

Health Professional Networks as Social Innovation Mechanisms for Tobacco Control: Toward a Conceptual Model

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Abstract

Tobacco control is increasingly seen as a complex public health challenge that cannot be addressed solely through clinical care and regulatory intervention. The World Health Organization (WHO) MPOWER framework has provided policy architecture, but less attention has been paid to intermediary mechanisms through which policy goals translate into sustained professional, organizational, and community action. This paper addresses that lacuna by developing a conceptual model of social innovation in tobacco control, using the Tobacco-Free Thai Society initiative as an illustrative example. The paper argues that health professional networks may be understood as social innovation mechanisms linking policy intent, service delivery, knowledge development, and community mobilization in a broader tobacco-control ecosystem. The proposed model conceptualizes six interrelated action domains. In healthcare, these include professional capacity formation, cessation service delivery, and knowledge mobilization. Beyond healthcare facilities, the model extends to community-based prevention and mobilization, multi-sector engagement for smoke-free environments, and policy influence and advocacy. By integrating these six domains, health professional networks may operationalize tobacco-control goals in a systemic, coordinated manner. The paper contributes to the literature by reframing social innovation in tobacco control as an ecosystem-level integration mechanism and by proposing a theoretically informed model connecting global policy frameworks, professional legitimacy, cross-sector collaboration, and multi-level implementation. Practical implications for tobacco endgame strategies are also discussed.

Keywords: social innovation, tobacco control, health professional networks, conceptual model, tobacco endgame, Thailand

INTRODUCTION

Tobacco use is among the most persistent and complex international public health challenges. Its consequences extend beyond individual smoking behavior to long-term effects on health systems, economic productivity, social welfare, and population wellbeing. Therefore, tobacco control should not be understood solely as a matter of clinical treatment or personal behavior change. It is basically a systemic governance challenge that requires coordinated policy, institutional capacity, professional engagement, and community participation. Globally, the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) and the monitoring, protection, offer help, warn, enforce and raise taxes (MPOWER) framework offer a policy foundation for reducing tobacco use. These measures have advanced international understanding of tobacco control as a thorough, evidence-based agenda.

However, an extant policy framework does not guarantee implementation. An ongoing tobacco control concern is to grasp how policy goals translate into workable mechanisms in diverse institutional and social settings. This is particularly meaningful in contexts where tobacco control requires coordination across healthcare systems, educational institutions, professional bodies, civil society, and local communities. In such conditions, success depends on actors and mechanisms connecting national policy intent with everyday professional practice and community-level action in addition to formal regulations. This suggests that tobacco control should be analyzed in terms of implementation architecture as well as policy instruments.

Thailand is a test case for developing such an analysis. It has often been perceived for strong tobacco-control implementation in Southeast Asia, supported by legislation, public policy, and professional and civic network engagement. Among the latter, the Tobacco-Free Thai Society (TFTS) initiative by the Thai Health Promotion Foundation shows how many professional networks may limit tobacco use through education, service delivery, advocacy, and social mobilization. TFTS unites professional networks, a coordinating alliance, and several active healthcare and community domains.

Yet its wider conceptual significance remains insufficiently analyzed in the literature. Extant research focuses on effective policy measures, outcomes of specific interventions, and implementing tobacco control locally. These investigations, albeit useful, ignore how policy, professional legitimacy, service systems, and community action join in a coherent implementation logic. Likewise, while social innovation scholarship underscores collaboration, participation, and systemic change, it has generally overlooked professional networks as organized social innovation conduits for public health.

To address this omission, a conceptual model of social innovation in tobacco control is created in this research, offering an integrated explanation of how health professional networks function as intermediary mechanisms. Rather than reporting primary empirical findings, relevant literature is synthesized with the Tobacco-Free Thai Society initiative as an illustrative context for building a theory-informed model. The central argument is that health professional networks may be conceptualized as ecosystem-level social innovation mechanisms translating tobacco-control policy into coordinated action in multiple domains.

