Smoking Behavior, Perceived Self-Efficacy, and Motivation of Smoking Cessation among University Student

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Abstract

Smoking is deemed one of the negative conducts that may result in health damage. Apart from the factual truth, many people keep smoking, even since they were still adolescents. Smoking conduct can be potentially found on those suffering from emotional disorders, and adolescents are named as the potential parties who attempt to show fluctuation in their emotional stability. This research, therefore, was intended to investigate smoking behavior and the correlation of perceived self-efficacy and motivation to quit smoking. In terms of design, this research occupied a cross-sectional model, with the application of a purposive sampling technique involving as many as 208 respondents taken from engineering faculty students. To collect the data, two sorts of the questionnaire were used, such as Richmond Test and Self-Efficacy, with two major variables, dependent and independent. For the need for data analysis, a spearman's rho correlation was employed. Following the result of Spearman's rho correlation test, it was shown that $p = 0.000 < \alpha = 0.05$, with $r = 0.466$. It demonstrated that the degree of correlation coefficient was on average point. Most of the respondents (equivalent to 63%) consumed conventional cigarettes. Besides, the majority of the respondents conveyed high motivation to quit smoking (constituting 58%) and were equipped with high self-efficacy (equal to 61%). Furthermore, most of the respondents were found possessing high self-efficacy and motivation to quit smoking with several 102, while the other 3 respondents were oppositely found having low self-efficacy and motivation. To sum up, there was a correlation between perceived self-efficacy and motivation to quit smoking on a student, indicated by the presence of high self-efficacy followed by the rising of motivation to quit smoking.

Keywords: Adolescents, Motivation, Self-efficacy, Quit smoking

Introduction

According to the third edition of Tobacco Atlas (2009) in *Infodatin*, the percentages of world population consuming tobacco had reached: 57% throughout Asia, 14%Eastern Europe and fractional country Soviet Union, 12% America, 9% Western Europe, and 8% Middle-East and Africa. Meanwhile, ASEAN is named as a grouped area with 10% out of the whole smoker population around the universe and 20% of the cause of global death due to tobacco. The followings are the percentages of smokers distributed throughout ASEAN countries: Indonesia (46.16%), Philippine (16.62%), Vietnam (14.11%), Myanmar (8.73%), Thailand (7.74%), Malaysia (2.90%), Cambodia (2.07%), Laos (1.23%), Singapore (0.39%), and Brunei (0.04%) (Infodatin, 2014).

Indonesia is a specific country that is still undergoing industrial growth. It is ranked the fifth big world's tobacco producer. There have been as many as 1,132cigarette factories running in business in Indonesia, which is categorized as the biggest number over the world. This industry has been involving millions of workforces until 2013, calculated to have around 114 million people, with the distribution of 40 million of whom (35%) occupied in the agricultural sector, 29 million (25%) in the industrial sector, and 45 million (45%) in cigarette distributional service (Sulastri, Herman, & Darwin, 2018). According to Riskesdas (Basic Health Research) (2013), the smoking prevalence in Indonesia, primarily on a 15-year-old (and above) group of age elevates from 34.2% in 2007 to 34.7% in 2010 and gets higher up to 36.3% in 2013.

Supeno & Suroso (2015) have claimed that smoking conduct was highly potential to attack any individuals who suffer from emotional disorders the most, and adolescents are the most potential subjects to possess emotional stability problems. Now that adolescents are considered emotionally immature, they can open up a greater probability of performing self-defense mechanisms utilizing smoking.

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Through smoking, they perceive themselves emotionally more mature than those not smoking at all. Apart from any reasons pushing them forward to smoke, it is nearly certain that they will be much more of joy. In this kind of situation, the desire to repeat smoking on and on is getting stronger. In terms of self-efficacy possessed by adolescents, they perceive smoking as the best solution to make them so cool and mature that they will be kindly accepted by their group (Istifaizah, 2017).

