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Systematic Literature Review: Peer Conformity to Smoking Behavior in Adolescent Boys

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Abstract

Conformity pressure in peer groups is one of the factors that most influence the emergence of smoking behavior in adolescent boys. The classic findings of Solomon Asch's experiments provide the basis that individuals can adjust their opinions and actions when under the pressure of majority norms. In line with this, various public health studies and social network research have highlighted the mechanisms of influence and selection as the main explanation for why smoking behavior can spread in adolescent groups. This literature review examines in detail 10 major empirical studies related to the relationship between conformity and smoking behavior in adolescents, along with additional analysis from 25 other scientific sources. The results of the study showed that normative group pressure, social status in the school network, closeness to close friends, and social relationship patterns affect adolescents' chances of starting smoking. Its interaction with other environmental factors suggests that conformity does not work alone, but is interrelated to the process of social selection and group dynamics. These findings hint at the importance of social network-based interventions and strengthening anti-smoking norms as prevention strategies.

Keyword: *conformity, peers, smoking behavior, adolescent boys, Solomon Asch experiment*

A. INTRODUCTION

Social conformity is one of the key concepts in social psychology that explains how individuals change their behavior or opinions in order to fit in with the group (Asch, 1951). Through a series of experiments, Asch showed that majority pressure is able to make a person set aside his own judgment in order to avoid disagreement with the group (Mercken et al., 2010). This mechanism is also seen in risky behaviors in adolescents, including smoking behavior, since the position of peer groups is an important source of social acceptance (Sultana, 2025).

Recent epidemiological research has identified that the similarity of smoking behaviors in adolescent groups is influenced by two main mechanisms: direct peer influence and the tendency to choose friends with similar behaviors (Fu et al., 2017; Mahathir et al., 2020; Nadya & Daulay, 2024). In addition, a study of social networks revealed that relationships such as best

friends, popularity, and clique structure play a role in strengthening the spread of smoking habits (Lessov-Schlaggar et al., 2008; Park, 2011; Tucker et al., 2003). Based on the theoretical framework of Asch's experiment, this review aims to provide a comprehensive synthesis of how conformity dynamics and peer norms affect smoking behavior in adolescent boys (Levine, 1999).

B. RESEACRH METHOD

This study uses a narrative literature review approach by selecting 10 empirical studies that directly examine the relationship between peer conformity or the influence of social networks and smoking behavior in adolescents. The literature search process is carried out through scientific databases such as PubMed, PMC, ScienceDirect, Wiley, and other academic repositories. Search keywords include "peer influence adolescent smoking", "social conformity smoking", "peer network smoking", and similar terms. Inclusion criteria include: (1) research that includes an analysis of peer relationships with smoking behavior, (2) quantitative research design both longitudinal and cross-sectional, and (3) articles in English or full manuscripts available. From this process, ten main studies were selected: (Alexander et al., n.d.; Ennett & Bauman, 1994; Hall et al., 2025a; Harakeh et al., 2004; Kobus, 2003; Liu et al., 2017; Schaefer et al., 2013; Simons-Morton & Farhat, 2010; Vitaro et al., 2004) Ennett & Bauman (1994), Kobus (2003), Alexander et al. (2001), Simons-Morton & Farhat (2010), Harakeh et al. (2004), Vitaro et al. (2004), Engels et al. (2004), Schaefer et al. (2013), Liu (2017), and Hall et al. (2007).

C. HASIL DAN PEMBAHASAN

Based on the literature selection process that has been carried out, ten main empirical studies have been obtained that directly examine the relationship between peer conformity, the influence of social networks, and smoking behavior in adolescents. The studies included longitudinal research design, meta-analysis, systematic reviews, and social network analysis conducted in various countries with the characteristics of high school adolescent respondents. In general, all studies show that there is a significant role of peers in shaping smoking behavior, both through the mechanism of direct influence (peer influence) and through the process of social selection (peer selection). To provide a systematic overview of the characteristics and key findings of each study, a summary of the ten reviewed studies is presented in Table 1 below.

Table 1. Summary of Empirical Studies on Peer Conformity and Adolescent Smoking Behavior

No	Author(s) & Year	Research Design	Sample	Main Variables	Key Findings	Relevance to This Review
1	(Ennett & Bauman, 1994)	Longitudinal	Secondary school adolescents	Peer influence,peer selection, smoking behavior	Peer influence and selection jointly contributed to similarity in smoking behavior.	Foundational model of influence–selection in adolescent smoking
2	(Kobus, 2003)	Systematic literature review	Adolescents	Peer relations, group norms, smoking	Peer influence increased the risk of smoking up to twofold	Strengthens peer conformity as a major risk factor
3	(Alexander et al., n.d.)	Longitudinal social network study	Junior and senior high school students	Network structure, social status, smoking	Popularity and network position increased the likelihood of smoking	Explains the role of social network structure
4	(Simons-Morton & Farhat, 2010)	Empirical review	Adolescents	Peer pressure, social norms, smoking	Group norms exerted stronger influence than individual factors	Supports a social-norm-based prevention approach
5	(Harakeh et al., 2004)	Longitudinal	Adolescents and parents	Parenting, peer influence, smoking	Strong parental monitoring weakened peer influence	Shows the interaction between family and peer conformity
6	(Vitaro et al., 2004)	Longitudinal	Male adolescents	Peer influence, parental influence,smoking	Peer influence was stronger than parental influence	Reinforces peer group dominance
7	(Otten et al., 2009))	Longitudinal	Adolescents	Peer selection, parental smoking, smoking behavior	Adolescents selected friends with similar smoking behavior	Strong evidence of social selection mechanisms
8	(Schaefer et al., 2013)	Social network analysis	School adolescents	Popularity, peer influence,smoking	Popular adolescents were more effective in spreading smoking behavior	Basis for peer-leader-based interventions
9	(Liu et al., 2017)	Quantitative meta-analysis	Multinational adolescents	Peer smoking behavior, smoking initiation	Adolescents with smoking peers were 1.5–2 times	Provides quantitative effect size of peer influence