The paper's tripartite scientific contribution: 1) reconceptualizing tobacco control from a policy-centered to a multi-level implementation problem; 2) expanding the literature on social innovation by showing that tobacco control innovation depends on creating durable coordination mechanisms in

diverse sectors and levels more than stand-alone technology or isolated programs; 3) proposing a conceptual model in which health professional networks are intermediary actors linking policy frameworks, professional practice, service delivery, and multi-sector engagement for smoke-free environments with community mobilization. The paper offers an integrative analytical framework to guide future empirical research and inform public health strategy, rather than testing causal relationships.

It is organized as follows: Section 2 reviews relevant theoretical foundations, including tobacco control as a multilevel implementation challenge; social innovation; and the role of professional networks as change agents and intermediaries. Section 3 explains the conceptual development approach employed here. Section 4 presents the proposed conceptual model. The final section discusses the theoretical contribution and practical implications of the model for tobacco endgame strategies and future research.

2. THEORETICAL FOUNDATIONS

2.1 WHO MPOWER Framework and Global Progress

MPOWER may be viewed as the WHO operational framework for translating principles of the Framework Convention on Tobacco Control into actionable national policy. Rather than representing one intervention, it combines mutually reinforcing measures for reducing tobacco demand, boosting public health protection, and bolstering state creation of systematic tobacco-control responses. It is significant as practical policy architecture helping governments move from broad commitment to implementation as well as in the content of individual measures (WHO, 2026; Ngo et al., 2024).

Evidence from international research suggests that assiduous implementation of MPOWER is associated with better tobacco-control outcomes. Comparative analyses have shown that measures related to protection from tobacco smoke and stronger warning systems are linked to lower levels of youth smoking in a range of national contexts (de Looze et al., 2022). In Taiwan, simulation-based research has further implied that full enforcement of MPOWER could substantially reduce long-term smoking prevalence and prevent much tobacco-related death (Sanna et al., 2020). This underlines the argument that tobacco control is most effective when policy measures are introduced as part of an integrated system rather than as isolated instruments.

In Southeast Asia, implementation trajectories vary by nation. Thailand is often viewed as a strong regional performer because of sustained legislation, taxation, public communication, and regulatory enforcement. By contrast, other countries have advanced in select areas while facing ongoing obstacles in taxation, enforcement, and institutional continuity (Gupta et al., 2016; Hoang Van Minh et al., 2016). This unevenness suggests that a formal policy package alone fails to rationalize implementation success. It also stresses the need to examine organizational and intermediary mechanisms through which policy frameworks translate into practice.

2.2 Social Innovation Theory

In this paper, social innovation means a collaborative process through which actors develop sustainable responses to persistent public problems by reshaping relationships, institutional roles, and coordination patterns. This understanding surpasses the concept of innovation as a new product or technology. Instead, it emphasizes changes in how people, organizations, and knowledge systems unite to address

issues unresolved by conventional devices (Murray, Caulier-Grice, & Mulgan, 2010; Mulgan, 2019; Khongmalai & Distanont, 2024). Some social innovation features are especially relevant to tobacco control: 1) those oriented to complex, long-term social needs that resist single-sector solutions; 2) dependant on participation and collaboration across institutional boundaries; and 3) valuably producing systemic change rather than isolated activity. In public health, these characteristics matter because many problems require durable coordination among professional groups, service providers, policy institutions, and community actors.

From this perspective, tobacco control may be seen as a social innovation arena more about designing workable integration formats than inventing wholly new interventions. The challenge is to create mechanisms connecting policy, knowledge, service delivery, and prevention coherently. This interpretation follows Rogers' (2003) diffusion of innovations theory that change spreads more effectively when supported by credible actors in a social system. Therefore, in the present study, health professional networks are treated as potential social innovation bearers combining legitimacy, expertise, and multidimensional action coordination in addition to occupational groups.

2.3 Technology-Assisted Smoking Cessation Research

Research on technology-assisted smoking cessation highlights the growing role of digital instruments in extending the reach of tobacco-control interventions. Yet access to such technology has not always matched rapid Internet and smartphone expansion. Survey evidence from England suggests that the proportion of smokers using digital aids to quit was limited during the late 2010s, despite wider digital connectivity (Perski et al., 2019). This indicates that technological availability alone does not guarantee an uptake in tobacco-control practice. Recent literature points to increasingly diverse digital and technology-supported cessation approaches. These include text-based support systems, smartphone applications, chatbot or conversational platforms, and technology integrated with clinical care or monitoring devices. Emerging work also suggests that combinations of behavioral support, digital communication, and motivational devices may strengthen program effectiveness in some populations (Bricker et al., 2024; Kendzor et al., 2024).

