

Measuring the message of Vaping's Harm Exposure on Followers' Attitudes and Intentions

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Abstract

This study investigates the influence of exposure to vaping harm information, particularly through the TikTok account @geraldvincentt, on followers' attitudes and their intention to not quit vaping. As e-cigarette use continues to rise among young adults, understanding how health messages on social media affect user behavior becomes increasingly important. Grounded in the Theory of Reasoned Action (TRA), this study explores whether exposure to negative health content can shape attitudes and reduce the intention to continue vaping. A quantitative approach was used, involving 400 respondents who follow @geraldvincentt. Data were collected using a Likert-scale questionnaire distributed via Google Form and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that exposure to vaping harm content significantly leads to more negative attitudes toward vaping and decreases the intention to continue its use. Furthermore, attitude mediates the relationship between information exposure and behavioral intention. The model demonstrates moderate explanatory power and predictive relevance. These findings suggest that while exposure to information alone may not immediately change behavior, shaping attitudes is a crucial step toward influencing behavioral intentions. This highlights the role of influencers like @geraldvincentt in strengthening public health messages through digital platforms.

Keywords: TikTok Content; Knowledge; Vaping; Intention; Attitude

Abstrak

Penelitian ini mengkaji pengaruh paparan informasi bahaya vaping, khususnya melalui akun TikTok @geraldvincentt, terhadap sikap pengikut dan niat mereka untuk tidak berhenti menggunakan vape. Dengan meningkatnya prevalensi penggunaan rokok elektrik di kalangan dewasa muda, memahami bagaimana pesan kesehatan di media sosial memengaruhi perilaku menjadi hal yang penting. Penelitian ini didasarkan pada Theory of Reasoned Action (TRA) untuk melihat apakah paparan konten kesehatan negatif di media sosial dapat membentuk sikap dan mengurangi niat melanjutkan penggunaan vape. Penelitian ini menggunakan pendekatan kuantitatif dengan melibatkan 400 responden yang merupakan pengikut akun @geraldvincentt. Data dikumpulkan melalui Google Form berskala Likert dan dianalisis menggunakan metode Partial Least Squares Structural Equation Modeling (PLS-SEM). Hasil penelitian menunjukkan bahwa paparan konten bahaya vaping secara signifikan membentuk sikap yang lebih negatif terhadap vape dan menurunkan niat untuk melanjutkan penggunaannya. Sikap juga berperan sebagai mediator dalam hubungan antara paparan informasi dan niat perilaku. Model menunjukkan daya jelas (explanatory power) dan relevansi prediktif yang sedang. Temuan ini mengindikasikan bahwa meskipun informasi saja tidak selalu mengubah perilaku secara langsung, membentuk sikap adalah langkah penting menuju perubahan niat perilaku. Hal ini menyoroti peran influencer seperti @geraldvincentt dalam memperkuat pesan kesehatan publik melalui platform digital.

Kata Kunci: Konten Tiktok; Pengetahuan; Vape; Niat; Sikap

INTRODUCTION

Health is an extremely important aspect and a priority for every individual. As humans, it is essential to maintain and pay attention to our health to ensure optimal well-being. Smoking remains one of the most pressing global challenges, contributing to a multitude of adverse health effects and imposing a significant economic burden on individuals and society (Adnan & Samed, 2024). In Indonesia, tobacco consumption remains a significant public health concern. Based on the latest data from Tobacco Atlas in 2025, the adult smoking prevalence in Indonesia reached 28.70%. The prevalence was considerably higher among men at 56.00%, compared to only 1.40% among women. Furthermore, data from 2022 reported that the number of adult smokers in Indonesia reached 74,916,000 people, consisting of 72,711,000 men and 2,205,000 women, indicating a substantial gender disparity in smoking behavior. In addition, the youth smoking prevalence in Indonesia in 2023 reached 8.48%, with a prevalence of 15.32% among boys and 1.24% among girls, showing that smoking behavior has also become prevalent among younger age groups.

E-cigarettes, which come in many varieties, are becoming an increasingly important health issue of concern around the world. While they were initially considered a safer alternative to conventional tobacco cigarettes (Facts about E-Cigarettes | FDA, 2023), recent studies have shown that vaping or e-cigarette use also carries significant health risks (Polosa, O'Leary, Tashkin, Emma, & Caruso, 2019). As per the Food and Drug Administration (FDA) definition, e-cigarettes are devices that enable individuals to breathe in an aerosol that includes nicotine or other compounds. Unlike traditional cigarettes, e-cigarettes rely on batteries and heating elements to vaporize e-liquid from a refillable pouch, releasing an aerosol containing various chemicals (Polosa, O'Leary, Tashkin, Emma, & Caruso, 2019).

