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Promising Themes in Tobacco Control Campaign Message Development: A Review of Professor Xiaoquan Zhao's Lecture at Peking University

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Abstract

Tobacco use remains a pervasive global public-health challenge, making the strategic design of persuasive messages central to modern tobacco-control efforts. Yet a persistent gap separates theoretically robust intervention models from their practical implementation, particularly within politically and culturally constrained settings. Drawing on Professor Xiaoquan Zhao — Editor-in-Chief of *Health Communication* — and his 2025 lecture at Peking University, this review distils four decades of scholarship on tobacco-control message design. It synthesises three leading behaviour-change frameworks—the Theory of Planned Behaviour, Social Cognitive Theory, and the Expectancy–Value Model—and demonstrates how belief-selection tools, notably the Promising Beliefs Selection Framework and the Relative Promise Index, operationalise these theories into actionable campaign elements. The review also appraises evidence on the alignment of content and execution strategies, maps structural constraints such as political sensitivities, media regulation, and resource limitations, and catalogues adaptive tactics reported across diverse sociocultural contexts. By retracing the field's historical inflection points and revisiting past debates, scholars can uncover overlooked questions and gain fresh perspectives that enrich contemporary tobacco-control communication.

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Keywords

Tobacco control, Health communication, Message design, Behaviour-change theories, Belief selection, Relative promise index

Introduction

Tobacco use remains one of the most formidable challenges in global public health and has long stood at the centre of health communication scholarship (St Claire et al., 2020). Within comprehensive tobacco control programs, message design is pivotal: well-crafted mass media campaigns, school-based curricula, pictorial warnings, and social media interventions can raise awareness, shift social norms, and motivate quitting (Durkin et al., 2012). Cross-national evidence shows that sharp declines in smoking often coincide with sustained, strategically designed media efforts, underscoring the influence of content, emotional tone, format, and delivery (Wakefield et al., 2010). Yet the same evidence warns that messages misaligned with audience values, poorly framed emotionally, or unclear in their calls to action may be ignored, misunderstood, or even counterproductive; effective tobacco-control communication, therefore, demands rigorous, theory-guided craftsmanship (Peters et al., 2013).

On 8 July 2025, Professor Xiaoquan Zhao[1] delivered a lecture at Peking University titled "Promising themes in tobacco control campaign message development: A classic approach and its extension," in which he synthesised the theoretical foundations, conceptual models, and methodological tools that inform campaign design. Building on Zhao's synthesis, this review[2] retraces four decades of scholarship, highlights the persistent gap between behavioural theory and campaign practice, and outlines directions for future theory-informed, context-sensitive interventions.

Theoretical foundations for tobacco control communication and the design of behavioural interventions

Tobacco control communication constitutes a vital component of the health communication system, aiming to advance public health goals by systematically intervening in smoking-related behaviours (Elder et al., 2009). In applied settings, it is often conceptualized as an intervention project—a structured, evidence-based process that develops communication strategies and continuously evaluates and refines their effectiveness to promote sustained behavioural change (Kloek et al., 2006). This approach rests on a core assumption: individual smoking behaviour can be influenced and modified through strategic information dissemination (Elder et al., 2009). A substantial body of empirical research has shown that intervention strategies grounded in behavioural science theories are significantly more effective than those lacking a theoretical foundation (Glanz & Bishop, 2010). Therefore, the design of tobacco control messages should be informed by a clear

understanding of the mechanisms underlying smoking initiation and cessation, ensuring that message content targets key variables central to behavioural change (Michie et al., 2011).

A critical challenge following the establishment of a theoretical foundation lies in translating behavioural science into actionable intervention strategies. The concept of behavioural logic refers to the systematic identification of psychological and social mechanisms that shape smoking behaviour and the subsequent construction of theoretically grounded intervention pathways (Glanz & Bishop, 2010). In tobacco control communication, this logic is first operationalized through the specification of intervention goals—for instance, reducing initiation rates among adolescents or enhancing cessation motivation among adult smokers. Based on these goals, message design must identify the behavioural determinants most relevant to the target group (Glanz & Bishop, 2010). Behavioural science offers a suite of applicable frameworks, such as the Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB), which help clarify the cognitive, attitudinal, motivational, and intentional factors that influence smoking behaviour (Armitage & Conner, 2001; Pribadi & Devy, 2020). For example, adolescent smoking may be driven by peer norms, perceived risks, and identity-related concerns, whereas adult smoking behaviour may be more strongly associated with nicotine dependence, withdrawal symptoms, and stress-coping mechanisms. These underlying mechanisms require continuous refinement and validation through both theoretical development and empirical research (Michie et al., 2011).

