

A Multi-Dimensional Analysis of Smoking Behavior Prevention in Malaysia: The Moderating Role of Risk Awareness

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ABSTRACT:

Smoking is a global health risk despite tobacco control. Nations' health, social, and economic systems suffer from smoking-related diseases. This study examines the role of social, economic, policy, and psychological factors in preventing smoking behavior and it also examines the moderating role of risk awareness. Social Cognitive Theory and the Health Belief Model underpin the study's smoking prevention behavior. Using a purposive sample, a total of 219 Malaysians adults completed a structured online questionnaire. The findings showed that social, economic, policy and psychological factors contribute positively to the prevention of smoking behavior. Risk awareness moderated positively the effect of economic; policy and psychological factors on smoking behavior prevention. To quit smoking, risk-aware people respond better to economic deterrents, tobacco control policies, and psychological coping mechanisms. The findings suggest smoking prevention requires economic policies, regulatory initiatives, psychological assistance, awareness campaigns, and community-based activities.

Keywords: Economic Factor, Social Factor, Psychological Factor, Policy Factor, Smoking behavior prevention, health belief model

1. Introduction

Tobacco consumption remains one of the most critical public health challenges globally and

continues to represent a leading preventable cause of mortality. According to World Health Organization (WHO), tobacco use contributes to

more than eight million deaths annually and imposes substantial social, economic, and healthcare burdens on societies across both developed and developing countries (Imamuzzaman et al. 2025). Despite strong efforts of government around the world which include taxation, anti-smoking campaigns, and smoke-free regulations as well as cessation programs, smoking prevalence remains persistently high among various population groups, particularly within low- and middle-income countries where socioeconomic inequities and limited healthcare accessibility as well as weak support system for cessation (Ford et al. 2025). Recent research conceptualized smoking as a multidimensional phenomenon shaped by the interaction of several factors such as individual, social, economic, psychological, and institutional factors rather than as a purely individual lifestyle choice. This perspective emphasizes the limitation of fragmented approaches and underscores the need for integrative theoretical and empirical frameworks capable of explaining the complexity and persistence of smoking behavior (Sari et al. 2023).

Within this worldwide context, Malaysia represents a strategically important setting for examining smoking behavior due to its unique socio-cultural characteristics and evolving tobacco control environment. In the last decades, Malaysia has cooperated with WHO and implemented several tobacco control initiatives. This includes the excise taxation and smoke-free legislation as well as restriction on tobacco advertising and pictorial warning labels on cigarette packaging. Although these practices have contributed to the reduction of smoking prevalence, tobacco consumption is still highly prevalent among adults' males, lower-income population and certain occupational groups (Zhong & Wang 2024). Moreover, the rapid growth of alternative nicotine product including electronic cigarettes and vaping devices has also introduced additional challenges to national tobacco control efforts (Serdarevic et al. 2025). Prior literature indicated that smoking behavior in Malaysia remains socially embedded within specific communities and occupational

environments where tobacco use is culturally normalized and socially tolerated (Lund et al. 2024)(Triyana & White 2022). As a result, the persistence of smoking despite regulatory efforts indicates that existing interventions may not sufficiently address the broader determinants and behavioral mechanism underlying tobacco use in Malaysian context (Wells & Östberg 2021).

Social factors are widely recognized as major determinants of smoking behavior, influencing smoking initiation, continuation, and cessation. Prior studies suggested that peer influence, family smoking behavior and social norms are critical factors that can shape individual attitude toward smoking (Shartle 2021). Based on social cognitive theory and social network perspective, smoking is often encouraged by interpersonal interaction and social acceptance within communities. In collectivist societies such as Malaysia, the social relationship and group conformity are culturally important (Dunbar et al. 2021). Therefore, social influence can have a strong effect on smoking behavior particularly among young adults. These findings indicates that smoking behavior is embedded with social environments and this makes the behavioral change difficult to achieve through individual-level interventions alone.

