

Analysis of Social and Psychological Determinants of Vape Use in Adolescents and Its Implications for Healthy Lifestyles

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ABSTRACT

The purpose of this study was to analyze the factors that promote the use of e-cigarettes (vape) and their impact on adolescent lifestyle. By examining the literature from various scientific journals, it was determined that the effects of age, family environment, social media and low risk perception are important factors in increasing the use of vape among young people or adolescents. In addition, psychological reasons such as desire, stress, curiosity and the desire to mature play an important role. The appeal of vape includes a variety of flavors and the ability to change smoke, increasing the positive image in the eyes of young people. In fact, e-cigarettes contain harmful substances that can cause serious health problems. Therefore, continuous education, advertising restrictions and social environment management are needed to reduce the growth rate of e-cigarette users.

Keywords: *electronic cigarette, adolescent, social influence, lifestyle, health*

INTRODUCTION

Cigarettes are processed tobacco products, both cigars and other forms, that contain nicotine and tar from plants such as *Nicotiana tabacum* and *Nicotiana rustica*.¹ Cigarettes are divided into two types, namely conventional and electric. Conventional cigarettes are generally cylindrical in shape with a length of 70-120 mm and contain crushed tobacco leaves. In contrast, e-cigarettes consist of key components such as batteries, cartridges, and heating elements.² Both active and passive smokers are equally exposed.³

According to WHO (2018), the number of global smokers continues to grow,

reaching around 1.1 billion people, with 80% coming from developing countries such as Indonesia.⁴ Data from the 2023 Indonesian Health Survey recorded around 70 million active smokers in Indonesia, with 7.4% of them aged between 10-18 years.

E-cigarettes or vapes emerged as a new alternative, using batteries to heat the metal elements that produce the vapor. Recent variants such as POD offer a more compact and practical design, making them increasingly popular. Vaping has been widely known in Indonesia since 2012.⁵ However, the POM Agency emphasizes that vapes contain harmful compounds such as liquid nicotine, propylene glycol, diethylene glycol,

and glycerin, which can produce carcinogenic substances when heated.⁶

Social factors such as peer influence, environment, and exposure to advertisements greatly influence adolescents' decision to start vaping. Teens often see vaping as a symbol of status or maturity. Some even feel more confident due to the more expensive price of vapes and their supposedly exclusive appearance. On the other hand, serious health impacts such as lung disorders and chronic diseases are a real threat. In addition, the smoke emitted produces a variety of shapes and odors, so informants feel confident when using vapes.⁷

One of the risks of using e-cigarettes is the possibility of damage to the lungs. Liquids used in e-cigarettes often contain nicotine, propylene glycol, as well as a variety of other chemicals that can cause irritation to the lungs, which can lead to serious illnesses such as chronic bronchitis or

chronic obstructive pulmonary disease (COPD).⁸

METHOD

This study uses a literature review method where researchers use reliable scientific data searched through google scholar, pubmed, science direct, oxford academic. This literature review has gone through the stage of ethical review with the code No.10.094.C/KEPK-FKMUMJ/V/2025. The literature review aims to search for and find ideas that will be formulated in accordance with the researcher's goals. The literature review in this study aims to obtain conclusions regarding the Analysis of Social and Psychological Determinants of Vape Use in Adolescents and Its Implications for Healthy Lifestyles.

RESULTS AND DISCUSSION

Table 1. List of Literature Used in Research

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
|-----|--|--|--|--|
| 1. | Víctor José Villanueva-Blasco, Lorena Belda-Ferri, Andrea Vázquez-Martínez | A systematic review on risk factors and reasons for e-cigarette use in adolescents | Tobacco Induced Diseases Vol 23 Year 2025 pages 1-25 | Out of a total of 895 studies analyzed, only 50 met the inclusion criteria. The main risk factors driving e-cigarette (EC) use among adolescents include social environment acceptance |