According to Bandura in Nursalam (2016), self-efficacy constitutes individual competence to organize and to show necessary conduct in connection with, not only skills being possessed but also decisions taken based on at which they are expert. Efficacy decisions that individuals have taken out can be pinpointed based on expected results, such as individual competence in dealing with a specific duty in which the result expected refers to a decision made alongside the consequence of financial benefits, for instance, generated conduct. At the beginning of the adolescence period, individuals decide whether to smoke or not. Before taking a decision, motivation to smoke or not in this phase can be stimulated by self-efficacy development. Furthermore, self-efficacy refers to individual belief in their competences to complete extraordinary duties. High self-efficacy is deteriorated to facilitate the process of change of conduct dichotomized into two points, formation of desire and transference of desire into actual conduct (Supeno & Suroso, 2015).

In addition to self-efficacy, it is also of great necessity to achieve desired results. Thus, self-understanding is deemed key to acquiring such confidence. Individuals are supposed to keep trusting their capacities and potentials engraved in mind. They are strongly not suggested that they be so pessimistic and anxious that they will be haunted by fear at times (Rahmawati, Siwu & Hamel, 2017). Self-efficacy is a big deal since it contributes to determining individual decision making whether to smoke or not. To those actively smoking, they hold the belief that smoking can uplift a sense of self-efficacy as it manifests an effort to acquire social support and a joyful state of relaxation. Conversely, those not smoking perceive that self-efficacy is a result of the ability to control their own lives by doing health and cigar-free lifestyles to reduce the risk of coronary heart and pneumonia diseases (Rahmawati et al., 2017)

Besides self-efficacy, motivation is also another key to supporting people to quit smoking. It is defined as a conscious effort to influence or support ones to do something for the sake of desired expectation (Astiariny & Noviani, 2017). According to Nursalam and Effendi (2008) as cited in Astiariny & Noviani (2017), motivation refers to the presence of internal and external encouragements possessed by ones indicated by the presence of (1) desire to do things, (2) encouragements and needs to do things, (3) hopes and expectations, (4) honors and self-respect, (5) supportive environment, and (6) interesting activities. Motivation, in nature, does not automatically exist at once; indeed, it takes a series of processes to make all the targets achieved maximally. As a consequence, there exist some theories related to the process of motivation comprising the theory of reward, the theory of justice, and the theory of defining the target. Individual motivation may come from two, internal and external factors. Specifically speaking, motivation to quit smoking is referred to as an encouragement one has possessed, both from internal and external dimensions, to quit smoking (Astiariny & Noviani, 2017)

Methods

This was analytical-observational research, with the design of cross-sectional. The population outlined in this current research comprised male students of Engineering Faculty who were named as active smokers in one of the University of Malang, Indonesia. To define the sample, the purposive sampling technique was occupied with the number of 208 students qualified to set inclusive and exclusive criteria. The former referred to common characteristics of research subjects from the population being targeted and researched (Nursalam, 2016). Furthermore, the inclusive criteria in this research included: active smokers, students of Engineering Faculty of one of the University of Malang, possessing age of between 18-20 years old (late adolescent), and willing to be research respondents. Besides, exclusive criteria referred to a state of removing or eliminating subjects qualified to inclusive criteria out of the research due to particular conditions (Nursalam, 2016). The following criteria belonged to exclusive one, such as: that respondents were qualified to inclusive criteria, but suffered from a certain illness which might be potential to influence research process and result, namely lung disease and heart attack, and that respondents were into inclusive criteria, but not answering all questions given in questionnaire sheet.

Moreover, to identify the motivation to quit smoking, a Richmond test questionnaire was set as the instrument, with 4 primary questions using the UNICRA scale (University of Rodhe Island Change Assessment) and categories of low, fair, and high (Garcia-portilla, et al., 2013). The lowest score to answer questions ranged from 0 or 1, and the highest score did from 1 or 3. The maximum score constituted 10, whilst the minimum one was 0. The motivation to quit smoking was categorized low if the scores ranged from 0-4, 5-6 for fair, and 7-10 for high. Besides, the instrument used for the self-efficacy variable designed by (Istifaizah, 2017) consisted of several questions developed from the theoretical concept of Alwisol (2009).

This sort of scale was created to measure self-efficacy on students (adolescents) who desired to quit smoking, measured using the 10-question questionnaire. The scoring method, further, used in this measurement instrument was referred to as a Likert scale with a score of 1-4, with the description of 4 for "strongly agree", 3 "agree", 2 "disagree, and 1 "strongly disagree". In this current research, further, Spearman's rho test was occupied using an SPSS package program for windows, using an ordinal data scale.