Users and enthusiasts of e-cigarettes are very diverse, not only men who use e-cigarettes but many women also have an interest in consuming these e-cigarettes. Many women are just starting or trying this e-cigarette so that they become new users and not even a few decide to become active smokers. Reporting from the results of Statista survey data released in December 2022, the percentage of e-cigarette use based on gender is 64% for men and 36% for women from the total Indonesian vape users.

Based on data from Badan Pusat Statistik (BPS) in 2025, approximately 1.22% of the population aged 15 years and above in Indonesia consumed electronic cigarettes or vape products. Considered a safer alternative to conventional cigarettes and having lower health risks, many individuals are turning to e-cigarette use in the belief that it can help them reduce the health risks associated with smoking (Dobbs, Branscum, & Wilkerson, 2020). However, this perspective is not entirely precise. Studies have found that vapes can cause respiratory problems, lung damage (EVALI), and increase the risk of nicotine addiction (Cao, et al., 2020). This misconception, coupled with the marketing strategies and appealing features of e-cigarettes, has led to a surge in usage, especially among youth and students. Indonesia stands out as a country where both smoking and vaping rates are alarmingly high, making it a critical context for research on health communication and behavior.

In the digital age, social media platforms have become major sources of information and influence, particularly for younger generations. Platforms like TikTok have fundamentally transformed how health information is consumed, shared, and reacted to. Among the many content creators addressing health topics on TikTok, @geraldvincentt stands out due to his ability to discuss complex issues such as the dangers of vaping in an engaging and accessible manner. Usually his content is taken from people's questions from the comment section and then he will research and explain by uploading videos.

The decision to select @geraldvincentt's content as the subject of this study stems from his consistent and influential dissemination of information, particularly regarding the risks of vaping. His videos often generate significant audience interaction—ranging from agreement and intentions to quit vaping, to scepticism and resistance. These diverse responses offer a valuable opportunity to explore the complex relationship between exposure to health information and individual behavior. The viral

nature of his content and the broad spectrum of feedback it generates suggest that @geraldvincentt is not just a source of information but also an influencer of attitudes and behaviors. By analyzing how his content impacts viewers, this study seeks to understand the role of social media health communication in shaping public perception, particularly within the framework of the Theory of Reasoned Action.

A scoping review by Adekeye & Exten, 2025, on the impact of social media on adolescent e-cigarette use found that higher frequency of social media use correlates with increased likelihood of vaping initiation. This aligns with findings from the study “Knowledge, Attitudes, and Behavior of E-Cigarette Users in Indonesia,” which highlights that Indonesian adolescents are heavily influenced by vaping content on social media, shaping their attitudes and behaviors toward vaping (Masan et al., 2023). Similarly, research conducted by Aldiansyah et al., 2024, “*Pengaruh Intensitas Komunikasi Peer Group Dan Terpaan Celebrity Endorser Di Media Sosial Terhadap Minat Menggunakan Rokok Elektrik (Vape) Pada Remaja*” reveals that social media influencers significantly increase vaping interest among teenagers, underscoring the persuasive power of digital peer networks.

Despite these insights, a gap remains in understanding how exposure to vaping harm information—as opposed to promotional content—affects followers’ attitudes and intentions, particularly intentions to not quit vaping. The study “Quitting e-cigarettes: Quit attempts and quit intentions among youth and young adults” shows that perceived harm is a critical predictor of quit intentions, but few studies have explored how harm messages conveyed through social media influencers mediate this relationship in the Indonesian context (Cuccia et al., 2021).

This study aims to fill this gap by investigating the influence of exposure to vaping harm information on followers’ attitudes and intentions to not quit vaping. Guided by the Elaboration Likelihood Model (ELM), which explains how individuals process persuasive messages through central and peripheral routes, this research explores how exposure to harm-related content shapes cognitive evaluations (attitudes) and subsequent behavioral intentions. In this framework, exposure to vaping harm information is the independent variable, attitude toward vaping serves as a mediator, and intention to not quit vaping is the dependent variable.

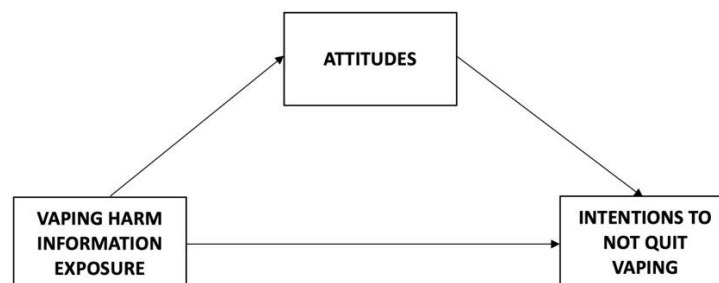


Figure 1. Research Framework
(sources : author, 2024)

This study tests four main hypotheses: (1) exposure to vaping harm information influences attitudes toward vaping; (2) exposure influences intentions to not quit vaping; (3) attitudes toward vaping are related to intentions to not quit; and (4) attitudes mediate the relationship between exposure and intention. These hypotheses are grounded in the Elaboration Likelihood Model and aim to clarify the cognitive pathways through which social media health communication affects vaping-related intentions.