Embedding behavioural logic into the design of tobacco control interventions enhances both their precision and impact (Akter et al., 2024). Specifically, communication strategies can be developed across three interconnected levels. First, interventions must articulate specific and measurable behavioural objectives to ensure message clarity and direction (Ajzen, 1991). Second, message components should be tailored to key behavioural determinants, such as reshaping the social meanings associated with smoking or reinforcing perceived self-efficacy (Sterling et al., 2014). Third, methodological tools—such as belief structure analysis and attitude scales—can be applied to identify critical bottlenecks in the intervention pathway, optimize resource allocation, and enable more targeted messaging (Barati et al., 2015). Collectively, these measures improve the strategic coherence and overall effectiveness of tobacco control communication.

Message content and execution strategies

Zhao said that the effectiveness of tobacco control communication is determined not only by the construction of message content but also by the appropriateness of its delivery strategies. In intervention practice, message content strategy and message execution strategy function as an integrated system. The former aims to define the thematic focus and normative orientation of the campaign, while the latter concerns the selection of media channels and expressive formats to optimize how the target audience receives, interprets, and engages with the message.

The message content strategy addresses the fundamental question of what to communicate. In the context of tobacco control, commonly adopted content approaches include: (1) emphasizing the health risks associated with smoking (Hammond et al., 2007); (2) highlighting its social and

economic costs (Hiilamo et al., 2014); and (3) employing moral framing to construct normative opposition (Yang & Yang, 2023). For instance, health risk–centered messages often rely on epidemiological statistics and graphic imagery to heighten individual risk perception (Hammond et al., 2007). Messages emphasizing social costs underscore the burdens of smoking on family well-being and public resources, aiming to evoke a sense of collective responsibility (Hiilamo et al., 2014). Moral framing approaches frequently focus on issues such as secondhand smoke exposure and tobacco industry manipulation, encouraging audiences to question the legitimacy of smoking behaviours through ethical reflection (Yang & Yang, 2023). For instance, health risk–centered messages often rely on epidemiological statistics and graphic imagery to heighten individual risk perception (Hammond et al., 2007).

The persuasiveness of a message depends not only on the internal coherence of its argumentative logic but also on its resonance with the lived experiences of the intended audience. For instance, research indicates that adolescents are generally less responsive to warnings about long-term health risks (Latimer et al., 2012). Instead, messages that emphasize the immediate consequences of smoking—such as its effects on appearance, breath, athletic performance, or social image—are more likely to elicit emotional reactions and shape behavioural intentions (Hallfors et al., 2005). Furthermore, studies have found that integrating moral value frameworks, such as the ethics of care or the ethics of purity, can strengthen adolescents' identification with tobacco control norms, fostering internal reflection and promoting greater self-regulation of smoking behaviours (Yang & Yang, 2023).

By contrast, the message execution strategy focuses on how to communicate. This involves selecting appropriate information channels, scheduling dissemination effectively, and making stylistic decisions regarding both visual and linguistic presentation. Execution is not merely a technical extension of content design; rather, it plays a pivotal role in determining whether messages enter the audience's perceptual field, are cognitively processed, and ultimately retained (Noar et al., 2016). Even well-crafted content may lose its persuasive power if the mode of delivery fails to align with the audience's expectations and media consumption habits. Zhao cited the U.S. "Truth" campaign as an exemplary case of synergy between message content and execution strategy. Rather than relying on fear appeals, the campaign strategically exposed how tobacco companies manipulated youth consumer psychology, thereby provoking scepticism and resistance among adolescents (Farrelly et al., 2005). On the execution side, it employed live-action storytelling, rapid editing, and visually arresting imagery, while deliberately avoiding didactic or patronizing language (Farrelly et al., 2009). This approach created a communication style that appeared youth-driven, reinforcing both authenticity and emotional identification. The convergence of content intent and execution design enabled the campaign to build a foundation of trust and affective resonance among young audiences, ultimately contributing to a significant decline in youth smoking rates over a decade (Farrelly et al., 2005). It is widely regarded as a benchmark case in integrated tobacco control communication.

In applied contexts, the effectiveness of communication strategies often hinges on the degree of alignment between message content and its mode of execution. For instance, among older rural populations, channels such as radio broadcasts, village bulletin boards, and in-person health talks tend to be more effective due to their immediacy and accessibility. In contrast, for urban youth,

short-form video platforms, popular culture references, and interactive formats are more likely to attract attention and encourage engagement. Moreover, highly educated audiences typically place greater value on logical coherence and data transparency, whereas general audiences may respond more strongly to vivid, concrete, and emotionally resonant messages. Ultimately, the impact of communication on behavioural decision-making depends not only on message validity, but—more critically—on whether the delivery format aligns with the audience's cognitive schemas and media consumption habits.

