Falling Into the Same Hole: Leaving Cigarette, Approaching E-Cigarette

Sheila Jessica Claudia[1], Ratu Mega[1], Lola Delvira[1]

[1]*Universitas Indonesia, Jakarta, Indonesia*

Corresponding Author: Sheila Jessica Claudia

Article Info	Abstract
	Effective communication regarding the risks associated with electronic cigarettes is a crucial part of efforts to control their usage, and incorporating elements of fear is an effective method to achieve proper regulation. This research, utilizing content analysis methodology, examined three online news articles from Indonesian news portals: Kompas.com, IDNTimes.com, and Detik.com. The study aimed to describe how online news conveys the dangers of using electronic cigarettes using the Extended Parallel Process Model (EPPM). The research method employed was content analysis. EPPM explains how people manage the fear evoked by threat messages. There are two key factors that can explain how individuals respond to fear messages. The first factor is the perception of threat, consisting of the severity and vulnerability to the threat. The second factor is the perception of efficacy, consisting of response efficacy and self-efficacy. The research findings indicate that online news coverage prioritizes the perception of threat. Conversely, the aspect of efficacy perception still needs to be applied in reporting the dangers of electronic cigarettes. These results are also influenced by ethical codes, journalistic principles, and cultural influences.

Introduction

Tobacco is the cause of death of more than 8 million people yearly; most of these deaths occur in low and middle-income countries (WHO, 2019). Amid efforts by low and middle-income countries to reduce smoking prevalence, the cigarette industry is now aggressively developing and promoting new tobacco products, one of which is electronic cigarettes or e-cigarettes (National Academies of Sciences and Medicine, 2018)

Marketing of e-cigarette products is designed to attract the attention of young people (Goodwin, 2021). Starting from products that are available in various flavors and packaging to using new media to carry out promotional activities for e-cigarettes. According to previous research, e-cigarette promotional content via Instagram in Indonesia is the second largest in the world (Laestadius et al., 2019). E-cigarettes have been promoted and marketed as safer than conventional cigarettes, even though the 2019 WHO report clearly states that these products are undoubtedly dangerous to human health (WHO, 2019).

Instead of being a solution, the use of e-cigarettes among teenagers and adults has increased drastically. In June 2022, the Ministry of Health of the Republic of Indonesia released the results of the global survey on tobacco use, the Global Adult Tobacco Survey (GATS), carried out in 2011 and repeated in 2021. The survey results found that in Indonesia, the number of e-cigarette users aged 15 years and over increased from 0.3 percent or 480 thousand in 2011 to 3.0 percent or 6.6 million in 2021 (Indonesia, 2022). This means that e-cigarette users in Indonesia have increased by 6.1 million in just ten years. Sadly, 2.8 percent of them are young and work as students. E-cigarette use is a public health concern due to the many known and potential health effects of e-cigarettes, including short- and long-term damage to brain structure

and function due to nicotine exposure (Wawryk-Gawda et al., 2019), respiratory damage (Gotts et al., 2019), as well as smoking initiation and escalation (Soneji et al., 2017) ; (Fadus et al., 2019) ; (McMillen et al., 2019). Given these facts, public awareness of the risks associated with e-cigarettes needs to be increased to control and reduce the harmful effects of e-cigarettes on young people.

Effective communication about the risks associated with e-cigarettes is an important part of efforts to control their use, and fear is an effective method to achieve good control. Combining academic research on health risk communication and practical experience of tobacco control, fear management is recognized by many experts as an effective strategy for persuasion and behavioural intervention (Ruiter et al., 2014). Kim Witte (1992) is one of the figures who pays attention to managing the fear of a threatening message through his idea of the Extended Parallel Process Model or EPPM.

Witte believes that evaluating perceived threat and perceived efficacy associated with a particular intervention determines the path the target audience takes after exposure to the message (Witte, 1992). EPPM focuses on fear and how people respond to that fear. The response will depend on the perceived threat level and perceived efficacy. When exposed to a health threat, and when the perceived threat and perceived efficacy are high, individuals attempt to control the harm by following the message's recommendations and engaging in preventative behaviours that minimize the risk of harm. However, when a perceived threat is high but efficacy is low, individuals are motivated to control fear through defensive avoidance or denial and ultimately do not adopt the recommended action.

