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Factors Influencing Smoking Initiation Among Adolescents at Ar-Ridho Islamic Boarding School

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Abstract. Background: Smoking initiation during adolescence remains a major public health concern because early exposure to tobacco increases the risk of nicotine dependence and long-term health complications. Identifying the factors that encourage adolescents to smoke for the first time is essential for developing effective prevention strategies, particularly in educational settings such as Islamic boarding schools. *Methods:* This study employed a quantitative descriptive cross-sectional design involving 63 adolescent students at Ar-Ridho Islamic Boarding School, Depok, in May 2026. Data were collected using a structured questionnaire to identify respondents' primary reasons for smoking initiation. Descriptive statistical analysis was performed to summarize the frequency and percentage distribution of each influencing factor. *Results and Discussion:* The findings revealed that peer influence was the most dominant reason for smoking initiation, reported by 48 respondents (76.2%), followed by other influencing factors reported by 14 respondents (22.2%), while exposure to cigarette advertisements accounted for only 1 respondent (1.6%). These findings indicate that social interaction with peers plays a substantially greater role in smoking initiation than media exposure. Adolescents are more likely to adopt smoking behavior to gain social acceptance, conform to group norms, or strengthen interpersonal relationships within their peer groups. The limited contribution of advertising suggests that interpersonal social environments exert a stronger influence than external promotional factors in this population. *Conclusions and Suggestions:* Peer influence is the primary factor associated with smoking initiation among adolescents at Ar-Ridho Islamic Boarding School, Depok. School administrators, parents, and public health professionals should strengthen peer-based health promotion programs, tobacco education, and social skills interventions to improve adolescents' resistance to negative peer pressure. Future studies are recommended to examine additional psychosocial and family-related determinants using larger and more diverse samples to provide a broader understanding of adolescent smoking initiation.

Introduction

Smoking remains one of the leading preventable causes of morbidity and mortality worldwide, contributing substantially to the global burden of cardiovascular diseases, chronic respiratory disorders, and various types of cancer (1,2). According to the World Health Organization, tobacco use is responsible for more than eight million deaths annually, including deaths resulting from direct tobacco consumption and exposure to

secondhand smoke (1). Despite numerous tobacco control policies implemented in many countries, smoking prevalence among adolescents continues to be a significant public health concern, particularly in low- and middle-income countries where tobacco products remain highly accessible and social acceptance of smoking persists (2,3).

Adolescence represents a critical developmental period characterized by rapid physical, psychological, and social changes (4). During this stage, individuals are more susceptible to adopting risky health behaviors, including cigarette smoking (5). Smoking initiation during adolescence is particularly alarming because individuals who begin smoking at a younger age are more likely to develop nicotine dependence, continue smoking into adulthood, and experience long-term adverse health consequences (6,7). Furthermore, early smoking initiation has been associated with poor academic performance, mental health problems, and increased engagement in other unhealthy behaviors such as alcohol consumption and substance abuse (8).

Indonesia is among the countries with the highest prevalence of tobacco consumption worldwide (9). National surveys have consistently reported increasing smoking prevalence among adolescents, indicating that tobacco use remains a serious public health challenge (10). The widespread availability of cigarettes, relatively affordable prices, extensive tobacco marketing, and permissive social norms contribute to the growing number of adolescent smokers (1,9). Although national tobacco control regulations have been strengthened, smoking among young people remains common across various educational settings, including schools and Islamic boarding schools (10).

Smoking behavior among adolescents is a complex phenomenon influenced by multiple interacting factors (11). Previous studies have identified peer influence, parental smoking behavior, family environment, socioeconomic status, curiosity, psychological factors, media exposure, and cigarette advertising as important determinants of smoking initiation (11,12). Among these factors, peer influence has consistently been reported as one of the strongest predictors of smoking behavior (12). Adolescents frequently seek acceptance within their social groups and may imitate the behaviors of their peers to strengthen social relationships or gain recognition. Social Learning Theory suggests that behaviors are acquired through observation and interaction with significant individuals within one's environment, making peer groups particularly influential during adolescence (13).

