

## Social Media Exposure towards Asian Youth Smoking Behaviour: A Scoping Review

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### ABSTRACT

**Background:** Smoking habits among teenagers have a significant impact on public health. Smoking in adolescence is a global health problem that requires serious attention because it can have long-term impacts on public health, including an increased risk of chronic diseases in later life. **Aims:** This review aims to identify the influence and impact of cigarette promotion on social media on adolescent smoking behavior in Asia. **Method:** This research uses a scoping review method to explore and understand the level of cigarette consumption among teenagers in various Asian countries. Search using Pubmed, Google Scholar, and Springer Link databases. Search for articles using the main keywords Asian youth cigarette consumption, influence and impact. This review was conducted on 200 articles that were screened and a total of 10 articles were analyzed. The selected articles are in English and Indonesian, with a period of five years between 2019 and 2024. Types of articles cover the fields of medicine, health, health care, environmental science, and social science. The types of documents used are journals and articles with full text and free. The articles come from Germany, England, the United States, Malaysia, China, Taiwan, and Indonesia. **Results:** The results of this study indicate that cigarette promotion on social media can have a significant influence on smoking behavior among youth in Asia. **Conclusion:** We have identified that cigarette promotion on social media influences adolescent smoking behavior due to low self-efficacy, peers, ineffective promotional advertising, and family habits.

**Keywords:** Asia, Promotion, Social-Media, Teenage cigarette consumption

### INTRODUCTION

Smoking among teenagers in Asia is a problem that requires serious attention, considering its negative effects on the health and development of the younger generation. Due to diverse geography and culture, it is difficult to understand the factors that influence smoking behaviour among adolescents in Asia (Nainggolan *et al.*, 2020).

Cigarette promotion on social media has a significant impact on adolescent smoking behaviour. With wide penetration and great influence among teenagers, social media has become the main platform through which cigarette promotion can reach a wider and more

vulnerable audience (Marchel, 2019). Through attractive content and targeted marketing campaigns, cigarette promotion can strengthen positive perceptions of smoking among teenagers, depicting a modern and mature lifestyle. This can change social norms in adolescents, encourage smoking experimentation, and even increase nicotine addiction rates (Fadhila *et al.*, 2022). Apart from that, social media also facilitates the exchange of information and experiences between teenagers and strengthens the smoking culture among teenagers. Therefore, efforts to control cigarette promotion on social media are important in efforts to prevent smoking among teenagers.

Thus, in order to find a solution, it is necessary to study how cigarette ads on social media affect young smoking habits in Asian nations. The impact of cigarette advertising on smoking habits among Asian youth is the focus of this study. Smoking habits among teenagers have a significant impact on public health and are a global health problem that requires serious attention. With its cultural and demographic diversity, the Asian Region offers an extraordinary context for understanding cigarette consumption patterns among adolescents.

Understanding cigarette consumption levels in Asia can help design more efficient public health interventions. Adolescent smoking increases the likelihood of developing chronic diseases in later years and has other far-reaching effects on public health (Muslim *et al.*, 2023).

This research is a continuation of previous research which used the Scoping review method by comparing factors that influence cigarette consumption in Asian adolescents. In the context of globalization, comparative objectives can provide more comprehensive insights into smoking trends among

Asian adolescents. The formation of this research title was based on the need to identify the impact of cigarette promotion on social media on cigarette consumption among teenagers, which is a big problem in Asia. This research is expected to be able to identify the impact of cigarette promotion on teenagers. The establishment of more efficient prevention and intervention initiatives can provide benefits in preventing the younger generation from the negative impacts of smoking behaviour. This research is relevant because it increases understanding of this pressing public health problem worldwide.

## METHODS

This research uses a scoping review design. National international journals are the subject of this research, and the research sample consists of 20 research articles from national and international journals which discuss the influence of cigarette promotion on social media on adolescent smoking behaviour in Asia.

These articles were taken from Google Scholar, Pubmed, and Springer databases.

