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EMPLOYMENT OF DIGITAL MEDIA TO INCREASE THE SELF-EFFICIENCY OF YOUNG SMOKERS

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ABSTRACT
Smoking is a habit or behavior that is very difficult to quit, especially for adolescents. To be able to stop smoking behavior, a strong belief (self-efficacay) is needed from the adolescent to stop smoking. The aim of this study is to determine the effect of empowerment through digital media on the self-efficacy of adolescent smokers at Senior High School. Method This study used a quasi-experimental design through a group pre-test and post-test design. The sampling technique was through convenience sampling, which amounted to 28 respondents. Collecting research data using the SEQ 12 (Smoking Self-Efficacy Questionaire) questionnaire instrument given at the pre-test and post-test stages. The collected data is then analyzed, which includes univariate analysis, namely analysis of demographic data and bivariate analysis to determine the effect of empowerment using digital media on the self-efficacy of adolescent smokers at SMA Negeri 2 Ciamis using the Wilcoxon test because the normality test results show abnormal data distribution. The results of the Wilcoxon test with a p-value of 0.002 <0.05, which means that there is a significant effect of empowerment using digital media on the self-efficacy of adolescent smokers at Senior High School. The conclusion based on the research that has been done is that empowerment with digital media has an effect on increasing the self-efficacy of adolescents to quit smoking.

Keywords: adolescent; digital media; empowerment; self-efficacy; smoking

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INTRODUCTION

Smoking behaviour is a habit or behaviours that is very difficult to give up by people who are addicted to smoking, smoking habits can be carried out by both men and women (Nguyen & Tran, 2023). Smoking behavior in everyday life is often found in different places, even in the school environment (Jauharuddin, 2019). This smoking behaviour does not only occur among adults, but also among many adolescents (Rudika et al., 2023; Solihin et al., 2023). According to data from the Global Youth Tobacco Survey in 2019, conducted among Indonesian students aged 13-15 years, about 19.2% of students, including 35.6% of boys and 3.5% of girls, use tobacco products, while 18.8% of students, including 35.5% of boys and 2.4% of girls, currently smoke cigarettes (WHO, 2023). Meanwhile, according to Riskesdas, (2010), the age of first smoking in adolescence is as high as 44.6% in the 15-19 age group and only 15.2% in the 10-14 age group. The age of first smoking generally ranges from 11-13 years and generally smoking before the age of 18 years (Parnham et al., 2023).

Exposure to nicotine, tar, carbon monoxide and carcinogens in cigarettes can trigger the development of various chronic diseases and cause cell and tissue damage (Lam et al., 2023). According to the World Health Organization (WHO), tobacco kills half of its users, tobacco kills more than 8 million people every year, and more than 7 million of these deaths are the result of direct tobacco use, while 1.2 million are the result of non-smokers being exposed to secondhand smoke (WHO, 2023).

To date, Indonesian adolescents still believe that smoking will make them more accepted by their peers, make them feel self-confident, and even believe that smoking can reduce stress (Fithria et al., 2021). The causes of adolescent smoking include internal factors that influence their smoking habits, namely adolescents who want to be accepted by their group, want to show their identity, and a sense of curiosity about smoking (Lin et al., 2023). From external factors, namely the family environment that smokes, invitations from school friends to smoke, and the community environment that smokes (Taufiq, 2023). In addition to negative health effects, adolescent smoking can lead to juvenile delinquency, including drug use, school dropout, sexual risk, and violence (Chan et al., 2021). Peer and family influences are known to increase adolescent smoking (Lin et al., 2023). To be able to quit smoking, the adolescent must have a strong belief in his or her ability to stop smoking (Afriani et al., 2021). Self-efficacy is a supportive factor that influences adolescents' intention to quit smoking (Poggiolini, 2019).

Smoking behavior will not occur if adolescents have high self-efficacy, and conversely, if adolescents have low self-efficacy, it will influence these adolescents to smoke. Self-efficacy is a person's belief in achieving a goal and overcoming an obstacle (Wang et al., 2021). Self-efficacy will be high when a person has a high evaluation of themselves to control their health. They will have self-efficacy to quit smoking in internal situations, such as refraining from smoking when they feel anxious, nervous, and depressed because they know that smoking cannot solve problems (Chan et al., 2021). Self-efficacy in adolescents to quit smoking can be increased through empowerment because empowerment can increase self-confidence, which increases self-efficacy (Hadiyani et al., 2022).