Here, the literature is relevant in showing that digital instruments may be part of a wider implementation ecosystem, rather than a stand-alone solution. Technology-assisted cessation is acutest when linked to professional services, referral pathways, and institutional support structures. Thus, digital tools may be seen as enabling components in service-delivery and system-support dimensions of the proposed conceptual model, rather than as substitutes for coordinated professional community-based mechanisms.

3. CONCEPTUAL DEVELOPMENT APPROACH

Conceptual rather than empirical, this paper develops an integrative conceptual model to explain how social innovation works in tobacco control through health professional networks. It does not test hypotheses or report primary field findings. Accordingly, a theory-building approach is used grounded in conceptual synthesis.

The conceptual development is informed by integrating four knowledge streams: 1) tobacco-control literature, particularly work related to the WHO FCTC and MPOWER framework as policy architecture for full tobacco control; 2) social innovation literature, stressing collaborative arrangements and systemic change to resolve complex social problems; 3) diffusion, change agent, and intermediary actor

literature, explaining how professional actors facilitate adoption and institutionalization of new practices; and 4) policy and organizational context of the TFTS initiative as an illustrative setting for conceptual model development.

This conceptual paper is nonetheless informed by previous empirical engagement by triangulation. This included: 1) document review of program reports and related materials from health professional networks supported by the Thai Health Promotion Foundation; 2) in-depth interviews with representatives from six health professions (physicians, dentists, nurses, pharmacists, physical therapists, and medical technologists) conducted iteratively to describe implementation experience and validate emerging insight; and 3) field observations of relevant activity, including professional education setting, cessation service delivery in participating healthcare facilities, and community-based tobacco prevention initiatives such as smoke-free schools, households, and communities. These empirical inputs are used to inform conceptual development and ensure that the proposed model reflects real-world practices and implementation dynamics in addition to being presented as formal findings.

This approach is based on the premise that conceptual papers create value by clarifying key constructs, identifying relationships among them, and proposing a coherent explanatory framework for phenomena that remain insufficiently theorized. The key conceptual task of this study is to explain how tobacco control advances from policy aspiration to coordinated implementation. Therefore the question is posed: what kind of mechanism can connect global tobacco-control frameworks, professional legitimacy, service delivery systems, and community-based action in a sustained system-wide way?

In response, the paper organizes conceptual development around the Organisation for Economic Co-operation and Development (OECD) context–process–outcome (CPO) framework, as analytical scaffold rather than fieldwork protocol. In this sense, context refers to policy environment, institutional structures, and public health conditions in which tobacco control occurs. Process means the mechanisms with which health professional networks coordinate action, mobilize knowledge, and link actors across sectors and levels. Outcome alludes to conceptual forms of change that coordination means to produce, including service integration, policy alignment, multi-sector engagement, and community mobilization, rather than measured empirical effect size.

The model is developed in three steps: 1) identifying limitations of policy-centered tobacco control explanations and cites a need for intermediary implementation mechanisms; 2) conceptualizing health professional networks as carriers of social innovation, given their professional legitimacy, expertise, and access to institutional and community settings; 3) synthesizing insights into a six-domain conceptual model explaining how the networks connect healthcare systems, policy institutions, physical environments, and communities in an integrated tobacco-control ecosystem.

Accordingly, the contribution of this section is methodological conceptually: it makes explicit the logic through which the proposed model has been constructed. Rather than claiming empirical verification, the paper offers a theoretically grounded, empirically informed framework for further refinement, testing, and extension in future research.