EPPM is one of the models that is widely used to test various cases regarding persuasion messages with a fear approach, including about driving safety (Cismaru, 2014) ; (Jung & Brann, 2014) ; (Kennedy et al., 2018), healthy lifestyle and health (Moylett & Hevey, 2019) ; (Ahn & Noh, 2021) ; (Zhao & Wu, 2021) ; (Engelbrecht et al., 2022) ; (Mousavi et al., 2022), including its relation to tobacco or cigarettes (Zarghami et al., 2021) ; (Chen & Chen, 2021) ; (Hosseini et al., 2022) and e-cigarettes (Noone, 2020) ; (Escoto et al., 2021) ; (Sun et al., 2021).

Persuasive messages with a fear approach to news about e-cigarettes are interesting and important to discuss, considering the need for messages that are packaged effectively to remind smokers, especially young people, about the dangers of smoking, especially e-cigarettes. Especially considering the characteristics of e-cigarettes and their marketing techniques, which are entering society with a more modern style and targeting young people. Mass media as a mass communication tool also plays an important role because the content of mass communication can persuade or otherwise influence the behaviour, attitudes, opinions, or emotions of people who receive the information (Hadi et al., 2020). This makes the existence of online news articles about e-cigarettes interesting and needs to be discussed to see whether their persuasive messages meet the requirements for good persuasion messages.

Methods

This research does not examine the impact of a persuasion message with a fear appeals approach to the attitudes or behavior of e-cigarette users but rather analyzes whether persuasive messages about the dangers of e-cigarettes created by the media in Indonesia function to inform and educate (following Law Number 40 of 1999 concerning the press) has fulfilled the principles of good message persuasion according to the EPPM. The research method used is content analysis. Content analysis is a systematic method for analyzing content and how the message is delivered. It is also stated that content analysis is useful because it can predict who is delivering the messages and how the messages are delivered (Putri et al., 2017). Using content analysis in research can estimate media depictions of certain groups in society.

85

This research discusses the news created by Kompas.com with the title, "15-year-old teenager said to have died because of vaping, the youngest death case in the US", and "8 dangers of vaping for health, increasing the potential for cancer" by IDNTimes.com, and "Beware Vapers Can Get 'Popcorn Lung' Lung Damage, What Is That Condition?" by Detik.com. The selection of news samples was random based on keyword searches and recommendations for articles "dangers of e-cigarettes" via search engines on the internet.

Next, the analysis assesses whether the news meets the principles of good persuasion according to the EPPM, where delivery is considered effective if it includes elements of threats or frightening messages (Witte, 1992). A persuasive message (in this case related to the dangers of e-cigarettes) is categorized as meeting the principles of good persuasion if it meets the perceived threat, which consists of two elements, namely the level of severity (severity of threat) and susceptibility to threat (susceptibility to threat), and perceived efficacy which consists of two elements, namely response efficacy, and self-efficacy.

Results and Discussion

Media Kompas.com reported information regarding deaths that occurred due to the use of vapes or e-cigarettes in January 2020 with the title "15-year-old teenager said to have died from vaping, the youngest death case in the US". This news article is about a 15-year-old teenager in Texas who died from an e-cigarette. The US Centers for Disease Control and Prevention (CDC) called this case the youngest death reported after a 17-year-old Bronx teenager was reported as a death case due to e-cigarettes (Vina et al., 2020)

This article also explains that the CDC announced that vitamin E acetate contained in e-cigarettes is the biggest cause of lung disease outbreaks in the US. The researchers revealed that this substance may interfere with a natural substance in the lungs called surfactant, which is responsible for helping keep the air sacs open and is very important in the breathing process. Meanwhile, the damage caused by these substances is similar to chemical burns on war victims who were attacked with poison gas (Vina et al., 2020). In this Kompas.com article, an infographic, "The Difference Between Cigarettes and Vapes," was also released, which provides information about what ingredients are in both and which countries prohibit e-cigarettes, and statements from

