

Adolescent Behavior Towards Electronic Cigarettes: The Role of Knowledge, Social Support, and Risk Perception on Health Impacts

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ABSTRACT

This tobacco contains harmful substances that can cause lung disease, but the use of e-cigarettes in adolescents continues to increase. The purpose of this study was to assess the factors and health effects that affect the behavior of young people when using e-cigarettes. The literature was obtained from Google Scholars, PubMed, and ScienceDirect, and has inclusion standards in the form of publications from 2019-2024 with a focus on youth in developing countries. We analyzed up to 15 articles with exclusion criteria such as replication, unrelated and inaccessible literature. Results show that adolescents' behavior is influenced by internal factors such as knowledge, confidence, and gender, as well as external factors such as parental support, peers, and accessibility. The misconception is that e-cigarettes are safer than traditional cigarettes. Health effects include asthma, shortness of breath, chronic cough, shortness of breath, breast pain, and assessment (e-cigarettes or vapor-related lung injuries). Preventive and promotional interventions are needed to reduce the prevalence of e-cigarettes in adolescents by encouraging health risks and strengthening social roles.

Keywords: *Factors of use, lung health, adolescents, e-cigarette*

INTRODUCTION

Adolescence is a transition period from childhood to adulthood, where there are many changes towards physical and psychological, during adolescence they tend to be easily influenced by the surrounding environment including smoking behavior (Devin & Maburur, 2023) smoking can have a negative impact on the physical and mental health of adolescents. Physically, cigarettes contain harmful substances that can damage the respiratory organs. While mentally, adolescents who smoke are more susceptible to depression, therefore, efforts to prevent and handle smoking behavior among adolescents need to be carried out comprehensively, by involving parents, schools and the government through intensive education and supervision programs, it is hoped that it can reduce the number among adolescents and reduce the negative impacts that cause electric cigarettes or vapes to become a trend among adolescents or gen z, the trend in Indonesia is very real

METHODS

His research is a type of literature study research, namely a series of activities related to the method of collecting library data, reading, recording and managing research materials. Literature studies are

because of the use of electric cigarettes, especially among the younger generation. This trend is driven by the mistaken perception that electric cigarettes are safer than conventional cigarettes or are even considered a healthier alternative, the additional attraction is in the form of electric cigarette liquids (liquids) which have several flavors such as fruit, coffee, candy and flavors others, making this product increasingly popular among teenagers (Aisyah et al., 2024).

Danger is an unresolved problem, many individuals ignore the dangers of smoking for health, some of them smoke because of environmental influences, friendship styles, then there are also those who follow smoking because of pressure or stress. Not a few also try it, especially now that there is electricity where smokers switch to electric cigarettes on the grounds that they can get rid of the habit of smoking, but in reality, electric cigarettes are just as dangerous for health (Pelawi & Siregar, 2023).

conducted by searching various written sources, such as academic journals, research reports and scientific documents that discuss Factors Influencing the Use of Electronic Cigarettes (Vape) and Their Impact on the Physical, Psychological and Social Health of the Gen Z Generation.

This research is taken from sources from the last 10 years from each journal. The implementation of this research was carried out in March-April 2025.

The inclusion criteria in this study are from journals that have been published, open access, and use Indonesian and English. While the exclusion criteria in this study are paid use, only include abstracts. and do not use Indonesian and

English. The literature used in this study uses the electronic database Goggle Schola, Pubmed and from published journals with Keywords: Usage factors, lung health, adolescents, electronic cigarettes. This research has gone through the FKM UMJ ethical review process with the ethical review number 10.085.C/KEPK- FKMUMJ/V/2025.

DISCUSSION RESULT

Literature Table 1

No	Research name	Title	Publication and Year	Method	Conclusion
1.	Salma Nadia Rahmani	Factors Influencing E-cigarette Use Among Adult Smokers in Indonesia	Medical Journal volume 11, Number 1 May 2024	Quantitative research with secondary data comes from GATS	This study found that the factors that influence e-cigarettes are personal and policy factors. Thus, strong self-control is needed to avoid the dangers of using e-cigarettes, because the use of e-cigarettes poses serious health risks in the long term.