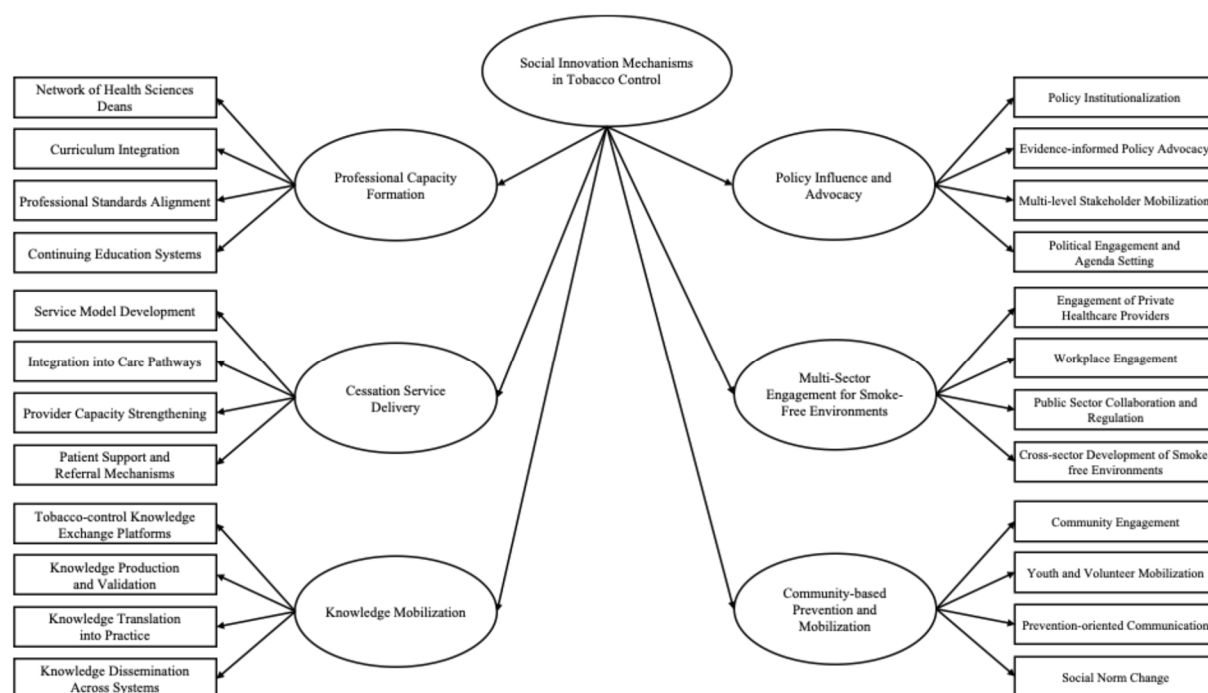
4. PROPOSED CONCEPTUAL MODEL

A conceptual model of social innovation in tobacco control is proposed in which health professional networks are ecosystem-level intermediary mechanisms. The model is based on a simple proposition:

more than formal policy frameworks, effective tobacco control requires organized mechanisms transmuting policy goals into sustained, coordinated professional, institutional, and community action.

In the proposed model, social innovation is no single new intervention, but a systemic coordinating process. Its innovativeness is in how it reorganizes relationships among actors, institutions, knowledge systems, and implementation practices to address a complex public health problem. Health professional networks are central to this process, combining expert credibility, organizational reach, and connecting multiple action domains. Instead of merely delivering services, they construct the architecture through which tobacco control becomes practically embedded.

The tobacco control social innovation model comprises six key domains: 1) professional capacity formation; 2) cessation service delivery; 3) knowledge mobilization; 4) policy influence and advocacy; 5) multisector engagement for smoke-free environments; and 6) community-based prevention and mobilization. The first three operate mainly in or through professional and national healthcare systems. The fourth, fifth, and sixth transcend national healthcare facilities to wider community and policy environments. Together, these six domains form a conceptual ecosystem of tobacco control implementation (Picture 1).



Picture 1: A conceptual model of social innovation in tobacco control

Created by the authors

4.1 Domain 1: Professional Capacity Formation

Tobacco control professional capacity formation comprises four key components: 1) health sciences dean network; 2) curriculum integration; 3) professional standards alignment; and 4) continuing education systems. This incorporates tobacco control into professional education and continuing development. Network of health sciences deans, an informal academic collaborative group, control

tobacco use by embedding cessation knowledge, preventive awareness, and related competencies into formal curricula, professional standards, and continuing education systems. This domain is conceptually significant in addressing upstream development of professional capacity. It positions tobacco control as part of routine professional responsibility rather than an optional or peripheral issue.

