Research Article

Relationship Between Perception of Electric Cigarette and Electric Smoking Behaviour

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ABSTRACT

Introduction: The adolescent has a high chance of becoming a smoker. Numerous determinants impact the smoking conduct of adolescents, among which the companionship of peers holds significant sway. The study aims to investigate the level of awareness pertaining to e-cigarettes as a means of acquiring insights into the patterns of e-smoking conduct. **Methods:** The study used a cross-sectional design in Kemoning Traditional Village, with 87 adolescents and early adults. **Results:** there is a strong link between adolescent smokers' perceptions of the calmness that comes with smoking and their actual smoking behaviour (p = 0.043). **Conclusion:** Participants generally had a positive perception of smoking hazards, with most agreeing that smoking could have negative health effects. Overall, the study provides insights into the factors influencing smoking behaviour.

Keywords: Adolescent, Adult, Electronic nicotine delivery systems, Smokers

Introduction

A cigarette is a manufactured tobacco commodity that is wrapped in paper, utilising either manual or automated techniques. Cigarettes are readily available in supermarkets and roadside shops that offer single-stick purchases, thereby contributing to the prevalence of smoking among adolescents. Adolescents who are in their early stages of smoking are categorised as novice smokers. This phenomenon is prevalent among teenagers in Indonesia. The onset of this conduct typically commences during the adolescent stage and gradually escalates to habitual smoking over the course of multiple years [1]. According to the 2019 Global Youth Tobacco Survey (GYTS), recently published on May 30, 2020, a significant proportion of Indonesian students aged 13-15 (40.6%) were found to have purchased cigarettes despite being underage [2]. Furthermore, a majority of these students (60.6%) reported that there were no measures in place to prevent them from accessing tobacco products. Cigarettes are available for purchase at retail establishments. For certain individuals, cigarettes are perceived as a means of alleviating exhaustion and tension. Unbeknownst to individuals, the aforementioned object, measuring approximately 8 cm in dimensions, possesses the potential to elicit addictive behaviour akin to substance abuse.

Adolescents exhibit a pronounced inclination towards seeking social acceptance from both their peer cohort and adult figures. The inclination to conform to social norms among adolescents is a significant factor that motivates them to adopt the behavioural patterns of their immediate social circle, including smoking behaviour [3]. The inclination of adolescents to experiment with novel experiences, particularly the act of smoking cigarettes, and their yearning for social recognition and acceptance from their peers, culminates in the development of persistent smoking behaviour that is challenging to overcome due to the addictive nature of smoking.

According to population projections in 2015, a quarter of Indonesia's overall population of 255 million comprises individuals aged between 10 and 24 years. According to the data, the adolescent demographic in Indonesia constitutes a significant proportion of the overall population, comprising nearly one-fourth of the total populace. The incidence of tobacco use among individuals between the ages of 10 and 18 has exhibited a rise of 1.9% between the years 2013 (7.20%) and 2018 (9.10%). The data was acquired from the outcomes of the 2018 National Basic Health Research (Riskesdas) [4]. According to the publication of Health Research and Development in 2018, it was found that... Mortality is a common outcome of diseases that are attributable to smoking behaviour. The annual mortality rate amounts to six million individuals. The number of fatalities attributed to active smoking exceeds 5 million, whereas passive smoking is responsible for over 600,000 deaths. Adolescent smokers are susceptible to the onset of hazardous illnesses, including lung cancer and heart disease, at an early stage in life. Premature ageing, commonly known as the development of wrinkles around the eyes and mouth, is a probable consequence of smoking, as suggested by Salman Alfarisy, Agrina, and Lestari in their 2017 study[5] . Despite awareness of the adverse consequences of smoking, the prevalence of smoking among adolescents continues to increase. Furthermore, the age at which individuals first experiment with cigarettes appears to be decreasing, with even younger teenagers now engaging in this behaviour. The work by

Komasari and Helmi (2018) is being referenced [6] . From various perspectives, smoking is a highly detrimental behaviour to both personal and public health. Adolescent smoking behaviour is commonly perceived as a normative practise, particularly among male teenagers, as per Munir's research in 2019 [7].

Numerous efforts have been made to reduce the prevalence of smoking and enhance the accessibility of public areas that are free from smoke [8]. Despite receiving recognition from the Ministry of Health of the Republic of Indonesia to carry out or support the smoking control movement, the anti-smoking policy has not garnered unanimous support from various groups. Fei et al. (2017) have reported that certain agencies, such as law enforcement, do not comply with the policies established by the Ministry of Health [9].