Applying health behaviour theories in tobacco control communication

Zhao systematically reviewed several classical theories of health behaviours, among which the Theory of Planned Behaviour (TPB), Social Cognitive Theory (SCT), and the Health Belief Model (HBM) are the most widely adopted frameworks in contemporary tobacco control communication research and intervention design. TPB, proposed by Ajzen (1991), posits that an individual's behaviours is primarily determined by their behavioural intention, which is shaped by three key constructs: attitude toward the behaviours, subjective norm (i.e., perceived social pressure from significant others), and perceived behavioural control (PBC)—that is, the individual's perception of their ability to perform the behaviours. In tobacco control contexts, TPB provides a valuable framework for identifying strategic intervention points. For example, when individuals recognize the health risks associated with smoking, they are more likely to develop negative attitudes toward the behaviours (Armitage & Conner, 2001). When smoking is discouraged or stigmatized by prevailing social norms, conformity pressures may further reduce the likelihood of engaging in the behaviours (Lee et al., 2018). Moreover, when individuals believe that cessation resources are accessible and that they possess the capability to quit successfully, the likelihood of actual behaviours change increases significantly (Dadipoor et al., 2023).

SCT emphasizes the dynamic interplay between personal factors, behaviour, and environmental influences. Central to SCT is the concept of self-efficacy, defined as an individual's belief in their ability to perform a given behaviour (Heffernan, 1988). Unlike the TPB, which emphasizes behavioural intention, SCT proposes that behaviour is influenced not only by cognitive evaluations but also by perceived control and environmental reinforcement. In the context of tobacco control, strategies such as highlighting success stories of former smokers, promoting socially endorsed role models, and creating supportive environments—such as implementing smoke-free policies or offering cessation assistance—can enhance individuals' self-efficacy and thereby facilitate sustained behaviour change (Elshatarat et al., 2016).

HBM explains behavioural adoption through the lens of risk perception. According to HBM, individuals' health-related decisions are shaped by four key perceptions: perceived susceptibility to a health threat, perceived severity of its potential consequences, perceived benefits of taking preventive action, and perceived barriers that may hinder behaviour change (Green et al., 2020). In tobacco control practice, HBM is particularly useful in early-stage interventions, such as

cognitive education campaigns targeting adolescents or first-time smokers. By using diverse media formats—such as infographics, testimonial videos, and expert interviews—campaign designers can amplify perceptions of smoking-related health risks, emphasize the advantages of quitting, and address anticipated psychological or logistical barriers to cessation. These efforts collectively contribute to increased behavioural adoption and broader support for tobacco control initiatives (Oo et al., 2025).

Predictive pathways from attitudes to behaviour

In the early stages of health communication research, the widely adopted "Knowledge–Attitude–Behaviour" (KAB) model proposed that knowledge leads to changes in attitude, which in turn naturally guides behaviour (Bettinghaus, 1986). However, subsequent research in psychology and communication has demonstrated that the relationship between attitudes and behaviour is far more complex than a simple linear causality. Instead, it is shaped by the interaction of multiple psychological, social, and contextual variables. Recognition of this "attitude–behaviour gap" has prompted the ongoing refinement of behavioural prediction theories (Wicker, 1969).

As early as 1969, Wicker's review of extensive empirical studies indicated a generally weak correlation between attitudes and behaviour—so weak, in fact, that he argued the two were "virtually unrelated." This finding challenged the prevailing assumption that attitudes reliably determine behaviour and sparked sustained academic debate on the phenomenon of attitude–behaviour inconsistency (Wicker, 1969). Take smoking as an example: even when individuals acknowledge the health risks of smoking, many continue the behaviour, suggesting that awareness alone is insufficient to drive action. Several explanations account for this mismatch. First, attitudinal measures are often abstract, while behaviours are embedded in specific situational contexts. Second, behaviour is heavily shaped by external environments and social norms. Third, some behaviours—like smoking—involve physiological dependence and habitual repetition, which go beyond the explanatory reach of conventional psychological models (Ajzen, 1991; Gardner, 2015; Wicker, 1969).