4.2 Domain 2: Cessation Service Delivery

Cessation service delivery includes four main aspects: 1) service model development; 2) integration into care pathways; 3) provider capacity strengthening; and 4) patient support and referral mechanisms. This pertains to transforming tobacco-control goals into service delivery. The model conceptualizes health professional networks as clinical and service cessation-related practice facilitators. They promote practical service models, integrating cessation support into extant care pathways to reinforce frontline professional capacity to identify, advise, refer, and support tobacco users. In the model, this domain is an operational bridge between professional knowledge and direct public health action.

4.3 Domain 3: Knowledge Mobilization

Knowledge mobilization has four chief elements: 1) tobacco-control knowledge exchange platforms; 2) knowledge production and validation; 3) knowledge transmuted into practice; and 4) knowledge transmission across systems. Tobacco control requires shared devices, guidelines, manuals, protocols, educational materials, and practical skill, not just policy mandates and service routine. In this model, health professional networks are knowledge intermediaries, producing, adapting, validating, and transmitting resources institutionally. The domain underscores that public health social innovation often depends on how knowledge is transmuted into forms usable by practitioners, educators, and local actors.

4.4 Domain 4: Policy Influence and Advocacy

Policy influence and advocacy has four leading facets: 1) policy institutionalization; 2) evidence-informed policy advocacy; 3) multilevel stakeholder mobilization; and 4) political engagement and agenda setting. Here health professional networks shape and sustain tobacco -control policy with networks as agents influencing policy direction and institutional priority, not just service providers. A central component is policy institutionalization, integrating tobacco control into routine Ministry of Public Health functions in key performance indicators (KPIs) through sustained budgeting. Additionally, evidence-informed policy advocacy enables networks to develop field-based experiences and implementation needs into actionable policy proposals and strategic recommendations. This process is bolstered by multilevel stakeholder mobilization uniting health professional networks, youth groups, educational institutions, and community actors to advocate for tobacco control. These political engagement, agenda setting efforts improve the chances that policymakers and political actors will respond to proposed measures and legislative initiatives. So policy influence and advocacy are critical mechanisms through which tobacco-control efforts are institutionalized, scaled, and sustained in the wider public health system.

4.5 Domain 5: Multi-Sector Engagement for Smoke-Free Environments

Multi-sector engagement for smoke-free environments has four principal features: 1) engaging private healthcare providers; 2) workplace and organizational engagement; 3) public sector collaboration and regulation; and 4) cross-sector development of smoke-free environments. Health professional networks

are spotlighted in motivating diverse actors to create supportive physical environments for tobacco cessation. More than providing services, such networks coordinatively extend tobacco-control efforts beyond public healthcare systems. A central component is engaging private healthcare providers, including private hospitals and community pharmacies to expand access to smoking cessation services in a wider scope of service settings. Workplace and organizational engagement also permits integrating cessation support and smoking prevention into everyday environments, particularly in enterprises and institutional settings where workers spend much of their day. This is further supported by public sector collaboration and regulation, with state agencies coordinating, supporting, and enforcing tobacco-control policies, particularly in establishing smoke-free areas in public and institutional spaces. This is reinforced by cross-sector development of smoke-free environments by coordinating action among several stakeholders to reduce exposure to tobacco smoke and promote healthier environments. Hence, multi-sector engagement is a critical mechanism for tobacco-control efforts to extend into physical environments with stronger range, policy enforcement, and sustainable behavior change in diverse social contexts.

4.6 Domain 6: Community-based Prevention and Mobilization

Community-based prevention and mobilization is fourfold: 1) community engagement; 2) youth and volunteer mobilization; 3) prevention-oriented communication; and 4) social norm change. Health professional networks extend tobacco-control efforts beyond formal institutions into everyday social settings. Community engagement means involving local actors in households, schools, temples, and communities, with social interactions shaping health behavior. Youth and volunteer mobilization bolster the process by engaging students, community volunteers, and local networks to promote tobacco-free lifestyles. Prevention-oriented communication occurs through culturally embedded channels, including school-based activity and temple engagement, with messages heard in familiar surroundings.