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
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| | | | | and usage among peers or family members (reported in 13 studies), being male (10 studies), perception of low risk (6 studies), younger age (3 studies), and greater financial resources (3 studies). |
| 2. | Izquierdo-Condoy, Juan S., Sosa, Kenny Ruiz, Salazar-Santoliva, Camila, Restrepo, Natalia, Olaya-Villareal, Guillermo, Castillo-Concha, Juan S., Loaiza-Guevara, Valentina, Ortiz-Prado, Esteban | E-cigarette use among adolescents in Latin America: A systematic review of prevalence and associated factors | Preventive Medicine Reports Vol 49 Year 2025 page 102952 | The surrounding environment has a significant impact, especially when adolescents live with family members who smoke, which is closely linked to a higher tendency to use e-cigarettes. Peer pressure also plays an important role—having friends who use e-cigarettes substantially increases the likelihood of adolescent use. |
| 3. | Putri, Monifa; Bahriyah, Fitriyani | Factors influencing the use of e-cigarettes (vapes) among students at Indragiri Institute of Technology and Business | Zona Kebidanan Vol 13 No. 3 Year 2023 page 10 | Out of 96 respondents, 9.4% were found to use e-cigarettes, the majority of whom were female (62.5%). Common reasons for use include wanting to look cool, mature, or gain recognition (29.2%). The most influential factors include social environment (35.4%), family (33.3%), and lifestyle (30.2%). Chi-square test showed all three |

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| | | | | factors had a significant relationship with vape use ($p = 0.000$). |
| 4. | Gentzke, Andrea S., Wang, Teresa W., Cornelius, Monica, Park-Lee, Eunice, Ren, Chunfeng, Sawdey, Michael D., Cullen, Karen A., Loretan, Caitlin, Jamal, Ahmed, Homa, David M. | Tobacco Product Use and Associated Factors Among Middle and High School Students—National Youth Tobacco Survey, United States, 2021 | MMWR Surveill Summ Vol 71 No. 5 Year 2022 page 1-29 | Among students who had ever used e-cigarettes, the most common reasons for first-time use were “my friends use them” (57.8%), “I was curious” (47.6%), “I felt anxious, stressed, or depressed” (25.1%), and “to experience the effects of nicotine” (23.3%). High school students most frequently cited “my friends use them” (60.6%), while middle school students cited “I was curious” (49.4%). |
| 5. | Lilik Setiawan, Widyasih Sunaringtyas | The Relationship Between Adolescents' Knowledge Level About the Dangers of E-cigarettes (VAPE) and Their Vaping Behavior | Jurnal Gawat Darurat Vol 5 No. 2 Year 2023 pages 165–174 | A study in Darungan Village, Pare, showed that out of 168 adolescents, the majority had good knowledge about the dangers of e-cigarettes (76.2%) and exhibited good vaping behavior (91.1%). Spearman Rho test showed a significant but weak positive correlation between knowledge level and behavior. The higher the knowledge about the dangers of vaping, the |

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| | | | | lower the tendency to use it. |
| 6. | Lindpere, Vanda, Winickoff, Jonathan P., Khan, Ali S., Dong, Jianhu, Michaud, Tzeyu L., Liu, Jessica, Dai, Hongying Daisy | Reasons for E-cigarette Use, Vaping Patterns, and Cessation Behaviors Among US Adolescents | Nicotine and Tobacco Research Vol 25 Year 2023 pages 975–982 | The 2020 NYTS survey sampled 180 schools with 1,769 active e-cigarette users. Factor analysis identified four main reasons for vaping: (1) as a substitute for conventional cigarettes, (2) product features (e.g., flavors, concealability, vapor tricks), (3) use by family/friends, and (4) curiosity. |
| 7. | Fan, Jiannan, Mao, Tao, Zhen, Shiqi, Xu, Yan, Qu, Chen | Comparative analysis of e-cigarette prevalence and influencing factors among adolescents in Jiangsu Province, China | Frontiers in Public Health Vol 11 Year 2023 | In 2019 and 2021, 12,410 and 12,880 students were surveyed respectively. Results showed an increase in e-cigarette experimentation from 9.34% to 13.07%, and actual use from 2.23% to 3.74% ($P < 0.001$). The most influential factor for vape use was trying conventional cigarettes. |
| 8. | Struik, Laura L., Werstuik, Saige Taylor, Sundstrom, Alyssa, Dow-Fleisner, Sarah, Ben-David, Shelly | Factors that influence the decision to vape among Indigenous youth | BMC Public Health Vol 22 Year 2022 pages 1–10 | The study involved 16 youth from the Syilx First Nation community, aged 11 to 26 years (average 15.8), mostly male (62.5%). All participants were born in Canada, mostly still in school, and lived with 4–5 others in |