This study investigates how exposure to information on the harms of vaping influences individuals’ attitudes towards vaping and their intentions to quit vaping. It applies the Theory of Reasoned Action to understand how awareness of vaping harm affects attitudes and behavioural intentions, utilizing survey methods to measure these effects among diverse participants.

METHOD

This research applied quantitative method, by measuring variables using instruments, and the resulting numerical data is analysed using statistical techniques (Creswell, 2009). The type of descriptive research used by the researcher is a survey. By using a survey, researchers will use a questionnaire as a research instrument. In this study, researchers used a Likert scale. Based on the time dimension, the research conducted is a Cross-Sectional study. In this study, there are variables that can be seen from the research title which is divided into three variables, namely variable x, variable y and variable z. Variable x is information exposure of the dangers of smoking (media exposure), variable y (Intention not to quit vaping) and variable z (attitude towards vaping).

The population in this study focuses on using the social media account @geraldvincentt on TikTok, which has 7.6 million followers, and more specifically on one of the videos discussing the author's topic where there were 817.6 thousand viewers, 49.2 thousand likes of the video, and 1,435 comments. The sample includes both men and women, who use vapes and have watched or interacted with this particular content in social media called TikTok. The sample used in this research is the followers of @geraldvincentt, where it is known that there are 7.6 million followers. Based on this, in determining the number of respondents needed, the authors used the slovin formula,

$$n = \frac{N}{1 + Ne^2}$$

Information :

n = number of samples

N = number of population

e = Error level, which the maximum error limit is 5% or 0,05

$$\begin{aligned} n &= \frac{7.600.000}{1 + (7.600.000 \times 0,05^2)} \\ n &= \frac{7.600.000}{1 + (7.600.000 \times 0,0025)} \\ n &= \frac{7.600.000}{1 + 19.000} \\ n &= \frac{7.600.000}{19.001} \\ n &= 399,978948 \end{aligned}$$

Based on the above calculations, it was found that the sample for this study was 399.978948 as the minimum number, but the researchers rounded the number to 400 to make it easier to collect questionnaire data later.

In this study the authors used a non-probability sampling technique. This technique can be used by researchers with the criteria of people who watch TikTok @geraldvincentt content videos and are also active in using vape. In this study, the author decided to choose a questionnaire as primary data. Primary data is original and fresh data collected directly by researchers as the first hand (M(Adekeye & Exten, 2025; Ajzen & Fishbein, 2005; Aldiansyah et al., 2024; Brankovic & Samed, 2024; Cao et al., 2020; Creswell & David Creswell, n.d.; Cuccia et al., 2021; Dobbs et al., 2020; *Facts about E-Cigarettes* / FDA, n.d.; Fithria et al., 2021; for Disease Control, 2011; Hair & Alamer, 2022; Jane C. Orcullo & Hui San, 2016; Martini et al., 2022; Masan et al., 2023; Pokhrel et al., 2018; Polosa et al., 2019; Priyono, n.d.; Prof. Dr. Lijan Poltak Sinambela, n.d.; Sari, 2023; Shmueli et al., 2016)azhar, Anjum, Anwar, & Khan, 2021). This primary data has several types such as observation methods, interview methods, distributing questionnaires, through schedules, and additional techniques including using mechanical devices, through projective techniques, depth interviews, content analysis, pantry audits, distributary audits, consumer panels, and warranty cards. According to the explanation, the author decided to choose questionnaires as primary data in this research. This questionnaire will be

distributed to respondents and distributed using an online platform, namely Google Form. The author decided to choose a questionnaire because this method is more efficient in terms of time, effort, and cost. Secondary data is data that has been previously collected by other people and has been tested or has passed the statistical process (Mazhar, Anjum, Anwar, & Khan, 2021). In this research, secondary data is obtained from books, online news articles, and also several previous journals that are relevant to the topic of this research.

In this study, researchers used Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the relationship between latent variables in the research model. PLS-SEM is a variant-based analysis method that is suitable for research with a focus on predicting relationships between variables, especially in complex contexts and involves data that does not always fulfill the assumption of normal distribution (Hair, Hult, Ringle, & Sarstedt, 2022). There are several steps of testing statistical analysis of data in the SEM PLS method: descriptive statistics analysis, measurement model assessment (indicator reliability, internal consistency reliability, convergent validity and discriminant validity), structural model assessment (collinearity assessment, significance and relevance of the structural model relationships, explanatory power and predictive relevance).