Furthermore, a news article entitled "8 Dangers of Vaping for Health, Increase the Potential for Cancer" by IDNTimes.com, which was released on November 29, 2022, informed the CDC's statement that 'alternative' e-cigarettes are not safe because they contain nicotine and other compounds. Others make vaping a real danger to the body. Some of the discussion of the danger points of e-cigarettes by IDNTimes.com include that e-cigarettes can lower the immune system, cause the risk of bronchiolitis obliterans or 'popcorn lung,' dangerous explosions, and trigger serious burns, risk of addiction, poisoning in children, increase potency cancer, lipoid pneumonia which is a health effect when fatty acids enter the lungs, as well as other health problems (Firscha, 2022).

The next news article released by Detik.com on October 7, 2022, "Beware that Vapers Can Get 'Popcorn Lung' Lung Damage, What Condition is That?" informs about Vapes or e-cigarettes, which are now loved by many groups, from teenagers to adults. The phenomenon of some people switching to e-cigarettes because they are considered less dangerous than conventional cigarettes is wrong because e-cigarettes can also trigger serious health risks. For example, collapsed lungs and the rare condition, namely 'popcorn lung,' the name for bronchiolitis obliterans. This rare condition causes the airways in the lungs to shrink, causing coughing and shortness of breath. Further information is provided in this article regarding the characteristics

of popcorn lung symptoms and an example of a case in a 17-year-old teenager from Canada who suffered from this disease (Alam, 2022).

As a persuasion message that uses a fear appeals approach, the author wants to know whether media news articles in Indonesia regarding the dangers of e-cigarettes meet the requirements of good persuasion. The author uses the concept created by Witte (1992) to analyze this news. Witte stated that persuasion messages with a fear approach could be successful if they meet the perceived threat consists of two elements, namely the level of severity (severity of threat) and susceptibility to threat (susceptibility to threat), as well as perceived efficacy (perceived efficacy); consists of two elements, namely response efficacy, and self-efficacy.

The analysis carried out on the three articles looked at the perceived threat, where the scale of the threat or severity must be large so that it is truly frightening because the perceived threat is related to the extent to which people feel vulnerable to danger. A persuasive message whose scale of threat is not large will not make the public, as the recipient of the message, feel afraid or threatened.

In this section, even though it provides a message about deaths due to e-cigarettes, Kompas.com created an article entitled "15-year-old teenager said to have died due to vaping, the youngest death case in the US" where the severity or threat is not depicted as scary if you look at the visuals. The article's visuals illustrate a person in disguise using an e-cigarette, which can also be seen from the puff of smoke produced. Meanwhile, no supporting visuals clearly showcase death or images of lung disease contaminated with vitamin E acetate in e-cigarettes. Furthermore, the infographic also does not show any visual examples of the dangerous effects of e-cigarettes.

Likewise, the IDNTimes.com news article "8 Dangers of Vaping for Health, Increase the Potential for Cancer" displays a list of danger points and an explanation of the dangers caused by e-cigarettes but does not explicitly display visuals of the severity, and the Detik.com news article "Beware Vapers Can Get 'Popcorn Lung' Lung Damage, What Is That Condition?" which explains popcorn lung disease caused by e-cigarettes, shows visual examples of contaminated lungs, but does not quite convey the horror to the reader.

If you look at the aspect of susceptibility to threat, where the level of vulnerability looks at how likely someone is to become a victim or be affected, then only the Kompas.com news article "15-year-old teenager said to have died from vaping, the youngest death case in the US" has it, where the impact of death on e- Cigarettes are described as affecting young people to the elderly on average. The susceptibility to threat aspect was not found in the IDNTimes.com news article "8 Dangers of Vaping for Health, Increase the Potential for Cancer" and also the Detik.com news article "Beware Vapers Can Get 'Popcorn Lung' Lung Damage, What Condition Is That?".