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
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| | | | | British Columbia. Most had older peers (81.25%) and were in environments exposed to tobacco products. More than half (56.25%) had tried smoking or vaping. Most had friends who smoked (68.75%) or vaped (87.5%). A total of 31.25% lived with a vaper, 50% had been offered vape liquid, and 62.5% lived near vape shops. |
| 9. | Zahratul Atiqah, Syukaisih, Riri Maharani | Predictors of E-cigarette Use Among Adolescents in Sambelia Subdistrict, East Lombok | Media Kesmas (Public Health Media) Vol 1 No. 3 Year 2021 pages 599–612 | Analysis showed that students' motivations for vaping varied and were personal. Some informants said vaping gave them confidence, as it is perceived to be more expensive and exclusive than tobacco. Moreover, the odorless vapor and ability to make vapor tricks contributed to a “cool” impression. |
| 10. | Asgara, Wiga Jatih, Trisnowati, Heni, Yuningrum, Hesti, Rosdewi, Naomi Nisari | Predictors of E-cigarette Use Among Adolescents in Sambelia Subdistrict, East Lombok | Jurnal Formil (Forum Ilmiah) Kesmas Respati Vol 1 Year 2023 page 82 | The study showed that most respondents (90.2%) came from families with smokers. Fisher Exact test revealed a significant influence between having smoking family members and adolescent e-cigarette use (p-value = 0.002). Teen |

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
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| | | | | vapers often came from less harmonious families with minimal parental attention and supervision, particularly boys who often spent little time at home. |
| 11. | Alabdulqader, Muneera, Almulhim, Mohannad A, Alquraini, Mohammed Ali, Insaf, Alhajri, Muneera S, Alsaleh, Noor A, Al Naim, Abdulrahman, Al Noaim, Khalid I, Majzoub, Rabab A, Alalawi, Zainab H | Exploring the Rise of E-cigarette Use Among Male Adolescents in Al-Ahsa, Saudi Arabia: Prevalence, Patterns, and Influencing Factors | Cureus Vol 16 Year 2024 pages 1–13 | The study showed a prevalence of 17.4% e-cigarette use, with 12.6% exclusive use and 4.8% dual use with tobacco. Key findings included initiation as early as eight years old, frequent use, and motivations influenced by peers (61.4%), curiosity (31.3%), and flavor preferences (26.5%). Main acquisition sources were online platforms (34.9%) and malls (28.9%). Most participants were aware of nicotine content (84.3%) and considered vaping harmful (86.7%). About 69.9% planned to quit, 44.6% intending to do so within 30 days. There was also a significant relationship between vaping, education level, and peer influence. |
| 12. | Le, Thi Thanh Huong; Le, Tu Hoang; Le, Minh | Exposure to E-Cigarette Advertising and Its Association | Tobacco Use Insights Vol 16 Year 2023 page 1179173X2311796 | About 7.4% of participants admitted to having used e-cigarettes, while 4.8% intended to use them. E- |

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
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| | Dat; Nguyen, Tien Thang | With E-Cigarette Use Among Youth and Adolescents in Two Largest Cities in Vietnam 2020 | | cigarette advertisements on social media (Facebook, Twitter, Instagram, YouTube, etc.) were the most common exposure source and had a positive correlation with youth vaping tendencies (OR = 3.38, 95% CI: 1.59–7.14). Referral marketing also increased likelihood of use (OR = 2.68, 95% CI: 1.03–6.95). Other motivating factors included attractive colors and free samples. |
| 13. | Tristanto, Ardyansyah; Matulesy, Andik; Aulia Ul Haque, Sayidah | Smoking behavior among adolescent e-cigarette users: What about peer attitude? | INNER: Journal of Psychological Research Vol 1 No. 2 Year 2022 pages 76–84 | E-cigarettes were first invented by a company in China and quickly spread with famous brands like NJOY, Epuffer, Blu Cig, and Green Smoke. They consist of three main components: a battery, an atomizer (heater), and a nicotine liquid cartridge. Today, there are over 460 e-cigarette brands with around 7,700 nicotine liquid flavors. The first generation was refillable or disposable; later generations evolved with trends. A 2018 study showed e-cigarette prevalence at 2.8% for <10 years, 10.6% for ages 10– |