RESULTS AND DISCUSSION

Respondent Characteristic

The respondent criteria used are that the respondent uses TikTok or Instagram social media, the respondent follows the account of @geraldvincentt on TikTok or Instagram, and the respondent is a vape user. Based on the questionnaire distributed by the researcher, there are 400 respondents who have filled out the questionnaire. In the diagram above, it shows that 274 respondents or 68.5% are male. Respondents who were female were 126 respondents or 31.5%. This data indicates that most of these respondents are male.

Descriptive Statistic

Table 1. Results of descriptive statistical analysis of social media content of the dangers of vaping (media exposure) variable (X)

Statement	Mean	Total Score	Ideal Score	Percentage
The content of @geraldvincentt concerning the effects of vaping and smoking are very informative.	4,2	1692	2000	84,60%
The content of @geraldvincentt contain information about the danger of vaping and smoking.	4,2	1674	2000	83,70%
The content of @geraldvincentt provide useful new knowledge about the effects of vaping.	4,3	1702	2000	85,10%
The content of @geraldvincentt on the dangers of vaping are very educational.	4,2	1699	2000	84,95%
The content of @geraldvincentt is delivered very attractively.	4,2	1661	2000	83,05%
The content of @geraldvincentt is engaging and captivating, making it enjoyable to learn about vaping-related topics.	4,2	1684	2000	84,20%
The content of @geraldvincentt allowed audience to interact by commenting.	4,2	1688	2000	84,40%
The content of @geraldvincentt is interactive.	4,2	1693	2000	84,65%
13493				
16000				
84,33%				

Based on the analysis results show that the dimensions of social media content have been rated quite high by respondents, shows that respondents agree that social media content from @geraldvincentt has an important role in providing information, educating, entertaining, and interactive.

Table 2 Results of descriptive statistical analysis of attitude towards vaping variable (Z)

Statement	Mean	Total Score	Ideal Score	Percentage
Vaping or not everyone will die eventually	3,5	1417	2000	70,85%
Vaping can release my stress	3,4	1377	2000	68,85%
Vaping makes me addicted	3,5	1416	2000	70,80%
Vaping can improve social relationships	3,5	1399	2000	69,95%
Vaping is generally accepted in social circle	3,5	1399	2000	69,95%
I feel more confident if when I vape	3,5	1419	2000	70,95%
Vaping is something cool to me	3,5	1397	2000	69,85%
I am seen as an adult if I vape	3,5	1410	2000	70,50%
Sum of total scores				11234
Sum of ideal scores				16000
Percentage				70,21%

Table 2 shows the results of the descriptive analysis which in the context of the 5-point Likert scale describes a position that tends to be neutral or in the middle of the spectrum of respondents' perceptions, meaning that most respondents did not explicitly express agreement or rejection of the statements contained in the variable indicators. This score indicates ambiguity or uncertainty in audience perception, which can be caused by various factors.

Table 3. Results of descriptive statistical analysis of intention not to quit vaping or to keep vaping variable (Y)

Statement	Mean	Total Score	Ideal Score	Percentage
I will continue vaping because it is safer than tobacco cigarettes	3,6	1421	2000	71,05%
I will continue vaping even though it may cause health problems	3,5	1418	2000	70,90%
I will continue vaping because it helps me reduce stress	3,5	1407	2000	70,35%
I will continue vaping because of the pleasant smell of the smoke	3,5	1394	2000	69,70%
I will keep vaping because I make a friend	3,5	1396	2000	69,80%
I will find it easier to vape if I hang out with friends who vape.	3,5	1390	2000	69,50%
I will keep vaping because it is more convenient than smoking cigarette	3,5	1404	2000	70,20%
I will not stop vaping in the near future	3,5	1390	2000	69,50%
I plan to continue vaping in the next few months	3,5	1409	2000	70,45%
I expect to keep using vaping products in the future	3,5	1397	2000	69,85%
Sum of total scores				14026
Sum of ideal scores				20000
Percentage				70,13%

Sources : Processed research data, 2026

Based on the analysis results in Table 3 which describes the descriptive statistics for this neutrality indicates that respondents tended not to express strong agreement or disagreement with the items presented. In essence, their attitudes toward continuing to vape appear to be undecided or ambivalent. In summary, while there is a mild inclination toward continuing the behaviour, the overall responses lean more toward the middle of the spectrum, emphasizing a lack of strong conviction in either direction.