2.	Weni Nur Aisyah	Factors influencing e-cigarette use and its impact on lung health in adolescents	Journal of Public Health vol 7 no 2 December 2024	This study uses the Literature Review method by referring to literature from national and international journals.	This study recommends that all health workers the community can carry out educational activities routinely to increase knowledge and adolescent awareness of lung health risks as a result of e-cigarette use.
3.	Firdi Devin	The impact of vaping on health in gen z	Scientific Journal of Psychology and Public Health Vol.1 (January-June 2023)	This method uses qualitative research methods.	According to research conducted, vape is no less dangerous than cigarettes. Vape and cigarettes both contain nicotine which can cause addiction. The risks posed are no less dangerous than cigarettes. With the results of the analysis of the dangers of vape, as teenagers, especially Gen Z, we must be able to realize the dangers of vaping. Along with the above, we as Muslims are required to stay away from all kinds of useless and bad deeds for the body, such as

					<p>using vapes because in addition to being useless for the body, vapes can be dangerous for others too. Therefore, as a teenager and a Muslim who has awareness regarding our own health, let us protect ourselves from things that can damage the body.</p>
4.	Putra Apriadi Siregaar	Knowledge of the Dangers of Electronic Cigarettes for Teenage Girls	Health Journal Vol 1.No.2 August 2023	This method uses quantitative research methods.	<p>This study was seen from the results of the study that knowledge of the dangers of using electric cigarettes (vape) in adolescent girls was poor. Judging from the results of the frequency of knowledge of electric cigarettes (vape) in adolescent girls, out of 30 respondents, 8 respondents (26.7%) had good knowledge, while 22 respondents (73.3%) had poor knowledge about the dangers of e-cigarettes in adolescent girls.</p>

					<p>There is no significant relationship between knowledge and smoking behavior in this case, this can occur because the attitude of adolescents to smoking is still wrong and the desire to try smoking is very large, with these results we can see that high knowledge about the dangers of cigarettes does not necessarily change attitudes and actions. Teenagers tend to lift themselves up themselves as individuals to attract attention to be seen as an individual, so that teenagers tend to pay more attention to their appearance.</p>
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5.	Nia Musniati	Factors related to e-cigarette smoking behavior in high school students	Journal of Health Education Volume 13, No.1 April 2024	This type of research is quantitative using a Cross Sectional study design.	The results of the study, obtained several findings. Of the total 109 respondents, as many as 53.2% or 58 respondents were identified as e-cigarette smokers, while 46.8% or 51 respondents did not have e-cigarette smoking behavior.
6.	Kartika Fitriani R	Use of electric (Vape) in Makassar City from an Islamic Law Perspective	Student Scientific Journal of Comparative Schools Vol. No. 2 May 2020	This research is a type of quantitative research using a cross-sectional study design.	Based on the results of the study conducted on students of SMA Negeri 1 Tarumajaya, Bekasi Regency, it was found that 58 respondents (53.2%) of students of SMA Negeri 1 Tarumajaya smoked electronic cigarettes. This value was influenced by many factors, such as gender, knowledge about smoking behavior electronics, attitudes towards electronic smoking behavior, electronic cigarette advertising on social media,

					<p>easy access to get cigarettes electric, pocket money, family influence, friends influence and teacher and school environment influence. Often this electronic smoking behavior is considered as a trend among school teenagers. Most of the respondents in this study were 16-17 years old, namely 58 respondents (53.2%). The average reason respondents first smoked was to try it out (26.9%).</p>
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7.	Dessy Abdulla h	Counseling on the dangers of electronic cigarettes for teenagers, why we should care	Journal of Collaborative Service and Innovation of IPTEKS Volume 2, No. 5- October 2024	The method of community service used is the socialization method used is participatory. This method stimulates creativity and interaction between students and the community service team.	Based on the results of the study conducted, smoking can not only cause damage to the respiratory system, but can also increase the risk of depression in adolescents. Therefore, efforts to prevent and handle smoking behavior among adolescents must be carried out comprehensively, by involving various stakeholders, such as parents, schools, and government. Through the With appropriate education, supervision and policy programs, it is hoped that the
					number of smokers among teenagers can be reduced, so that they can grow and develop into a healthy generation, both physically and mentally.

