



Article Title

Determinants of Smoking Behavior among Migrant Students: A Socio-Ecological Analysis of Spatiotemporal Dynamics in Dormitory Environments

Author(s)

Fransiska Hong*

Universitas Widya Gama Mahakam Samarinda, Indonesia // hong250302@gmail.com

*Corresponding Author

Rosdiana Rosdiana

Universitas Widya Gama Mahakam Samarinda, Indonesia // anafkm2002@uwgm.ac.id

A. Suyatni Musrah

Universitas Widya Gama Mahakam Samarinda, Indonesia // andi_suyatni@uwgm.ac.id

How to cite:

Hong, F., Rosdiana, R., & Musrah, A. S. (2025). Determinants of Smoking Behavior among Migrant Students: A Socio-Ecological Analysis of Spatiotemporal Dynamics in Dormitory Environments. *Sign Journal of Public Health*, 4(2), 94-115. <https://doi.org/10.37276/sjph.v4i2.720>



This work is licensed under a CC BY-4.0 License

ABSTRACT

Smoking behavior among migrant students represents a complex public health issue that reflects an inconsistency between academic status and lifestyle choices, exacerbated by urban socio-spatial transitional stress. This study aims to contextually analyze the socio-environmental influences on the smoking behavior of migrant students in male dormitories through a multidimensional ecological approach. Employing a qualitative case study design, primary data were gathered through semi-structured in-depth interviews with three informants (comprising one primary informant and two supporting informants), and direct observation on the dormitory front porch, subsequently analyzed using thematic analysis. The findings indicate that smoking initiation is triggered by academic stress associated with the undergraduate thesis as a predisposing factor, reinforced by the transmission of domestic habitus through visual modeling of the actively smoking father as a reinforcing factor, and facilitated by the social territorialization of the dormitory front porch as a permissive smoking zone due to indoor physical restriction policies as an enabling factor. This study concludes that the smoking behavior of migrant students is systemically perpetuated by the conditioning of behavioral architecture and a spatial regulatory vacuum from the regional government of origin as the asset owner. An urgent policy implication is to formulate formal, legally binding Smoke-Free Area (Kawasan Tanpa Rokok/KTR) regulations for official housing contracts and to establish integrated smoking cessation support services within the dormitory.

Keywords: Domestic Habitus; Dormitory; Migrant Students; Smoking Behavior; Socio-Spatial Territoriality.

INTRODUCTION

University students hold a highly strategic social role within the dynamics of community life. These young intellectuals bear the moral responsibility as agents of change and social control, expected to guide society toward a better, higher-quality of life. This social expectation requires university students to serve as role models in various aspects of life, including adopting clean and healthy lifestyles in their surroundings. However, social reality indicates a clear paradox as many university students engage in detrimental habits that harm health. One of the most prevalent forms of risky behavior found among these young academics is active tobacco smoking. The inconsistency between their intellectual status and their unhealthy lifestyle indicates a weakness in university students' self-regulatory control. This phenomenon triggers a decline in public trust in university students' future social leadership role.

The urgency of addressing smoking behavior among the productive age group in Indonesia is supported by alarming epidemiological data. Official reports indicate that the prevalence of active smokers continues to increase significantly every year, particularly among adolescents and young adults. A similar condition is recorded at the local level in Samarinda City, East Kalimantan. The Central Bureau of Statistics of Samarinda City noted a steady increase in the prevalence of tobacco use among residents over the past few years. The increase in the number of smokers in this urban area is dominated by males within the productive age range. Most of this active smoker group consists of newcomers or migrant students pursuing higher education

in urban areas. This increasing prevalence proves that health promotion programs and socialization on the dangers of tobacco executed thus far have not effectively suppressed the rate of cigarette consumption. A more in-depth analysis of the socio-environmental factors underlying the persistence of this risky behavior is required.

To comprehend the complexity of smoking behavior among migrant students, analysis must not be limited solely to biological factors or individual choices. The behavioral ecology approach to health provides a broader perspective to observe the close relationship between humans and their surrounding environment. [Bronfenbrenner \(1979\)](#) explained that human behavioral development results from a progressive, reciprocal process of accommodation between a developing individual and the dynamic characteristics of the immediate environment. This Ecological Systems Theory divides environmental influences into four structured systemic levels: the microsystem, mesosystem, exosystem, and macrosystem. The smoking behavior of migrant students must be positioned as a product of multilayered interactions among individual psychosocial conditions, interaction patterns within the family home, and the influence of rule enforcement policies in the immediate residential environment. Through this ecological lens, health behavior diagnosis can be conducted in a more comprehensive, objective, and non-reductionist manner.

The application of ecological analysis in health promotion is methodologically reinforced through health promotion program planning models. [Green and Kreuter \(2005\)](#) formulated the PRECEDE-PROCEED model to identify behavioral determinants through educational and ecological diagnosis stages. This model categorizes factors influencing health behavior into three primary groups: predisposing, enabling, and reinforcing factors. Predisposing factors encompass internal individual aspects, including knowledge, attitudes, beliefs, and personal motivation to adopt a habit. Enabling factors comprise external conditions that facilitate action, such as the availability of physical facilities, accessibility, and formal regulations that restrict or relax an action. Meanwhile, reinforcing factors include social support, peer influence, and the attitudes of authority figures that determine the long-term sustainability of a behavior. This categorization is highly critical to dismantling how physical rules and the relaxation of social supervision in the residential environment contribute to legitimizing the smoking behavior of university students.

The analysis of social determinants of health behavior is sociologically reinforced by examining the relationship between individual choices and environmental constraints. [Cockerham \(2021\)](#) formulated the Health Lifestyle Theory to explain that unhealthy lifestyles, including smoking behavior, constitute collective action patterns formed by the dynamic interaction between the life chances provided by the social structure and the life choices made by individual agency. This dialectical relationship between structure and agency is bridged by the concept of habitus (a

mental disposition formed by past social experiences). This concept explains that behavioral patterns learned by individuals in childhood within the family of origin are internalized as automatic, subconscious cognitive schemas. When the individual relocates to a new environment, the established habitus will continue to be executed as a form of daily adaptation. This theory is highly relevant to analyzing how smoking habits that have been normalized in the domestic environment of the family of origin are carried over and maintained by university students in their migrant residential environments.