Along with the social factor, the economic factors play a critical role in shaping smoking behavior. Previous studies indicated that tobacco affordability, income level, and employment status as well as financial stress are important predictors of smoking patterns (Bernini & Hartmann 2025). Despite the fact that cigarette taxation has contributed to the reduction of smoking consumption among adult in lower income population, the financial hardship also encouraged smoking as a coping mechanism for stress and psychological pressure (Neale et al. 2022). In Malaysia, the availability of lower-cost tobacco product and illicit cigarettes can weaken the effectiveness of taxation policies and enable smokers to maintain consumption despite rising prices. This highlights the complex role of economic factors as both deterrents and facilitators of smoking behavior (Hartnett et al. 2021).

Policy related factors are also affecting the smoking behavior by shaping the broader institutional environment. Government interventions such as smoke-free regulations, advertising restrictions, and health warning as well as tobacco taxation aim to reduce smoking prevalence by increasing the cost and reduction of social acceptance of smoking (Keijzer et al. 2024). Prior literature suggested a comprehensive tobacco control policies can effectively reduce smoking rates when supported by strong enforcement and public awareness initiatives (Lakon et al. 2025). However, there are several factors that can affect the policy effectiveness which include the enforcement consistency as well as public understanding and cultural acceptance. In contexts where smoking remains socially normalized, policy intervention can have limited impact. Therefore, understanding smoking behavior requires examining how policy measures interact with broader social and individual influence (Akter et al. 2024). Another important determinant is the psychological factor which also essential in explaining smoking behavior. Factor such as stress, addiction, emotional regulation, self-efficacy, and perceived benefits of smoking significant affect smoking initiation and persistence. Smoking is frequently used as a coping mechanism to manage emotional distress and occupational stress, particularly among individual with lower psychological resilience (Prens et al. 2022; Starker et al. 2022). In addition, nicotine dependence reinforces smoking behavior by reducing individual's ability to quit despite awareness of its harmful impact. This suggest that smoking as a behavior can be affected by external environment and internal cognitive and emotional processes (Rochadi et al. 2025). Importantly, the effect of factors such as economic, social, policy, and psychological determinants can vary depending on individual's levels of risk awareness. Drawing on the health belief model and social cognitive theory, individual with higher risk awareness is more likely to perceive smoking as harmful and respond positively to preventive interventions (Xiang et al. 2023). Conversely, individual with lower risk awareness can underestimate smoking-related risks and thereby weakening the

effectiveness of external deterrents. Despite its theoretical importance, the moderating role of risk awareness is still underexplored particular in the context of emerging economies such as Malaysia (Akter et al. 2024). Therefore, this study aims to test a multidimensional framework to examine the smoking behavior among adults in Malaysia. The study also aims to examine the moderating role of risk awareness.

2. Literature review

2.1 Theoretical framework

The study explains Malaysian smoking using behavioral and public health methods. The framework includes Social Cognitive Theory (SCT) and Health Belief Model. Because social, economic, policy, and psychological factors impact tobacco use, these theories explain smoking. Smoking's complexity and social and institutional context are highlighted in modern behavioral and public health studies. A single theory may not explain smoking in Malaysia's diverse culture and society. These theories provide a more complete framework that accounts for risk awareness, external environmental influences, and internal cognitive processes. Personal, environmental, and behavioral factors affect human behavior, according to Social Cognitive Theory (Bandura 1986). Reciprocal determinism refers to humans impact their circumstances, not exogenous variables. This theory claims observational learning, social reinforcement, self-regulation, and self-efficacy affect behavior. Therefore, based on the theory, family smoking, peer influence, and community norms drive smoking. Regular exposure to smoking parents, friends, coworkers, or key social groups may cause smoking. Such exposure normalizes smoking and encourages adults to smoke. Malaysian collectivist societies promote social relationship, interpersonal relationships, and group conformity; therefore, friends and family may count for individual's behavior (Abbas & Wu 2021). Social reinforcement of group norms and accepted behavior may boost smoking.