In Thailand, school-based health education programs raise awareness among students and indirectly influence household behavior, as children encourage parents to quit smoking. Such interactions can have ripple effects in communities, with behavior change in one household potentially influencing others, contributing to evolving smoke-free community norms. Similarly, engagement with religious institutions significantly reinforces tobacco-control messages. Health education activity involving monks integrates tobacco-control messages into religious teaching. As respected moral leaders, monks can influence community member attitudes and behaviors, encouraging tobacco-free practices. Through these culturally ingrained mechanisms, tobacco-control efforts are diffused societally and reinforced through shared values and collective practices. This contribute to social norm change, as tobacco-free practices are gradually adopted in households and communities.

This pattern coheres with Rogers' Diffusion of Innovations theory, underlining interpersonal communication and credible change agents for spreading new behavior. In Thailand, children, community members, and monks are influential change agents, causing ripple effects that strengthen tobacco-free norms and long-term prevention communiterarily.

4.7 Integrative Logic of the Model

The value of the proposed model is interrelationships among them as well as the six discrete domains. The model suggests that tobacco control is clearer and more sustainable when the domains are connected rather than experienced in isolation:

- Professional capacity formation strengthens future workforce capacity;
- cessation service delivery transmutes professional capacity into direct support;
- knowledge mobilization enables consistency and diffusion;
- policy influences and advocacy align institutional incentives and frameworks;
- multisector engagement creates visible smoke-free environments;
- and community mobilization reinforces prevention and social legitimacy.

Together, these domains cumulatively, mutually reinforce the implementation ecosystem.

Conceptually, this integration explains how global tobacco-control principles may transform into domestic practice. The model identifies health professional networks as a missing link between policy architecture and local action, connecting macro-level frameworks, meso-level institutions, and micro-level practice through legitimacy, coordination, and knowledge mobilization.

Additionally, the model offers a means of joining social innovation to the wider tobacco-control agenda. Rather than treating MPOWER as a list of policy devices, the model interprets it as policy architecture requiring intermediary mechanisms for implementation. Health professional networks provide such mechanisms by enabling professional, organizational, and community-level expression of tobacco-control goals. Thus, social innovation is conceptualized as the process through which policy framework becomes actionable, embedded, and sustained across sectors.

Consequently, the proposed model reframes tobacco control as an ecosystem challenge. It suggests as a central conceptual argument that effective tobacco-control strategy depends on intermediary networks aligning knowledge, service, policy, place, and community, not just on regulatory strength.

To complement the conceptual model, this section presents secondary statistical evidence on smoking prevalence in Thailand between 2007 and 2024. The intent is to situate the discussion in a national trajectory of tobacco control rather than using this data to directly empirically validate the proposed model, but. In this sense, the data serve as contextual evidence showing that tobacco use declines in Thailand over a sustained interval of policy and implementation effort rather than through any single intervention.

Around 2005, tobacco control efforts in Thailand accelerated when physician networks implemented WHO global policy frameworks professionally. Gradually, these efforts expanded to other health professional networks, including dentistry, nursing, pharmacy, medical technology, and physical therapy. In this way, social innovation emerged through coordinated professional networks bridging fragmented policy, service delivery, and community engagement mechanisms. Notably, tobacco control was not at first a high-priority goal for the Ministry of Public Health.

Nonetheless, continuous social innovation development and expansion driven by health professional networks resulted in a gradual improvement in smoking behavior among the population. National Statistical Office survey data shows a consistent downward trend in smoking prevalence. From 2007 to 2024, the proportion of current smokers declined from 33.19% to 26.95%, respectively, while the proportion of non-smokers and never-smokers rose from 56.43% to 63.49%.