The group of migrant students residing in homogeneous regional dormitories faces distinct social and psychological vulnerabilities during their higher education studies. The relocation of migrant students from inland and border regions, such as Mahakam Ulu Regency, to a major urban area like Samarinda City represents an ecological transition that demands major adaptation. During this adaptation period, migrant students face not only high academic demands but also socio-spatial transitional stress due to differences in social culture and spatial adaptation. Under these stressful conditions, ethnically and regionally homogeneous student dormitories serve as a primary social buffer. Migrant students tend to gather on the dormitory's front porch to build group solidarity and relieve psychological tension stemming from academic burdens. This communal gathering habit in the dormitory indirectly triggers the normalization of smoking behavior. Cigarettes transform into a medium of social communication that facilitates togetherness and reinforces the identity of the migrant group in the new environment.

Prior empirical studies concerning smoking behavior among university students have been extensively conducted with various research focuses. Several studies have found that academic stress in higher education institutions is positively associated with increased daily tobacco consumption among university students ([Abdulrahman et al., 2022](#)). Other research indicates that the young adult age group represents the developmental stage most vulnerable to smoking temptation due to social influences outside the home ([Sawitri et al., 2020](#)). Apart from individual factors, peer influence is a dominant predictor of university students becoming active smokers ([Azzahra et al., 2025](#)). Peer group conformity has a remarkably strong contribution to accelerating the initiation and maintaining the smoking habits of university students ([Kharisma et al., 2023](#)). Communal gathering activities in lounge areas are also proven to trigger an increase in daily smoking frequency ([Pasaribu et al., 2023](#)). Although these factors have been mapped, an analytical limitation in the prior literature remains: it has not dismantled the role of physical spatial interaction in the socio-cultural transition of migrant students. The scientific novelty of this study lies in the socio-environmental contextual analysis that specifically dissects how dormitory physical restriction rules trigger the territorialization of the front porch as a smoking area, which is synthesized

with the family of origin's habitus and homogeneous group norms as an adaptive coping mechanism for the socio-spatial transition of migrant students.

Given the analytical gap in prior research, this study is specifically designed to achieve targeted scientific objectives and make substantial contributions. The general objective of this study is to conduct a socio-environmental contextual analysis of smoking behavior among migrant students in male dormitories to obtain a comprehensive understanding of these health behavior dynamics. Specifically, this study aims to explore the intrapersonal characteristics of migrant students in responding to academic pressure, analyze the influence of the family of origin's domestic environment, and examine the socio-environmental dynamics of the dormitory community in perpetuating smoking habits. The theoretical benefit of this study is to contribute insights to the development of health promotion science and the sociology of health behavior, particularly regarding the socioecological model of risky behavior among diaspora groups in remote areas. Practically, the results of this study are expected to serve as evaluation materials and recommendations for dormitory management, higher education institutions, and regional health agencies in designing more comprehensive and well-targeted healthy dormitory and smoke-free area intervention programs.

METHOD

This study employed a qualitative case study design to explore smoking behavior in depth within a real-life context. This approach was selected for its ability to comprehensively unravel the complex interactions between individual actions and the surrounding physical and social environments ([Creswell, 2013](#)). Using a case study design, researchers can investigate how spatial regulations and the social dynamics of migrant student groups influence health-behavioral decisions within specific spatiotemporal boundaries. This qualitative approach focuses on understanding the subjective meanings that informants assign to their daily smoking activities, thereby enabling the researcher to present a holistic and in-depth descriptive portrayal of the social reality at the research site.

The focus of this scientific inquiry was spatially bound to a unique sociological unit of analysis, namely the Mahakam Ulu Male Student Dormitory, located in Samarinda City, East Kalimantan Province. The selection of this research setting was based on the consideration that this regional dormitory is homogeneously inhabited by migrant students originating from the inland and border regions of Mahakam Ulu Regency. The regional homogeneity of the student population creates a distinctive social microecological environment wherein residents import their indigenous domestic cultural values into a new urban setting. Consequently, this dormitory serves as an ideal sociological transitional crucible to observe how past habits interact with the

structural regulations of the new residence, and how students collectively cope with academic adaptation stress while living away from home.

To obtain information-rich, representative data, informants were selected using a purposive sampling approach based on stringent inclusion criteria (Sugiyono, 2019). The primary inclusion criteria established were active male student smokers who were officially registered residents of the dormitory and exhibited varying levels of daily cigarette consumption. Based on these criteria, three informants (two supporting and one primary) were selected to achieve data saturation. The primary informant, pseudonym B, was an active student currently completing his undergraduate thesis and had resided in and smoked in the dormitory for 5 years. The first supporting informant, pseudonym JS, was the younger brother of the primary informant, who possessed a profound understanding of the sociological family background in their region of origin. Meanwhile, the second supporting informant, pseudonym S, was the dormitory chairperson and a peer resident who interacted daily with the primary informant in the migrant setting.

The data collection process in this case study relied on two complementary data sources: primary data and secondary data. All empirical data gathered directly by the researcher in the field were rigorously classified as primary data, in which the researcher served as the human instrument, flexibly guiding the scientific interaction process. These primary data consisted of verbal recordings of interviews, draft transcripts, and draft observational field notes compiled during the social interaction period. Conversely, secondary data were obtained through the review of administrative supporting documents, which included demographic data on the number of dormitory residents, written dormitory codes of conduct, and secondary reports on student smoking prevalence from relevant health agencies.

Primary data collection was conducted using a combination of two methods: semi-structured in-depth interviews and direct observation. In-depth interviews were conducted using an open-ended interview guide draft to allow informants the freedom to express their perspectives without feeling interrogated. Simultaneously, direct observation was employed to examine the daily physical configuration of the dormitory building and the social dynamics of residents in outdoor areas. The observational instrument was specifically designed as a behavioral architecture (architectural determinism) observation sheet, focusing on the availability of seating facilities, the territorial boundaries of the porch, and the presence or absence of Smoke-Free Area (Kawasan Tanpa Rokok/KTR) health promotion media. The researcher periodically conducted direct observations of communal smoking activities among students on the front porch of the dormitory located on Ir. Juanda 7 Street, Samarinda, during academic breaks, afternoons, and evenings, precisely documenting the observations in field notes.