SCT states that economic and policy issues influence smoking and society. Smoke-free

zones, anti-smoking campaigns, and higher cigarette prices may reduce smoking and societal acceptance. Insufficient tobacco enforcement, easy access, and social acceptance may increase smoking (Akter et al. 2024; Starker et al. 2022). Poor individuals may smoke to relieve stress, despite the consequences. According to SCT, environmental, social, economic, and psychological elements affect smoking through reciprocal and ongoing interactions. Supplementing SCT, the Health Belief Model stresses cognitive beliefs in health-related behavior (Stretcher & Rosenstock 1997). According to the Health Belief Model, individual is more inclined to take measures if they feel threatened and the consequences are severe. The paradigm states action's pros and cons impact behavior. Those who feel tobacco is harmful and worth stopping are more likely to do so.

This Health Belief Model study stresses risk awareness. Health, social, and economic repercussions of smoking are examined through risk awareness. Risk awareness should worsen smoking and boost anti-smoking activities (Steptoe et al. 1995). Smokers who understand the risks may respond better to smoke-free laws, health warning labels, and public awareness. Higher risk information may reduce peer pressure and smoking-normalizing social circumstances. Lower risk information may understate smoking's effects, reduce policy efficacy and boost social and psychological sensitivity (Abu Shomar et al. 2014; Masiero et al. 2019). Risk awareness affects smoking, economics, regulation, psychology, and social behavior. High risk awareness reduces smoking, while low risk awareness allows smoking despite public health efforts. Therefore, risk awareness as a moderating variable enriches the theoretical

framework by offering cognitive insights on multidimensional variables and smoking habit.

2.2 Concept and Hypothesis of Multidimensional Smoking Behavior Prevention

Smoking is now a complicated social, economic, policy, and psychological issue, not a habit. Contemporary behavioral and public health research stresses that tobacco use is integrated in ecological and social systems where interpersonal interactions, ambient factors, institutional norms, and cognitive processes impact behavior. Integration theories like Social Cognitive Theory and Health Belief Model describe how observational learning, environmental reinforcement, and perceived risks affect health behavior (Bandura, 1986; Stretcher & Rosenstock 1997). Thus, smoking should be understood holistically, including external and internal cognitive aspects, especially in culturally diverse and socially varied nations like Malaysia.

Smoking research has improved yet has gaps. First, social, economic, policy, and psychological factors have been researched individually, limiting the understanding of their effects on smoking behavior prevention. Second, few studies in emerging nations like Malaysia have combined these multidimensional traits into a theoretical and empirical framework. Risk awareness is a cognitive health strategy that may moderate multiple determinants and smoking behavior prevention. This study proposes risk awareness to moderate the effect of social, economic, policy, and psychological on smoking behavior prevention. This integrated method improves public health literature and provides Malaysian tobacco control insights. Figure 1 shows the conceptual framework of this study:

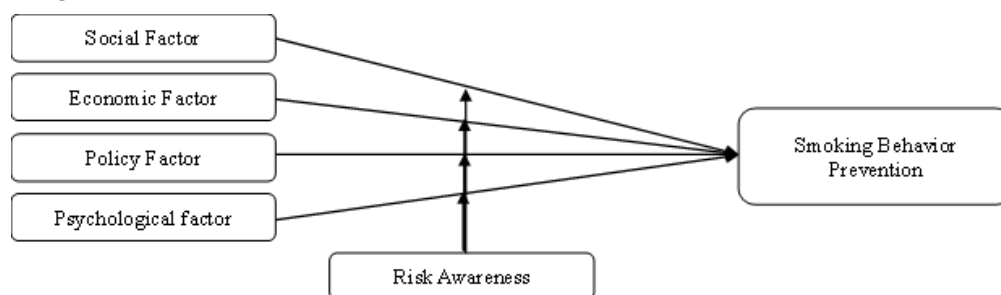


Figure 1: Conceptual Framework

2.2.1 Social Factor and Smoking Behavior Prevention

Social factors strongly impact smoking. Peer pressure, familial smoking, and social norms greatly influence smoking initiation, continuance, and quitting (Christakis & Fowler, 2008; Kobus, 2003). Smoking increases on tobacco-promoting social media. SCT claims humans learn social activities by watching, imitating, and rewarding. Observational learning and social contagion from smoking peers, family, or significant others may encourage smoking. Parents' smoking affects teens' and young adults' smoking beliefs. Sari et al. (2023) found that children who see their parents smoke will be encouraged to smoke. Educational and social inequalities affect smoking rates. Lower education and socioeconomic status can increase smoking rates due to limited access to health awareness, cessation aids, and preventative medications (Wells & Östberg, 2021). Peer and familial influences on smoking may be greater in collectivist societies like Malaysia, which prioritize social relationships, belonging, and obedience. Therefore, this study proposes a positive link between social factors and smoking behavior prevention.