Result

This research dealt with characteristics of respondents and the result of it was referred to as research problems proposed, which was the correlation of perceived self-efficacy and motivation to quit smoking on students (adolescents).

Characteristics of Respondents

Table1. The Characteristics of Respondents

Characteristics	Frequencies (N)	Percentages (%)
Gender		
Male	208	100%
Terms of Study		
1 year	73	35%
2 years	38	18%
3 years	97	47%
Types of Cigarette		
Conventional	132	63%
Electric	24	12%
Both (in combined)	52	25%

Referring to Table 1, it can be identified that all of the respondents (208, calculated 100%) were male. Most of them involved in this research had been 3 years long taking their study, with the number of 97 respondents (46.6%). At last, the majority of them preferred consuming electric cigar over a conventional one (63. 4%).

Table2. The Number of Cigar's Consumption of the Respondents

The number of cigars per day	Frequencies (N)	Percentages (%)
Electric	24	12
Conventional		
≤ 10 cigars	95	46
11-20 cigars	78	37
≥ 21 cigars	11	5

Alluding Table 2, it is evident that most of the respondents consumed ≤ 10 cigars in a day with a total of 95 respondents (45.67%), 11 respondents (5%) consuming ≥ 21 cigars in a day and 24 respondents (11.53%) consuming electric cigar.

The Result on Motivation to Quit Smoking among Students

Table3. The result on motivation to quit smoking among students

Motivation to Quit Smoking	Frequencies (N)	Percentages (%)
High	121	58%
Fair	54	26%
Low	33	16%

Concerning Table 3, it is obvious that 121 respondents conveyed high motivation to quit smoking (58%), and only 33 respondents (15.8%) did low motivation.

The Result on Perceived Self-Efficacy to Quit Smoking on Students

Table 4. The result of perceived self-efficacy to quit smoking on students

Perceived Self-Efficacy	Frequencies (N)	Percentages (%)
High	126	61%
Fair	59	28%
Low	23	11%

Based on Table 4, there are 126 respondents (60.5%) had high perceived self-efficacy and only 23 respondents (11%) showed low-self-efficacy.

The Degree of Perceived Self-Efficacy and Motivation to Quit Smoking on Students

Table5. The degree of perceived self-efficacy and motivation to quit smoking on students

Perceived Self-Efficacy	Motivation to Quit Smoking		
	High	Fair	Low
High	102	38	7
Fair	17	18	23
Low	0	0	3

Referring to Table 5 above, it is known that 102 respondents were possessing high motivation and high self-efficacy, 38 respondents with fair motivation and high self-efficacy, and 7 respondents with low motivation and high self-efficacy. Also, 17 respondents were possessing high motivation and fair self-efficacy, 18 with fair motivation and fair self-efficacy, and 23 respondents with low motivation and fair self-efficacy. At last, only three respondents were found to possess the low motivation and low self-efficacy.

The Result on Correlation between Perceived Self-Efficacy and Motivation to Quit Smoking on Students

Table6. The result of the analysis of the correlation between perceived self-efficacy and motivation to quit smoking on students

	Motivation to Quit Smoking	
Perceived Self Efficacy	P	R
	0.000	0.466

By Table 6, it is obvious that Spearman's rho test resulted in $p= 0.000$ smaller than alpha (0.05), which meant that H_0 was rejected and H_1 was supported. It indicated that there was a correlation between perceived self-efficacy and motivation to quit smoking. The correlation coefficient constituted 0.466, which showed that the degree of correlation between the variable perceived self-efficacy and motivation to quit smoking was categorized fairly. Besides, the coefficient correlation of the above result was +0.466, therefore, it could be concluded that the correlation between the two went in the same direction. It implied that if self-efficacy was high, motivation was high too. In sum, there was found a significant correlation between perceived self-efficacy and motivation to quit smoking on students (adolescents).

