Strategic Social Marketing and Consumer Behavioural Change in Unregulated Alcohol Consumption: Evidence from Central Kenya

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ABSTRACT

Purpose

This study examined the influence of Strategic Social Marketing on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya. The study responds to limited empirical evidence on the effectiveness of integrated social marketing interventions in alcohol harm reduction within low- and middle-income countries.

Design/methodology/approach

Guided by the Theory of Planned Behaviour, Strategic Social Marketing Theory and Institutional Theory, the study adopted an explanatory sequential mixed-methods design. Quantitative data were collected from 386 respondents drawn from four counties in Central Kenya and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). Qualitative interviews with key stakeholders were conducted to explain and contextualise the quantitative findings.

Findings

Strategic Social Marketing had a positive and statistically significant influence on Consumer Behavioural Change ($\beta = 0.463$, $t = 9.317$, $p < .001$), explaining 61.0% of the variance in behavioural outcomes ($R^2 = 0.610$). Integrated interventions incorporating audience segmentation, stakeholder collaboration, community engagement, value exchange, rehabilitation support and evidence-based communication were associated with improved behavioural outcomes related to unregulated alcohol consumption.

Originality/value

The study advances Strategic Social Marketing scholarship by conceptualising Strategic Social Marketing as a multidimensional behavioural intervention and providing empirical evidence from an under-researched African context. It demonstrates that consumer-centred interventions complement regulatory enforcement by strengthening behavioural, social and institutional mechanisms that support sustainable alcohol harm reduction.

Keywords: *Strategic Social Marketing, Consumer Behavioural Change, Alcohol harm Reduction, Theory of Planned Behaviour, Alcohol Harm Reduction, Kenya, Partial Least Squares Structural Equation Modelling (PLS-SEM).*

INTRODUCTION

Strategic Social Marketing has increasingly emerged as an effective approach for addressing complex public health challenges by applying commercial marketing principles to achieve voluntary behavioural change for social good, extending the foundational concept of social marketing introduced by Kotler and Zaltman (1971) and subsequently refined by contemporary scholars (French & Gordon, 2019; Lee et al., 2023). Harmful alcohol consumption remains one of the leading preventable causes of morbidity, mortality, and socioeconomic loss worldwide, accounting for more than three million deaths annually and contributing to over 200 disease and injury conditions (WHO, 2024). Beyond its direct health consequences, harmful alcohol use imposes substantial economic costs through reduced productivity, increased healthcare expenditure, crime, family instability, and widening social inequalities. Although governments continue to strengthen regulatory measures such as taxation, licensing restrictions, advertising controls, and law enforcement, these approaches frequently achieve only partial success because they often fail to address the behavioural, social, and environmental factors that sustain alcohol consumption.

Recognition of these limitations has stimulated growing interest in Strategic Social Marketing as a complementary behavioural approach to public health. Unlike conventional awareness campaigns that primarily seek to increase knowledge, Strategic Social Marketing integrates consumer insight, audience segmentation, value exchange, stakeholder collaboration, systems thinking, and evidence-based programme design to encourage voluntary and sustained behavioural change (French & Gordon, 2019; Lee et al., 2023). Contemporary social marketing scholarship further emphasises that successful behavioural interventions require supportive institutional environments, community participation, service accessibility, and ongoing evaluation rather than communication activities alone (Rundle-Thiele et al., 2023; Dietrich et al., 2024; Temmerman et al., 2024).

Evidence supporting Strategic Social Marketing has expanded across diverse behavioural domains, including tobacco control, vaccination uptake, healthy eating, physical activity, environmental sustainability, and chronic disease prevention. Systematic reviews consistently report that interventions combining consumer research, audience segmentation, co-creation, and stakeholder partnerships produce more durable behavioural outcomes than programmes relying primarily on information dissemination or regulatory enforcement. However, most empirical evidence originates from high-income countries with relatively strong institutional capacity, leaving limited understanding of how Strategic Social Marketing performs in low- and middle-income countries characterised by resource constraints, informal economies, and fragmented governance.