All field-collected raw data were subsequently processed using qualitative thematic analysis. This data analysis procedure was executed through three continuous interactive components that occurred throughout the writing of the manuscript draft. The first stage was data condensation, wherein the researcher selected, simplified, focused, and transformed raw data from interview transcripts and field notes into concise meaning units. The second stage was data display, in which the condensed data were assembled into structured descriptive narratives to facilitate conclusion drawing. The third stage was conclusion drawing and verification, during which the researcher identified patterns, logical explanations, and relationships within the data to formulate valid conclusions.

The trustworthiness and validity of the qualitative analysis were rigorously established using triangulation techniques to eliminate subjective researcher bias in the field (Miles et al., 2014). The researcher simultaneously applied two types of triangulations: source and method triangulation. Source triangulation was performed by cross-referencing the verbal statements of Primary Informant B with the testimony of Informant JS regarding the family environment, and with Informant S regarding the dormitory environment and institutional supervision. Meanwhile, method triangulation was conducted by cross-referencing the in-depth interview findings on smoking restrictions in the dormitory with the researcher's direct observations of clustered student smoking activities, the availability of communal seating, and the absence of SFA health promotion media on the front outdoor porch.

RESULTS AND DISCUSSION

A. Intrapersonal Characteristics, Academic Pressure, and Transitional Adaptation of Migrant Students

Smoking behavior among urban migrant students reflects a discrepancy between their academic status and daily behavioral choices. Despite theoretically bearing the moral responsibility as agents of social change, many students engage in risky behaviors such as active smoking. Intrapersonal analysis indicates that the developmental transition from late adolescence to early adulthood (around the age of 19) represents a critical period highly vulnerable to the initiation of daily smoking. For migrant students, habits initiated at the onset of university life tend to persist and develop into long-term dependence in the new environment. This phenomenon is corroborated by the account of Primary Informant B, an active smoker and senior student: *"as far as I remember, it was around the age of 19."*

The smoking initiation age of Primary Informant B coincided with his relocation from Mahakam Ulu Regency to Samarinda City to pursue higher

education. This geographical and social relocation can be analyzed using the concept of ecological transition formulated by Bronfenbrenner (1979). According to this theory, an ecological transition occurs whenever a person's position in the ecological environment is altered by a shift in role, a change in immediate setting, or both. Migrating from a homogeneous inland region to a heterogeneous urban center restructures the entire configuration of the individual's residential microsystem. The loss of direct parental supervision forces migrant students to adapt independently to their new roles. This role transition, when not accompanied by adaptive preparedness, is frequently met with the adoption of smoking habits as a form of self-experimentation outside the family home. This account regarding the smoking initiation age is further corroborated by the primary informant's younger brother, Supporting Informant I JS: *"it was when he started college, when he had just entered university, around the age of 19."*

From a health promotion perspective, the decision to initiate and maintain smoking habits is part of the predisposing factors in the ecological planning model of Green and Kreuter (2005). These factors encompass the cognitive and affective aspects underlying behavioral motivation, including subjective beliefs and values regarding tobacco. Among male students, there is a social belief that positions smoking as a symbol of maturity, courage, and masculinity, which is crucial for gaining recognition within urban social groups. These beliefs are subsequently internalized into the life conduct consciously chosen by individual agency, although these actions remain constrained by the life chances provided by the surrounding social structure, as explained in the Health Lifestyle Theory by Cockerham (2021). Migrant students utilize this symbol of masculinity as an adaptive instrument to construct an independent self-image in their new environment.

Beyond symbolic beliefs, psychological pressure stemming from academic burdens also accelerates increases in daily cigarette consumption. Primary Informant B, currently in his final year, faces dual pressure: completing his undergraduate thesis while coping with adjustment stress in the migrant setting. In this situation, smoking serves as a coping mechanism that offers instant psychological relaxation to facilitate task completion. The daily cigarette consumption of Primary Informant B surged drastically from half a pack to a full pack per day when experiencing stress from writing his thesis or during intensive online gaming. This consumption pattern was expressed directly by Primary Informant B:

"On a daily basis, I can smoke half a pack, and it can even reach a full pack a day. Especially when gathering and chatting with friends here, a full pack will definitely be gone. Furthermore, when playing games or working on my thesis, it flows smoothly once I smoke."

This pattern of increased consumption driven by academic stress aligns with international public health research findings. An epidemiological study by [Abdulrahman et al. \(2022\)](#) in Saudi Arabia demonstrated a high prevalence of active smoking among university students, with 57.1% reporting that they smoked specifically under psychosocial stress. This positive correlation between final project workload and the escalation of smoking behavior is further reinforced by [Jarelnape et al. \(2023\)](#), who proved that male students with high academic anxiety exhibit a greater tendency to rely on smoking as a daily psychological escape. This reliance on nicotine as a temporary cognitive stimulant proves that academic stress acts as the strongest intrapersonal driving factor perpetuating smoking habits among final-year students.

The daily consumption quantity of Primary Informant B, ranging from half to a full pack per day, also represents the general characteristics of smoking behavior among the young adult population in Indonesia. A descriptive study by [Sawitri et al. \(2020\)](#) among male university students found that the majority of respondents were in the 20–24 age range and were moderate smokers (10–20 cigarettes per day). In terms of social development, the young adult cohort has greater autonomy and mobility than adolescents. Consequently, their purchasing capacity and smoking frequency increase steadily. This continuous moderate-intensity cigarette consumption directly contributes to the development of higher substance tolerance within the body as the duration of smoking in the migrant environment increases.

The high intensity of daily smoking exhibited by Primary Informant B is also influenced by his academic background as a student in a non-health major, which tends to lack clinical supervision or professional sanctions in his academic environment. This condition differs significantly from the characteristics of medical students investigated by [Jindan and Lontoh \(2024\)](#). In that group, smoking prevalence is remarkably low due to stringent academic professionalism demands and high clinical awareness instilled from the first year. Non-health students tend to experience a more permissive social climate on campus, where smoking is deemed acceptable and does not compromise their academic standing. This is validated by the observations of Supporting Informant II S, the dormitory chairperson, regarding the characteristics of the primary informant's peers.