Measurement Model Assessment (Outer Model)

a. Indicator Reliability

Table 4 .Outer Loading Test

	Attitude towards Vaping	Intention to Not Quit Vaping	Vaping Harm Information Exposure
ANQ1	0.763		
ANQ2	0.772		
ANQ3	0.765		
ANQ4	0.731		
ANQ5	0.73		
ANQ6	0.739		
ANQ7	0.747		
ANQ8	0.757		
INQ1		0.74	
INQ10		0.773	
INQ2		0.757	
INQ3		0.789	
INQ4		0.728	
INQ5		0.745	
INQ6		0.759	
INQ7		0.764	
INQ8		0.766	
INQ9		0.744	
SMC1			0.777
SMC2			0.779
SMC3			0.774
SMC4			0.742
SMC5			0.776
SMC6			0.759
SMC7			0.781
SMC8			0.777

Sources : Processed research data, 2026

Based on the validity test results presented in Table 4, all indicators of the three main constructs in this study—Attitudes Towards Vaping, Intention to Not Quit Vaping, and Exposure to Vaping Hazards—showed standardized external loading values above 0.70. According to Hair & Alamer (2022), indicators are considered to have adequate reliability if their outer loading values are ≥ 0.708 , as this indicates that the indicator explains at least 50% of the variance of the underlying construct. Therefore, all indicators in this study met the indicator reliability criteria and were considered suitable for further analysis.

b. Internal Consistency Reliability

According to Hair & Alamer (2022), values of 0.70 or higher are considered acceptable for established research, while values between 0.60 and 0.70 may be acceptable in exploratory studies.

Table 5. Internal Consistency Reliability Test

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Attitude towards Vaping	0.889	0.89	0.912	0.563
Intention to Not Quit Vaping	0.917	0.918	0.93	0.573
Vaping Harm Information Exposure	0.902	0.904	0.921	0.594

Sources : Processed research data, 2026

Table 5 illustrates that all latent constructs meet the internal consistency reliability standards. The evaluation results indicate that Cronbach's Alpha values for all constructs are above 0.7, with the highest score found in the Intention to Not Quit Vaping construct (0.917), indicating strong internal reliability. These findings confirm that each set of indicators reliably measures its corresponding construct and can be confidently used in the next stage of analysis.

c. Convergent Validity

According to Hair & Alamer (2022), a construct is said to meet convergent validity if its AVE value exceeds 0.50, which means that the construct is able to explain more than 50% of the variance of its indicators. Based on the test results, all constructs in this study have met the convergent validity criteria. The Attitude towards Vaping construct has an AVE value of 0.563, Intention to Not Quit Vaping of 0.573, and Vaping Harm Information Exposure of 0.594. These values indicate that each construct is able to explain more than 50% of the variance of its indicators. Thus, it can be concluded that the indicators in each construct have good consistency in measuring the intended construct, and each construct has sufficient convergent validity to be used in further analysis.

d. Discriminant Validity

One of the primary approaches for assessing discriminant validity is the Fornell-Larcker criterion. According to this method, a construct is said to have discriminant validity if the square root of its AVE exceeds the highest correlation it shares with any other construct in the model (Hair & Alamer, 2022). This comparison confirms that a construct is more strongly related to its own indicators than to other constructs. The assessment results are presented in the table below.

Table 6. Fornell-Larcker Criterion

	Attitude towards Vaping (Z)	Intention to Not Quit Vaping (Y)	Vaping Harm Information Exposure (X)
Attitude towards Vaping (Z)	0.75		
Intention to Not Quit Vaping (Y)	0.569	0.757	
Vaping Harm Information Exposure (X)	-0.345	-0.368	0.771

Sources : Processed research data, 2026

Referring to Table 3, these outcomes indicate that each construct is more closely related to its own indicators than to other constructs, affirming that they are conceptually and empirically distinct. Therefore, the measurement model is shown to have satisfactory discriminant validity.

Table 7. Cross Loading Test

	Attitude towards Vaping	Intention to Not Quit Vaping	Vaping Harm Information Exposure
ANQ1	0.763	0.454	-0.27
ANQ2	0.772	0.432	-0.284
ANQ3	0.765	0.423	-0.196
ANQ4	0.731	0.407	-0.276
ANQ5	0.73	0.463	-0.267
ANQ6	0.739	0.424	-0.257
ANQ7	0.747	0.417	-0.273
ANQ8	0.757	0.384	-0.24
INQ1	0.404	0.74	-0.299
INQ10	0.459	0.773	-0.256
INQ2	0.413	0.757	-0.287
INQ3	0.433	0.789	-0.245
INQ4	0.399	0.728	-0.271
INQ5	0.454	0.745	-0.278
INQ6	0.42	0.759	-0.302
INQ7	0.499	0.764	-0.269
INQ8	0.431	0.766	-0.282
INQ9	0.376	0.744	-0.294
SMC1	-0.246	-0.258	0.777
SMC2	-0.284	-0.328	0.779
SMC3	-0.276	-0.316	0.774
SMC4	-0.216	-0.263	0.742
SMC5	-0.282	-0.262	0.776
SMC6	-0.269	-0.298	0.759
SMC7	-0.276	-0.277	0.781
SMC8	-0.271	-0.25	0.777

Sources : Processed research data, 2026

The results in Table 7 show that each indicator has the highest loading on its own construct compared to other constructs. This indicates that all indicators are correctly measuring their intended variables. Therefore, the model meets the discriminant validity requirement based on the cross-loading analysis.