These contextual challenges are particularly evident in Sub-Saharan Africa, where alcohol-related harm is exacerbated by widespread informal alcohol production, weak enforcement capacity, poverty, unemployment, and limited access to rehabilitation services (Ferreira-Borges et al., 2023; WHO, 2024). Kenya illustrates this challenge. Despite sustained investments in enforcement, licensing, rehabilitation programmes, and public awareness campaigns, unregulated alcohol consumption continues to contribute to preventable deaths, alcohol poisoning, family disruption, crime, and substantial pressure on health services. The persistence of illicit alcohol markets suggests that regulatory interventions alone are insufficient and highlights the need for integrated consumer-centred approaches capable of addressing the behavioural drivers of alcohol consumption.

Although Strategic Social Marketing has attracted increasing scholarly attention, several important gaps remain. Conceptually, previous studies have frequently examined individual intervention components such as communication campaigns or community mobilisation rather than Strategic Social Marketing as a multidimensional behavioural system. Methodologically, many investigations continue to rely on conventional regression techniques that inadequately capture relationships among complex latent constructs. Contextually, empirical evidence from Sub-Saharan Africa—and Kenya in particular—remains limited, despite the region experiencing some of the most persistent alcohol-related public health challenges. Consequently, the applicability of contemporary Strategic Social Marketing theory to informal alcohol markets remains insufficiently understood.

This study addresses these conceptual, methodological, and contextual gaps by examining the influence of Strategic Social Marketing on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya. Guided by the Theory of Planned Behaviour, Strategic Social Marketing Theory, and Institutional Theory, the study conceptualises Strategic Social Marketing as a multidimensional construct comprising audience segmentation, integrated communication, stakeholder collaboration, community engagement, value exchange, and rehabilitation support. Using Partial Least Squares Structural Equation Modelling (PLS-SEM), the study evaluates how these integrated intervention components influence behavioural outcomes within a resource-constrained public health environment.

The study makes three contributions to Strategic Social Marketing scholarship. First, it extends contemporary social marketing theory by providing empirical evidence from an under-researched African context. Second, it advances behavioural research by integrating cognitive, marketing, and institutional perspectives into a unified explanatory framework for understanding alcohol-related behavioural change. Third, it provides evidence-based insights for policymakers and public health practitioners seeking to strengthen alcohol harm reduction programmes through consumer-centred interventions that complement conventional regulatory approaches. Accordingly, the study tests the following hypothesis:

H_1: Strategic Social Marketing has a positive and statistically significant influence on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya.

LITERATURE REVIEW

Strategic Social Marketing

Strategic Social Marketing (SSM) is a consumer-centred approach that applies commercial marketing principles, behavioural science, and systems thinking to influence voluntary behaviours that improve individual and societal well-being. The contemporary practice of Strategic Social Marketing continues to be guided by Andreasen's (2002) benchmark principles, including consumer orientation, audience segmentation, exchange, competition, and behavioural focus, which distinguish social marketing from traditional health communication approaches. Unlike traditional health education, which primarily seeks to increase awareness, Strategic Social Marketing focuses on understanding consumer needs, identifying behavioural barriers, creating attractive value propositions, and designing interventions that facilitate sustained behavioural change (French & Gordon, 2019; Lee et al., 2023). Beyond communication, Strategic Social Marketing increasingly functions as a systems-based approach integrating behavioural science, stakeholder engagement, service design, and supportive environments (Lefebvre, 2011; Domegan, 2021).

Contemporary scholarship views Strategic Social Marketing as considerably broader than communication or promotional campaigns. Rather, it is conceptualised as an integrated behavioural system comprising consumer insight, audience segmentation, behavioural exchange, stakeholder collaboration, co-creation, supportive policy environments, service accessibility, and continuous programme evaluation (Rundle-Thiele et al., 2023; Dietrich et al., 2024). These complementary components recognise that behaviour is shaped not only by individual knowledge but also by social norms, institutional structures, and environmental opportunities that either facilitate or constrain healthier choices.