Empowerment is the process of becoming capable by gaining power or ability. Empowerment is the most important concept in health promotion because it helps individuals achieve their ability to change (Malta, 2023). The Centers for Disease Control (CDC) recognizes that youth empowerment is one of the best practices in health promotion and education (Auld et al., 2020). With empowerment, youth will develop a stable and positive identity. Adolescents will feel more confident and in control and have higher self-esteem and self-efficacy to not smoke (Melizza et al., 2020).

One way to empower youth is to use digital media as education to increase youth self-efficacy to quit smoking, for example, by producing anti-smoking videos (Hadiyani et al., 2022). Digital media itself is a variety of tools and other applications with Internet support for communication, interaction, and collaboration (Hutchinson et al., 2020). Some examples are social networks (Facebook, Twitter, Instagram), online newspapers (Kompas.com, newspaper.tempo.co, republika.co.id, tribunnews.com), and messaging applications (Whataspp, Facebook Messenger, Line, Wechat) (Park & Chang, 2020). The advantages of using digital media in education can make the messages conveyed more interesting and, of course, more accessible to adolescents (Hadiyani et al., 2022). Based on this description, the purpose of this study is to determine the effect of empowerment using digital media on the self-efficacy of adolescent smokers at Senior High School.

METHOD

The type of research used in this study was a quasi-experimental design with a one group pre- and post-test design. The population in this study were 12th grade adolescents of Senior High School who smoked with a total of 28 people. The sampling technique in this study was total sampling with inclusion criteria, namely adolescents who are active smokers, have feelings of lack of confidence if they do not smoke, are active students studying in Senior High School, do not have hearing loss, are willing to be respondents in research, cooperative and able to follow procedures that were determined during the research process. Meanwhile, the inclusion criteria were adolescents who could not be present at the time of the study.

The research data was collected using the SEQ 12 (Smoking Self-Efficacy Questionnaire) questionnaire instrument, which is standardized and reliable with Cronbach alpha values (internal and external) of 0.87 and 0.92 at the pre- and post-test stages, respectively (Talip et al., 2017). The collected data is then analyzed, which includes univariate analysis, namely analysis of demographic data and bivariate analysis to determine the effect of empowerment using digital media on the self-efficacy of adolescent smokers at SMA Negeri 2 Ciamis using the Wilcoxon test because the normality test results show abnormal data distribution. This research was conducted in October 2023 with 8 sessions.

RESULTS

Characteristics of respondents based on the average age of 18 years old, the gender of male adolescents is more dominant, namely 24 people compared to females. Most adolescents have smoking parents, as many as 23 people. Most of the students claimed to have smoked for 1 year or started smoking since the 2nd grade of high school, but there were also students who claimed to have smoked for more than 1 year, as can be seen in Table 1 below:

Table 1.
Respondent Characteristics (n=28)

Respondent Characteristics		f	%
Age	17 Year	7	25.0
	18 Year	18	64.3
	19 Year	3	10.7
Gender	Male	24	85.7
	Female	4	14.3
Family History of Smoking	Yes	23	82.1
	No	5	17.9
Duration of Smoking	1 Year	14	50.0
	2 Year	6	21.4
	3 Year	5	17.9
	4 Year	3	10.7

Based on the results of the Wilcoxon test using IBM SPSS Statistics 26, it shows that there is a significant effect of internal stimuli on self-efficacy before and after empowerment using digital media because the p value is 0.012 <0.05 ($\rho < \alpha$). The results of the above study also show that there is a significant effect of external stimuli on self-efficacy before and after empowerment using digital media because the p-value is 0.001 <0.05 ($\rho < \alpha$). Furthermore, there is also a significant effect on self-efficacy before and after empowerment using digital media because the p-value is 0.002 <0.05 ($\rho < \alpha$), the results of the Wilcocxon test can be seen in Table 2 below:

Table 2.
Wilcoxon Test Results

Variabel	Mean ± SD	S.E Mean	95% CI interval	P Wilcoxon-test
Internal stimuli self eficacy pretest	12.75 ± 4.502	0.851	11.00	0.012
Internal stimuli self eficacy postest	15.54 ± 4.221	0.881	13.90	
External stimuli sel eficacy pretest	11.11 ± 4.661	1.597	9.30	0.001
External stimuli sel eficacy postest	15.75 ± 5.161	0.798	13.75	
Self eficacy pretest	23.86 ± 8.449	0.975	20.58	0.002
Self eficacy postest	31.29 ± 9.221	1.743	27.71	

DISCUSSION

In terms of age, where the results of data analysis found that most respondents were 18 years old, then followed by 17 years and 19 years. These results are supported by a statement from Listyorini, (2023) who says that the prevalence of smoking in Indonesia is increasing, especially among children and adolescents. From 2007 to 2018, the prevalence of people using snuff and chewing tobacco has increased, especially among 10-14 years old (an increase of 0.7%) and 15-19 years old (an increase of 1.4%) (WHO, 2021).