Discussion

The Illustration of Perceived Self-Efficacy to Quit Smoking

This current research had indicated that the majority of the respondents possessed high self-efficacy and motivation to quit smoking. However, most of the respondents were also found only having desire without any intention to make it true. Such kind of fact could be identified by the researcher when the respondents conveyed that they did have the desire to quit smoking, still could not quit smoking. Besides, some domains, such as, the number of cigars consumed in a day which was quite high, terms of study, and types of cigarette consumed also influenced one's self-efficacy. Referring to the desire to quit smoking, the number of cigars consumed also contributed to the success of quitting smoking. Most of the respondents consumed conventional cigars with the amount of >10 cigars per day and in the outdoor environment. In line with Tamy-Maury (2014) reported that 2%, 12%, and 83% of participants reported that smoking was allowed in clinical environments, other indoor environments, and outdoor environments of their dental schools, respectively.

Self-efficacy is defined as a personal belief to act out specific conduct for the sake of the targeted success of the goal. It represents a feeling in which one believes to quit smoking. This research, furthermore, was also supported by another research carried out by Sulastri (2018), 150 students (90%) out of the total of 166 SMK (Vocational School) students who were active smokers assumed that they could quit smoking if their desire rose to exist, and they also confessed that they had ever suggested and received some help from programs and professionals to quit smoking. Doing quittance from smoking could be initiated from the presence of strong desire and be helped through certain methods of quitting smoking developed by experts. This was supported by a research conducted by Haryati (2015), if the self-efficacy found on adolescents was quite high, therefore, they would reject to smoke. Meanwhile, when adolescents were found to have low self-efficacy, they would keep being addicted to smoking. Besides, self-efficacy was close in correlation with the desire and personal belief upon smoking conduct for they were strongly aware and had known very well about the negative and positive sides of smoking perceived by the adolescents. Self-efficacy determined intention of smoking cessation and was an indirect predictor of continued abstinence, through the intention to quit smoking (de Hoog, 2016).

Such kind of thing was in line with another research brought up by Amaliah (2018), stating that quittance from smoking habits was not that easy for smokers should possess sufficient self-efficacy to begin a new lifestyle without any cigars at all. Nonetheless, when they found themselves having low self-efficacy, they would return to their common smoking habit. Self-efficacy was indicated through certain conduct of avoiding getting close to active smokers, and could also be possible to do physical exercise, consuming some kinds of snack or food to replace cigar consumption, and committing to renew personal desire to begin a new healthier lifestyle. In this case, strong self-efficacy or self-competence would be engraved in one's mind to quit smoking. This was also stated on research carried out by Alfi in Amaliah (2018), health counseling to improve one's self-efficacy to avoid any kinds of risky conducts could be provided in a form of verbal persuasion through counseling and health education, which was believed effective for strengthening one's self-efficacy or self-competence in altering their conduct. In this case, quitting smoking and doing a healthier lifestyle were the two best solutions.

The Illustration of Motivation to Quit Smoking

The result of this research had indicated that most of the respondents were shown having high motivation as well as desire, interest, and effort to quit smoking. Despite the good things, the respondents were only motivated to quit smoking, but without any serious intention to show up real actualization. Besides, it had been identified that some factors, such as the number of cigars consumed, terms of study, and types of the cigar also contributed to individual self-efficacy. Referring to the desire to quit smoking, the number of cigars influenced the respondents to quit smoking. It was shown that conventional cigar remained the most consumed one with a total of >10 cigars per day. Such kind of fact influenced the respondents to effortful quit smoking.

Regarding theories elaborated on theoretical review, motivation to quit smoking was defined as an encouragement that existed on individuals, both related to internal and external domains, with the purpose of quittance from smoking as expected. To quit smoking, there were some particular stages needing actualization, such as pre-termination, termination, and perseverance.

This notion was in line with research from Astiariny (2017), motivation to quit smoking was shown the highest on 51 respondents (57.3%). In a real implementation, quitting smoking was not that easy considering the need of strong desire. Individuals could stop smoking only if they were equipped with high and strong motivation and determination. A research carried out by Kumalasari as cited in Rahmah (2015) explained that some factors influenced the intention of one to quit smoking on adolescents, such as willingness to stop doing the conduct, health reasons, economic matters, familial support, smoking prohibition, and self-efficacy.