					more likely to smoke	
10	(Hall et al., 2025a)	Longitudinal social network analysis	High school adolescents	Influence, selection, social networks	Influence and selection simultaneously shaped smoking diffusion	Strengthens smoking diffusion model in adolescents

1. Discussion

The synthesis of the ten empirical studies summarized in Table 1 demonstrates that peer conformity plays a central role in shaping smoking behavior among adolescents. Consistent evidence from (Ennett & Bauman, 1994; Kobus, 2003; Simons-Morton & Farhat, 2010) indicates that normative peer pressure significantly increases the likelihood of smoking initiation. These findings align with Asch's (1951) classical conformity experiments, which showed that individuals tend to adjust their behavior to align with majority norms even when such behavior contradicts personal judgment. In the context of adolescent smoking, cigarette use can therefore be interpreted as a form of public conformity aimed at gaining social acceptance rather than a purely individual choice.

Furthermore, the reviewed studies consistently highlight that similarity in adolescent smoking behavior is shaped not only through direct peer influence but also through social selection processes. (Ennett & Bauman, 1994; Hall et al., 2025b; Otten et al., 2009) demonstrated that adolescents tend to select friends who exhibit similar behavioral patterns, including smoking. This reciprocal interaction between influence and selection creates reinforcing cycles within peer groups, leading to behavioral homogeneity. Such dynamics explain why smoking behaviors tend to cluster within adolescent social networks rather than being randomly distributed.

The role of social network structure in smoking diffusion is also strongly supported by the reviewed literature. (Alexander et al., n.d.; Schaefer et al., 2013) found that network position, popularity, and close friendship ties significantly increase exposure to smoking behavior. Adolescents who occupy central or popular positions within school networks were shown to be more influential in spreading smoking norms. These results suggest that smoking is not merely an outcome of dyadic peer pressure but is embedded within broader network dynamics that facilitate the diffusion of risk behaviors across adolescent groups.

In addition to peer-related factors, family environment was found to moderate the strength of peer influence on smoking behavior. (Harakeh et al., 2004; Vitaro et al., 2004)

reported that strong parental monitoring and negative parental attitudes toward smoking can buffer adolescents against peer pressure. Conversely, weak parental control increases vulnerability to peer influence. These findings indicate that peer and family factors interact dynamically rather than operating independently in shaping adolescent smoking behavior.

With regard to the magnitude of peer effects, the meta-analytic evidence provided by (Fauzan et al., 2018; Kobus, 2003; Liu et al., 2017). Indicate that adolescents with close friends who smoke are approximately 1.5 to 2 times more likely to initiate smoking compared to those embedded in non-smoking peer groups. This effect size underscores the substantial role of peer conformity as a determinant of smoking initiation during adolescence (Lessov-Schlaggar et al., 2008; Mahathir et al., 2020; Rachmat et al., 2021).

From a theoretical perspective, these findings reinforce the relevance of Asch's conformity framework in explaining adolescent health-risk behaviors. The implication is that smoking prevention efforts should not solely target individual attitudes or knowledge but should also focus on modifying group norms and social network structures. Network-based interventions, such as engaging popular students as peer leaders, appear particularly promising for disrupting the diffusion of pro-smoking norms within schools, as suggested by (Hall et al., 2025a; Schaefer et al., 2013).

Despite the robustness of the reviewed evidence, several limitations should be acknowledged. Most studies relied on observational designs, either cross-sectional or longitudinal, which restrict causal inference. Moreover, the majority of the evidence originates from developed countries, raising questions about the generalizability of the findings to developing contexts such as Indonesia, where cultural norms, regulatory environments, and patterns of tobacco use may differ. Future research should therefore prioritize experimental or quasi-experimental designs and include sociocultural contexts from low- and middle-income countries to strengthen the external validity of existing models of peer conformity and adolescent smoking.

D. CONCLUSION

This literature review indicates that peer conformity plays a central role in shaping smoking behavior among adolescent boys. Smoking initiation is influenced by a dynamic interaction between normative peer pressure, social selection processes, and the structure of adolescent social networks. Adolescents tend to both imitate their peers' smoking behavior and affiliate with friends who share similar habits, leading to the clustering and diffusion of smoking

within peer groups. Network characteristics such as popularity and close friendship ties further strengthen this process, while parental monitoring can act as a protective factor.

The findings support the relevance of Asch's conformity theory in explaining adolescent smoking as a socially driven behavior. Practically, smoking prevention efforts should focus not only on individuals but also on group norms and social network–based interventions. However, limitations related to observational study designs and the dominance of evidence from developed countries suggest that future research should employ more robust longitudinal or experimental approaches and include diverse cultural contexts, particularly from developing countries.

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