Based on the gender of the respondents, most of the adolescent smokers were male, as many as 24 people (85.7%), while only 4 people (14.3%) were female. The findings of this study are supported by data from WHO, (2023) which states that in the world, the number of active smokers aged 15 years is dominated by males, namely 237.3 million and 129.4 million are female. This is also consistent with data from Riskesdas, (2013) which states that the majority of cigarette users are male 64.9% and 2.1% are female.

Based on respondents with a family history of smoking, it shows that out of a total of 28 respondents, most adolescents reported that parents in their families had a smoking habit as many as 23 people (82.1%). The results of this analysis are consistent with the findings of Utami, (2020), who states that the smoking behavior of parents significantly affects the smoking behavior of adolescents ($p=0.000$; $OR=1.397$; 95% $CI=1.173<OR<1.663$). The family is the first place for a person to make his first contact and communication before knowing the community. Interactions between individuals and parents or families make it possible to form experiences and self-adjustment. Adolescents who have families with bad behavior will tend to become smokers compared to adolescents with good family behavior. The example given by parents to children will lead to similar behavior, including smoking behavior. Adolescents who live with parents who smoke tend to imitate or copy the smoking behavior (Kristiani & Ricky, 2023).

Judging by the length of smoking, researchers found that most respondents had smoked for 1 year. Based on the majority of 18-year-olds, it can be interpreted that adolescents start smoking between the ages of 15 and 19. This is in line with the findings of the 2019 Global Youth Tobacco Survey, which noted that the highest age of first smoking was 15-19 years, namely 52.1%.The results of this analysis are also in line with Noviana's statement that the age of first smoking initiation was 1.1% at 5-9 years, 24.0% at 10-14 years, and 74.9% at 15-19 years (Noviana et al., 2016).

The increase in adolescent smoking is associated with the transition to adulthood. Adolescents are in a phase of self-discovery and are interested in trying new things. Adolescent smokers are considered to look more masculine and mature and may attract the attention of the opposite sex (Mirnawati et al., 2018). Adolescent smoking behavior, if not prevented, can have

an impact on the disruption of learning concentration, decreased performance, and the emergence of health problems (Wati et al., 2018). The increasing prevalence of adolescent smokers is creating a threatening burden of noncommunicable diseases in Indonesia of IDR 17.9-27.7 trillion (Meilissa et al., 2022).

From the Wilcoxon test results in Table 2, it can be analyzed that there is a significant increase in self-efficacy before and after the empowerment intervention using digital media with an increase of 2.79 for internal stimuli, 4.64 for external stimuli, and 7.43 for total self-efficacy. The results of this analysis are supported by the findings of research by Hadiyani et al., (2022) which shows that there is a significant difference in self-efficacy scores between the control and intervention groups with a p-value of 0.000 ($p <\alpha$ 0.05). This is also consistent with the research conducted by Feriyanti et al., (2020) which states that there are differences in knowledge, attitude and self-efficacy before and after the intervention of video lectures on the dangers of smoking with p values of 0.000, 0.019 and 0.023 respectively ($p < 0.05$), therefore it can be concluded that there are differences in knowledge, self-efficacy and attitude before and after the intervention of video lectures on the dangers of smoking.

Adolescents with low self-efficacy tend to have high smoking behavior (Laili, 2018). The cause of low self-efficacy in adolescents is caused by intense emotions, fear, anxiety, and stress, so when the ability to control adolescents' emotions is low, these adolescents will be higher to smoke as a form of distraction (Riyanda et al., 2023). Self-efficacy in adolescents can be increased through empowerment because empowerment can make adolescents more active, provide opportunities to learn skills, and take responsibility for participating in meaningful social and community affairs (Park & Chang, 2020). Empowerment allows adolescents to build self-confidence and have high self-esteem and self-efficacy (Hadiyani et al., 2022).

Empowerment in adolescents can have a positive impact on smoking prevention (Feriyanti et al., 2020). In this study, empowerment of adolescents was carried out through three stages, namely the first awareness stage, in this stage the researcher made adolescents aware by asking adolescents to give opinions about the conditions of people with smoking behavior. Researchers also make adolescents aware of the adverse effects of smoking behavior by showing several pictures of someone affected by smoking behavior. This can help adolescents realize that smoking can have a real negative impact on health.