Various sociocultural factors such as peer influence, exposure to smokers, inadequate parental supervision, media impact, and social surroundings can serve as underlying determinants of smoking behaviour. That psychological variables, such as changes in mood subsequent to smoking, the impact of tension reduction, personality traits, and biological factors, should be taken into account [10]. Peer groups, consisting of individuals of similar age and maturity levels, are the primary influence on adolescent smoking behaviour. Friendship groups that share a common objective of adhering to or endorsing the aspirations of their peers tend to foster a desire to persuade, convince, influence, or make an impression on others in order to attain a position of esteem and recognition within the group. The desire for social acceptance among adolescents can lead to a willingness to engage in behaviours that are deemed acceptable by the group, while also exhibiting a sense of caution and attentiveness [11]. Moreover, the initiation of smoking among adolescents may be attributed to self-related or personality-related factors. The study of adolescent development reveals factors that stem from within adolescents themselves. Erikson posits that the initiation of smoking among adolescents is associated with the presence of a psychosocial dimension of the crisis encountered during their developmental

phase, specifically the period in which they are seeking to establish their identity [12].

According to the findings of an initial survey conducted on junior high school students [8], it was observed that 14.3% of the students were actively involved in smoking. The present investigation aimed to ascertain the prevalence of smoking behaviour and the associated characteristics among male students in junior high school. The present investigation constitutes a descriptive cross-sectional study. The present study utilised purposive sampling techniques to select a sample of 75 junior high school students, from whom data was collected through interviews. The prevalence of smoking among students was found to be 22.7%. On average, adolescent students who engage in smoking behaviour are approximately 12-13 years of age and typically consume 2-3 cigarettes per day. There is a correlation between smoking behaviour and certain factors such as family history, negative perceptions of smoking, association with smoking peers, and susceptibility to cigarette advertising among students. It can be inferred that by regulating the student's surroundings via socialisation efforts that highlight the hazards of smoking within the home, school, and community, it is possible to deter students from engaging in smoking behaviour. Drawing from the aforementioned description, it can be inferred that numerous determinants impact the smoking conduct of adolescents, among which the companionship of peers holds a significant sway. Consequently, scholars are inclined towards conducting a research endeavour to investigate the level of awareness pertaining to e-cigarettes as a means of acquiring insights into the patterns of e-smoking conduct.

Materials and Methods

The present investigation used a descriptive research methodology. The utilised model was cross-sectional, which involves a singular observation or data collection event, in which subject variables are measured through the administration of questionnaires to respondents. The present investigation did not involve any intervention on the part of the researchers, but rather sought to establish a correlation between perceptions of cigarette use and behaviour related to e-cigarettes. The study was carried out at the Kemoning Traditional Village STT. The present study was carried out between January and March 2022, using the Google Form platform. The online platform is considered to be one of the alternative media for conducting research without paper and is effective and efficient [13,14].

Instruments

The instrument is divided into three parts, including demographic, e-cigarettes perception and smoking behaviour. Demographics include age, sex, education, and job. The perception of e-cigarettes consists of ten questions with the answer yes, no, or do not know [15]. Smoking behaviour uses 15 questions with a specific answer, such as 'are you smoking?', 'how many pieces in one day?', and 'is your friend smoking?'

Data Analysis

The data obtained were tabulated and edited. Edits were made to retrieve subjects with complete data. Subjects with incomplete data were not included in the data analysis. Statistical analysis used for univariate analysis was frequency, percentage, mean, standard deviation, minimum, and maximum. Meanwhile, for bivariate analysis, we used Spearman Ranked Test.

Ethical Considerations

This investigation was carried out after receiving ethical approval from the Institutional Review Board. Participants were provided with information about the study, which included both risks and potential benefits. After completion of the informed consent form, questionnaires were distributed. During the data collection process, respondents have the option of refusing or withdrawing.

Result and Discussion

The present study was conducted in Kemoning Traditional Village, which comprises five banjars, namely Banjar Adat Sari, Banjar Adat Atu, Banjar Adat Kemoning, and Banjar

Adat Dlod Titi. The total population of the village is 2,191 individuals, out of which 104 belong to the teruna teruni group in the Adat Village Kemoning.

Table 1. Frequency Distribution of Respondents (n=87)

Variables	Category	Frequency (n)	Percentage (%)	Mean (St.dev)	Min-Max
Age				21.84 (2.56)	16-27
Sex	Female	52	59.8		
	Male	35	40.2		
Education	High school	25	28.7		
	College	62	71.3		
Job	Civil servants/TNI/POLRI	3	3.4		
	Private employees	27	31.0		
	Self-employed	17	19.5		
	Student	40	46.0		
Electric cigarettes perception	Good	82	94.3		
	Enough	3	3.4		
	Not enough	2	2.3		
Smoking behaviour	Good	84	96.6		
	Enough	1	1.1		
	Not enough	2	2.3		

According to the data presented in Table 1, the majority of respondents were 22 years old, with 18 individuals comprising 20.7% of the sample. There were 52 female participants, accounting for 59.8% of the total sample, while 35 male participants constituted 40.2% of the sample. This indicates that participants who exhibit the highest degree of feminine gender dominance. 25 participants possessed a high school or vocational school education, accounting for 28.7% of the sample, while 62 participants had tertiary education, representing 71.3% of the sample. This indicates that individuals with higher education levels constitute the majority of the respondents.

