefore, interventions through education aimed at increasing knowledge about the dangers of smoking are very important in efforts to prevent smoking behavior, especially among students. Many studies that have been conducted also state that there is a significant relationship between knowledge and smoking behavior. The first study stated that there is a statistically significant relationship between adolescent knowledge and smoking behavior (0.005). (9) In addition, other studies also state that there is an influence of knowledge factors on smoking behavior with a calculated *p-value* of 0.027 ($p < 0.05$).

Furthermore, the majority of respondents (53 respondents, 96.4%) did not smoke on campus. This could indicate a level of compliance with the KTR regulations implemented on the FKIK UNJA campus. This is also related to knowledge and campus regulations that enforce KTR regulations.

Based on the results of this study, it can be described that the majority of respondents do not smoke and do not smoke in the campus area. The access to knowledge about the dangers of smoking that respondents received was more intensive and comprehensive so that it was reflected in their daily behavior. This was also reflected in the seriousness of students to implement a smoke-free campus area through their statement letter addressed to the FKIK UNJA management in their official statement letter number 001/SPn/DPM-FKIK-UNJA/VI/2025. Likewise, FKIK UNJA also applies regulations related to KTR based on activities officially carried out to socialize Jambi City Regional Regulation No. 3 of 2017 concerning Smoke-Free Areas. So that it places more emphasis on compliance in each implementation.

Based on the results of this study, the majority of respondents had good knowledge of KTR, as many as 47 respondents (85.5%). While the remaining 8 respondents (14.5%) had less knowledge. This shows that respondents had good exposure to information and education regarding KTR. The knowledge measured in this study was related to electronic cigarettes (*vape*) and passive smoking. Because these two things are also problems related to the dangers of smoking. Not smoking does not mean being free from exposure to cigarette smoke. This is also explained in a study which states that

people who do not smoke (passive smokers) feel disturbed by exposure to cigarette smoke and they do not have the option to avoid exposure to cigarette smoke.

The high level of knowledge of respondents can be influenced by various factors, related to the educational environment, access to information, and the existence of policies related to KTR. This is in line with Desita's research which states that there is a correlation between knowledge (*p-value* 0.02), attitudes (*p-value* 0.00), exposure to negative content about e-cigarettes on TikTok social media (*p-value* 0.01) and e-cigarette smoking behavior. In addition, other research also states that from the chi-square test, the p-value of the influence of education level on knowledge, attitudes and behavior regarding the use of e-cigarettes is 0.488; 0.088; and 0.441, respectively.

Based on the results of this study, although the overall level of knowledge of respondents is in the good category, further efforts are needed to be able to disseminate information more openly and evenly to the entire academic community of FKIK UNJA in order to be consistent in implementing regulations related to KTR .

Based on the results of this study, the majority of respondents (34 respondents (61.8%) had a positive perception of KTR. The remaining 21 respondents (38.2%) had a less favorable perception. This indicates that the majority of respondents have a positive mindset and support the KTR policy on campus.

Respondents' perceptions regarding smoke-free campus environments demonstrate an awareness and sensitivity to the importance of a smoke-free campus environment and its impacts. These impacts affect not only active smokers but also passive smokers. This positive perception is also influenced by a high level of prior knowledge. This aligns with research conducted through an online questionnaire, which found that 100% of respondents agreed with the establishment of smoke-free areas. This clearly demonstrates the broader public's support for creating smoke-free environments.

In addition, there is still a small portion of respondents (38.2%) who have a less than favorable perception. This is certainly related to their actions in complying with regulations regarding KTR. This is in line with research that has been conducted examining the relationship between knowledge, attitudes, and perceptions regarding KTR sanctions. In this study, it was stated that knowledge (0.000), attitudes (0.002), and perceptions regarding sanctions (0.010) were significantly related to employee compliance with the implementation of KTR.

Although most respondents had a positive perception of the implementation of KTR on campus, this study still found some laxity in violating KTR regulations. This indicates that there is still much room for improvement, particularly regarding KTR promotion on campus. By providing more information on campus, it will certainly be more accessible and visible to all campus residents.