**Table 1.** Database and keywords

Database	Keyword
Pubmed, Google Scholar	Keywords: (“Cigarette Consumption” [Mesh]) , (“Effect of Cigarette Promotion”[Mesh]) Filter: Adult), (“Cigarette Behaviour”[Mesh]) Filter: Adult), and (“Asian Adolescents”[Mesh]) Filter: Adult).
Springer Link	Keywords: (Effect of Cigarette Promotion on Cigarette Behaviour in Social Media), Filter: Discipline: Asian Adolescents Subdiscipline: Health

Selected articles were selected based on publications released between 2019 and 2024 (5 years) and written in Indonesian and English. The exclusion criteria are articles that require full text in a language other than English or Indonesian, articles published before 2019, articles with unclear publication sources, research results that are not related to health impacts, and articles that require ISSN or ISBN. The eligibility criteria for this study were based on the PICOS criteria (population, intervention/exposure, outcome, study):

- The population in this study consisted of non-cigarette consumers.
- The exposure in this study was not smoking behaviour.
- The results evaluated in this study are not the effect of cigarette promotion on social media on smoking behaviour in Asian adolescents.
- This research is not an observational study.

## RESULTS AND DISCUSSION

Google Scholar returns 199 articles, Springer Link 181, and PubMed 22 when searching for papers using the aforementioned keywords. Reviewing the abstract is the next stage. In the next phase, a full-text review, 160 articles were included after 188 articles were removed from consideration due to their lack of relevance to the topic at hand (the Influence of Social Media Promotion

on Teenage Smoking Behavior in Asia). Articles that did not fulfill the criteria were eliminated from a full text search of

160 chosen articles. For this study, eleven papers were chosen (Figure 1).

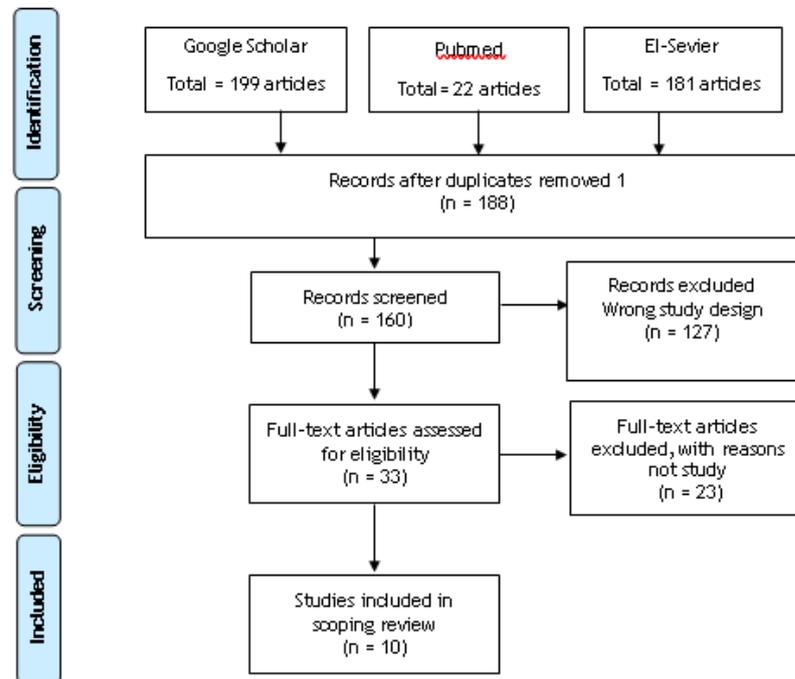


Figure 1. Framework diagram based on PRISMA guidelines

Table 1. Summary of selected data

Authors	Journal Title	Results
(Oktavilantika <i>et al.</i> , 2023)	Literature Review: Promosi Kesehatan dan Model Teori Perubahan Perilaku Kesehatan	Several theories may be used in health promotion to influence people's health-related behaviors. These theories include Theories of Affect, Learning Theory, Social Cognitive Theory, and Stage of Change Theory. To promote and change health behavior, this study used a literature review approach covering the years 2012-2022. The theories covered here address the steps, outcomes, and methodologies involved.
(Satpathy <i>et al.</i> , 2022)	Literature Review: Cigarette Promotion Strategies Versus Anti-Smoking Health Promotion Strategies	It is critical that we address the issue of adolescent smoking as soon as possible. As a result of advancements in media consumption enabled by ICT, anti-smoking health promotion initiatives are modern. Nevertheless, its widespread adoption is still in its early stages, and the effectiveness of health promotion messaging is heavily dependent on its attractiveness and relevance to the target audience.
(Vassey <i>et al.</i> , 2022)	Frequency of social media use and exposure to tobacco or nicotine-related content in association with E-cigarette use among youth: A cross-sectional and longitudinal survey analysis	Online surveys were administered to 2,036 high school students from varied ethnic and socioeconomic backgrounds in Los Angeles, California, between January and May of 2021 and 2022. The data was analyzed using both cross-sectional and longitudinal methods. Adolescents who used TikTok several times daily were more likely to use e-cigarettes ever (adjusted odds ratio [AOR] = 2.16; CI: 1.20;3.90) and are using them now (AOR = 3.11; CI: 1.64;5.89), as comparison to those who used