H1: Social factors have a positive effect on smoking behavior prevention.

2.2.2 Economic factors and Smoking Behavior Prevention

Another smoking concern is economy. Smoking affects tobacco affordability, income, employment, and financial stress (Chaloupka et al., 2019). Economic health behavior theories assume affordability and economics affect consumption. Thus, raising cigarette pricing, especially excise taxes, is one of the greatest approaches to reduce smoking, especially in low-income individuals (Steptoe et al. 1995). Rising cigarette costs reduce smoking and encourage quitting (Imamuzzaman et al., 2025). Economics do not linearly affect smoking. To manage anxiety, work stress, and socioeconomic instability, financial stress may lead to tobacco usage (Guillaumier et al., 2017). Price increases may deter smoking. Poor smokers find

consolation in smoking despite rising tobacco prices. Malaysia's illicit cigarette markets and cheaper tobacco alternatives may delay pricing initiatives and allow consumers to stay (Hockin et al. 2018). Economics may encourage or discourage smoking; therefore, this study proposes that economic factor can lead to smoking behavior preventions.

H2: Economic factor has a significant effect on smoking behavior prevention.

2.2.3 Policy factor and Smoking Behavior Prevention

Policy affects smoking's institutional and environmental setting. Taxation, smoke-free regulations, advertising limits, public awareness programs, and health warning labels make smoking more expensive and socially undesirable (Abu Shomar et al. 2014). Policies that ban tobacco and raise awareness of its harms restrict smoking. Effective and widely advertised tobacco control efforts reduce smoking (Dunbar et al., 2021). Public smoking is denormalized in free settings. Health warnings and anti-smoking commercials may help quitters. Public knowledge, cultural tolerance, policy enforcement, and social conformity impact policy intervention efficacy. If smoking is socially accepted or policy enforcement is inadequate, tobacco control may fail. Dunbar et al. (2021) suggest social norms may favor smoking in high-smoking circumstances. Low smoke-free compliance may impair public space policies (Keijzer et al., 2024). Our findings suggest policy initiatives are part of smoking-related social and environmental systems. Hypothesis proposed:

H3: Policy factor has a positive effect on smoking behavior prevention.

2.2.4 Psychological factor and Smoking Behavior Prevention

Smoking psychology matters. Stress, concern, discontent, addiction, self-efficacy, and perceived smoking benefits increase smoking initiation and persistence (West, 2017). Smoking may help people cope with mental illness, work stress, and bad emotions. Stress and psychological fragility may encourage tobacco smoking (Cohen et al.,

2017). Despite the risks, nicotine dependence encourages tobacco use and makes quitting harder. Addiction can lessen reactions to smoking bans and societal condemnation. Smoking may be worth the long-term health risks for stress relief, relaxation, social acceptance, and emotional management. Per Social Cognitive Theory, these benefits keep smoking going. Cognitive aspects like self-efficacy and quitting motivation affect smoking. Smokers without confidence may continue despite hazards. Smoking cessation should address addiction and emotion since psychological pathways impact smoking. Hypothesis supported by arguments:

H4: Psychology factor has a positive effect on smoking behavior prevention.

2.2.5 Moderating role of Risk Awareness

Risk awareness impact internal and external smoking factors. According to the Health Belief Model, smokers who see it as harmful are more likely to quit (Stretcher & Rosenstock 1997). Risk awareness improves tobacco control and encourages smokers to quit (Noar et al., 2016). Risk awareness can reduce social pressures by resisting smoking and peer pressure. Taxation, warning labels, and public awareness can work better for smokers who realize the financial and health implications (Steptoe et al. 1995). However, people with less risk information may underestimate tobacco's dangers, increasing social, economic, and psychological variables on smoking (Abu Shomar et al. 2014; Derman et al. 1995; Masiero et al. 2019). Risk awareness's moderating effect in multidimensional smoking behavior frameworks is seldom investigated, especially in developing nations like Malaysia. This study proposes that risk awareness moderates social, economic, policy, and psychological factors and smoking behavior prevention. Therefore, the following is proposed:

H5: Risk awareness moderates the effect of social factor on smoking behavior prevention.