8.	Muhammad Rinaldhi Tandah	Education on the Dangers of Using Conventional and E-Cigarettes for Teenagers	Scientific Journal of Community Service vol.7 no 2 Year 2024	This community service is carried out using the lecture method, implemented face to face.	The community service activity was also considered successful, this was indicated by an increase in participants' knowledge about the dangers of conventional cigarettes and electric cigarettes by 76.356% with a good category, namely from 10.91% (before the activity) to 87.27% (after the activity).
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9.	Ahyar Rosidi	Education on the Dangers of Electronic Smoking for Teenagers' Health	Indonesian Journal of Community Dedication (IJCD) Vol. 7 Number 1 January 2025	This community service activity was carried out in the form of providing education about the dangers of electronic cigarettes for the health of adolescents at SMAN 01 Wanasaba. This activity was attended by 350 adolescents in total. Before being given education, participants' knowledge was measured using a pre- test questionnaire.	Based on the results of community service that has been carried out, the conclusion that can be drawn is that there is a change in the level of knowledge about the dangers of electronic cigarettes (Vape) in adolescents, where the use of electronic cigarettes is not free from risks and has a significant negative impact on health. There is a need for public awareness and stricter regulations to limit the use of e-cigarettes, especially among teenagers. Further research is needed to understand the long-term impacts of e-cigarette use.
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10.	Novia Oktavia ni	Factors Related to Smoking Behavior in Male Students	Journal of Public Health Students Vol 2 No.1 February 2019	This research is a quantitative research with an analytical survey method, using a cross-sectional survey design.	Based on the analysis results, the "Odds Ratio (OR)" was obtained as 0.256, meaning that respondents who have less knowledge about cigarettes have a 0.25 times greater chance of smoking compared to respondents who have good knowledge about cigarettes. This is in accordance with the statistical test It was found that the p-value was 0.008 ($p < 0.05$), which means that there is a significant relationship between knowledge and smoking behavior.
11.	Piqih Akbar	Factors that influence the use of e-cigarettes among students	Journal of Muhammadiyah University of Surakarta (2021)	This research is a literature review research which means analysis in the form of criticism (constructing/demolishing) of research that has been conducted on a specific topic or question regarding a particular part	The results of the research that were critically reviewed in this literature review showed that the results of knowledge about electronic cigarette users among students were not good because. Based on 2 out of 3 journals, students do not

				of science.	know the negative health impacts of consuming electronic cigarettes.
12.	Laura L Struik	Factors that influence the decision to vape among indigenous youth	BMC public health(2022)	This qualitative study employed Indigenous research methods (e.g., traditional methods of data collection, like sharing circles) [28] to understand decision-making around vaping among Indigenous youth.	Syilx youth reported that vaping decision-making is underpinned by colonialism, and the historical disproportionate impact of the tobacco industry. The youth spoke to several individual determinants that influence intentions to vape (e.g., vaping helps you cope) and to not vape (e.g., family and community connectedness), and determinants that translate intentions to vape to decision to vape (e.g., access to vaping), and to not vape (e.g., access to trusted adults and support from the band). The youth suggested that prevention efforts must be informed by an understanding of why Indigenous youth vape and

					what strengthens their resolve to not vape
13	Zita Arieselia	Prevalence of e-cigarette users among students and determinant Factors influencing usage behavior	Journal of Medicine Vol.22 No.2 August 2023: pp.136-146	This study is a non- supportive and non- supportive study. The factors of knowledge level, perception, availability of supplies, family support, and friend support are categorized according to the optimal cut off mean.	This study found 21.7%. Gender factors, perception, availability of supply, support. Given the results Of the study which stated that the level of knowledge factor did not have a significant effect, it is necessary to create policies/regulation s to prohibit the use of electronic cigarettes.