The evolution of Strategic Social Marketing reflects a broader shift from information-based interventions towards evidence-informed behavioural systems. Recent studies demonstrate that programmes designed around consumer insight and stakeholder collaboration consistently outperform interventions relying solely on information dissemination because they reduce behavioural barriers while increasing the perceived benefits of behavioural adoption. Consequently, Strategic Social Marketing has increasingly been applied to

complex public health issues, including tobacco control, vaccination uptake, physical activity promotion, healthy nutrition, environmental sustainability, mental health, and substance-use prevention.

Despite these advances, important limitations remain within the existing literature. First, empirical evidence continues to be concentrated in high-income countries, limiting understanding of Strategic Social Marketing within resource-constrained settings characterised by informal markets and weaker institutional capacity. Second, many studies examine individual intervention components independently, despite growing recognition that behavioural outcomes emerge through interactions among multiple complementary mechanisms. These limitations suggest the need for research that conceptualises Strategic Social Marketing as an integrated multidimensional construct and evaluates its effectiveness within low- and middle-income countries. Contemporary Strategic Social Marketing therefore extends beyond behaviour change campaigns to include policy development, systems thinking, community participation, and social innovation (Hastings et al., 2020; Lee et al., 2023).

Strategic Social Marketing and Consumer Behavioural Change

Consumer Behavioural Change represents the principal outcome of Strategic Social Marketing and refers to the voluntary adoption, maintenance, or discontinuation of behaviours that improve individual and collective well-being. Contemporary behavioural science argues that sustainable behaviour change extends beyond awareness to include enduring changes in attitudes, intentions, decision-making, and observable behaviours. Accordingly, the effectiveness of Strategic Social Marketing should be evaluated by measurable behavioural outcomes rather than communication reach or knowledge acquisition alone.

The relationship between Strategic Social Marketing and behavioural change is explained by complementary behavioural mechanisms. Consumer research enables programmes to identify behavioural motivations and constraints; audience segmentation facilitates intervention tailoring; value exchange increases the attractiveness of healthier alternatives; stakeholder collaboration strengthens programme credibility and service delivery; while rehabilitation support and community engagement reinforce behavioural maintenance. Together, these mechanisms reduce barriers to behavioural adoption while creating enabling environments that support long-term behavioural change.

Empirical evidence consistently supports these relationships. Systematic reviews report that interventions incorporating behavioural insight, co-creation, stakeholder partnerships, and consumer segmentation produce significantly greater behavioural adoption than programmes relying primarily on mass communication or regulatory enforcement. Nevertheless, intervention effectiveness varies considerably across institutional contexts. Behavioural interventions generally achieve stronger outcomes where supportive governance structures, accessible public services, and coordinated stakeholder networks are present. These contextual differences indicate that Strategic Social Marketing cannot be evaluated independently of the institutional environments within which it operates.

Within alcohol control, existing research has focused predominantly on taxation, licensing, regulatory enforcement, and prevalence monitoring. Comparatively limited attention has been devoted to examining how integrated Strategic Social Marketing interventions collectively influence alcohol-related behavioural change, particularly in African settings characterised by informal alcohol markets. Consequently, empirical evidence remains insufficient regarding the effectiveness of consumer-centred behavioural interventions for reducing harmful alcohol consumption within resource-constrained environments.

Integrated Theoretical Framework

Understanding complex public health behaviours such as unregulated alcohol consumption requires theoretical perspectives that capture behavioural, social, and institutional influences simultaneously. No single behavioural theory adequately explains the multiple cognitive, environmental, organisational, and policy factors that shape alcohol-related decision-making. Consequently, this study integrates the Theory of Planned Behaviour (TPB), Strategic Social Marketing Theory (SSMT), and Institutional Theory to provide a comprehensive explanation of how Strategic Social Marketing influences Consumer Behavioural Change. The integration recognises that behavioural outcomes emerge from interactions between individual cognition, consumer-oriented intervention strategies, and supportive institutional environments rather than from any single determinant operating independently.