H6: Risk awareness moderates the effect of economic factor on smoking behavior prevention.

H7: Risk awareness moderates the effect of policy factor on smoking behavior prevention.

H8: Risk awareness moderates the effect of psychological factor on smoking behavior prevention.

3. Research Methodology

This quantitative study examines Malaysia's multidimensional smoking behavior prevention and risk awareness as well as the predictor of the behavior which include social, economic, policy, and psychological implications. Since the study experimentally examines theoretically based links across dimensions and analyzes their strength, direction, and relevance using statistical analysis, a quantitative method is acceptable (Creswell & Creswell 2017). Explanatory research analyzes smoking behavior prevention and how social, economic, policy, and psychological variables impact this behavior. Explanatory research is superior for testing theories and demonstrating causal or predictive links (Sekaran & Bougie 2019). This study examines external and internal smoking behavior prevention using Social Cognitive Theory, Health Belief Model, and Ecological Model of Health Behavior. Explanatory study can evaluate risk awareness moderating effects and theoretical links.

This study is cross-sectional. In cross-sectional research, respondents are surveyed once. Cross-sectional approaches are useful for tracking individual's attitudes, actions, and views in behavior and public health research (Creswell & Creswell, 2017). The population of this study is smokers or previous smokers in Malaysia. The study uses purposive sampling to select only those smokers with age above 18 years. The questionnaire was distributed via social media channels and network referral. A total of 239 responses were collected. Out of which nine responses were removed due to missing values and 11 responses were removed based on outliers. The normality of the data was checked, and the values of skewness and kurtosis were acceptable below 1 as recommended by (Hair et al. 2023). For multicollinearity, the value of variation inflation factor (VIF) and tolerance were acceptable below 5 and larger than 0.20

respectively. Therefore, in total, 219 responses were found to be valid and usable.

4. Findings

This section presents the background information of the respondents as well as the assessment of the measurement model and the structural model. The section also presents the result of testing the hypotheses.

4.1 Profile of Respondents

This study included 219 respondents from all Malaysian states. The participants are majority males with age above 18 and have educational level of diploma and above. The majority of the respondents are employed and earn an income in average between 738-750RM. Most of the respondents are current smokers and the majority have been smoking for more than five years, and they are smoking six and above cigarettes every day. Table 1 shows the background information of the respondents.

Table 1: Profile of the Respondents

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	154	70.3
	Female	65	29.7
Age	18–25 years	61	27.9
	26–35 years	78	35.6
	36–45 years	49	22.4
	46 years and above	31	14.2
Educational Level	Secondary School	48	21.9
	Diploma	57	26.0
	Bachelor's Degree	81	37.0
	Postgraduate Degree	33	15.1
Employment Status	Employed	137	62.6
	Self-Employed	34	15.5
	Student	28	12.8
	Unemployed	20	9.1
Monthly Income	Less than RM 2,000	52	23.7
	RM 2,001 – RM 4,000	84	38.4
	RM 4,001 – RM 6,000	49	22.4
	More than RM 6,000	34	15.5
Smoking Status	Current Smoker	162	74.0
	Former Smoker	57	26.0
Smoking Duration	Less than 5 years	51	23.3
	5–10 years	73	33.3

Cigarette Consumption per Day	11–15 years	54	24.7
	More than 15 years	41	18.7
	1–5 cigarettes	43	19.6
	6–10 cigarettes	79	36.1
	11–20 cigarettes	68	31.1
	More than 20 cigarettes	29	13.2

4.2 Measurement Model

The measurement model of this study was assessed by examining the level of factor loadings as well as the reliabilities and validities. All the criteria were achieved except for the factor loadings. One item from social factor and another item from psychological factor was

removed to enhance the radialities and validities. Table 2 shows the results of testing both the reliabilities and validities which include the convergent validity using average variance extracted (AVE>0.50) and the discriminant validity using HTMT ratio (HTMT<0.85). The assessment was based on the criteria given by Hair et al. (2023).