CONCLUSION

Based on the research results , the majority of respondents in this study were 19 years old and predominantly female. The majority of respondents did not smoke and did not smoke on campus. The level of student knowledge regarding the dangers of cigarettes and its relationship to the Non-Smoking Area (KTR) was good at 85.5%. Although a small number of respondents still had insufficient knowledge, especially regarding the aspect of understanding e-cigarettes. The majority of respondents also had a positive perception of the implementation of KTR (61.8%), which can be interpreted as students strongly support the implementation of KTR on campus. In general, a good level of knowledge tends to be followed by a positive perception of the implementation of TR on campus and creating a healthy, smoke-free environment.

REFERENCES

Altrimeifo Putra N, Poerwanto E, Arsyad M, KUNCI Pengetahuan K, Elektrik R. Level of Knowledge, Attitude, and Behavior of YARSI University Faculty of Medicine Students Class of 2021 and 2022 Regarding the Use of Electronic Cigarettes and Their Review According to Islamic Viewpoints. Jr Med J [Internet]. 2024;2(6):706–14. Available from: https://academicjournal.yarsi.ac.id/index.php/jmj/article/view/4078

Ambarita MB, Nurhasana R, Ningtyas FR, Shellasih NM, Nadya S. Strategy for Reducing Stunting Rates Through Raising Awareness of the Dangers of Cigarette Smoke in Tenjolaya, Bogor, West Java. Ilm Media Bina [Internet]. 2023;17(6):1–23. Available from: http://binapatria.id/index.php/MBI/article/view/230

Arisandy NA, Kurniawan WE, Hikmatin A. Factors Influencing Smoking Behavior in Adolescents. Br Med J. 2024;6(6):2851–8.

Baharuddin NH, Puspitasari A, Islamiah N. Implications of Pictorial Health Warning System on Cigarette Packaging: Study of Low Socioeconomic Areas. J Lang Heal. 2024;5(1):7–14.

Dendi, Pramudya H, Sartika M, Sohilait HPF. Knowledge and Smoking Behavior Among High School Students: A Cross-Sectional Study. Sustain [Internet]. 2025;11(4):1–14. Available from: http://scioteca.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI

Desita UK, Aristi D. Knowledge, Attitude and Exposure to TikTok Content on College Students' E-Smoking Behavior. J Masy Sehat Indones. 2025;4(2):42–50.

DPM DPM. Student Aspirations Regarding the Realization of a Healthy and Smoke-Free Campus Environment, Especially in the Faculty of Medicine and Health Sciences Area.

Eddy Azwar, Asnawi Abdullah MMA. Perception of FKM Unmuha Students towards Smoke-Free Areas (KTR) in the Muhammadiyah University of Aceh Campus Environment in 2022. J Pus Stud Pendidik Rakyat. 2022;2(November):42–50.

Haikal Fitranto M, Adinda Sufna M. The Dilemma of Smoking Behavior in Smoke-Free Areas and Guarantees of Fulfillment of Others' Rights. Education, Social and Human Rights QOSIM J Education, Social and Human Rights [Internet]. 2025;1674–81. Available from: https://doi.org/10.61104/jq.v3i4.2654

Handayani L. Description of Smoking Habit among Adults in Indonesia: Finding of Global Adult Tobacco Survey (GATS) 2021. Vol. 3, Jurnal WINS |.

Juliano MF, Yulyanti D, Rudiansyah. Knowledge, Attitude, and Implementation of Sanctions Are Key Factors in the Successful Implementation of Smoke-Free Area Policies. J Health Abdurahman Palembang. 2021;14(2):8–23.

Kurniawati RD, Abidin I, Sibtiah NS. Optimizing Partnerships Through the Role of Cadres as Agents of Change to Increase the Achievement of Smoking Free Commitment in Households. J Abdi Insa. 2024;9(2):480–8.

Ministry of Health & Ministry of Home Affairs. Joint Regulation of the Minister of Health and Minister of Home Affairs Number 7 of 2011. Republic of Indonesia State Regulation Number 49 of 2011. 2011;1–6.

Putri C. Faculty of Medicine and Health Sciences, University of Jambi Establishes Role Models as Drivers of a Culture of Excellent Work. Faculty of Medicine and Health Sciences, University of Jambi [Internet]. 2025; Available from: https://mkm.unja.ac.id/?p=284

Somantri UW. The Relationship Between Knowledge Level, Gender, and Perception of Cigarette Packaging Images and Smoking Behavior. J Health. 2020;11(1):69–76.

Winner MS, M. Ridwan, Usi Lanita. Determinants of Student Smoking Behavior at Jambi University. J Ilm Kedokt dan Kesejahteraan. 2025;4(2):476–90.