In this research, the respondents conveyed that the desire to quit smoking was influenced by two determining factors, such as internal and external factors, in addition to these two; health also mattered to them as the reason why they quitted smoking. The internal factor referred to personal determination, while the external constituted support from outsiders, such as parents and close relatives. On top of that, the respondents also proclaimed that familial support did influence their willingness to quit smoking. This was in line with another research carried out by Prasojo (2014), explicating that students' motivation to quit smoking from a personal viewpoint signified 4.43 out of the maximum point of 7, whilst only 3.31 points remarked students' motivation to quit smoking under the external factor. This could be the indicator that the internal factor was significant to elevate students' motivation to quit smoking on the respondents. Educational programs about negative and positive sides of smoking conduct could be held to provide students with assistance as the interventive procedure. The educative programs, as mentioned, were considered worth-conducting for some parties, such as a doctor (facilitating autonomous), supposed to be more beneficial than either enforcement or prohibition.

This was supported by research by Rahmah (2015), health factors could be a determinant factor to encourage adolescents to stop smoking. Indeed, the majority of the respondents were highly cognizant of health and willing to quit smoking. Consuming tobacco as through smoking activity coasted people priceless health, even the health who attempted to be their surroundings. In short, smoking could potentially trigger coronary heart attack and arterial diseases.

The Correlation between Self-Efficacy and Motivation to Quit Smoking on Students

Concerning data analysis using Spearman's rho test upon 208 respondents, it was shown that p=0.000 smaller than alpha (0.05), which meant that there was a correlation between self-efficacy and motivation to quit smoking on students considering the significance value smaller than alpha (0.05). This, therefore, remarked the presence of correlation between self-efficacy and students' motivation to quit smoking.

Moreover, this current research was the same in logic with another one carried out by Nisa as cited in Istifaizah (2017), self-efficacy variable was closely interlinked to the intention of quittance from smoking. There were also found some factors contributing to self-efficacy, namely: mastery experiences, people's experience, social persuasion, physiological and emotional states. Regarding the result exposed above, the researcher, thus, opined that the respondents found to possess high self-efficacy were highly-motivated to quit smoking. On the other hand, those with fair self-efficacy were found to have the fair motivation, too, to quit smoking. Correlatively speaking, those who were found to have low self-efficacy remained low-motivated to quit smoking. These patterns were identifiable from the result of the research in which the researcher confidently conveyed that the respondents only showed high motivation to quit smoking, yet they remained unwilling to actualize the motivation into real practices. This statement could be referred to as the number of cigars consumed, which were still deemed significantly high in a day. This remained a determinant factor to influence engineering students to quit smoking.

Bandura, as inserted in Istifaizah (2017), was a proponent to this current research, postulating that self-efficacy referred to personal belief of ones in connection with their competences to perform and organize a series of duties mandated. What is more, self-efficacy was also influenced by such factors as culture, gender, criteria of given tasks, individual status or roles within the family, and information as regards self-competence. Besides, individuals also somehow dealt with resisting factors that opened a necessary probability to empower self-efficacy and self-confidence that could raise their sense of bravery and optimism to actualize the desired target and success of quitting smoking. Self-efficacy was also defined as trusting oneself to succeed individually by achieving glory. Individuals with high self-efficacy would commit to solve any possible problems and never easily give up when finding out that their strategies failed many times.

This research had indicated that all the respondents were male and none of whom was female. This occurring state happened as advocated by Sulastri (2018), the probability of smoking habit was shown more potential to occur at a male group than the female group. This was due to the difference in conduct acted out by male adolescents with potential risks that might happen to them, such as exceeding the speed limit when driving, consuming alcohol, and smoking. The prevalence of smoking in the male group was identified higher than that of female one due to the common belief that smoking constituted a symbol of masculinity, yet considered bad if it was practiced by the female.

After all, this current research explained that high self-efficacy found at students was still close to a matter of belief that they could cope with smoking issues, especially to quit smoking. This correlated with students' high motivation which was shown relatively high to quit smoking.

Conclusion

The illustration of perceived self-efficacy for quitting smoking found on students constituted a percentage of 61%. Generally speaking, the illustration of students' motivation to quit smoking was dominated by those with high motivation (58%), whilst only 16%of the rest showed low motivation. Further, there was a correlation between individual perceived self-efficacy and students' motivation to quit smoking.

Moreover, this research was supposed to be qualified for a source of review or referral source to conduct upcoming research with different variables and respondents related to characteristics or connection of variables with further researches. At last, it is suggested that forthcoming research be concerned about investigating factors influencing self-efficacy and motivation to quit smoking.

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