From the 1970s onward, scholars began developing more nuanced models of behavioural prediction. Within this context, Fishbein and Ajzen introduced the Theory of Reasoned Action (TRA), which positioned behavioural intention as the critical intermediary between attitudes and behaviour. They emphasized the principle of compatibility, which posits that significant attitude–behaviour associations only emerge when the two align in terms of target, action, context, and timing (Fishbein & Ajzen, 1975). Ajzen (1991) later extended the TRA into TPB by incorporating the construct of perceived behavioural control (PBC)—an individual's belief in their ability to perform the behaviour—thereby enabling the model to account for situations in which people intend to act but are constrained by limited capacity or resources. This theoretical advancement has proven particularly relevant in the context of tobacco control, where individuals frequently express a desire to quit smoking yet fail to follow through due to psychological or situational barriers (Godin et al., 1992). TPB thus calls for a strategic shift in health communication—from

merely disseminating knowledge to strengthening individuals' perceived capability and fostering supportive environments that facilitate behaviour change (Tapera et al., 2020).

In parallel, research has deepened the understanding of attitudinal structure. The Expectancy–Value Model (EVM) posits that attitudes are not unitary constructs but are composed of multiple specific beliefs, each weighted by its subjective importance (Zhang et al., 2008). This perspective allows for more targeted interventions by enabling practitioners to identify and modify the key beliefs that underlie maladaptive behaviours. For example, beliefs such as "smoking reduces stress" or "quitting leads to weight gain" may function as anchors that sustain smoking. Without directly addressing these specific beliefs, even a general recognition of smoking's health risks may fail to produce actual behaviour change (van der Pligt & de Vries, 1998). As a result, the focus of tobacco control messaging has shifted from broad attitude change to belief reconstruction, laying the theoretical foundation for belief-targeting approaches.

The limitations of explaining complex behaviours solely through individual-level psychological variables have become increasingly apparent. The Social Ecological Model addresses this issue by asserting that behaviour is shaped by interacting influences operating across multiple levels: individual, interpersonal, organizational, community, and policy. In the context of tobacco control, this implies that communication efforts must be integrated with broader structural interventions (Golden & Earp, 2012). Empirical evidence shows that policy measures such as tobacco taxation, public smoking bans, and advertising restrictions often have a greater impact on behaviour than information campaigns alone (Chaloupka et al., 2012; Zeller & Hatsukami, 2009). Overemphasizing personal responsibility risks minimizing the structural influence of the tobacco industry and may ultimately undermine the effectiveness of regulatory instruments.

Recent behavioural models have increasingly incorporated non-rational factors to better explain complex health behaviours. Among these, the Extended Parallel Process Model (EPPM) and the Elaboration Likelihood Model (ELM) highlight the significant roles of emotional responses, cognitive processing routes, and motivational states in influencing behavioural outcomes (Lam et al., 2022; Siev et al.). Building on this foundation, the theory of Implementation Intentions argues that behavioural intention alone is insufficient; rather, it must be translated into concrete, actionable plans to produce actual change (Gollwitzer, 1999). Reflecting these theoretical developments, contemporary tobacco control strategies increasingly utilize layered interventions. These combine cognitive and motivational enhancement through informational content with environmental and behavioural scaffolding to support execution(Young-Wolff et al., 2019). Practical applications of this approach include helping individuals develop specific quit plans, anticipate high-risk situations, and rehearse alternative coping strategies (Brown & Bell, 2008). In this evolving landscape, the challenge of converting attitude into behaviour has shifted from a question of *whether* change occurs to one of *how* it can be effectively facilitated. Understanding the mechanisms that link attitudes, intentions, and behaviours—particularly by identifying key mediators and enabling conditions—has become a central concern in the design of contemporary health communication interventions (Susmann et al., 2022).

Hornik and Woolf's belief selection approach

Smoking behaviour is often shaped by the combined influence of multiple specific beliefs. To maximize the effectiveness of communication interventions under limited resources, it is essential to identify and prioritize target beliefs—those that are both predictive of behaviour and amenable to change (Hornik et al., 2019). Zhao introduced Hornik and Woolf's belief selection approach, which provides a robust empirical foundation for selecting message content in a scientifically rigorous manner. This framework is guided by two key criteria. First, a belief must exhibit a statistically significant correlation with the target behaviour, indicating that individuals who endorse the belief demonstrate distinct behavioural patterns compared to those who do not. Second, the belief must be relatively uncommon within the target population, suggesting untapped potential for change through intervention. Beliefs that satisfy both conditions are classified as high-promise beliefs—those most likely to drive behavioural shifts when strategically addressed in communication campaigns (Hornik et al., 2019).