		TikTok less often or not at all. Adolescents who used TikTok more often or daily were also more likely to start using electronic cigarettes (AOR = 2.97; CI: 1.53;5.77) than those who used it less often or never. Viewing tobacco or nicotine postings, including e-cigarettes, on TikTok at least weekly increased the likelihood of e-cigarette ever-use (AOR = 2.60; CI: 2.02;3.35) and current usage (AOR = 3.11; CI: 1.64;5.89) among adolescents. The risk of e-cigarette use and initiation is higher among teenagers who use TikTok often and who are exposed to tobacco material on the app frequently.
(Pokhrel <i>et al.</i> , 2021)	Social media's influence on e-cigarette use onset and escalation among young adults: What beliefs mediate the effects?	Twenty-three hundred and thirty-seven college students (mean age=21.2; standard deviation=2.1; 54% female) had their self-report data taken at three intervals between 2017 and 2019. The mediational models were tested using structural equation modeling. greater affect regulation expectations, such as the perception that e-cigarette usage alleviates boredom and stress, moderated the relationship between greater baseline social media e-cigarette exposure and the commencement of e-cigarette use one year later among baseline never e-cigarette users. Among those who had used electronic cigarettes for at least a year, the effects of increasing social media exposure at baseline on increased current e-cigarette usage were moderated by higher positive sensory, pleasant "smoking" experience, and affect regulation expectation beliefs. Ads for electronic cigarettes on social media may entice young individuals to give them a try by making them seem like a stress reliever and a source of happiness.
(Donaldson <i>et al.</i> , 2022)	The impact of e-cigarette product placement in music videos on susceptibility to use e-cigarettes among young adults: An experimental investigation	Final Product When comparing the treatment group to the control group, those who had never used electronic cigarettes before were more likely to say they planned to use them in the future (OR = 1.94, 95% CI [1.08, 3.54]). When comparing the treatment group to the control group, individuals in the former were more likely to report being influenced by their peers to use e-cigarettes (OR = 1.97, 95% CI [1.19, 3.32]). The treatment group did not show a correlation with the composite measure of e-cigarette use susceptibility, while these subitems did. In summary, Seeing e-cigarettes advertised in music videos could make young individuals more open to trying them out.
(Dai <i>et al.</i> , 2022)	Vaping Media Literacy, Harm Perception, and Susceptibility of E-Cigarette Use Among Youth	Disparities in vape media literacy were shown to be statistically significant among middle school students ( $p=0.03$ ), male students ( $p=0.003$ ), and students from racial and ethnic minority groups (Blacks, Hispanics, others vs Whites, $p=0.0009$ ), along with gender. An AOR of 1.2 (95% CI=1.1, 1.2; $p<0.0001$ ) was shown to be substantially linked with an elevated perception of the harmfulness of E-cigarette usage, when vaping media literacy was higher. Perceived danger from electronic cigarettes was likewise linked to all subscales. Higher vaping media literacy was associated with a reduced likelihood of first-time E-cigarette use among non-users