Table 8. Heterotrait Monotrait ration (HTMT)

	Attitude towards Vaping	Intention to Not Quit Vaping	Vaping Harm Information Exposure
Attitude towards Vaping			
Intention to Not Quit Vaping		0.626	

Vaping Harm Information Exposure	0.382	0.402
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Sources : Processed research data, 2026

According to Hair & Alamer (2022), HTMT values should not exceed 0.90 in order to confirm that each construct is empirically distinct from the others. Overall, the discriminant validity of the measurement model is well established. This is supported by the results of the Fornell-Larcker criterion, cross-loading analysis, and HTMT ratio. Each construct has shown stronger associations with its own indicators than with those of other constructs, and the HTMT values remain below the threshold of 0.90. These findings indicate that the constructs in this study are empirically distinct from one another, thus confirming the model's discriminant validity.

Structural Model Assessment (Inner Model)

a. Collinearity Assessment

Table 9. Variance Inflation Factor (VIF)

	VIF
Attitude towards Vaping -> Intention to Not Quit Vaping	1.135
Vaping Harm Information Exposure -> Attitudes	1
Vaping Harm Information Exposure -> Intention to Not Quit Vaping	1.135

Sources : Processed research data, 2026

To determine whether the model suffers from multicollinearity issues, the variance inflation factor (VIF) was examined. According to Hair & Alamer (2022) a VIF value below 5 indicates that multicollinearity is not a concern. Based on the results shown in the table, all VIF values fall well below the threshold of 5, indicating the absence of multicollinearity among the exogenous variables in the model. These findings confirm that the constructs in the model do not exhibit multicollinearity problems and that the structural relationships can be interpreted reliably.

b. Significance And Relevance Of The Structural Model Relationships

Table 10. Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Attitude towards Vaping -> Intention to Not Quit Vaping	0.502	0.505	0.041	12.118	0.000
Vaping Harm Information Exposure -> Attitude towards Vaping	-0.345	-0.349	0.03	11.434	0.000
Vaping Harm Information Exposure -> Intention to Not Quit Vaping	-0.194	-0.194	0.027	7.224	0.000

Sources : Processed research data, 2026

The results of the path coefficient analysis indicate that all direct and indirect relationships between latent variables are statistically significant at the 0.05 significance level. The relationship between Attitude towards Vaping (Z) and Intention to Not Quit Vaping (Y) shows a positive and significant effect with a path coefficient of 0.502, t-statistic of 12.118, and p-value of 0.000. Since $p < 0.05$, H_0 is rejected and H_1 is accepted, indicating that the more positive an individual's attitude toward vaping, the stronger their intention not to quit. Furthermore, Vaping Harm Information Exposure (X) has a negative and significant effect on Attitude (Z), with a coefficient of -0.345, t-statistic of 11.434, and p-value of 0.000. This supports the rejection of H_0 and acceptance of H_1 , suggesting that increased exposure to information about the harms of vaping leads to more negative attitudes toward vaping. Additionally, Vaping Harm Information Exposure (X) also

negatively and significantly affects Intention to Not Quit Vaping (Y), with a coefficient of -0.194, t-statistic of 7.224, and p-value of 0.000, meaning H1 is accepted. This implies that exposure to vaping harm information directly reduces individuals' intention to continue vaping.

Table 11. Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Vaping Harm Information Exposure -> Attitude towards Vaping -> Intention to Not Quit Vaping	-0.173	-0.176	0.019	8.896	0.000

Sources : Processed research data, 2026

This confirms that attitudes play a mediating role, showing that the influence of vaping harm information on the intention not to quit vaping also occurs indirectly through a shift in individuals' attitudes.

c. Explanatory Power

Table 12. R-Square Values

	R-square	R-square adjusted
Attitude towards Vaping	0.119	0.117
Intention to Not Quit Vaping	0.357	0.353

Sources : Processed research data, 2026

The closeness of the adjusted R-square values to the original R-square values for both constructs suggests that the model remains consistent and reliable, even after accounting for the number of predictors involved. Overall, while the explanatory power for attitudes is modest and for intention is moderate, the model demonstrates a stable ability to account for variance in these behavioural outcomes.