Despite possessing theoretical knowledge regarding the dangers of tobacco to the human body, the persistence of smoking habits in Primary Informant B indicates a profound cognitive dissonance. [Rohman et al. \(2024\)](#) explained that knowledge about the hazards of smoking does not automatically translate into behavioral change without psychological readiness and adequate regulatory support from the immediate environment. Student smokers often employ ego

defense mechanisms such as rationalization, minimizing the perception of long-term clinical risks to obtain short-term psychological benefits in the form of instant relaxation when facing academic stress.

Critically, the persistence of this behavior must not be reduced merely to psychosocial failure or sociological habit. The neurobiological dimension of addiction plays an exceptionally powerful physiological role. Nicotine inhaled constantly binds to nicotinic acetylcholine receptors in the brain, subsequently stimulating the release of the neurotransmitter dopamine, which activates the brain reward system. This pharmacological dependence creates a tangible physical drive for Primary Informant B to continue smoking to avoid withdrawal symptoms, thereby widening the gap between cognitive health awareness and daily behavioral practices.

The influence of intrapersonal drivers, such as academic stress, is also spatially linked to physical boundaries within the dormitory environment. Confined dormitory rooms and written management regulations strictly prohibiting smoking indoors act as an exosystem force. This pushes Primary Informant B out of his private space and onto the front porch to smoke when experiencing burnout while writing his thesis. On this dormitory porch, outdoor smoking is communally normalized in the absence of SFA health promotion media, thereby facilitating continued smoking. This outdoor spatial conditioning that triggers communal territorialization proves that the smoking behavior of migrant students does not exist autonomously. Rather, it is shaped progressively by domestic values and spatial conditioning imported from the family home through primary socialization. This tracking of primary socialization history, including Informant JS's testimony regarding the father figure's smoking habits was conducted in strict adherence to rigorous research ethics protocols. The researcher guaranteed absolute confidentiality and anonymity for all third parties mentioned in the interviews and obtained valid informed consent from the supporting informants. Consequently, this domestic data is analyzed purely as a theoretical model of sociological habitus transmission from the family of origin, underlying the development of smoking behavior among migrant students in the dormitory.

B. Social-Environmental Influence of the Domestic Environment and Transmission of Smoker Habitus

Understanding the roots of risky behavior among migrant students requires a deep exploration of the primary socialization phase within the family environment. As the smallest social institution, the family is responsible for laying the foundation for beliefs, social norms, and health-behavioral patterns before a child interacts with the broader external environment (Putri et al., 2025). Weak

internalization of health values during childhood creates a persistent behavioral vulnerability when the individual transitions to an urban environment. For migrant students originating from Mahakam Ulu Regency, the domestic conditions in their home of origin serve as the baseline for their behavioral tendencies in the migrant setting. This is reflected in the explanation of Primary Informant B regarding the family composition in his home of origin: *“at home, there is only my father, mother, and younger sibling.”*

This intact nuclear family structure places Primary Informant B within a domestic microsystem. According to Ecological Systems Theory by Bronfenbrenner (1979), the microsystem is the immediate environment where an individual interacts directly, face-to-face, and intensively. Constant daily interaction within this household microsystem profoundly shapes a child's habits through visual modeling. The presence of an actively smoking family member acts as a daily stimulus that filters the child's perception of the utility and normality of smoking activities. Regarding the smoking figure in his home, Primary Informant B explained: *“my father is the one who smokes.”*

The presence of the father as a daily smoker exposed Primary Informant B to smoking behavior from an early age. Within microsystem concept by Bronfenbrenner (1979), children adopt behaviors through intensive observation of their closest authority figures (significant others). The father serves as the primary role model for boys in defining masculinity and adulthood. When a father smokes openly at home, the child internalizes the implicit message that tobacco is a natural part of adult male life. Years of this visual imitation process eventually erode the child's moral sensitivity to the health risks of tobacco, as demonstrated by the response of Primary Informant B: *“it feels normal, not like anything special, because it is a very common thing for us, so smoking is not taboo for us.”*

This response confirms a profound normalization of smoking behavior within the family environment. The absorption of this value aligns with Health Lifestyle Theory by Cockerham (2021), specifically the concept of habitus, a system of structured and durable mental dispositions acquired from past social experiences. The domestic smoker habitus is formed when early exposure to smoking is perceived not as a health threat, but rather as a normal routine. This process triggers cognitive and sensory desensitization, causing smoking behavior to lose its negative connotations. The absence of moral resistance from non-smoking family members further solidifies this habitus within the individual's subconscious schema until it is carried over to the migrant environment. The transmission of this smoker habitus is also driven by the mother figure's weak social control function. In the health promotion planning model of Green and Kreuter (2005), permissive family attitudes are categorized as reinforcing factors that perpetuate a behavior.

The mother, who should be the pillar of health discipline at home, only provides loose verbal reminders without strict sanctions. This leniency is interpreted by the child as passive tolerance that legitimizes smoking behavior in the domestic sphere, as acknowledged by Primary Informant B:

"Never, actually, but more like reminding me to reduce the amount I smoke. My mother is like that, she definitely just reminds me, she has never gotten angry to that extent."

This permissive attitude correlates closely with the lack of active education regarding the clinical hazards of tobacco within the family. As a filter for health information, family communication patterns that ignore preventive aspects hinder the transfer of knowledge about the dangers of addictive substances. Without a critical discussion of the adverse effects of smoking, children lose the opportunity to build clinical awareness from an early age. The reminders that do exist are ultimately limited to quantitative appeals to reduce smoking, without being accompanied by a pathological understanding. Primary Informant B validated this absence of health education:

"Never, actually. So far, the family has never discussed that; at most, it is just reminding me, especially my mother, who sometimes reminds me not to smoke too often and, if possible, to reduce it."