The study revealed that out of the total respondents, 3 individuals (equivalent to 3.4%) were employed as civil servants/TNI/POLRI, 27 individuals (equivalent to 31.0%) held positions as private employees, 17 individuals (equivalent to 19.5%) were entrepreneurs, and 40 individuals (equivalent to 46.0%) were students. This indicates that individuals who are employed in the capacity of students exhibit the highest level of dominance.

The majority of the respondents, specifically 82 individuals or 94.3%, hold a favourable perception towards electric cigarettes and 84 participants, accounting for 96.6%, exhibited positive behaviour towards electric cigarettes, according to the respondents' perceptions.

Table 2. Cross table of between perceptions of smoking and smoking behaviour (n=87)

	Smoking perception (%)	Smoking behavior (%)	r (p=value)
Good	82 (94.3)	84 (96.6)	0.030 (0.043)
Enough	3 (3.4)	1 (1.1)	
Not enough	2 (2.3)	2 (2.3)	

The hypothesis was deemed acceptable based on the results of the Spearman correlation analysis test, which yielded a p-value of 0.043. The findings indicate a noteworthy correlation between the perceptions of tranquilly associated with smoking among adolescents and their actual smoking behaviour.

The study's findings indicate that the majority of participants who exhibited dominance were aged 22 years, comprising 18 individuals (20.7%). Notoadtmodjo [16] posits that age is a social factor that exerts influence on behaviour. The age range of the participants encompassed late adolescence. The tendency for late adolescents to engage in smoking behaviour is often attributed to their desire to assert their autonomy and demonstrate their maturity. The present study aligns with the findings of Binita, Istiarti, and Widagdo (2016) [17] , who established a correlation between the age of participants and their smoking behaviour. Individuals aged 16 years and above reported a higher prevalence of smoking due to their perception of adulthood and the associated autonomy to engage in behaviours of their choosing, including smoking.

The study's findings indicate that a significant proportion of the respondents, comprising 59.8%, were female, with a total of 52 individuals falling under this category. Scholars contend that an individual's propensity towards positive conduct is correlated with their age and educational attainment. Specifically, as one's age and educational level increase, so too does their level of knowledge, which in turn influences their smoking behaviour. This phenomenon can be attributed to the influence of an individual's personal experiences, information, and intentions on their behaviour.

The study's findings indicate that a majority of the participants possessed tertiary education, with a total of 62 individuals (71.3%) meeting this criterion. Education is identified as a social factor that has an impact on behaviour, as stated by Notoadtmodjo [16]. A correlation exists between an individual's extensive knowledge and their level of education. Individuals with a higher level of education are more likely to effectively acquire information pertaining to issues, as suggested by Yanti et al. [18]. There exists a positive correlation between an individual's level of education and their level of knowledge.

The study's findings indicate that a majority of the participants' employment status was that of students, with 40 individuals (46.0%) falling under this category. One's knowledge can be influenced by various factors, and occupation is among them. According to Budiman and Ryanto [19], an individual can acquire experience and knowledge through direct and indirect means within the context of their work environment.

The findings of the research suggest that the participants possess a positive perception regarding the hazards associated with smoking. Perception, as posited by Mahmudah and Mirasari [20], refers to the cognitive process of receiving sensory stimulation, which is preceded by attention. This process enables individuals to comprehend, interpret, and value the stimuli that are perceived, whether they are external or internal in nature. The majority of participants expressed their concurrence with the notion that smoking has the potential to engender health hazards in the human body.

Conclusion

A study on smoking behaviour among participants found that individuals aged 22 years had the highest prevalence, possibly due to their desire for maturity and independence. Age and educational attainment positively influence an individual's propensity for positive behaviour, with a significant proportion of participants being female. Education, with tertiary education, was associated with greater knowledge acquisition, with occupation being a factor influencing knowledge acquisition. Participants generally had a positive perception of smoking hazards, with most agreeing that smoking could have negative health effects. Overall, the study provides insights into the factors influencing smoking behaviour.

The study have several limitations. First, the study uses small sample size, further study could use bigger sample size with multicentre location to increase the generalisability of the study results. Second, might, there is a confounding or interaction between variables. Complex analysis could give specific results of the perception electric cigarettes. Respondent might an electric cigarettes user, so that makes a bias result of the study. Last but not least, the questionnaire has no result of reliability and validity. Future study should prepare reliability

and validity of the study to increase the internal validity of the study.

Acknowledgments

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