

The Impact of Health Promotion about E-cigarettes Risk among Adolescents

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ARTICLE INFO	ABSTRACT
ORCHID ID Author 1: - Author 2: - Author 3: -	The increasing prevalence of cigarette users in the younger generation is clear evidence that cigarettes are increasingly popular, especially e-cigarettes. Misinformation and misperceptions circulating in the community as well as the role of the media add to concerns about the impact that e-cigarettes can have. Therefore, a transformation of health promotion efforts to save future generations from the dangers of e-cigarettes is needed. This study aimed to analyze the effect of health promotion media in reducing the willingness to smoke e-cigarettes in adolescents. This study used a quantitative analytic design with primary data. The instrument used was a questionnaire which was filled out independently by the respondents. Data collection was carried out online using a small group trial. Data analysis was using Mc Nemar test. The bivariate analysis showed that the three challenges had an impact in the form of increasing knowledge and perceptions. On the knowledge variable, the whole challenge gave a significant increase with the results of sig. 0.025 on the challenge of providing visual media socialization, sig. 0.014 on the challenge of providing audio-visual media socialization, and sig. 0.008 on the active participation challenge. Adolescent perceptions also increased before and after a series of challenges was given. The provision of health promotion with these three challenges had a significant difference of sig. 0.031 on adolescent perceptions. There were differences in adolescent knowledge and perceptions of e-smoking behavior through the using of health promotion media. The most effective method used in changing the knowledge and perceptions of adolescents is to use the active participation of adolescents.
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1. Introduction

Smoking behavior is a social phenomenon that is familiar with people's lives. Consumption of cigarettes today has shifted from being only a secondary need to a primary need (Elon & Malinti, 2019). Over the past few years, many cigarette manufacturers have issued new tobacco products that claim to be healthier than conventional cigarettes or cigarettes by burning them (Martin et al., 2018). One of the products that has received a lot of attention from youth groups is Heated Tobacco Products (HTPs), which are heated tobacco products, or better known as electric cigarettes (FDA, 2017). The Indonesian Ministry of Health explained that Electronic Cigarettes (ECs) or Electronic Nicotine Delivery System (ENDS) are devices that function to convert vapors from chemical substances which are then channeled into the lungs (P2PTM Kemenkes RI, 2020). It is reported that many users of e-cigarettes are

among adult smokers with the aim of quitting smoking, but currently this behavior has been widely adopted by non-smokers and adolescents and has the potential to normalize the habit of using e-cigarettes (Brown et al., 2020).

In 2018, in Indonesia the prevalence of smokers in the younger generation has increased quite significantly. Data from the Basic Health Research in 2018 shows an increasing in teenage smokers aged 10-18 years, that reaches 9.1% or increases 0.3% from last 2016 (P2PTM Kemenkes RI, 2020). Based on the same data, the prevalence of adolescents aged 10-18 years who use e-cigarettes in Indonesia is 2.7% (P2PTM Kemenkes RI, 2020). This condition is quite worrying if it continues to be neglected, considering that the younger generation is the successor to the nation's future.

Even though many e-cigarette manufacturers claim that their products are safe for consumption, there is no guarantee that e-cigarettes are completely harmless to health, especially for the younger generation. Product Use-Associated Lung Injury (EVALI) has been reported to have occurred in the mainland United States, as many as 68 cases of death due to EVALI have been confirmed as of February 2020. The EVALI case is closely related to Tetrahydrocannabinol (THC), 82% of patients hospitalized as a result of EVALI admitted to using e-cigarette products and 14% using products containing nicotine other than e-cigarettes.

The policy regarding smoking age restrictions is set forth in Government Regulation Number 109 of 2012, namely that a teenager is not allowed to buy or enjoy cigarettes before turning 18 years old (Pemerintah RI, 2012). On a global scale, regulations related to electric cigarettes have been described in WHO Framework Convention of Tobacco Control (FCTC) article 9 to reduce the risk of disease and premature death from tobacco (Staal et al., 2021). The text of the FCTC regulations imposes an obligation in reporting new tobacco products to carry out a health risk assessment of the product. In addition, the Food and Drug Administration (FDA) has placed restrictions on the sale of e-cigarettes and their liquid counterparts (FDA, 2019).

The media has an influence in providing education about e-cigarettes. Information about e-cigarettes in adolescents generally comes from electronic media, friends, and online media, which has increased dramatically from 2007-2017 (Dewi et al., 2020). However, exposure to advertisements in online media is unfortunately still a lot of inaccurate information. The amount of information about the dangers of e-cigarettes, which is considered to be still confusing, raises the tendency for adolescents to try e-cigarettes and hinder tobacco control efforts (Kristina et al., 2020). Knowledge of smoking is supported by the intention, hope, or willingness to try using an electric cigarette. Knowledge is the main predictor that initiates adolescents' behavior with twice the risk of starting smoking (Lechner et al., 2018).

Therefore, there is a need for action and intervention to overcome the problem of e-cigarettes in adolescents. According to the theory of the Health Belief Model, a person's willingness to carry out healthy behaviors if he has trust and confidence in these behaviors (Wibowo, 2017), (Rizqi, 2018). Factors to fulfill the Health Belief Model theory include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and efficacy self (self-efficacy) (Wayne, 2019). The role of educational media is very important in increasing the knowledge and willingness of adolescents to smoke as one of the efforts to control e-cigarettes in Indonesia.