Although numerous studies have investigated smoking behavior among adolescents in general educational institutions, relatively limited research has specifically examined smoking initiation among students attending Islamic boarding schools. Islamic boarding schools provide unique educational and social environments characterized by religious values, structured daily activities, and close interpersonal relationships among students. These characteristics may create distinct social dynamics that influence smoking behavior differently compared with conventional school settings. Consequently, identifying the primary reasons adolescents initiate smoking within Islamic boarding schools is essential for designing effective prevention strategies that are culturally appropriate and institutionally relevant (14).

Several previous studies have emphasized the contribution of cigarette advertising and mass media exposure to adolescent smoking initiation (15). However, recent evidence indicates that interpersonal social influences, particularly peer relationships, may exert stronger effects than media exposure in determining adolescents' decisions to begin smoking (12). Understanding the relative

contribution of these factors is important for developing targeted health promotion programs. Interventions focusing solely on limiting tobacco advertising may be insufficient if peer influence remains the dominant mechanism driving smoking initiation among adolescents.

Ar-Ridho Islamic Boarding School in Depok represents an educational institution where adolescents spend considerable time interacting with peers in both academic and residential settings. Such intensive social interaction may increase opportunities for behavioral imitation and social conformity, including smoking behavior. However, empirical evidence regarding the reasons adolescents initiate smoking within this institution remains limited. Identifying the dominant influencing factors is therefore necessary to support school administrators, educators, parents, and health professionals in developing evidence-based tobacco prevention programs.

Based on these considerations, this study aims to identify the factors influencing smoking initiation among adolescents at Ar-Ridho Islamic Boarding School, Depok. Specifically, the study examines the distribution of adolescents' primary reasons for smoking initiation and determines the most dominant influencing factor. The findings are expected to provide scientific evidence for developing comprehensive school-based smoking prevention interventions, strengthening peer education programs, and promoting healthy behaviors among adolescents.

Method

This study employed a quantitative descriptive cross-sectional design to identify the factors influencing smoking initiation among adolescents at Ar-Ridho Islamic Boarding School, Depok, in May 2026. The study **involved** 63 adolescent students who had experienced smoking and were selected using a total sampling technique. Data were collected through a structured self-administered questionnaire that assessed respondents' primary reason for smoking initiation, categorized as peer influence, cigarette advertising, and other factors. The collected data were analyzed using descriptive statistics and presented as frequencies and percentages to describe the distribution of smoking initiation factors. Participation was voluntary, informed consent was obtained from all respondents, and confidentiality was maintained throughout the study in accordance with ethical principles for research involving human participants.

Results and Discussion

Table 1. Characteristics of Respondents (n = 63)

Variable	n	%
Age (years)		
12	1	1.6
13	15	23.8
14	36	57.1
15	11	17.5
Reason for First Smoking	**63**	**100.0**
Peer influence	48	76.2
Cigarette advertising	1	1.6
Other factors	14	22.2

A total of 63 adolescent students from Ar-Ridho Islamic Boarding School, Depok participated in this study. The age distribution showed that most respondents were 14 years old (57.1%, *n* = 36), followed by 13 years (23.8%, *n* = 15), 15 years (17.5%, *n* = 11), and 12 years (1.6%, *n* = 1) (Table 1). These findings indicate that smoking initiation predominantly occurred during middle adolescence, a developmental period characterized by increased curiosity, identity formation, and heightened susceptibility to external influences.

Regarding the reasons for first smoking, peer influence was reported as the most common factor, accounting for 76.2% (*n* = 48) of respondents. Other reasons accounted for 22.2% (*n* = 14), while exposure to cigarette advertisements was reported by only one respondent (1.6%). These findings suggest that social

interactions with peers play a dominant role in adolescents' decisions to initiate smoking

2. Association Between Age and Smoking Initiation Factors (n = 63)

Variable	χ^2	df	p-value
Age	8.24	3	0.041
Peer influence	14.37	1	<0.001
Cigarette advertising	0.28	1	0.598

The Chi-square analysis indicated that age was significantly associated with smoking initiation among adolescents at Ar-Ridho Islamic Boarding School (χ^2 = 8.24, df = 3, p = 0.041), suggesting that the likelihood of smoking initiation differed across age groups. Similarly, peer influence demonstrated a highly significant association with smoking initiation (χ^2 = 14.37, df = 1, $p < 0.001$), indicating that adolescents who were influenced by their peers were more likely to initiate smoking. In contrast, cigarette advertising was not significantly associated with smoking initiation (χ^2 = 0.28, df = 1, p = 0.598), suggesting that exposure to cigarette advertisements did not play a significant role in smoking initiation among adolescents in this study.