Table 13. R-Square Values

	R-square	R-square adjusted
Attitude towards Vaping	0.119	0.117
Intention to Not Quit Vaping	0.357	0.353

Sources : Processed research data, 2026

The closeness of the adjusted R-square values to the original R-square values for both constructs suggests that the model remains consistent and reliable, even after accounting for the number of predictors involved. Overall, while the explanatory power for attitudes is modest and for intention is moderate, the model demonstrates a stable ability to account for variance in these behavioural outcomes.

d. Predictive Relevance

Table 14. Predictive Relevance

	SSO	SSE	Q ² (=1-SSE/SSO)
Attitude towards Vaping	3200	2989.791	0.066
Intention to Not Quit Vaping	4000	3195.259	0.201

Sources : Processed research data, 2026

These findings suggest that while the model has limited predictive power in estimating attitudes toward vaping, it performs moderately well in predicting individuals' intention not to quit vaping based on the provided exogenous variables. In conclusion, the predictive relevance analysis shows that the model demonstrates a moderate level of predictive capability for key behavioural intentions, making it reasonably applicable for practical use, particularly in contexts involving behavioural interventions or communication strategies related to vaping. However, the relatively low predictive value for attitudes highlights the need for further refinement of the model or inclusion of additional relevant variables to better capture factors influencing vaping-related attitudes.

Discussion

The increasing prevalence of vape use nowadays has raised concerns, especially among adolescents. One factor of concern is how social media shapes public perceptions of the risks of vape use. Health influencers such as @geraldvincentt are actively producing and disseminating educational content that addresses the negative impacts of vape use. This information exposure, delivered through visual approaches and engaging narratives, has great potential to influence public opinion and encourage changes in attitudes and behaviours, particularly in the context of vape use. The Influence Of Vaping Harm Information Exposure On Followers' Attitudes And Intentions To Not Quit Vaping research has a sample of 400 respondents with the criteria of social media users, followers of @geraldvincentt, and vape users. Of the 400 respondents, 274 respondents were male, and 126 respondents were female, where it was found that the dominant respondent was male. Researchers managed to collect these respondents by distributing online questionnaires, namely Google Form.

The results provide important insights into how exposure to vaping harm information influences attitudes and behavioural intentions related to continued vape use, as framed by the TRA. The path coefficient analysis reveals statistically significant relationships between the constructs. Vaping Harm Information Exposure (X) has a significant negative effect on Attitude toward Vaping (Z) where the result of path coefficient is -0.345, t-statistic is 11.434 and $p < 0.05$, suggesting that the more frequently individuals are exposed to vaping harm content, the more negative their attitude becomes toward vaping. Furthermore, there is also a significant negative relationship between Vaping Harm Information Exposure (X) and Intention to Not Quit Vaping (Y) which the result of path coefficient is -0.194, t-statistic is 7.224, and $p < 0.05$, indicating that such exposure directly reduces the intention to continue vaping. Attitude toward Vaping (Z) significantly and positively affects Intention to Not Quit Vaping (Y) which the result of path coefficient is 0.502, t-statistic is 12.118, and $p < 0.05$, supporting the TRA's core assumption that behavioural intention is directly influenced by individual attitudes (Ajzen & Fishbein, 2005). An indirect effect was also observed, indicating that Attitude toward Vaping (Z) mediates the relationship between Vaping Harm Information Exposure (X) and Intention to Not Quit Vaping (Y). With an indirect effect of -0.173 ($t = 8.896$, $p < 0.05$), the result shows that exposure to vaping harm content leads to more negative attitudes, which in turn reduces the intention to continue vaping. This finding aligns with the Theory of Reasoned Action (Ajzen & Fishbein, 2005), which emphasizes that behavioural intentions are shaped by attitudes, thus highlighting the crucial role of attitude in translating information exposure into behavioural change. These results highlight the important role of individual attitudes in mediating the effect of information exposure on behavioral intention, showing that even when individuals are exposed to negative health messages, their resulting behavior depends largely on how such information shapes their personal attitudes.

The explanatory power of the model was assessed using the R-square (R^2) values. The R^2 value for Attitude towards Vaping is 0.119, indicating that Vaping Harm Information Exposure explains 11.9% of the variance in Attitude towards Vaping. Meanwhile, the R^2 for Intention to Not Quit Vaping is 0.357, showing that both Attitude towards Vaping and Vaping Harm Information Exposure together explain 35.7% of the variance in behavioral intention. These values suggest moderate explanatory power, particularly in behavioral studies where multiple external factors can influence individuals' intentions

regarding vaping behavior. The model also demonstrates strong model fit, as shown by the SRMR value of 0.042, well below the recommended threshold of 0.08, indicating good alignment between the empirical data and the theoretical model.