The second stage is capacity building, and the aim of this stage is to enable adolescents to increase their knowledge about the contents of cigarettes and the dangers of smoking through educational videos (Wati, 2018). The use of digital media such as videos in learning will be more effective than the use of traditional media. Empowerment in the capacity stage, through education on the dangers of smoking, can improve the perception of cigarettes to strengthen the awareness of adolescents to stop smoking behaviour.

The third stage is the empowerment stage, in which young people are involved in the production of anti-smoking videos. Before making the video. This stage starts with providing modules and posters about the dangers of smoking and recommendations on the website of the Indonesian Ministry of Health so that the respondents can search and read the material first. Next, the young people discussed the topic of the video and then began to produce videos according to the topic they had decided on.

CONCLUSION

Empowerment with digital media has an effect on increasing self-efficacy to quit smoking among adolescents.

REFERENCES

Afriani, Miskah et al. (2021). Self Efficacy and Barriers to Smoking Cessation in Men and Women in Medan : Case Study in the Lower Class Economic Community. International Journal of Cultural and Social Science, 2(2), 82–90.

Auld, M. Elaine et al. (2020). Health Literacy and Health Education in Schools : Collaboration for Action. National Academy of Medicine, 1–13. https://doi.org/10.31478/202007b

Chan, Jimmy et al. (2021). Self-Efficacy and Motivation to Quit of Smokers Seeking to Quit : Quantitative Assessment of Smoking Cessation Mobile Apps. JMIR MHealth and UHealth, 9(4), 1–18. https://doi.org/10.2196/25030

Feriyanti, Alma et al. (2020). Efektivitas Audio-Visual Dangers of Smoking dalam Meningkatkan Pengetahuan, Efikasi Diri dan Sikap Remaja di SMP Negeri 32 Kota Samarinda. Perilaku Dan Promosi Kesehatan: Indonesian Journal of Health Promotion and Behavior, 2(2), 25. https://doi.org/10.47034/ppk.v2i2.4182

Fithria, Fithria et al. (2021). Indonesian adolescents ' perspectives on smoking habits : a qualitative study. BMC Public Health, 21(82), 1–8. https://doi.org/10.1186/s12889-020-10090-z

Hadiyani, Wini et al. (2022). The Effect of Empowerment Using Digital Media on Self-efficacy Among Adolescent Smokers. Malaysian Journal of Medicine and Health Sciences, 18, 108–114.

Hutchinson, Paul et al. (2020). Evaluation of a multimedia youth anti- smoking and girls ' empowerment campaign : SKY Girls Ghana. Hutchinson et Al. BMC Public Health, 20(1734), 1–18. https://doi.org/https://doi.org/10.1186/s12889-020-09837-5

Jauharuddin, Arfiah. (2019). Tantangan dalam pengelolaan regulasi kawasan bebas rokok di area sekolah SMA di kecamatan Kahu Sulawesi Selatan. Berita Kedokteran Masyarakat, 35(4), OP10-5. https://doi.org/https://doi.org/10.22146/bkm.45192

Kristiani, Evi, & Ricky, Denny Paul. (2023). Gambaran Dukungan Keluarga dan Pengaruh Teman Sebaya terhadap Perilaku Merokok Remaja. Jurnal Penelitian Perawat Profesional, 5(3), 897–904.

Laili, Fauziah Nurul. (2018). Perbedaan Perilaku Merokok Antara Remaja Dengan Kepercayaan Diri Dan Efikasi Diri Tinggi Dan Kepercayaan Diri Dan Efikasi Diri Rendah.

Lam, David Chi Leung et al. (2023). Lung Cancer Screening in Asia: An Expert Consensus Report. Journal of Thoracic Oncology, 18(10), 1303–1322. https://doi.org/10.1016/j.jtho.2023.06.014

Lin, Manzhi et al. (2023). Factors influencing adolescent experimental and current smoking behaviors based on social cognitive theory: A cross-sectional study in Xiamen. Frontiers in Public Health, 11, 1–14. https://doi.org/10.3389/fpubh.2023.1093264

Listyorini, Puguh Ika. (2023). Perilaku Merokok Masyarakat Indonesia Berdasarkan Global Adult Tobacco Survey Tahun 2021. Prosiding Seminar Informasi Kesehatan Nasional (SIKesNas), 417–425. https://doi.org/https://doi.org/10.47701/sikenas.vi.2959

Malta. (2023). The Concept of Strategy in Community Empowerment : A Literature Review. INFLUENCE: International Journal of Science Review, 5(3), 24–34. https://doi.org/10.54783/influencejournal.v5i3.179

Meilissa, Yurdhina et al. (2022). The 2019 economic cost of smoking- _ attributable diseases in Indonesia. BMJ, 11(2), 1–7. https://doi.org/10.1136/tobaccocontrol-2021-056890

Melizza, Nur et al. (2020). Smoking Behavior , Perceived Self-Efficacy , and Motivation of Smoking Cessation among University Student. International Journal of Health Sciences, 8(1), 23–29. https://doi.org/10.15640/ijhs.v8n1a5

Mirnawati et al. (2018). Perilaku Merokok pada Remaja Umur 13-14 Tahun Mirnawati1. HIGEIA (Journal of Public Health Research and Development), 2(3), 396–405.