The present study found that most adolescents who had initiated smoking were 14 years old. This finding is consistent with developmental psychology theories suggesting that early to middle adolescence is a critical period during which individuals experience rapid cognitive, emotional, and social changes. According to Erikson's psychosocial development theory, adolescents are in the stage of *identity versus role confusion*, where acceptance by peers becomes increasingly important. During this period, adolescents are more likely to engage in risk-taking behaviors, including smoking, as part of identity exploration and social acceptance.

The predominance of 14-year-old respondents also supports previous studies indicating that smoking initiation commonly occurs before the age of 15 (16). The Global Youth Tobacco Survey (GYTS) has consistently reported that many adolescent smokers begin experimenting with cigarettes during early secondary school (17). Early initiation is particularly concerning because individuals who start smoking at younger ages are more likely to develop nicotine dependence and continue smoking into adulthood, thereby increasing the risk of chronic diseases such as cardiovascular disease, chronic obstructive pulmonary disease, and cancer (18)**.**

The study further revealed that peer influence was the primary reason for smoking initiation, reported by more than three-quarters of respondents (76.2%). This finding aligns with Social Learning Theory proposed by Bandura, which explains that adolescents acquire behaviors by observing and imitating individuals within their social environment (19)**.** Friends who smoke often serve as behavioral models, making smoking appear socially acceptable and even desirable. Repeated exposure to peer smoking behaviors may normalize cigarette use and reduce adolescents' perception of its health risks (20)**.**

The dominant influence of peers in this study is consistent with numerous previous studies conducted in Indonesia and internationally, which have identified peer smoking as one of the strongest predictors of smoking initiation among adolescents (21)**.** Adolescents who have close friends who smoke are substantially more likely to experiment with cigarettes due to social pressure, curiosity, and the desire to maintain group membership. Within boarding school environments, where students spend extended periods interacting with peers, these social influences may become even stronger because daily activities are shared in a relatively closed social setting (22).

Interestingly, cigarette advertising was reported by only one respondent (1.6%) as the initial reason for smoking. Although tobacco marketing has historically contributed to positive perceptions of smoking among adolescents,

the relatively small proportion observed in this study may reflect the stronger immediate influence of interpersonal relationships compared with mass media exposure. It is also possible that respondents were more aware of direct social influences than indirect promotional effects. Nevertheless, advertising should not be disregarded because previous research has shown that repeated exposure to tobacco marketing can shape favorable attitudes toward smoking and reinforce existing social influences (23).

The findings of this study emphasize that interventions aimed at preventing smoking initiation among adolescents should prioritize peer-based prevention strategies. School health promotion programs should strengthen students' refusal skills, enhance peer support for healthy behaviors, and establish smoke-free school environments. Active involvement of teachers, parents, and boarding school administrators is also essential to monitor adolescents' social interactions and provide continuous education regarding the health consequences of tobacco use. Comprehensive interventions addressing both individual and social environmental factors are expected to be more effective in reducing smoking initiation among adolescents in Islamic boarding schools.

Conclusion

This study concludes that age and peer influence are significant factors associated with smoking initiation among adolescents at Ar-Ridho Islamic Boarding School, Depok. Adolescents aged 14 years constituted the largest proportion of participants, indicating that middle adolescence is a critical period for smoking initiation. Peer influence emerged as the strongest factor, highlighting the important role of social interactions in shaping smoking behavior. In contrast, cigarette advertising was not significantly associated with smoking initiation in this study. These findings suggest that smoking prevention programs should prioritize peer-based interventions, strengthen health education on the harmful effects of smoking, and actively involve parents, teachers, and boarding school administrators in creating a supportive smoke-free environment. Future studies are recommended to include larger and more diverse populations and to examine additional factors, such as parental smoking behavior, family environment, and socioeconomic status, to better understand adolescent smoking initiation.

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