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| | | | | 14, 10.5% for ages 15–19, and 7% for ages 20–24. By occupation, usage was 12.1%, with a small gender gap (males 2.8%, females 2.75%). |
| 14. | Jha, Vedika; Kraguljac, Alan | Assessing the Social Influences, Self-Esteem, and Stress of High School Students Who Vape | Yale Journal of Biology and Medicine Vol 94 Year 2021 pages 95–106 | This study found that high school students who vape are mainly influenced by peers and the need to relieve stress. Vaping teens reported higher stress levels than non-vapers, with the highest stress among recent quitters. Family smoking/vaping history and the ability to vape indoors also affected habits. No significant self-esteem difference was found between vapers and non-vapers, contrary to college students, where vapers showed lower self-esteem using the Rosenberg Self-Esteem Scale. |
| 15. | Asgara, Wiga Jatih; Trisnowati, Heni; Yuningrum, Hesti; Rosdewi, Naomi Nisari | Predictors of E-cigarette Use Among Adolescents in Sambelia Subdistrict, East Lombok | Jurnal Formil (Forum Ilmiah) Kesmas Respati Vol 8 No. 1 Year 2023 page 82 | Teen smoking is influenced by several factors such as peer influence, environment, and advertising. Teens often smoke to be accepted in a group, appear cooler, or look more mature. However, smoking has |

| No. | Researcher Name | Heading | Publications and Titles | Conclusion |
|-----|-----------------|---------|-------------------------|--|
| | | | | many health consequences not only for the smoker but also for those around them. Substances in cigarettes can damage respiratory and vital organs, causing diseases such as periodontitis, pharyngitis, laryngitis, bronchitis, lung cancer, and COPD. |

Based on a search of various valid scientific sources, it can be concluded that various risk factors contribute to the increase in e-cigarette use among adolescents. The influence of the social environment, especially from peers and family members who also vape, proved to be the dominant factor. In addition, adolescent boys, young age, the amount of pocket money they have, and interest in promotions or advertisements also reinforce this tendency.

The assumption that vaping is safer than traditional cigarettes also triggers a desire to try, especially coupled with the perception that vaping makes its users seem more mature, cool, and masculine ⁹ Other psychological factors such as curiosity, efforts to manage stress, enjoyment of the flavors in vape liquid, and the pleasure of playing thick smoke are also the main

motivations for adolescents to use e-cigarettes ¹⁰.

Findings from a number of journals show that vape consumption among adolescents is the result of a complex interaction between social influences, economic conditions, psychological aspects, and exposure to digital media. Support from family and peers against vaping use is decisive. ¹¹This is the same as the ¹² and ¹³ that discuss the importance of the social environment

Social media also plays an important role in shaping positive perceptions of vaping use, making it seem modern and trendy ^{14 15} The visual dissemination of products through this platform is very effective in attracting the attention of teenagers. In addition, the diverse flavor variants and ease of use add to the appeal of vaping ¹⁶

Psychologically, adolescents tend to use vaping as a way to reduce mental and emotional distress such as anxiety and stress¹⁷ are also simply driven by curiosity¹⁸ It shows that the aspect of adolescent mental health also needs to be considered in mediating prevention. Although many believe that vaping is safer, scientific facts show that e-cigarette consumption still contains serious health risks¹²

Educational encouragement is one of the effective ones.¹⁹ that increasing knowledge about the dangers of e-cigarettes is able to suppress e-smoking behavior. Therefore, educational programs in schools, families, and community environments must be intensified. Meanwhile, the results of⁷ using e-cigarettes make users more confident because the price of e-cigarettes is more expensive than conventional cigarettes.

Economic factors such as pocket money also give this habit show that not only social and psychological factors are influential, but also economic factors, and also come from unhappy households where parents do not pay attention.⁷ Overall, to overcome the increase in the use of e-cigarettes in adolescents, efforts are needed which include restricting e-cigarette advertisements on social media, health

education about the dangers of e-cigarettes, strengthening supervision in the family.

CONCLUSION

The use of e-cigarettes (vapes) by adolescents is influenced by various related factors such as social influences, psychological factors, economic factors, and media exposure. Many teenagers consider e-cigarettes to be a modern, cool, odorless lifestyle, as well as unique flavor variants and thick smoke can be modified.

Although many people have the perception that e-cigarettes are safer than conventional cigarettes, it is scientifically proven that e-cigarettes carry serious health risks with various diseases ranging from lung irritation and chronic respiratory diseases. The solution to this problem is strengthening education at school, education in the family, education on social media, limiting cigarette advertising, and increasing supervision in the family environment.

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