Table 1. Smoking behavior trends by gender in Thailand from 2007 to 2024

Gender	Smoking behavior	2007	2011	2014	2015	2017	2021	2024
Total	Current smokers	33.19	33.24	32.25	30.65	29.91	27.89	26.95
	Non-smokers and never-smokers	56.43	55.63	56.41	54.13	56.75	60.04	63.49
	Ex-smokers	10.38	11.13	11.35	15.22	13.33	12.07	9.56
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Male	Current smokers	54.03	53.66	52.87	49.72	48.91	46.40	46.14
	Non-smokers and never-smokers	29.56	28.72	30.49	26.62	29.68	33.69	37.72
	Ex-smokers	16.41	17.62	16.64	23.66	21.41	19.91	16.14
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Female	Current smokers	3.76	4.15	4.13	3.41	3.25	2.61	2.00
	Non-smokers and never-smokers	94.38	93.96	91.73	93.41	94.74	96.01	97.00
	Ex-smokers	1.86	1.89	4.13	3.18	2.00	1.38	1.00
	Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: National Statistical Office of Thailand (2007, 2011, 2014, 2015, 2017, 2021, 2024)

A detailed examination by gender reveals a disparity in smoking behavior between males and females. More males smoke, although a gradual decline is observed over time. From 2007 to 2024, the proportion of male current smokers decreased from 54.03% to 46.14%, respectively. By contrast, smoking prevalence among females has been consistently low, declining from 3.76% to 2.00% over the same interval. Concurrently, the proportion of non-smokers and never-smokers increased in both genders, with a more pronounced rise among females, reaching 97.00% in 2024 compared to 37.72% among males. Ex-smoker rates vary, particularly among males, reflecting ongoing group cessation dynamics. This suggests that overall tobacco-control efforts in Thailand have reduced smoking prevalence, but gender differences remain impactful. Tobacco use continues to be concentrated among male populations, indicating the need for more targeted interventions addressing gender-specific behavioral patterns, social norms, and risk environments.

While causal relationships cannot be established in this study, observed trends follow the proposed role of social innovation as an integrative mechanism linking policy intent and implementation. In particular, the decline in smoking prevalence and expansion of non-smoking populations align with combined effects of professional capacity development, service delivery expansion, knowledge mobilization, policy influence, multisector engagement, and community-based prevention. This contextually supports the conceptual model, suggesting that sustained coordination across several domains may contribute to long-term improvement in tobacco-control outcomes.

5. THEORETICAL CONTRIBUTIONS AND PRACTICAL IMPLICATIONS

The proposed model contributes to the literature multifariously, by: 1) reframing tobacco control from a mainly policy-oriented issue into a multilevel implementation challenge. Much extant literature has focused on the design, effectiveness, and enforcement of tobacco-control measures. But persistent tobacco use in many contexts suggests that availability of policy instruments alone is insufficient. Less clearly theorized is the mechanism through which policy intentions become organized action in professional systems, institutions, and communities. By foregrounding the missing core, this research shifts the focus from policy architecture alone to the implementation ecosystem needed to durably sustain tobacco control; 2) social innovation scholarship in conceptualizing public health innovation as

a coordinated reconfiguration of actors, relationships, and institutional roles instead of a mainly technological intervention. This model's innovativeness is in connecting sectors and levels often treated separately: professional education, service delivery, knowledge development, policy advocacy, multisector engagement for smoke-free environments, and community mobilization. This perspective extends social innovation theory by demonstrating that in complex health challenges, innovation may be located in collaborative mechanism design rather than by introducing a new program or device;

3) advancing understanding of health professional networks as intermediary actors mobilizing legitimacy, expertise, and coordination in tobacco-control systems more than as expert associations or service-support structures. This theoretical advance underscores the organizational and relational role of networks in public health governance. In the proposed framework, professional networks align institutional incentives, policy translation, and macro-level frameworks with meso-level organizations and micro-level community action, instead of merely transmitting knowledge or supporting frontline practice. By doing so, they carry social innovation in a wider implementation ecosystem;

4) offering a conceptual bridge between global tobacco-control frameworks and domestic implementation processes. The model suggests that frameworks such as MPOWER become effective through intermediary mechanisms operationalizing principles in diverse contexts, not just through formal adoption. In this respect, the paper contributes an integrative perspective connecting global policy architecture to local institutional capacity and community engagement. This is why comparable policy frameworks may produce different cross-contextual outcomes: the difference may be in the presence or absence of credible coordinating mechanisms, not only in policy content.