Table 2: Results of Measurement Model

Variable	Cronbach's alpha (CA)	Composite reliability (CI)	AVE	HTMT
Economic Factor	0.918	0.915	0.888	<0.85
Policy Factor	0.918	0.911	0.611	<0.85
Psychological Factor	0.898	0.911	0.566	<0.85
Risk Awareness	0.904	0.914	0.685	<0.85
Social Factor	0.915	0.917	0.882	<0.85

4.3 Structural Model

The structural model was evaluated based on R-square, F-square, and Path Coefficient. The R-square for the direct effect recorded a value of 0.682 indicating that social factor, economic factor, policy factor, and psychological factor can explain 68.2% of the variation in smoking behavior among adults in Malaysia. The percentage increased to 78.4% after including risk awareness as a moderator. For the effect size, it

has a value larger than 0.02 indicating that the effect size is acceptable for all the direct effects. However, the values for two moderating paths were lower than 0.02 indicating that there is a weak effect size. The path coefficient is discussed in the hypotheses testing. The hypotheses are divided into direct effect hypotheses and moderating effect hypotheses. Figure 3 shows the structural model, and it shows the results of testing risk awareness as a moderator.

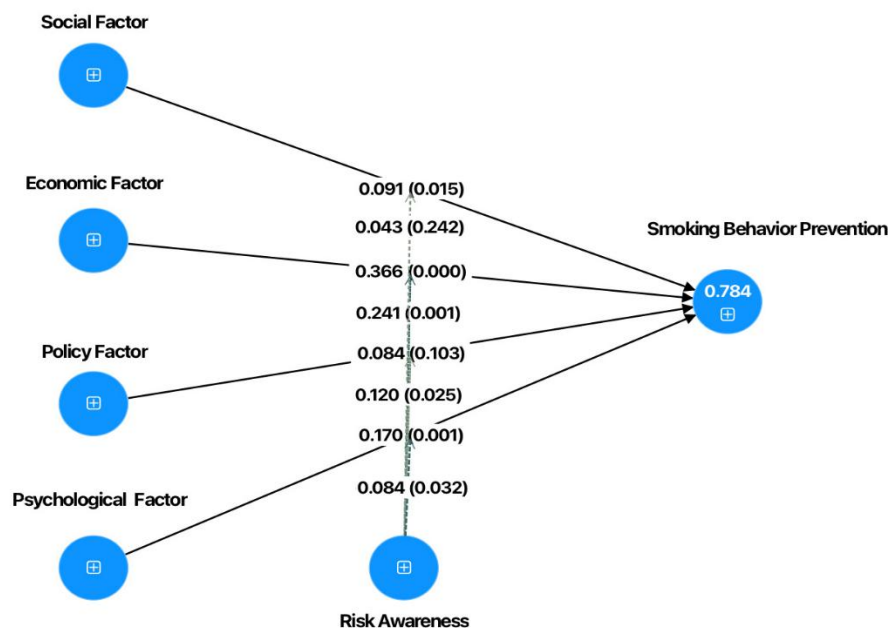


Figure 3: Structural Model

Table 3 shows the results of direct effect hypotheses as well as the moderating effect

hypotheses. The table also shows the results of hypotheses testing.

Table 3: Results of Moderating Effect of Risk Awareness

H	Path	B	Std.	T-Value	P values	Remark
H1	Social Factor -> Smoking Behavior Prevention	0.116	0.041	2.866	0.004	Supported
H2	Economic Factor -> Smoking Behavior Prevention	0.487	0.043	11.319	0.000	Supported
H3	Policy Factor -> Smoking Behavior Prevention	0.120	0.051	2.371	0.018	Supported
H4	Psychological Factor -> Smoking Behavior Prevention	0.230	0.046	4.952	0.000	Supported
H5	Risk Awareness x Social Factor -> Smoking Behavior Prevention	0.043	0.037	1.170	0.242	Not supported
H6	Risk Awareness x Economic Factor -> Smoking Behavior Prevention	0.241	0.075	3.234	0.001	Supported
H7	Risk Awareness x Policy Factor -> Smoking Behavior Prevention	0.120	0.054	2.243	0.025	Supported
H8	Risk Awareness x Psychological Factor -> Smoking Behavior Prevention	0.084	0.039	2.139	0.032	Supported

The findings of this study confirmed that social factors strongly affect smoking behavior prevention ($\beta = 0.116$, $t = 2.866$, $p = 0.004$), confirming H1. Thus, family, peer, and social norms help to prevent the smoking behavior.