The lack of critical discussion and loose verbal tolerance reflects the characteristics of permissive parenting. Under this parenting style, parents grant broad freedom without strict social behavioral boundaries or health responsibility demands. Children are allowed to determine their own actions based on subjective comfort, as long as they remain within the family's local tolerance limits. This loose parenting style shapes a character with minimal self-control, thereby facilitating the adoption of risky behaviors. This was expressed by Primary Informant B and validated by his younger brother, Supporting Informant I JS: *"emmm... they just free me, they never restrict me too much, just reminding me."* This statement was reinforced by Supporting Informant I JS: *"as for our parents, they just free us as long as it is still within reasonable limits."*

The permissive parenting style within an intact family experienced by Primary Informant B presents an anomaly to macro-sociological assumptions. This qualitative finding confronts the quantitative study by [Khlaf et al. \(2020\)](#) in France, which associated the high prevalence of adolescent smoking with broken families due to the collapse of parental supervision. This case critically demonstrates that the integrity of family structure is no guarantee of healthy living behavior when the parenting climate is highly permissive and the authority figure (the father) actively normalizes the risky behavior. This low-control domestic climate also

creates a regulatory contradiction: smoking is prohibited indoors but permitted freely in the home's outdoor areas. Primary Informant B explained:

"Yeah, so it is an unwritten rule, just verbal reminders. Smoking is not allowed inside the house, it must be outside, and it cannot be in front of the door because smoking in front of the door is the same as the smoke entering the house. So, we usually smoke in the relaxing area in front of the house."

This unwritten domestic spatial rule restricting smoking activities to the front porch was validated by Supporting Informant I JS: *"yes, there is; we are not allowed to smoke inside the house."* This spatial restriction reflects an internal contradiction in family protection. The indoor smoking ban appears to be motivated not by clinical awareness of the dangers of secondhand smoke to the respiratory organs, but solely by concerns about indoor air circulation. By providing the front porch as a smoking area, parents indirectly soften social sanctions and legitimize the habit as long as it is performed in the correct physical space. This spatial division pattern was internalized by Primary Informant B as a safe spatial schema. When he migrated and settled in the student dormitory, this outdoor domestic habitus was seamlessly transmitted because it aligned with physical rules and the relaxation of social control on the dormitory porch. This spatial freedom without direct parental supervision in the migrant setting accelerates the escalation of the daily smoking habitus, aligning with the analysis of [Azzahra et al. \(2025\)](#) regarding the shift of domestic family control dominance toward the hegemony of peer group norms in the new environment.

C. Dormitory Socio-Environmental Dynamics: Spatial Territoriality, Peer Conformity, and Adaptive Transitional Coping

The adaptation process of migrant students in urban areas frequently exposes individuals to significant changes in both physical and social spatial configurations. When migrant students relocate from their original domestic family environments in Mahakam Ulu Regency to Samarinda City, they experience not only an academic transition but also a permanent ecological transition in their new residence. The regional dormitory environment acts as a new microsystem that facilitates intensive, daily social interactions among migrant students with homogeneous cultural backgrounds. Within this institutional space of the dormitory, health-behavioral patterns previously formed at home interact with physical spatial configurations and peer-group dynamics in the migrant setting. The transmission of outdoor smoking behavior carried over from the home of origin is actualized through the spatial division established by the regional dormitory management.

Dormitory management establishes written policies governing resident conduct, including restrictions on smoking within the building. These written rules strictly prohibit students from smoking in enclosed areas, such as bedrooms and common living rooms, to maintain physical cleanliness and prevent fire risks. However, this indoor physical restriction indirectly forces all active smoker residents to relocate their daily smoking activities to open areas outside the building. The front porch area of the dormitory is selected as the sole physical space accessible freely without violating the management's written regulations. This spatial relocation regulation was explained openly by Primary Informant B through his description of the residential rules:

"As for the environment here, they have never scolded me about smoking, except inside the dormitory where there is indeed a rule prohibiting smoking indoors, so if we want to smoke, we have to do it on the front porch of our dormitory."

The spatial restriction policy prohibiting smoking inside the Mahakam Ulu dormitory building reflects a mesosystem connection (representing interactions between microsystems that influence human development) as conceptualized by Bronfenbrenner (1979). The mesosystem is formed by reciprocal relationships between the household microsystem of origin and the dormitory microsystem in the migrant setting. The spatial division pattern separating the indoor area as a smoke-free zone and the outdoor area as a permissive smoking zone in the dormitory shows an absolute continuity with the unwritten rules previously implemented by Primary Informant B's family at home. This alignment of outdoor spatial regulations facilitates the seamless transmission of the smoker habitus, as individuals do not need to undergo complex cognitive adjustments when relocating. Migrant students internalize the front porch of the dormitory as a socially legitimized safe zone to maintain their daily substance dependence.

Based on the researcher's direct field observations, the front porch area of the dormitory, located on Ir. Juanda 7 Street, Samarinda, underwent a gradual process of social territorialization driven by behavioral architecture (architectural determinism). The researcher observed that students smoked freely and openly in this area, with smoking activities completely clustered on the front porch. The physical configuration of the dormitory building, which provides an open porch equipped with communal seating without physical barriers, acts as an enabling factor within the PRECEDE-PROCEED health promotion planning model of Green and Kreuter (2005). This physical structure of the porch is not merely a passive space but an active instrument triggering the territorialization of smoking behavior. The absence of SFA health promotion media in the outdoor dormitory area interacts with smokers' physiological needs, creating a comfortable physical transition zone that overrides the regulatory strength of the written indoor smoking ban.

Communal activities within the territorial boundaries of the front porch are dominated by social interactions among daily smokers who link their smoking habits with various coping activities. The researcher directly observed that migrant students gathered on this front porch to chat, play mobile games, and discuss academic assignments. Within this social space of smokers, cigarettes act as both a physical stimulant and a communal glue that reduces social anxiety among fellow migrants. Smoking together on the front porch of the dormitory serves as an adaptive coping mechanism against the rural-urban transitional stress faced by migrant students from remote areas. The tolerance toward communal smoking on the front porch is further reinforced by lax supervision from the regional dormitory management. This relaxed regulatory condition was validated honestly by Supporting Informant II S, the dormitory chairperson, who testified regarding the loose enforcement of dormitory codes of conduct: *“yes, there is leniency.”*

The statement regarding the leniency of rules delivered by the dormitory chairperson indicates weak institutional oversight in the migrant residential environment. Theoretically, lax supervision personally carried out by the dormitory chairperson (Informant S) who is a peer student and fellow resident cannot be classified as an exosystem influence. Instead, it acts as a reinforcing factor within the dormitory microsystem. The dormitory chairperson is part of the immediate environment interacting face-to-face with Primary Informant B; thus, his social permission provides interpersonal reinforcement that perpetuates smoking behavior within the residential setting.