In applied settings, researchers often visualize candidate beliefs using a two-dimensional matrix, where the horizontal axis represents the strength of the belief–behaviour association and the vertical axis indicates the current prevalence of the belief. Beliefs located in the high-association, low-prevalence quadrant are prioritized for intervention, as they offer both influence and modifiability. By contrast, beliefs that are strongly associated with behaviour but already widely accepted tend to yield diminishing returns when further promoted. Conversely, beliefs that are uncommon yet weakly related to behaviour offer limited practical value for communication interventions. To further quantify these distinctions, Hornik and colleagues proposed the Relative Promise Index (RPI)—a standardized metric that estimates the behavioural gain achievable from modifying a given belief (Hornik et al., 2019). The RPI allows for direct comparisons across beliefs by expressing the potential behavioural change on a 0-to-100 scale. For example, the same belief may generate significantly different RPI scores in adolescent and adult populations, enabling communicators to tailor intervention priorities across demographic segments.

A key contribution of this framework lies in its emphasis on the limited marginal utility of widely known or commonsense beliefs in driving behavioural change. For example, the statement "smoking causes cancer," while factually accurate and widely endorsed, contributes little to behaviour modification due to its saturation in public consciousness. By contrast, less prevalent beliefs—such as "smoking enhances social interaction" or "anti-smoking messages represent defiance against authority figures"—may exert a stronger influence on behaviour and are therefore more promising targets for intervention.

From an operational standpoint, the framework not only offers a methodological basis for identifying high-priority content but also guides the strategic construction of persuasive messages. Practitioners can collect candidate beliefs through surveys or interviews, assess their behavioural relevance and prevalence, and then prioritize those with the greatest potential for impact. This approach shifts the focus from general awareness-raising to the targeted reconstruction of under-recognized yet behaviourally influential beliefs. Nonetheless, the application of belief selection must remain context-sensitive. Some statistically promising beliefs may be unsuitable for real-world campaigns due to political sensitivities, cultural constraints, or difficulties in linguistic

adaptation. Furthermore, belief salience and modifiability may differ across gender, age, or cultural subgroups, necessitating intersectional considerations in strategy development. Effective implementation, therefore, requires not only empirical rigor but also communicative sensitivity and contextual adaptability.

Conclusion

The effectiveness of health communication strategies is determined not only by the scientific validity of theoretical models but also by the structural constraints imposed by political, economic, and institutional contexts. As Zhao noted, in the case of tobacco control, although behavioural science offers idealized pathways for designing interventions, their practical implementation often encounters substantial challenges—ranging from political resistance and economic conflicts of interest to limited institutional resources.

The complexity of tobacco control policy is most evident in the constraints imposed by the political environment. In some countries, the tobacco industry serves as both a major source of government revenue and a provider of local employment. For example, under China's tobacco monopoly system, tobacco taxation constitutes a significant portion of fiscal income in certain regions. Within such contexts, communication strategies that are theoretically sound—such as exposing the manipulative practices of tobacco companies or fostering anti-industry sentiment—may lack political feasibility. As a result, communicators often need to identify politically "safe" framings that remain grounded in scientific evidence. Messages oriented around themes such as youth protection or family health tend to be more acceptable and less likely to trigger institutional pushback. Communication practice is also limited by media control and resource constraints. In environments where public communication channels are restricted or underfunded, tobacco control campaigns may fall short of the theoretical ideals of high frequency and broad coverage. In response, Zhao suggested leveraging alternative platforms—such as social media, grassroots networks, or civil society organizations—to implement "low-cost, high-density" communication efforts that circumvent institutional bottlenecks.

Given these structural constraints, communicators must strike a balance between normative theory and practical feasibility. As Zhao observed, effective communication requires assessing the political sensitivity of message content, estimating implementation costs, and weighing potential risks against anticipated impact. While adhering to ethical standards and scientific principles, practitioners should explore multi-level, adaptive modes of expression. For instance, when direct critique of tobacco corporations is not viable, communicators may strategically reference international case studies to indirectly shape issue agendas. When budgetary constraints exist, selecting cost-effective channels—such as short-form videos or public-space media—can help maximize reach. Although theory identifies what ought to be done, policy environments often determine what can be done. Communication strategies must account for this discrepancy and work within institutional boundaries through strategic framing, incremental engagement, and collaborative public involvement to gradually expand the space for action. The true value of health

communication lies not in the mechanical application of theory, but in the ability to preserve its practical relevance amid political complexity and institutional constraints.