This finding is in line with SCT which claimed that social learning, interpersonal interaction, and behavioral reinforcement affect health. The study found that economic factor reduces smoking behavior ($\beta = 0.487$, $t = 11.319$, $p = 0.000$), and

this provide support for H2. This reveals that cigarette affordability, income constraints, financial pressure, and taxation policies strongly influence smoking. Higher cigarette prices and fiscal constraints may reduce smoking. Economics, like tobacco taxes, are the greatest way to support smoking behavior prevention. Thus, financial factors still greatly impact smoking prevention in Malaysia.

Policy factors ($\beta = 0.120$, $t = 2.371$, $p = 0.018$) significantly improve smoking behavior prevention, supporting H3. Health warning labels, anti-smoking campaigns, and advertising limitations can reduce smoking. Government rules can limit smoking's social acceptability and improve awareness of its risks. The tiny path coefficient shows policy measures are meaningful but may depend on enforcement consistency, public knowledge, and social acceptance. This validates prior studies showing that policy implementation and social support improve results. Research indicates that psychological factors significantly influence smoking behavior prevention ($\beta = 0.230$, $t = 4.952$, $p = 0.000$), supporting H4. Smoking prevention increases with stress management, emotional regulation, self-efficacy, addiction control, and perceived smoking benefits. Smoking can be prevented by understanding its emotional and health impacts and strengthening psychological resilience. Stress and nicotine reliance might make quitting smoking harder. This supports SCT and behavioral health literature, which emphasize internal cognitive and emotional factors in health decisions.

Regarding the moderating role of risk awareness, the findings showed that risk awareness does not significantly impact the relationship between social factor and smoking behavior prevention ($\beta = 0.043$, $t = 1.170$, $p = 0.242$), rejecting H5. This shows that risk awareness does not significantly alter social factors' smoking prevention. Smokers may recognize the risks, yet societal influence may be significant. Risk-aware smokers in collectivist Malaysia may suffer peer and family punishments. This suggests that social norms and interpersonal interactions can affect smoking independent of cognitive risk. For H6, risk

awareness substantially increased the connection between economic factors and smoking behavior prevention ($\beta = 0.241$, $t = 3.234$, $p < 0.001$). Costs of smoking and cigarettes can affect risk-aware persons more. Understanding the expense and health effects of smoking may make people more sensitive to economic restrictions and less likely to smoke. Therefore, risk awareness helps manage tobacco economically.

The analysis confirmed that risk awareness moderates the relationship between policy factor and smoking behavior prevention ($\beta = 0.120$, $t = 2.243$, $p = 0.025$), confirming H7. Risk-aware people respond better to tobacco control and public health. Risk awareness emphasizes smoke-free laws, health warnings, and anti-smoking efforts. Recognizing smoking risks improves policy compliance and smoking prevention. This confirms the Health Belief Model's assertion that perceived vulnerability and severity greatly influence health behavior. The study supports H8 by showing that risk awareness moderates the link between psychological factor and smoking behavior prevention ($\beta = 0.084$, $t = 2.139$, $p = 0.032$). Risk awareness can increase the impact of psychological factor on smoking behavior prevention. Reduce stress, emotional triggers, and nicotine dependency by understanding smoking risks. Smokers with low-risk awareness may underestimate risks, making them more sensitive to psychology.