In contrast, actual influences at the exosystem level are identified through the absence of formal regulatory policies and administrative supervision from the Mahakam Ulu Regency Government, as the asset owner and funding provider of the regional dormitory. The local government, as an external authority, determines physical development and dormitory funding but does not include strict written clauses regarding SFA in the student housing contracts. The absence of policy at this administrative exosystem level triggers a spatial regulatory vacuum in the field. Consequently, dormitory management at the ground level lacks a strong formal legal basis to implement disciplinary actions or strict supervision, which ultimately allows the outdoor front porch of the dormitory building to develop into a permissive, sanction-free zone for student smokers.

The social dynamics within the regional dormitory are also strongly shaped by the homogeneity of the residents' origin, all of whom are migrants from Mahakam Ulu Regency. In Health Lifestyle Theory by [Cockerham \(2021\)](#), this homogeneous social group is classified as a collectivity (a social group climate that binds members to uniform values and social norms). The collectivity of migrant students living together in the regional dormitory builds a social subculture that

normalizes smoking behavior as a core element of their communal identity. The permissive norms of dormitory peer groups create social pressure that requires individuals to conform to be accepted within this migrant community. The assertion regarding the normalization of smoking within the homogeneous dormitory community was validated consistently by Supporting Informant I JS through the following testimony: *"the community also consists of many active smokers, so there is definitely no ban on smoking, and it is also considered a normal thing."*

The testimony of Supporting Informant I JS confirms that the regional dormitory community acts as a social incubator that perpetuates smoking habits through the enforcement of permissive peer norms. Among migrant students, the need to build social integration in a new urban environment drives them to conform to the habits of the dormitory majority. The significant relationship between peer conformity and student smoking behavior is empirically validated by the quantitative findings of [Kharisma et al. \(2023\)](#), who found that close peer conformity makes a highly dominant contribution to increasing the intensity of student smoking behavior, with an odds ratio (OR) of 20.47. This high statistical value proves that the desire to avoid social exclusion and maintain acceptance within close peer groups compels migrant students to adopt a communal smoking habitus, even when they are aware of the clinical risks it poses to their bodies.

Communal gatherings or social hanging out (nongkrong) in the dormitory porch area serve as the primary social stimulators that multiply the daily tobacco consumption volume of migrant students. This phenomenon aligns with health behavior research findings by Pasaribu et al. (2023) in Indonesia, who reported that 54.3% of student smokers chose to consume cigarettes specifically when gathering with their friends. Verbal interactions accompanied by coffee consumption and communal smoking on the front porch lower individual self-control over daily nicotine intake. An individual who initially intends to smoke only a few cigarettes will easily and unconsciously consume an entire pack of cigarettes due to being immersed in the homogeneous group conversation. This dominant influence of the peer environment in the dormitory was openly acknowledged by Primary Informant B through his description of his close friends' profiles: *"yes, all of my close friends are smokers."*

The fact that all of Primary Informant B's close friends are active daily smokers poses a real environmental health threat within the microecological environment of the Mahakam Ulu dormitory. Clustered smoking activities concentrated on the front porch generate constant secondhand smoke exposure in this open territorial space. Although this study did not explore subjective complaints or direct clinical impacts on non-smoker residents in the dormitory, the absence of physical barriers on the front porch epidemiologically creates a high

risk of secondhand smoke exposure. This condition is critically confronted with the findings of [Alves et al. \(2022\)](#) in Portugal, which indicated that environments that normalize the presence of tobacco smoke in communal spaces generate a high risk of passive smoke exposure, reaching 65.6%. The weak enforcement of a comprehensive smoke-free policy in the outdoor area of the student dormitory violates environmental health principles; thus, the open porch area, which lacks architectural smoke barriers, potentially transmits toxic chemicals from daily tobacco combustion to anyone present in that space.

The dynamics of smoking behavior among migrant students are not restricted solely to their residential dormitory but also transition to the higher education campus environment. When in the university area, Primary Informant B exhibits partial, situational compliance with campus regulations by adhering to formal bans on smoking in lecture halls or classrooms to avoid immediate academic sanctions. However, the informant exploits spatial loopholes by relocating his smoking activities to outdoor campus areas perceived as lax in terms of bureaucratic supervision, as described openly by Primary Informant B through his explanation of smoking areas at the university: *"I have [smoked on campus], but not in forbidden places. It is still around the campus area, like in the cafeteria or just in the parking lot."*

Primary Informant B's choice to smoke in the campus cafeteria and parking lot reflects low student compliance with the enforcement of SFA regulations in higher education environments. This phenomenon aligns with the spatial analysis by [Campo et al. \(2022\)](#) at the University of Milan, which proved that only 49% of students were aware of and complied with outdoor smoking regulations on campus. Weak socialization of formal rules and the lack of regular monitoring by campus security guards lead to open university areas being frequently exploited by student smokers as secondary permissive zones outside the dormitory. This limited regulatory reach in outdoor campus areas perpetuates the smoking habits of migrant students during daily academic breaks.

The accumulation of permissive social norms in the dormitory, lax institutional supervision, and the functionality of cigarettes as an adaptive coping medium for the socio-spatial transition create immense barriers for migrant students to stop smoking. A study by [Alwhaibi et al. \(2022\)](#) confirmed that most daily student smokers actually possess an internal desire to quit, but these attempts frequently face systemic failure due to the strong pressure of peer norms in their daily living environments. Furthermore, Primary Informant B's spatial choice to restrict his smoking activities to the dormitory porch, cafeteria, or parking lot also acts as a self-defense mechanism to avoid social stigma from non-smoker students. [Firdaus and Hamdan \(2025\)](#) explained that active smokers in academic environments often

face negative labeling and stereotyping as unhygienic or weak-willed individuals. By localizing their smoking activities to the homogeneous territorial space of the dormitory front porch, migrant students can execute their smoking habitus freely, reduce the psychosocial tension of urban transition, and avoid the gaze of social isolation in primary public spaces.