Furthermore, looking at the aspect of perceived efficacy, from the three samples of Indonesian media news articles regarding the dangers of e-cigarettes, no response efficacy was found, which included alternatives or solutions to avoid danger, and self-efficacy (self-efficacy), which is how likely someone is to act following a solution or recommendation to avoid danger.

In the Kompas.com article, "the 15-year-old teenager said to have died from vaping, the youngest death case in the US" and "8 dangers of vaping for health, increasing the potential for cancer" by IDNTimes.com, as well as "Beware that vaper can suffer from 'Popcorn Lung' lung damage ', What Condition is That?" by Detik.com, it appears that the news only displays sentences about the dangers and impacts of e-cigarettes. It is not explained in detail how someone can stop using e-cigarettes. These three news articles do not depict e-cigarette users

who have stopped smoking or re-using cigarettes. This means that the article is not strong enough to make the public aware that behavior in using e-cigarettes can be changed.

Table 1. Comparative Content Analysis of Indonesian Media

Aspect		Kompas.com news article "15 year old teenager said to have died from vaping, the youngest death case in the US"	IDNTimes.com News Article "8 Dangers of Vaping for Health Increase the Potential for Cancer"	Detik.com News Article "Beware Vapers Can Get 'Popcorn Lung' Lung Damage, What Condition is that?"
Perceived Threat Definition: Perceived threat	**Severity of threat** Definition: Degree of severity; how scary or threatening the message is displayed	Yes, moderate The article displays the dangers of death from e-cigarettes and other potential health problems. However, it does not explicitly show the severity's severity through visuals.	Yes, moderate The article lists the danger points due to e-cigarettes and explains each point. However, the severity is not explicitly shown through visuals.	Yes, moderate The article displays and explains popcorn lung disease caused by e-cigarettes and shows visual examples of contaminated lungs but does not adequately convey the horror to the reader.
	Susceptibility to threat Definition: Level of vulnerability, how likely someone is to become a victim or be affected	Yes, moderate The death impact of e-cigarettes is explained to affect the average age of young people to the elderly.	There is not any Unexplained pain due to the effects of e-cigarettes can happen to anyone	There is not any Pain due to the effects of e-cigarettes was only demonstrated in a 17-year-old teenager from Canada, and it was not explained that this impact could happen to anyone.
Perceived Efficacy Definition: Perceived efficacy	**Response efficacy** Definition: Response efficacy, whether there are alternatives or solutions to avoid danger	There is not any. News articles only display sentences about the dangers and impacts of e-cigarettes. It is not explained how someone can stop the habit of e-smoking	There is not any. News articles only display sentences about the dangers and impacts of e-smoking. It is not explained how someone can stop the habit of e-smoking	There is not any. News articles only display sentences about the dangers and impacts of e-smoking. It is not explained how someone can stop the habit of e-smoking
	Self-efficacy Definition: Self-efficacy how likely a person is to be able to act following a solution	There is not any. This news article does not depict e-smokers who have quit smoking. This means that the article does not provide direction or solutions so that someone can take action to quit the e-cigarette habit.	There is not any. This news article does not depict e-smokers who have quit smoking. This means that the article does not provide direction or solutions so that someone can take action to quit the e-cigarette habit.	There is not any. This news article does not depict e-smokers who have quit smoking. This means that the article does not provide direction or solutions so that someone can take action to quit the e-cigarette habit.

Analysis of the content of media reports in Indonesia regarding the dangers of e-cigarettes using samples from the Kompas.com article "15-year-old teenager said to have died from vaping, the youngest death case in the US" and "8 dangers of vaping for health, increasing the potential for cancer" by IDNTimes.com, and "Beware Vapers Can Get 'Popcorn Lung' Lung

Damage, What Condition Is That?" by Detik.com, shows the results that only the perceived threat aspect is contained in it. However, the message of frightening persuasion is less emphasized in news articles for public consumption. Plus, no visuals or writing will cause horror in the readers.