		(AOR=0.90; 95% CI=0.83, 0.97; p=0.005). Exposure to vaping was inversely related to the vaping Messages and Meanings subscale and the vaping Representation and Reality subscale.
(Klein <i>et al.</i> , 2022)	Testing potential disclosures for e-cigarette sponsorship on social media	We summarized the main topics connected to the hashtags by qualitative content analysis, and we compared commercial content recognition by condition using logistic regression analyses. Final Product When comparing the #sponsored and #ad conditions, the probabilities of commercial recognition were 1.98 (OR: 1.14-3.38). The probability of commercial awareness rose by 22% for every second that the hashtag was given attention to (OR:1.22, CI: 1.00-1.33).
(Tantri <i>et al.</i> , 2018)	The Relationship Between Perceptions of Warnings about the Dangers of Smoking on Cigarette Packaging and Smoking Behaviour among Adolescent Boys in Palembang City	Perceived vulnerability, perceived severity, perceived advantages, perceived obstacles, and signals to actio were all shown to be connected with smoking behavior in statistical tests, however self-efficacy was found to be unrelated (p=0.734). According to multivariate research, the duration of perceived vulnerability was the most influential variable on smoking behavior.
(McKelvey <i>et al.</i> , 2015)	Determinants of cigarette smoking initiation in Jordanian schoolchildren: longitudinal analysis.	On average, the participants were 12.6 years old when they started. By the end of the tenth grade, 29.8% of the 1,454 pupils had started smoking cigarettes, with men's rates being 37.2% and girls' at 23.7%. Smoking was first started by 47.2% of males and 37.2% of girls in eighth grade, out of 498 who started. A history of waterpipe use, poor cigarette rejection self-efficacy, a desire to start smoking, and the presence of smoking peers were all factors in the decision to start smoking cigarettes. Girls were also more likely to start smoking if they had a smoking parent or sibling.
(Ling <i>et al.</i> , 2019)	Cigarette smoking among secondary school-going male adolescents in Malaysia: Findings from the National Health and Morbidity Survey 2017	a cross-sectional research with 27,497 participants that aimed to represent Malaysian school-aged teenagers using a 2-stage stratified cluster sampling method. The purpose of this study was to investigate potential risk variables for current cigarette smoking among Malaysian male teenagers by using multiple logistic regression analysis. Teenage boys between the ages of 16 and 17 were more likely to be current smokers if they were: current users of illicit drugs (AOR = 8.14; 95% CI = 6.37-10.41), current users of alcohol (AOR = 1.92; 95% CI = 1.65-2.23), students from rural schools (AOR = 1.60; 95% CI = 1.46-1.76), children of parents who were widowed, divorced, or separated (AOR = 1.37; 95% CI = 1.21-1.55), and children of parents or guardians who used tobacco products (AOR = 3.47; 95% CI = 2.33-5.16). Adolescents at risk and parents should both be targets of tobacco control initiatives targeted at helping their children quit smoking.

According to research conducted by Oktavilantika *et al.* (2023), there are several approaches that can explain that the role of health promotion can help reduce smoking behaviour in society. The Learning Theory approach has an influence in providing behavioural changes to individuals. This theory may

help patients care for themselves and live a healthy oral lifestyle, especially by reducing the negative effects of smoking, which include thickening of saliva and dryness of the throat, which causes bad breath. Apart from that, this theory can also increase people's awareness of paying attention to their throat health so they

can avoid disease. Then, according to the Social Cognitive Theory approach, it states that oral health promotion on social media can have an influence on smoking behaviour in individuals. This theory can increase individual self-efficacy regarding handling oral health problems and improving oral health through productive and healthy activities. Then the Stage of Change Theory approach can have an influence on individual awareness of readiness and awareness of biological health, especially oral health. And finally, the Theory of Affect theory approach can have an influence on increasing health promotion which can have an impact on the desire to quit and avoid smoking behaviour in individuals as well as being able to provide awareness of the dangers of smoking and the benefits of avoiding smoking behaviour.

According to Research conducted by Satpathy *et al.* (2022) stated that health promotion that develops today's technology can influence reducing smoking behaviour among young people in Asia. This is due to the problem of smoking. The problem of smoking in teenagers is a crucial point that must be a priority to prevent, which is caused by the negative impacts of smoking behaviour such as hypertension, lung cancer and heart attacks. Therefore, appropriate health promotion strategies are needed that can be packaged in an attractive way to increase awareness among young people in Asia about the dangers of smoking behaviour.

According to Research conducted by Vassey *et al.* (2022) stated that cigarette promotion on the Tiktok platform could have an influence on increasing smoking behaviour among teenagers. The results of this research have a ratio value [AOR] = 2.16; CI: 1.20;3.90 in cigarette users and increased in the last 30 days with value (AOR = 3.11; CI: 1.64;5.89). This shows that teenagers who have a high frequency of using TikTok have a higher tendency for smoking behaviour than teenagers who have a low frequency of using TikTok. The data shows that young people who use and watch tobacco content on TikTok are more likely to start using e-cigarettes, and that there needs to be stricter regulation and enforcement of existing rules due to the prevalence of tobacco-related content on popular youth social

media platforms like TikTok. Stronger stances on tobacco content restriction on their platforms.