CONCLUSIONS AND SUGGESTIONS

The socio-environmental contextual analysis of smoking behavior among migrant students in regional dormitories successfully unraveled the reciprocal dynamics between individual agency, the internalization of domestic values, and daily spatial conditioning. By combining a qualitative case study design with a socio-ecological framework, this study demonstrated that tobacco consumption is not an autonomous, isolated act. A profound exploration of the lived experiences of residents of the Mahakam Ulu Male Student Dormitory in Samarinda City confirmed a strong alignment among the research questions, objectives, and empirical findings. The conclusions of this study synthesize the developmental trajectory of substance addiction, which initiates at the intrapersonal level, transitions through primary socialization within the family of origin, and culminates in spatial territorialization and conformity to homogeneous peer group norms in the migrant dormitory.

At the intrapersonal dimension, the study concluded that the developmental transition at age 19, coinciding with geographic migration to pursue higher education, represents a critical phase for the initiation of daily smoking behavior. Academic pressure from writing undergraduate theses and social adaptation anxiety in a new urban environment serve as primary psychological stimulators that accelerate the escalation of daily cigarette consumption, transforming students from light to moderate smokers who consume half to a full pack of cigarettes per day. Nicotine is consciously utilized as a personal coping mechanism to alleviate mental tension, stimulate daily cognitive focus, and maintain physical stamina while completing academic tasks. Furthermore, a profound cognitive dissonance was identified among migrant students; their theoretical knowledge regarding the clinical risks of cardiovascular disease and gastrointestinal pathology is overridden by short-term psychological needs for instant mental relaxation through tobacco inhalation.

The selection of this coping instrument during early adulthood does not occur in a sociological vacuum; rather, it results from the transmission of a smoker habitus from the family environment in Mahakam Ulu Regency. An intact nuclear family structure was proven to be no guarantee of a healthy lifestyle if the father, as the primary authority figure, is an active smoker who openly exhibits risky behaviors within the home. This early childhood normalization process neutralizes the child's moral sensitivity to the hazards of tobacco. This habitus is further reinforced by a permissive parenting style,

such as loose verbal reminders from the mother without strict disciplinary sanctions. Contradictions in domestic regulations—which prohibit smoking indoors but permit it on the front porch—indirectly legitimize the child’s perception that smoking is a socially safe action as long as it is localized to an appropriate outdoor physical space. This domestic pattern establishes an outdoor spatial schema that is seamlessly carried over and transmitted to the migrant residential environment.

Upon settling in the regional dormitory, this outdoor spatial habitus encounters a matching alignment of physical rules and a similar relaxation of social control. Written policies from dormitory management restricting smoking to outdoor areas trigger a process of social territorialization on the front porch driven by behavioral architecture (architectural determinism). The front porch transforms from a passive physical element into a dedicated communal smoking zone through the availability of open seating facilities and the absence of SFA health promotion media.

Within this territorial space, smoking behavior is reinforced by peer conformity among a homogeneous group of fellow students from Mahakam Ulu Regency who normalize tobacco as a communication medium, a buffer against transitional anxiety, and a symbol of solidarity within their adaptive coping schema for the socio-spatial transition. The leniency of supervision by the dormitory chairperson acts as a reinforcing factor within the residential microsystem, while the absence of formal regulations from the regional government (as the asset owner) operates as an exosystem force that relaxes health controls. Conversely, situational smoking in campus parking lots and cafeterias represents a partial, spatial compliance response to avoid formal sanctions and negative stereotyping from non-smoker groups in primary public spaces, whereas the concentration of smoke on the dormitory porch generates a constant risk of secondhand smoke exposure for non-smoking residents.

Based on this sociological-spatial synthesis, future research is recommended to develop studies that integrate environmental psychology and behavioral architecture in influencing public health outcomes. Future researchers should shift away from viewing migrant student smoking behavior through a linear-epidemiological lens, opting instead for a multi-center spatial comparative approach to examine the extent to which the physical design of communal housing facilitates or suppresses daily nicotine addiction. Further studies should also focus on evaluating the effectiveness of health promotion intervention models targeting the affective dimensions and social spaces of diaspora groups, thereby providing a multidimensional perspective on mitigating risky health behaviors among migrant populations by optimizing healthy coping strategies against rural-urban transitional stress.

Beyond academic contributions, the Mahakam Ulu Regency Government, as the owner of the regional dormitory, must immediately formulate strict formal regulations

regarding the implementation of SFA across all student housing facilities. The local government should integrate a clause on healthy lifestyle compliance into official housing contracts before students are permitted to reside in the dormitory, thereby ensuring the policy is backed by legally binding administrative sanctions. At the ground level, dormitory management must follow this policy by installing visual SFA warning signs in outdoor areas, redesigning the front porch layout to discourage communal clustering of smokers, and conducting regular social monitoring to eliminate sanction-free, permissive zones.

Equally crucial is the establishment of an integrated smoking cessation support program involving dormitory management, higher education institutions, and local health agencies. Mental health counseling services and smoking cessation clinics should be provided periodically to assist students in coping with the academic stress of writing their theses without relying on nicotine stimulation. Health promotion interventions must be comprehensively implemented through healthy lifestyle campaigns on the dormitory porch, actively engaging the dormitory chairperson as an agent of social change to dismantle permissive peer group norms. Synthesizing the enforcement of exosystem policy by the local government, architectural modifications of the dormitory space, and the provision of healthy psychological coping mechanisms for individuals will effectively break the intergenerational and trans-local transmission of the smoker habitus, ultimately fostering a healthy, productive, and smoke-free regional dormitory environment.