Meanwhile, persuasion messages with a fear approach must display susceptibility to threats because frightening persuasion messages will not be useful if the public feels that the threat is more likely to happen to other people and not themselves. For example, a persuasive message regarding e-cigarettes (for example, a clear picture of lungs contaminated with toxic content in e-cigarettes) will not be perceived if the public feels that the danger will not affect them. Thus, the three samples of news articles do not fulfill this principle.

However, the results of this analysis are interesting, considering the journalism code of ethics that journalists need to adhere to when creating news articles. In the process of forming a journalistic code of ethics, through the website www.dewanpers.or.id, it is said that a traumatic experience is defined as an event that causes extreme horror and fear that threatens both the physical and mental, so journalists must be able to respect this traumatic experience. It can be interpreted that in the production process, ethics must be maintained until the output is produced, and journalists and the media must be careful in creating their news content. Furthermore, news content cannot necessarily include elements of threats, horror, and scares. If a perceived threat aspect is found, it is not of high significance but low or moderate.

Another factor influencing the results is culture, where conveying persuasive messages through high threats is less suitable for Eastern cultures that do not want to stand out. Also included in Indonesian culture. Eastern culture tends not to like a frontal style of communication or conveying messages. Of course, this differs from Western culture, which can accept a straightforward communication style. Because of this influence, it is natural that the media or public institutions are very careful and careful in conveying their health persuasive messages to the public so as not to emphasize elements of high threat.

On the other hand, perceived or perceived efficacy, either through response or self-efficacy, was not found in the three samples of news articles. In fact, for example, persuasion messages using a fear approach through EPPM theory must also include elements of response efficacy. This aspect refers to what solutions are recommended so that someone can avoid the dangers of e-cigarettes. The efficacy of this response is important in persuasion because someone will not act or change behavior if the person feels there is no alternative or solution.

For example, long-time e-cigarette users will likely consider what happened to one of the examples of victims who died in the Kompas.com article "15-year-old teenager said to have died from vaping, the youngest death case in the US" as a fate that must be accepted. Furthermore, following the EPPM theory, response efficacy must also be accompanied by self-efficacy, which refers to the belief in one's ability to act to avoid the threat or danger of e-cigarettes.

Then why was there no efficacy aspect found in the three news samples regarding persuasive messages regarding the dangers of e-cigarettes? Independence and neutrality are one of the basic principles of media production. For this reason, the media, which is a channel for conveying public information, cannot immediately "drop" e-cigarettes, which also have the potential to be a source of advertising income for them. In this case, the media needs to be neutral, without mentioning certain e-cigarette brands, and carry out its task, namely reasonably informing the public about the dangers of e-cigarettes. It would be a different story if the Government or certain institutions that use the media as a channel for conveying information and persuasive messages assigned or encouraged information on the dangers of e-cigarettes

through representation as official sources directly. Aspects in the EPPM that increase the effectiveness of persuasion messages need to be considered and included.

Conclusion

This research describes how online reporting from three Indonesian news portals, Kompas.com, IDNTimes.com, and Detik.com, conveys the dangers of using e-cigarettes. From these three articles, it can be concluded that all articles contain elements of threats or frightening messages, but their significance is small. The three samples of online news articles needed to meet the two aspects of good persuasion according to EPPM: having perceived threat and perceived efficacy. Articles from the news portals Kompas.com, IDNTimes.com, and Detik.com contain moderate threat severity levels. The code of press ethics can cause this that the media needs to pay attention to, namely protecting content from elements that cause horror and independence, which is the basic nature of media production, namely being neutral, without bringing down any party or e-cigarette brand.