Nguyen, Huy Nga, & Tran, Tuan Anh. (2023). Tobacco Use Behavior Among Adolescents in Hanoi, 2023. Tạp Chí Y Học Việt Nam, 532(2), 32–39. https://doi.org/10.51298/vmj.v532i2.7377

Noviana, Arika et al. (2016). Determinan Faktor Remaja Merokok Studi Kasus di SMPN 27 Semarang. Jurnal Kesehatan Masyarakat, 4(3), 960–969.

Park, Eunhee, & Chang, Yu-ping. (2020). Using Digital Media to Empower Adolescents in Smoking Prevention : Mixed Methods Study. JMIR Pediatrics And Parenting, 3(1), 1–9. https://doi.org/10.2196/13031

Parnham, Jennie C. et al. (2023). Changing awareness and sources of tobacco and e- -cigarettes among children and adolescents in Great Britain. BMJ, 1–9. https://doi.org/10.1136/tc-2023-058011

Poggiolini, Claudia. (2019). High self-efficacy regarding smoking cessation may weaken the intention to quit smoking High self-efficacy regarding smoking cessation may weaken the intention to quit smoking. Cogent Psychology, 6(1), 1–14. https://doi.org/10.1080/23311908.2019.1574096

Riskesdas. (2010). Laporan Riset Kesehatan Dasar 2010. In Jakarta: Badan Litbang Kesehatan (pp. 1–446).

RISKESDAS. (2013). Riset Kesehatan Dasar. Jakarta: Badan Penelitian Dan Pengembangan Kesehatan Departemen Kesehatan Republik Indonesia, Penyakit Menular, 103. https://doi.org/10.1007/s13398-014-0173-7.2

Riyanda, Teuku et al. (2023). Hubungan Kecerdasan Emosional dengan Perilaku Merokok pada Remaja di Kabupaten Aceh Jaya. Jurnal Ilmu Keperawatan, 11(1), 73–83.

Rudika, Wisnu et al. (2023). Perilaku Merokok Sebagai Identitas Sosial di Kalangan Pelajar Kacamatan Tanjungpinang Timur. Social Issues Quarterly, 1(2), 284–292.

Solihin, Solihin et al. (2023). Perilaku Merokok pada Remaja dan Faktor Penyebabnya di SMA 2 dan SMK 8 Muhammadiyah Tanjung Sari Kecamatan Medan Selayang. Jurnal Ilmu Dan Teknologi Kesehatan Terpadu, 3(1), 21–30.

https://doi.org/10.53579/jitkt.v3i1.74

Talip, Tajidah et al. (2017). Reliability and validity of the malay version of a modified smoking self-efficacy questionnaire among Bruneian secondary students. Asian Pacific Journal of Cancer Prevention, 18(6), 1499–1505. https://doi.org/10.22034/APJCP.2017.18.6.1499

Taufiq, Tugastono. (2023). Impact of Smoking Behavior on Learning Achievement : A Case Study at PGRI Bandongan Junior High School Students. Journal of Islamic Education and Ethics, 1(1), 69–79. https://doi.org/https://doi.org/10.18196/jiee.v1i1.5

Utami, Novi. (2020). Pengaruh Kebiasaan Merokok Orang Tua terhadap Perilaku Merokok Remaja di Indonesia. Media Kesehatan Masyarakat Indonesia, 16(3), 327–335. https://doi.org/10.30597/mkmi.v16i3.9801

Wang, Shirlene D. et al. (2021). Addictive Behaviors Impact of self-efficacy on daily intention to not smoke. Addictive Behaviors, 118, 1–6. https://doi.org/10.1016/j.addbeh.2021.106877

Wati, Sitti Hasna et al. (2018). Dampak Merokok Terhadap Kehidupan Sosial Remaja (Studi di Desa Mabodo Kecamatan Kontunaga Kabupaten Muna). Neo Societal, 3(2), 503–509.

WHO. (2021). Gats|Global Adult Tobacco Survey Fact Sheet Indonesia 2021. Fact Sheet Indonesia, 1–2.

WHO. (2023). Tobacco. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/tobacco