Further evaluation of the model's effect sizes (f^2) reveals that Attitude towards Vaping has a moderate effect on Intention to Not Quit Vaping ($f^2 = 0.345$), while Vaping Harm Information Exposure has small effects on both Attitude towards Vaping ($f^2 = 0.135$) and Intention to Not Quit Vaping ($f^2 = 0.052$). This highlights the critical role of Attitude towards Vaping in shaping behavioral intention, aligning with previous studies grounded in the TRA. Additionally, the model's predictive relevance (Q^2) supports its forecasting ability, with Q^2 values of 0.066 for Attitude towards Vaping and 0.201 for Intention to Not Quit Vaping. These results indicate weak predictive relevance for Attitude towards Vaping, but moderate predictive capacity for behavioral intention (Shmueli, Ray, Velasquez Estrada, & Chatla, 2016). These findings reinforce the theoretical foundation of the TRA, demonstrating that while direct exposure to vaping harm information affects behavioral intention, its influence becomes more impactful when mediated through attitude change. This highlights the strategic importance of shaping public attitudes as a meaningful approach in efforts to reduce persistent vaping behaviors.

Consistent with the scoping review "Exploring the Impact of Social Media on E-Cigarette Usage Among Adolescents," which demonstrated that frequent social media exposure increases vaping initiation risk by 1.5 to 2 times, our study confirms that social media remains a powerful platform shaping youth vaping attitudes and behaviors. However, unlike the predominately promotional content examined in that review, this research uniquely focuses on harm-related messaging and its complex effects on attitudes and intentions, highlighting the critical role of message content type in influencing behavioral outcomes. The results also resonate with findings from "Knowledge, Attitudes, and Behavior of E-Cigarette Users in Indonesia," where despite over half of respondents possessing good knowledge about vaping risks (53.1%), a similar proportion (52.6%) maintained positive attitudes toward vaping, and 58.7% expressed intentions to quit (Masan et al., 2023). This underscores the complexity of the knowledge-attitude-intention relationship, reinforcing our study's emphasis on attitude as a mediator. Moreover, the significant influence of peer communication intensity and celebrity endorsements on vaping interest identified in "*Pengaruh Intensitas Komunikasi Peer Group dan Terpaan Celebrity Endorser di Media Sosial terhadap Minat Menggunakan Rokok Elektrik (Vape) pada Remaja*" supports the selection of a social media influencer (@geraldvincentt) as the focal point of this study. The influencer's content provokes diverse reactions—from agreement and quit intentions to skepticism and resistance—illustrating the multifaceted impact of social media figures on youth attitudes and behaviors. This study extends prior work by analyzing how harm-focused influencer content mediates attitudes and intentions, offering practical implications for designing targeted health communication interventions. Another previous study by Cuccia et al. (2021), identified harm perception as a strong predictor of quit intentions, with approximately 60% of youth intending to quit after recognizing vaping risks. Our research complements this by addressing the understudied role of social media harm messaging in Southeast Asia, revealing that while harm information can influence attitudes, these attitudes may paradoxically relate to intentions to not quit vaping in certain contexts, suggesting resistance or message fatigue among some followers. In conclusion, this study highlights the complex and sometimes counterintuitive effects of vaping harm information delivered via social media influencers. It emphasizes the need for nuanced health communication strategies that consider message framing, audience segmentation, and the influential role of digital peer networks. Future research should explore longitudinal effects and incorporate diverse influencer types to better understand how to optimize vaping cessation messaging in Indonesia and similar contexts.

CONCLUSION

Based on the results of the study entitled "The Effect of Exposure to Vaping Dangers Information on Followers' Attitudes and Intentions Not to Quit Vaping", it can be concluded that

exposure to information about the dangers of vaping on social media—especially through the @geraldvincentt account—significantly influences users' attitudes and behavioral intentions. Vaping Harm Information Exposure (X) has a significant negative effect on Attitude toward Vaping (Z), Vaping Harm Information Exposure (X) also shows a significant negative effect on Intention to Not Quit Vaping (Y), Attitude toward Vaping (Z) has a significant positive effect on Intention to Not Quit Vaping (Y). An indirect effect was also found between Vaping Harm Information Exposure (X) and Intention to Not Quit Vaping (Y) through Attitude toward Vaping (Z), which means that variable Z can moderate variables X and Y. Taken together, these findings demonstrate that health communication plays a significant role in shaping how individuals think and behave regarding vaping, especially when delivered by influential figures such as @geraldvincentt. His content, which combines accurate health information with a relatable delivery style, shows promise as an effective communication tool in digital campaigns aimed at reducing vaping behavior among younger audiences.

For future research, it is recommended to explore the integration of other theories such as the Theory of Planned Behavior (TPB) or the Health Belief Model (HBM) to gain a deeper and more comprehensive understanding of the cognitive and social factors influencing vaping behavior. Additionally, qualitative research approaches could be employed to explore the emotional and psychological responses of individuals to vaping-related content, especially in younger demographics who are active social media users. Based on the findings, it is suggested that public health practitioners and digital health communicators focus not only on increasing awareness of the dangers of vaping but also on shaping public attitudes through emotionally resonant and persuasive messaging.

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