According to Research conducted by Pokhrel *et al.*, (2021) stated that cigarette promotion on social media can influence individual beliefs regarding smoking behaviour. The results of this research indicate that the individual's confidence in e-cigarette users can increase because it is influenced by the individual's expectations of the consequences of existing regulations. The idea that vaping makes you feel better, less stressed, and bored may be at the root of this phenomenon, mitigating the effect of increased exposure to e-cigarettes on social media on starting to vape. Then, cigarette ads on social media can suggest to young people that smoking is a great way to relax and unwind, which might lead them to start smoking themselves. Cigarette ads on social media often portray smokes as a greener option, which helps to normalize the product and attract new smokers.

According to Research conducted by Donaldson *et al.* (2022) said that advertising cigarettes would make young people want to light up someday. Ads on social media and from friends may have a big impact on teens' urge to smoke, according to one research. Therefore, it is hoped that the local tobacco control body will consider promotional strategies to reduce the placement of cigarette products, one of which is promotion in the form of music videos.

According to Research conducted by Dai *et al.* (2022), Advertising cigarettes on social media platforms has a major impact on adolescent cigarette knowledge. The findings of this study suggest that heightened knowledge of the risks associated with smoking may be achieved via increased literacy. The odds ratio (AOR=0.90; 95% CI =0.83, 0.97; p=0.005) for first-time e-cigarette users among non-user teenagers was lower for pupils with more vaping media literacy compared to those with less literacy.

According to Research conducted by Klein *et al.* (2022) claim that there is a correlation between the prevalence of cigarette ads on social media and a rise in adolescent smoking in Asia. Disclosure advertisements are eye-catching and help young social media users recognize commercial sponsorships much better.

One potential way to help people understand the impact of paid social media is to label commercially sponsored material on social media. The value of boosting prospects for commercial awareness by 22% (OR:1.22, CI: 1.00-1.33) and the ratio of sponsored advertising (OR = 1.98, CI: 1.14-3.38) provide proof of this.

According to Research conducted by Tantri *et al.* (2018) found that males in Palembang City exhibited a correlation between their perceptions of their own vulnerability and their smoking habits, with a p-value of less than 0.000. Teens' lack of heightened understanding of the risks of smoking is a direct result of the many warnings printed on cigarette packs. Aside from that, the ads' content doesn't do a good job of warning teens about the risks of smoking.

According to Research conducted by McKelvey *et al.* (2015) participants' average age at baseline was 12.6 years. In the tenth grade, 29.8% of 1,454 pupils (37.2% of males and 23.7% of girls) began smoking. In eighth grade, 47.2% of males and 37.2% of females began smoking. The total number of smokers was 498. The factors that contributed to the smoking habits seen in this research among boys were their frequent exposure to social media advertisements for cigarettes, their lack of confidence in their ability to resist smoking, and the impact of their smoking-heavy peer group. Then smoking behaviour in women is caused by the smoking habit of their parents or closest family, which is a form of identification and prediction that smoking behaviour is a daily and commonplace behaviour in their family.

According to Research conducted by Ling *et al.* (2019) found that among male adolescents between the ages of 16 and 17, there was an increased likelihood of being an active smoker if they were: drug users, current alcohol users, those attending rural schools, those whose parents were widowed, divorced, or separated, and those whose parents or guardians used tobacco products. Teens in Malaysia are more likely to light up after seeing ads for cigarette products.

## CONCLUSION

Based on the results of the coping review of the 10 articles above, cigarette

promotion on social media has a significant influence on increasing smoking behaviour among teenagers in Asia. This is due to the low level of adolescent self-efficacy in rejecting smoking behaviour so that adolescents feel less motivated to understand the dangers of smoking. Apart from that, invitations to smoke from peers also influence adolescent smoking behaviour. Then the lack of effectiveness in the distribution of advertising and the low level of literacy regarding the dangers of smoking also causes low awareness of teenagers regarding the dangers of smoking. Family factors also have a significant impact on increasing smoking behaviour among teenagers in Asia.

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