Furthermore, the threat element of susceptibility to threat was only found in articles by Kompas.com. This could also be due to the choice of angle, which is the right of each editor to include elements or detailed information regarding the dangers of e-cigarettes. Then, two elements of perceived efficacy, namely response, and self-efficacy, were not found in the three articles. This shows that the three news portals chose not to present news about e-cigarettes with elements of perceived efficacy because their function only conveys information and is not an official statement from the relevant stakeholders. The three news portals prioritize threats to convince and attract readers' interest. Meanwhile, the perceived efficacy aspect still needs to be implemented in reporting on the dangers of e-cigarettes. These results were also influenced by the code of ethics and principles of journalism and cultural influences. Therefore, this research implies the importance of understanding how individuals perceive threats related to the use of electronic cigarettes. It emphasizes the need to assess both response efficacy (belief in the effectiveness of recommended actions) and self-efficacy (individuals' confidence in their ability to perform the recommended actions) in news messages. Applying the EPPM framework allows for the identification of gaps in news coverage, and the insights gained from using EPPM can provide strategic information for developing health communication strategies related to electronic cigarette usage.

References

Ahn, C., & Noh, G. Y. (2021). Testing extended parallel processing model in the Korean COVID-19 context: Effect of moral intuitions as moderators. *Frontiers in Public Health, 9*, 756281.

Alam, S. O. (2022). *Awas Vapers Bisa Kena Kerusakan Paru "Popcorn Lung", Kondisi Apa Itu?* DetikHealth. https://health.detik.com/berita-detikhealth/d-6334373/awas-vapers-bisa-kena-kerusakan-paru-popcorn-lung-kondisi-apa-itu

Chen, M., & Chen, L. (2021). Promoting smoking cessation in China: Using an expansion of the EPPM with other-oriented threat. *Journal of Health Communication, 26*(3), 174–183.

Cismaru, M. (2014). Using the extended parallel process model to understand texting while driving and guide communication campaigns against it. *Social Marketing Quarterly, 20*(1), 66–82.

Engelbrecht, H., van der Laan, L. N., van Enschot, R., & Krahmer, E. (2022). The Role of Agency and Threat Immediacy in Interactive Digital Narrative Fear Appeals for the

Prevention of Excessive Alcohol Use: Randomized Controlled Trial. *JMIR Serious Games, 10*(2), e32218.

Escoto, A., Watkins, S. L., Welter, T., & Beecher, S. (2021). *Developing a targeted e-cigarette health communication campaign for college students*. Addictive Behaviors, 117, 106841.

Fadus, M. C., Smith, T. T., & Squeglia, L. M. (2019). The rise of e-cigarettes, pod mod devices, and JUUL among youth: Factors influencing use, health implications, and downstream effects. *Drug and Alcohol Dependence, 201*, 85–93.

Firscha, P. (2022). *8 Bahaya Vape bagi Kesehatan, Tingkatkan Potensi Kanker*. Idntimes.Com. https://www.idntimes.com/health/fitness/patricia-firscha/bahaya-vape-atau-rokok-elektrik?page=all

Goodwin, R. D. (2021). E-Cigarette Promotion in the Digital World: The "Shared Environment" of Today's Youth. *In Nicotine and Tobacco Research (Vol. 23, Issue 8*. 1261–1262). Oxford University Press US.

Gotts, J. E., Jordt, S.-E., McConnell, R., & Tarran, R. (2019). *What are the respiratory effects of e-cigarettes*? Bmj, 366.

Hadi, I. P., Wahjudianata, M., & Indrayani, I. I. (2020). *Komunikasi massa. In KOMUNIKASI MASSA*. CV. Penerbit Qiara Media.

Hosseini, Z., Mouseli, A., Aghamolaei, T., Mohseni, S., Shahini, S., & Dadipoor, S. (2022). Predictors of adopting smoking preventive behaviors by university students: the extended parallel process model fitness test, 1–8.

Indonesia, K. K. R. (2022). *Temuan Survei GATS: Perokok Dewasa di Indonesia Naik 10 Tahun Terakhir*. Kementerian Kesehatan Republik Indonesia. https://www.kemkes.go.id/article/view/22060200005/temuan-survei-gats-perokok-dewasa-di-indonesia-naik-10-tahun-terakhir.html

Jung, T., & Brann, M. (2014). Analyzing the extended parallel process model and health belief model constructs in texting while driving: news coverage in leading US news media outlets. *International Journal of Health Promotion and Education, 52*(4), 210–221.