2. Method

This study was a survey with a cross-sectional design and quantitative method. This study also adopted the Health Belief Model questionnaire for the pre-test and post-test during the challenge to measure the level of belief in the risk of smoking. The questionnaire contained 17 questions with Likert scale answers on three challenges that discuss respondents' perceptions and beliefs about the use of e-cigarettes. This study was conducted in small groups consisting of Vocational High School or Senior High School students in Malang City who met the criteria to represent the entire population. The respondents were second years students of Vocational High School or Senior High School in Malang City and the sample is 10 students majoring in multimedia using a purposive sampling technique (Fauziah, 2018). The criteria for selecting respondents determined by the researcher were as follows: 17 years old, active status as a student at a Vocational High School or Senior High School in Malang City, and willing to participate. This study used T-test for analysis data.

3. Result and Discussion

Table 1 explain about the characteristics of respondents.

Table 1. Charactertics of Respondents

Characteristics of Respondents	N	%
Sex		
Male	7	70
Female	3	30
Smoking (e-cigarettes)		
Yes	8	80
No	2	20
Family with smokers		
Yes	5	50
No	5	50

The respondents in this study consist of male (70%) and female (30%). Majority of the respondents (80%) were smokers and only a few were not smokers (20%). Respondents came from families with smokers (50%) and families without smokers (50%). Table 2 shows the results before and after health promotion through the Social Zeven Challenges.

Table 2. Cross Tabulation of Before and After Health Promotion through Social Zeven Challenges

Category	Before		After	
	n	%	N	%
Knowledge on the first challenges (visual media intervention)				
Good	4	40	9	90
Sufficient	6	60	1	10
Less	0	0	0	0
Knowledge on the second challenges (audio-visual media intervention)				
Good	4	40	10	100
Sufficient	6	60	0	0
Less	0	0	0	0
Knowledge on the third challenges (active participation)				
Good	2	20	10	100
Sufficient	6	60	0	0
Less	2	20	0	0

Category	Before		After	
	n	%	N	%
Perception on smoking				
Positive (want to smoke)	4	40	0	0
Negative (do not want to smoke)	6	60	10	100

The first challenge is through the provision of visual media socialization, respondents have initial knowledge with sufficient (60%) and good (40%) categories. Increased knowledge after giving a challenge 1 respondent in the good category (90%). In the second challenge, the respondents had sufficient prior knowledge (60%) and good (40%) categories. All respondents experienced an increase in knowledge after giving challenges in the good category (100%). In the challenge 3 respondents had less initial knowledge (20%), sufficient (60%), and good (20%). In challenge 3 in the form of active participation of respondents there was an increase in knowledge in the good category (100%). Respondents' perceptions before giving Social Zeven Challenges were positive or having a willingness to smoke (17.4%) and negative perceptions or not having a willingness to smoke (26.1%). All respondents experienced changes in negative perceptions or did not have the will to smoke (100%) after participating in the Social Zeven Challenges. Table 3 explain the difference between the pretest and posttest results for each given challenge.

Table 3. Results of Difference Test on Knowledge from Pretest and Posttest

Challenges	Decreasing score	Increasing score	Fixed score	Sig. (2-tailed)
Visual media intervention	0	5	5	0.025
Audio-visual media intervention	0	6	4	0.014
Active participation	0	8	2	0.008

In the first challenge, there was an increase in 5 respondents, the second challenge in 6 respondents, and the third challenge in 8 respondents. The difference in the amount of increase explains the difference in the increase in the level of understanding or knowledge of the respondents on the material provided. The third challenge in the form of active participation in the creation and delivery of materials has the most significant difference.

This study shows that the majority of respondents are users of e-cigarettes and come from male group. This study also found an increase in the knowledge of the respondents after being given health promotion through three approaches namely visual media intervention, audio-visual media intervention, and active participation.

E-cigarettes are the most widely used type of cigarette among teenagers. This is due to the lack of knowledge of adolescents about the dangers of e-cigarettes and the new perception that e-cigarettes are healthier than tobacco cigarettes in general (Chaffee et al., 2017). Research conducted by Damayanti (2016), Jiang et al., (2016), Wang et al., (2018), Chen et al., (2019), show that the use of electric cigarettes in adolescents was included in the heavy category.

The majority of electric smoking behavior is carried out by adolescents with male gender. This shows that the use or consumption of cigarettes can increase the status of masculinity in the male gender group. Giving a different stigma is carried out when the gender of a woman consumes cigarettes (Bastonus & Herieningsih, 2017). Other studies explain that the male gender probability in e-cigarettes aims to gain taste, social and energy enjoyment, while women reason to control their weight (Istiqomah et al., 2016), (Kong et al., 2017).

Family support in electric smoking is also a factor supporting adolescents in smoking behavior. Jiang et al., (2016) and Chen et al., (2019), showed the same result that every teenager who uses electric cigarettes has family members who use electric cigarettes or conventional cigarettes. A different matter was explained by Hasna et al., (2017), that family support in the use of e-cigarettes did not significantly support adolescent use of e-cigarettes. Adolescents' interest in e-cigarettes is also influenced by family communication patterns with adolescents (Juliana, 2015), (Devhy & Yundari, 2017). This study shows that the description of adolescent smoking behavior tends to use e-cigarettes dominated by adolescent social factors.

4. Conclusion

This study concluded that health promotion media has the potential to reduce and reduce the willingness to smoke e-cigarettes in adolescents. Models and methods that involve the active role of adolescents in them are effective media in reducing the desire to smoke e-cigarettes in adolescents.

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