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The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Notes

1. Dr. Xiaoquan Zhao is a Professor in the Department of Communication at George Mason University and serves as the Editor-in-Chief of *Health Communication*. He earned his Ph.D. in Communication from the Annenberg School for Communication at the University of Pennsylvania in 2005. Dr. Zhao's research spans a broad range of areas, including health communication, persuasive messaging, media effects, information-seeking behaviour, tobacco control, and climate change communication. From 2013 to 2014, he served as a Tobacco Regulatory Science Fellow at the U.S. Food and Drug Administration (FDA) Centre for Tobacco Products. He currently holds the position of Scientific Advisor for Research and Evaluation in the Office of Health Communication and Education at the same centre.
2. This article is based on a lecture delivered by Professor Zhao at Peking University on July 8, 2025, titled "Promising Themes in Tobacco Control Campaign Message Development: A Classic Approach and Its Extension."

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-211. https://doi.org/10.1016/0749-5978(91)90020-T

Akter, S., Rahman, M. M., Rouyard, T., Aktar, S., Nsashiyi, R. S., & Nakamura, R. (2024). A systematic review and network meta-analysis of population-level interventions to tackle smoking behaviour. *Nature Human Behaviour*, *8*(12), 2367-2391. https://doi.org/10.1038/s41562-024-02002-7

Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behaviour: A meta-analytic review. *British Journal of Social Psychology*, *40*(4), 471-499. https://doi.org/10.1348/014466601164939

Barati, M., Allahverdipour, H., Hidarnia, A., Niknami, S., & Bashirian, S. (2015). Belief-based Tobacco Smoking Scale: Evaluating the Psychometric Properties of the Theory of Planned Behavior's Constructs. *Health Promot Perspect*, *5*(1), 59-71. https://doi.org/10.15171/hpp.2015.008

Bettinghaus, E. P. (1986). Health promotion and the knowledge-attitude-behavior continuum. *Preventive Medicine*, *15*(5), 475-491. https://doi.org/10.1016/0091-7435(86)90025-3

Brown, T., & Bell, M. (2008). Imperial or postcolonial governance? Dissecting the genealogy of a global public health strategy. *Social Science & Medicine*, *67*(10), 1571-1579. https://doi.org/10.1016/j.socscimed.2008.07.027

Chaloupka, F. J., Yurekli, A., & Fong, G. T. (2012). Tobacco taxes as a tobacco control strategy. *Tobacco Control*, *21*(2), 172-180. https://doi.org/10.1136/tobaccocontrol-2011-050417

Dadipoor, S., Heydari, G., Abu-Rmeileh, N. M. E., Mohseni, S., Kakhaki, H. E. S., Aghamolaei, T., & Shahabi, N. (2023). A predictive model of waterpipe smoking cessation among women in southern Iran: application of the theory of planned behavior. *BMC Public Health*, *23*(1), 1151. https://doi.org/10.1186/s12889-023-16053-4

Durkin, S., Brennan, E., & Wakefield, M. (2012). Mass media campaigns to promote smoking cessation among adults: an integrative review. *Tobacco Control*, *21*(2), 127-138. https://doi.org/10.1136/tobaccocontrol-2011-050345

Elder, J. P., Ayala, G. X., Parra-Medina, D., & Talavera, G. A. (2009). Health Communication in the Latino Community: Issues and Approaches. *Annual Review of Public Health*, *30*(Volume 30, 2009), 227-251. https://doi.org/10.1146/annurev.publhealth.031308.100300

Elshatarat, R. A., Yacoub, M. I., Khraim, F. M., Saleh, Z. T., & Afaneh, T. R. (2016). Self-efficacy in treating tobacco use: A review article. *Proceedings of Singapore Healthcare*, *25*(4), 243-248. https://doi.org/10.1177/2010105816667137

Farrelly, M. C., Davis, K. C., Haviland, M. L., Messeri, P., & Healton, C. G. (2005). Evidence of a Dose—Response Relationship Between "truth" Antismoking Ads and Youth Smoking Prevalence. *American Journal of Public Health*, *95*(3), 425-431. https://doi.org/10.2105/AJPH.2004.049692

Farrelly, M. C., Nonnemaker, J., Davis, K. C., & Hussin, A. (2009). The Influence of the National truth Campaign on Smoking Initiation. *American Journal of Preventive Medicine*, *36*(5), 379-384. https://doi.org/10.1016/j.amepre.2009.01.019

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research* (Vol. 27).