Kennedy, A., Cullen, B., Firman, D., Fleiter, J. J., & Lewis, I. (2018). Peer passenger intentions to speak up to a risky driver: A theoretically-guided investigation of the effects of a high school road safety education program. *Transportation Research Part F: Traffic Psychology and Behaviour, 54*(15–27).

Laestadius, L. I., Wahl, M. M., Pokhrel, P., & Cho, Y. I. (2019). From Apple to Werewolf: A content analysis of marketing for e-liquids on Instagram. *Addictive Behaviors, 91*, 119–127.

McMillen, R., Klein, J. D., Wilson, K., Winickoff, J. P., & Tanski, S. (2019). E-cigarette use and future cigarette initiation among never smokers and relapse among former smokers in the PATH study. *Public Health Reports, 134*(5), 528–536.

Mousavi, A., Jannesari, S., Hajian, S., Solhi, M., Khabaz Khoob, M., Nasiri, M., & Sadeghyan, A. (2022). Does the Extended Parallel Process Model Promote Breast Self-Examination? A Controlled Experimental Study. *Journal of Obstetrics, Gynecology and Cancer Research, 7*(4), 304–313.

Moylett, S., & Hevey, D. (2019). Examining the Extended Parallel Process Model for communicating about cardiovascular disease to an at-risk population utilising a think aloud methodology. *HRB Open Research, 2*(12), 12.

National Academies of Sciences and Medicine, E. (2018). *Public health consequences of e-cigarettes*.

Noone, R. (2020). *The Role of Threat and Efficacy in Anti-Vaping Ads: A Test of the Extended Parallel Process Model*. University of South Florida.

Putri, A. F., Hartati, T., & Purwinarti, T. (2017). Analisis konten kreatif pada fanpage facebook cadbury dairy milk tahun 2016. *EPIGRAM (e-Journal), 14*(2).

Ruiter, R. A. C., Kessels, L. T. E., Peters, G. Y., & Kok, G. (2014). Sixty years of fear appeal research: Current state of the evidence. *International Journal of Psychology, 49*(2), 63–70.

Soneji, S., Barrington-Trimis, J. L., Wills, T. A., Leventhal, A. M., Unger, J. B., Gibson, L. A., Yang, J., Primack, B. A., Andrews, J. A., & Miech, R. A. (2017). Association between initial use of e-cigarettes and subsequent cigarette smoking among adolescents and young adults: a systematic review and meta-analysis. *JAMA Pediatrics, 171*(8), 788–797.

Sun, C., Wang, F., & Jiang, M. (2021). How can E-cigarette fear appeals improve the perceived threat, fear, anger, and protection motivation of young people. *Frontiers in Psychology, 12* (676363).

Vina Fadhrotul Mukaromah, I. D. W. (2020). *Remaja 15 Tahun disebut Meninggal Dunia Karena Vape, Kasus Kematian Termuda*. KOMPAS.Com. https://www.kompas.com/tren/read/2020/01/14/181800265/remaja-15-tahun-disebut-meninggal-dunia-karena-vape-kasus-kematian-termuda?page=all

Wawryk-Gawda, E., Lis-Sochocka, M., Chylińska-Wrzos, P., Budzyńska, B., & Jodłowska-Jędrych, B. (2019). *The impact of traditional cigarettes and e-cigarettes on the brain*. In Neuroscience of Nicotine (pp. 25–32). Elsevier.

WHO. (2019). *WHO report on the global tobacco epidemic 2019: offer help to quit tobacco use*. World Health Organization. https://www.who.int/publications/i/item/9789241516204

Zarghami, F., Allahverdipour, H., & Jafarabadi, M. A. (2021). Extended parallel process model (EPPM) in evaluating lung Cancer risk perception among older smokers. *BMC Public Health, 21*(1–11).

Zhao, S., & Wu, X. (2021). From information exposure to protective behaviors: investigating the underlying mechanism in COVID-19 outbreak using social amplification theory and extended parallel process model. *Frontiers in Psychology, 12*(631116).