14	Cahyo Timur	Review of Electronic Cigarette Use Among Adolescents from the Perspective of Differential Association Theory	Action Research Literate Vol. 8, No. 8, Agustus 2024	Observations use qualitative types by obtaining conclusions from several previous observations.	The use of e-cigarettes or vapes among adolescents and active smokers can be explained through the perspective of differential association theory, which emphasizes the influence of the social environment on individual behavior. Although vapes are considered a healthier alternative to tobacco cigarettes because they produce vapor, they still contain harmful chemicals such as nicotine. The use of vapes among adolescents is very risky, especially for brain development which is still in its infancy. In this theory, adolescent behavior influenced by interactions with their social environment, including peers and norms in the media. If e-
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					cigarette use is considered normal in their environment, teenagers are more likely to accept and try vaping.
15.	Karmelia Nova Diana	Relationship between Peers and E- Cigarette Use Behavior among Students	World Public Health Journal Vol.9.No.4 (2020)	This research will use a research design, namely cross sectional.	Based on table 1 above, the most respondents are female, totaling 156 respondents with a percentage of 72.9% and male respondents totaling 58 people with a percentage of 27.1%. The age of respondents with the highest number is 19 years old with a percentage of 44.9% Based on table 1 above, the most respondents are female, totaling 156 respondents with a percentage of 72.9% and male respondents totaling 58 people with a percentage of 27.1%. The age of respondents with the highest number is 19 years old with a percentage of 44.9% of the dependents in this study were peers that respondents

					had influential as many as 180 respondents with a percentage of 84.1% while those who were not influential were 34 respondents with a percentage of 15.9%.
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The purpose of this study was to understand the factors that influence the use of electronic cigarettes (vape) for generation Z and their impact on physical, psychological and social health based on a literature study of 15 articles, several important findings were obtained

Factors that influence the use of vape, Internal factors and external factors knowledge most teenagers have a low level of knowledge about the dangers of electronic smoking self-confidence teenagers with high self-confidence find it easier to try vape as a form of identity search, men tend to use vape more than women the second is external factors include peer influence, lack of family supervision, easy access to vape and promotion on social media many teenagers have the wrong perception that vape is safer than conventional cigarettes even though it is the same as vape still contains nicotine and other hazardous substances

The impact of using vape is very serious including physical such as asthma, chronic cough, shortness of breath and lung injury while psychological includes the risk of depression and nicotine dependence and the last is social includes increasing consumer behavior and making vape a status symbol several studies emphasize the importance of health education, parental supervision, and government policy to limit the use of vapes among teenagers. The conclusion of the use of electronic cigarettes has a negative impact on the physical, mental and social health of generation Z.

CONCLUSION

Conclusion This study shows that the behavior of using e-cigarettes (vape) among Generation Z is influenced by various internal factors such as level of knowledge, self-confidence, and gender, as well as external factors such as peer influence, family support, accessibility, and

social media.

Many teenagers have the wrong perception that e-cigarettes are safer than conventional cigarettes. In fact, the use of vape carries various serious health risks, including disorders of the respiratory system (such as asthma and shortness of breath), psychological risks (such as nicotine addiction and depression), and social impacts in the form of increased consumer behavior.

Therefore, comprehensive prevention efforts are needed through ongoing education for teenagers, active involvement from families and schools, and the implementation of strict regulations from the government to limit access to e-cigarettes. With these steps, it is hoped that the number of vape users among teenagers can be reduced and the risk of adverse health impacts can be minimized.

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