Gardner, B. (2015). A review and analysis of the use of 'habit' in understanding, predicting and i nfluencing health-related behaviour. *Health Psychology Review*, *9*(3), 277-295. https://doi.org/10.1080/17437199.2013.876238

Glanz, K., & Bishop, D. B. (2010). The Role of Behavioral Science Theory in Development and Implementation of Public Health Interventions. *Annual Review of Public Health*, *31*(Volume 31, 2010), 399-418. https://doi.org/10.1146/annurev.publhealth.012809.103604

Godin, G., Valois, P., Lepage, L., & Desharnais, R. (1992). Predictors of smoking behaviour: an application of Ajzen's theory of planned behaviour. *British Journal of Addiction*, *87*(9), 1335-1343. https://doi.org/10.1111/j.1360-0443.1992.tb02742.x

Golden, S. D., & Earp, J. A. L. (2012). Social Ecological Approaches to Individuals and Their C ontexts:Twenty Years of Health Education & Behavior Health Promotion Interventions. *Heal th Education & Behavior*, *39*(3), 364-372. https://doi.org/10.1177/1090198111418634

Gollwitzer, P. (1999). Implementation Intentions: Strong Effects of Simple Plans. *American Psyc hologist*, *54*, 493-503. https://doi.org/10.1037/0003-066X.54.7.493

Green, E. C., Murphy, E. M., & Gryboski, K. (2020). The Health Belief Model. In *The Wiley En cyclopedia of Health Psychology* (pp. 211-214). https://doi.org/10.1002/9781119057840.ch68

Hallfors, D. D., Waller, M. W., Bauer, D., Ford, C. A., & Halpern, C. T. (2005). Which Comes F irst in Adolescence—Sex and Drugs or Depression? *American Journal of Preventive Medicine*, *29*(3), 163-170. https://doi.org/10.1016/j.amepre.2005.06.002

Hammond, D., Fong, G. T., Borland, R., Cummings, K. M., McNeill, A., & Driezen, P. (2007). Text and graphic warnings on cigarette packages: findings from the international tobacco con trol four country study. *Am J Prev Med*, *32*(3), 202-209. https://doi.org/10.1016/j.amepre.2006.11.011

Heffernan, C. J. (1988). Social foundations of thought and action: A social cognitive theory, Alb ert Bandura Englewood Cliffs, New Jersey: Prentice Hall, 1986, xiii + 617 pp. Hardback. US $39.50. *Behaviour Change*, *5*(1), 37-38. https://doi.org/10.1017/S0813483900008238

Hiilamo, H., Crosbie, E., & Glantz, S. A. (2014). The evolution of health warning labels on cigar ette packs: the role of precedents, and tobacco industry strategies to block diffusion. *Tob Con trol*, *23*(1), e2. https://doi.org/10.1136/tobaccocontrol-2012-050541

Hornik, R. C., Volinsky, A. C., Mannis, S., Gibson, L. A., Brennan, E., Lee, S. J., & Tan, A. S. L. (2019). Validating the Hornik & Woolf approach to choosing media campaign themes: Do promising beliefs predict behavior change in a longitudinal study? *Communication Methods and Measures*, *13*(1), 60-68. https://doi.org/10.1080/19312458.2018.1515902

Kloek, G. C., van Lenthe, F. J., van Nierop, P. W. M., Koelen, M. A., & Mackenbach, J. P. (200 6). Impact evaluation of a Dutch community intervention to improve health-related behaviour in deprived neighbourhoods. *Health & Place*, *12*(4), 665-677. https://doi.org/10.1016/j.healthplace.2005.09.002

Lam, C., Huang, Z., & Shen, L. (2022). Infographics and the Elaboration Likelihood Model (EL M): Differences between Visual and Textual Health Messages. *Journal of Health Communic ation*, *27*(10), 737-745. https://doi.org/10.1080/10810730.2022.2157909

Latimer, A. E., Krishnan-Sarin, S., Cavallo, D. A., Duhig, A., Salovey, P., & O'Malley, S. A. (20 12). Targeted smoking cessation messages for adolescents. *J Adolesc Health*, *50*(1), 47-53. https://doi.org/10.1016/j.jadohealth.2011.04.013

Lee, C. G., Middlestadt, S. E., Seo, D.-C., Lin, H.-C., Macy, J. T., & Park, S. (2018). Incorporating environmental variables as precursor background variables of the theory of planned behavior to predict quitting-related intentions: a comparative study between adult and young adult smokers. *Archives of Public Health*, *76*(1), 66. https://doi.org/10.1186/s13690-018-0311-3

Michie, S., van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, *6*(1), 42. https://doi.org/10.1186/1748-5908-6-42

Noar, S. M., Hall, M. G., Francis, D. B., Ribisl, K. M., Pepper, J. K., & Brewer, N. T. (2016). Pictorial cigarette pack warnings: a meta-analysis of experimental studies. *Tobacco Control*, *25*(3), 341-354. https://doi.org/10.1136/tobaccocontrol-2014-051978