Practically, the model has several implications for tobacco-control strategy and governance: 1) workforce development should be treated as a strategic pillar of tobacco control, not merely as a supportive activity. Embedding tobacco-related competencies in professional education, licensing, continuing development, and routine service expectations may strengthen long-term system capacity. This is especially useful for sustaining cessation support and prevention efforts beyond short-term campaigns;

2) system integration must be strengthened across service pathways. If tobacco control is an ecosystem rather than a fragmented activity, referral systems, service protocol, and performance expectation should align in organizations and professional groups. Hence, standardized referral pathways and shared key performance indicators are structural instruments for converting dispersed efforts into coherent implementation systems, rather than managerial devices. This priority coheres with the emphasis on long-term system continuity from community action to policy support;

3) the importance of sustainable enabling infrastructure is highlighted. Conceptually, social innovation cannot rely indefinitely on goodwill, informal commitment, and isolated project funding. It requires stable financing arrangements, supportive institutional mandates, and shared information systems allowing actors to coordinate and learn over time. For this reason, sustainable financing mechanisms and national outcome-data platforms should be seen as essential implementation capacity components instead of optional add-ons. When such infrastructure is absent, even well-designed tobacco-control efforts may struggle to scale, persist, and demonstrate collective value;

4) digital support is carefully incorporated as part of a broader ecosystem rather than treated as a stand-alone solution. Digital technology may widen access, improve continuity, and strengthen

communication, but its effectiveness depends on linkage to professional services, referral systems, and community-facing mechanisms. Specifically, digital cessation support is likely to be useful when embedded in a coordinated model of care and prevention rather than introduced in isolation;

and 5) it has relevance beyond tobacco control, focusing on how professional legitimacy, cross-sector coordination, and multi-level implementation interact. So it may also be useful for considering other complex public health challenges requiring sustained collective action, such as alcohol harm reduction, obesity prevention, non-communicable disease management, and community-based mental health promotion. Its more comprehensive value is in offering a way to conceptualize how policy ambition may be converted into organizational and social traction.

Conceptually, the present study has clear limits. The model is intended as an analytical framework rather than a tested causal explanation. Its purpose is to clarify relationships among key concepts, identify a plausible implementation logic, and offer a structured basis for future research. Future research may build on this model by examining how the six domains operate practically, how they interact cross-contextually, and which institutional arrangements strongly support durable tobacco-control outcomes.

6. CONCLUSION

The trends observed in smoking reduction and persistent gender disparity contextually support the proposed multi-domain model, particularly in underscoring the importance of coordinated mechanisms beyond policy alone. This paper argues that tobacco control should be examined through an architecture of implementation enabling policy goals to become sustained practice in institutions and communities, not just in terms of policy formulation. Global frameworks such as the FCTC and MPOWER provide an essential strategic foundation, but their influence depends on intermediary mechanisms through which they are developed into service systems, professional routines, and social action. In response to this challenge, a conceptual model is proposed identifying health professional networks as social innovation mechanisms in a larger tobacco-control ecosystem. The main insight of the model is that networks matter by connecting domains often treated separately in the literature and practically, not simply because they deliver services. Through professional legitimacy, knowledge circulation, and cross-sector coordination, they link education and workforce preparation, cessation support, policy intermediation, multisector engagement for smoke-free environments, and community prevention into a coherent action system.

Therefore, the model has a dual conceptual contribution: 1) it shifts the discussion beyond effectiveness of individual tobacco-control devices to how implementation coherence is created and sustained; 2) it redefines public health innovation by stressing organizational integration, relational coordination, and institutional alignment instead of technological novelty. In this light, progress toward a tobacco endgame will likely depend on intermediary structures transmuting policy ambition into coordinated and durable action, not merely on stronger regulation. Practical implications are equally significant. Tobacco-control strategy will probably strengthen by investing in professional network capacity, system-wide referral mechanisms, shared performance frameworks, sustainable financing arrangements, outcome-data infrastructures, and integrated digital support. These elements form the conditions through which policy becomes actionable, scalable, and durable, not just peripheral additions to tobacco policy.

Conceptually, this study provides a theory-informed framework to guide future empirical inquiry, comparative research, and strategic design, rather than empirically verifying the proposed model.

Researchers may examine how the six domains work practically, varying in institutional settings, and which coordination best supports long-term tobacco-control outcomes. Nonetheless, the framework developed here is a basis for understanding how social innovation may connect policy aspiration with implementation reality in tobacco control and potentially, in other complex public health challenges.

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