REFERENCES

- Abdulrahman, K. A. B., Alghamdi, H. A., Alfaleh, R. S., Albishri, W. S., Almuslamani, W. B., Alshakrah, A. M., Alsuwailem, H. M., & Alkhelaiwi, S. A. (2022). Smoking Habits among College Students at A Public University in Riyadh, Saudi Arabia. *International Journal of Environmental Research and Public Health*, 19(18), 1-11. <https://doi.org/10.3390/ijerph191811557>
- Alves, R. F., Precioso, J., & Becona, E. (2022). Smoking Behavior and Secondhand Smoke Exposure among University Students in Northern Portugal: Relations with Knowledge on Tobacco Use and Attitudes toward Smoking. *Pulmonology*, 28(3), 193-202. <https://doi.org/10.1016/j.pulmoe.2020.03.004>
- Alwhaibi, A., Wajid, S., Alenezi, A., Salami, Y., Alhaydan, I., Samreen, S., Alhossan, A., & Al-Arif, M. N. (2022). Prevalence of Smoking and Beliefs and Attitude toward Smoking Habit and Smoking Cessation Methods among Pharmacy Students: A Cross-Sectional Study in Saudi Arabia. *Frontiers in Public Health*, 10, 1-7. <https://doi.org/10.3389/fpubh.2022.816101>
- Azzahra, R. S., Koswara, I., & Fuady, I. (2025). Faktor-Faktor yang Mempengaruhi Perilaku Merokok pada Mahasiswa PSDKU UNPAD Pangandaran. *Jurnal Ilmu Psikologi dan Kesehatan*, 3(3), 137-146. <https://doi.org/10.47353/sikontan.v3i3.2481>

- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press. <https://books.google.co.id/books?id=OCmbzWka6xUC>
- Campo, L., Lumia, S., & Fustinoni, S. (2022). Assessing Smoking Habits, Attitudes, Knowledge, and Needs among University Students at the University of Milan, Italy. *International Journal of Environmental Research and Public Health*, 19(19), 1-15. <https://doi.org/10.3390/ijerph191912527>
- Cockerham, W. C. (2021). *Social Causes of Health and Disease* (Third Edition). Polity Press. <https://books.google.co.id/books?id=7uMXEAAAQBAJ>
- Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (Third Edition). Sage. <https://books.google.co.id/books?id=Ykruxor10cYC>
- Firdaus, H. S., & Hamdan, S. R. (2025). Kajian Stigma Merokok pada Perokok Aktif. *Bandung Conference Series: Psychology Science*, 5(1), 875-880. <https://doi.org/10.29313/bcpsps.v5i1.17548>
- Green, L. W., & Kreuter, M. W. (2005). *Health Program Planning: An Educational and Ecological Approach* (Fourth Edition). McGraw-Hill. <https://books.google.co.id/books?id=lCSbPQAACAAJ>
- Jarelnape, A. A., Waled Ahmed, S. O., Aida Fadlala, Z. A., Hassan, M., Ahmed, R., Hakami, M., Ali, M., Mohammed, K., Sagiron, E., Abdalla, Y. H., Osman, A., Abdelazeem, E., & Balola, H. (2023). Prevalence of Smoking Cigarettes and Beliefs Regarding Smoking Habits Among Medical Students: A Cross-Sectional Study in Sudan. *Frontiers in Public Health*, 11, 1-7. <https://doi.org/10.3389/fpubh.2023.1193475>
- Jindan, N. A., & Lontoh, S. O. (2024). Gambaran Tingkat Aktivitas Fisik dan Tingkat Kebiasaan Merokok pada Mahasiswa Kedokteran Universitas Tarumanagara Angkatan 2021-2022. *Jurnal Riset Ilmu Kesehatan Umum dan Farmasi*, 2(3), 9-16. <https://doi.org/10.57213/jrikuf.v2i3.268>
- Kharisma, R. S. Z. A., Sary, L., & Aryawati, W. (2023). Konformitas Teman Sebaya Terhadap Perilaku Merokok Mahasiswa. *Perilaku dan Promosi Kesehatan: Indonesian Journal of Health Promotion and Behavior*, 5(2), 107-116. <https://doi.org/10.47034/ppk.v5i2.7379>
- Khlat, M., Cleemput, O. V., Bricard, D., & Legleye, S. (2020). Use of Tobacco, Alcohol and Cannabis in Late Adolescence: Roles of Family Living Arrangement and Socioeconomic Group. *BMC Public Health*, 20, 1-9. <https://doi.org/10.1186/s12889-020-09476-w>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (Third Edition). Sage. <https://books.google.co.id/books?id=p0wXBAAAQBAJ>

- Pasaribu, A. N., Carolina, A., Harahap, M. A. R., Mursyid, P. A., & Harahap, R. A. (2023). Pengaruh Lingkungan Pertemanan Terhadap Perilaku Merokok pada Mahasiswa Laki-Laki di Universitas Islam Negeri Sumatera Utara IV Tuntungan Tahun 2023. *Health Information: Jurnal Penelitian*, 15, 1-10. Retrieved from <https://myjurnal.poltekkes-kdi.ac.id/index.php/hijp/article/view/956>
- Putri, L. J., Arisani, G., & Fauziah, N. (2025). Determinants of Basic Immunization Completeness among Infants: An Analysis of Maternal Socio-Demographics, Knowledge, Attitudes, and Practices. *SIGn Journal of Public Health*, 4(1), 55-69. <https://doi.org/10.37276/sjph.v4i1.680>
- Rohman, A., Mustajab, A. A., & Mulyani, S. (2024). Hubungan Tingkat Pengetahuan Bahaya Merokok dengan Perilaku Merokok di Pondok Pesantren Mahasiswa UNSIQ. *Jurnal kesehatan Saelmakers Perdana*, 7(2), 286-292. Retrieved from <https://journal.ukmc.ac.id/index.php/joh/article/view/1212>
- Sawitri, H., Maulina, F., & Aqsa, R. K. D. (2020). Karakteristik Perilaku Merokok Mahasiswa Universitas Malikussaleh 2019. *Averrous: Jurnal Kedokteran dan Kesehatan Malikussaleh*, 6(1), 78-86. <https://doi.org/10.29103/averrous.v6i1.2663>
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.