Oo, M. Z., Tint, S. S., Panza, A., Pongpanich, S., Viwattanakulvanid, P., Bodhisane, S., Rerkasem, A., & Rerkasem, K. (2025). Effectiveness of a Health Belief Model-based integrated health education and mobile phone short message service intervention on health knowledge, perception, and self-efficacy toward smoking: a quasi-experimental study among industrial workers in Myanmar. *BMC Public Health*, *25*(1), 1562. https://doi.org/10.1186/s12889-025-22754-9

Peters, G.-J. Y., Ruiter, R. A. C., & Kok, G. (2013). Threatening communication: a critical re-analysis and a revised meta-analytic test of fear appeal theory. *Health Psychology Review*, *7*(sup1), S8-S31. https://doi.org/10.1080/17437199.2012.703527

Pribadi, E. T., & Devy, S. R. (2020). Application of the Health Belief Model on the Intention to Stop Smoking Behavior among Young Adult Women. *Journal of Public Health Research*, *9*(2), jphr.2020.1817. https://doi.org/10.4081/jphr.2020.1817

Siev, J. J., Williams, S., & Petty, R. E. Elaboration Likelihood Model. In *The International Encyclopedia of Health Communication* (pp. 1-6). https://doi.org/10.1002/9781119678816.iehc0657

St Claire, S., Gouda, H., Schotte, K., Fayokun, R., Fu, D., Varghese, C., & Prasad, V. M. (2020). Lung health, tobacco, and related products: gaps, challenges, new threats, and suggested research. *American Journal of Physiology-Lung Cellular and Molecular Physiology*, *318*(5), L1004-L1007. https://doi.org/10.1152/ajplung.00101.2020

Sterling, K. L., Ford, K. H., Park, H., & McAlister, A. L. (2014). Scales of Smoking-Related Self-Efficacy, Beliefs, and Intention: Assessing Measurement Invariance among Intermittent and Daily High School Smokers. *American Journal of Health Promotion*, *28*(5), 310-315. https://doi.org/10.4278/ajhp.121009-QUAN-490

Susmann, M. W., Xu, M., Clark, J. K., Wallace, L. E., Blankenship, K. L., Philipp-Muller, A. Z., Luttrell, A., Wegener, D. T., & Petty, R. E. (2022). Persuasion amidst a pandemic: Insights from the Elaboration Likelihood Model. *European Review of Social Psychology*, *33*(2), 323-359. https://doi.org/10.1080/10463283.2021.1964744

Tapera, R., Mbongwe, B., Mhaka-Mutepfa, M., Lord, A., Phaladze, N. A., & Zetola, N. M. (2020). The theory of planned behavior as a behavior change model for tobacco control strategies among adolescents in Botswana. *PLOS ONE*, *15*(6), e0233462. https://doi.org/10.1371/journal.pone.0233462

van der Pligt, J., & de Vries, N. K. (1998). Belief Importance in Expectancy-Value Models of Attitudes. *Journal of Applied Social Psychology*, *28*(15), 1339-1354. https://doi.org/10.1111/j.1559-1816.1998.tb01680.x

Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change h ealth behaviour. *The Lancet*, *376*(9748), 1261-1271. https://doi.org/10.1016/S0140-6736(10) 60809-4

Wicker, A. W. (1969). Attitudes versus Actions: The Relationship of Verbal and Overt Behavior al Responses to Attitude Objects. *Journal of Social Issues*, *25*(4), 41-78. https://doi.org/10.11 11/j.1540-4560.1969.tb00619.x

Yang, F. E., & Yang, S. (2023). Effects of Moral Frames Within Vaping Prevention Messages on Current smokers' Support for Electronic Cigarette Regulations. *J Health Commun*, *28*(7), 41 2-424. https://doi.org/10.1080/10810730.2023.2217104

Young-Wolff, K. C., Fogelberg, R., & Preston, P. G. (2019). Implementing a Multifaceted Perio perative Smoking Cessation Intervention in a Large Healthcare System. *Nicotine & Tobacco Research*, *22*(3), 452-453. https://doi.org/10.1093/ntr/ntz050

Zeller, M., & Hatsukami, D. (2009). The Strategic Dialogue on Tobacco Harm Reduction: a visi on and blueprint for action in the US. *Tobacco Control*, *18*(4), 324-332. https://doi.org/10.11 36/tc.2008.027318

Zhang, X. H., Xie, F., Wee, H. L., Thumboo, J., & Li, S. C. (2008). Applying the Expectancy-Va lue Model to understand health values. *Value Health*, *11 Suppl 1*, S61-68. https://doi.org/10.1 111/j.1524-4733.2008.00368.x