5. Implications

This study has theoretical, practical, methodological, and policy implications for Malaysian smoking reduction. Developing and testing a multidimensional smoking behavior prevention framework that includes social, economic, policy, and psychological elements aids behavioral and public health research. These drivers are frequently addressed independently in smoking research, fragmenting explanations of smoking habit and limiting understanding how many elements affect smoking prevention. Cognitive perceptions and behavioral reinforcement impact smoking habit prevention, according to Social Cognitive Theory and the Health Belief Model. Thus, the study provides a

more full and contextually relevant explanation of smoking prevention in emerging and collectivist cultures such as Malaysia. Self-regulation, environmental reinforcement, and social learning affect smoking avoidance, supporting SCT. Strong social influences support the assumption that peer, family, and society standards shape behavior. Social surroundings impact smoking through observational learning and reinforcement.

Smoking prevention involves risk awareness, supporting the Health Belief Model. The study found that smokers who understand the social, economic costs, policy and psychological factor of smoking are more responsive to economic deterrents, policy interventions, and psychological coping mechanisms. This confirms the Health Belief Model's assertion that perceived vulnerability and severity greatly influence health behavior. People who have negative attitude toward smoking urges and respond better to smoking prevention methods. The Health Belief Model is reinforced by empirical evidence that risk awareness directly influences behavior and intensifies external factors on smoking avoidance. However, risk awareness's non-significant moderating effect on social factor and smoking prevention has important theoretical consequences. Social forces may rule unintentionally. Even knowing the risks, peer pressure, family smoking, and social standards may cause smoking. Social factors favor smoking; therefore, cognitive information cannot be enough to prevent smoking. This study offers a holistic Malaysian smoking prevention approach. Cigarette taxes, affordability constraints, and price spikes hinder smoking because economics matter. Financial considerations had the biggest influence on smoking prevention, proving their relevance. Thus, authorities may raise tariffs while tackling cheaper, illegal tobacco goods that reduce economic deterrents. To reduce public health risks from illegal tobacco distribution, policymakers should monitor and enforce tobacco pricing systems. The findings impact tobacco control and government policy. Quit smoking regulations, public health warnings, and advertising limitations support smoking

prevention. This shows institutional and regulatory smoking reduction and public attitude modification are needed. However, the moderate policy effect suggests tobacco control needs robust enforcement, public knowledge, and social conformity. Thus, governments should strengthen policy implementation and enforce tobacco control regulations in public and private contexts. Educational and community activities should promote tobacco control knowledge and policy compliance and efficacy.

Psychology emphasizes emotional and behavioral assistance in smoking cessation programs. Stress management, emotional regulation, addiction control, self-efficacy, and perceived smoking benefits affect smoking avoidance. Healthcare providers and public health organizations should integrate counseling, behavioral therapy, emotional support, and mental health interventions in smoking cessation programs. In programs, stress and anxiety sufferers can quit smoking and acquire healthy coping strategies. Mass media and digital platforms serve as powerful health promotion tools by influencing knowledge, attitudes, and behaviors, ultimately supporting smoking prevention and cessation efforts. Awareness and public health education are critical. An aware smoker is more inclined to take measure to stop smoking. Public health authorities should inform varied demographics about smoking's health, financial, and social repercussions. Awareness should focus on smoking's long-term health and immediate social and economic repercussions. Since social factors greatly influence smoking prevention, community- and family-based anti-smoking programs may change smoking norms. School, work, and peers may help adults quit smoking. Family smoking prevention can change behavior by creating supportive home environments that discourage smoking. Family and peer networks strongly influence attitudes and decision-making in collectivist Malaysia, making such interventions crucial.

6. Conclusion

This study examined the Malaysian social, economic, policy, and psychological factors that

prevent smoking, using risk awareness as a moderator. The finding showed that social, economic, policy, and psychological factors have a positive impact on smoking behavior prevention. The study found that risk awareness moderated the effect of economic, policy, and psychological factors on smoking behavior prevention. The study contributed to the SCT and health belief model in the context of Malaysia. Therefore, the findings of this study are limited to the Malaysian context and in particular

to the adults who have participated in this study. For further generalization of the findings, more studies are needed in different countries. Future studies are also recommended to deploy different sampling techniques such as random sampling to enhance the generalizability of the findings. Future studies are recommended to deploy moderating variable such as age, gender, income, and marital status to explain the smoking behavior prevention and provide policy recommendation to reduce smoking behavior.

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