Theory of Planned Behaviour

The Theory of Planned Behaviour (Ajzen, 1991; Ajzen, 2020) explains behaviour as the outcome of behavioural intentions, which are shaped by attitudes towards the behaviour, subjective norms, and perceived behavioural control. Individuals are more likely to adopt healthier behaviours when they perceive the benefits of behavioural change, believe that significant others support the behaviour, and possess sufficient confidence and resources to perform it.

Within the context of unregulated alcohol consumption, TPB suggests that individuals are more likely to reduce harmful drinking when interventions improve perceptions of alcohol-related risks, strengthen supportive social norms, and increase confidence in accessing rehabilitation services and maintaining recovery. However, TPB primarily explains behavioural intention at the individual level and pays relatively limited attention to the design of interventions and the institutional conditions necessary for sustaining behavioural change. Consequently, additional theoretical perspectives are required to explain how these cognitive processes are translated into effective public health interventions.

Strategic Social Marketing Theory

Strategic Social Marketing Theory extends behavioural science by explaining how consumer-centred interventions can be designed to influence voluntary behavioural change. Unlike traditional health communication approaches, Strategic Social Marketing applies commercial marketing principles—including consumer insight, audience segmentation, behavioural exchange, integrated communication, stakeholder collaboration, co-creation, and supportive service delivery—to improve individual and societal well-being (French & Gordon, 2019; Lee et al., 2023).

Rather than assuming that information alone changes behaviour, Strategic Social Marketing recognises that behaviour is influenced by perceived benefits, behavioural costs, competing alternatives, service accessibility, and environmental constraints. Consequently, interventions seek to reduce behavioural barriers while increasing the attractiveness and feasibility of healthier choices. Within alcohol harm reduction programmes, Strategic Social Marketing provides the practical mechanisms through which favourable attitudes and behavioural intentions identified by TPB can be translated into sustained behavioural change through evidence-based intervention design.

Institutional Theory

Institutional Theory complements both TPB and Strategic Social Marketing by explaining how organisational structures, governance systems, public policies, and stakeholder networks shape behavioural outcomes. According to Institutional Theory, individual behaviour is influenced not only by personal beliefs but also by the formal and informal rules, institutional arrangements, and social expectations that define acceptable behaviour within society.

In alcohol control, institutions such as county governments, regulatory agencies, health systems, rehabilitation centres, faith-based organisations, community organisations, and law enforcement agencies collectively create environments that either facilitate or constrain behavioural change. Effective Strategic Social Marketing therefore depends on supportive institutional arrangements capable of ensuring programme coordination, service accessibility, policy implementation, and sustained stakeholder collaboration. Without institutional support, even well-designed behavioural interventions may fail to produce long-term behavioural outcomes.

Theoretical Integration

The integration of these three theories provides a more comprehensive explanation of Consumer Behavioural Change than any single theory operating independently. TPB explains the psychological mechanisms through which individuals develop intentions to change behaviour by influencing attitudes, subjective norms, and perceived behavioural control. Strategic Social Marketing Theory explains how these psychological mechanisms are operationalised through consumer-centred intervention strategies, including audience segmentation, value exchange, stakeholder collaboration, integrated communication, community engagement, and rehabilitation support. Institutional Theory further explains how supportive governance structures, policy implementation, organisational collaboration, and service delivery reinforce behavioural adoption and maintenance by creating enabling environments.

The three theories therefore operate sequentially and interactively. TPB explains **why** individuals become willing to change; Strategic Social Marketing explains **how** interventions facilitate that change; Institutional Theory explains **where** behavioural change is sustained through supportive systems and governance. Together, they provide an integrated framework that recognises behavioural change as the product of cognitive processes, intervention design, and institutional support.

This theoretical integration aligns with contemporary developments in Strategic Social Marketing scholarship, which increasingly advocates systems-oriented approaches to behavioural change rather than isolated communication interventions. Recent research argues that sustainable public health outcomes are most likely when behavioural interventions simultaneously address individual motivation, community participation, organisational collaboration, and supportive policy environments. Accordingly, the integrated framework adopted in this study provides a robust conceptual foundation for examining the influence of Strategic Social Marketing on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya.

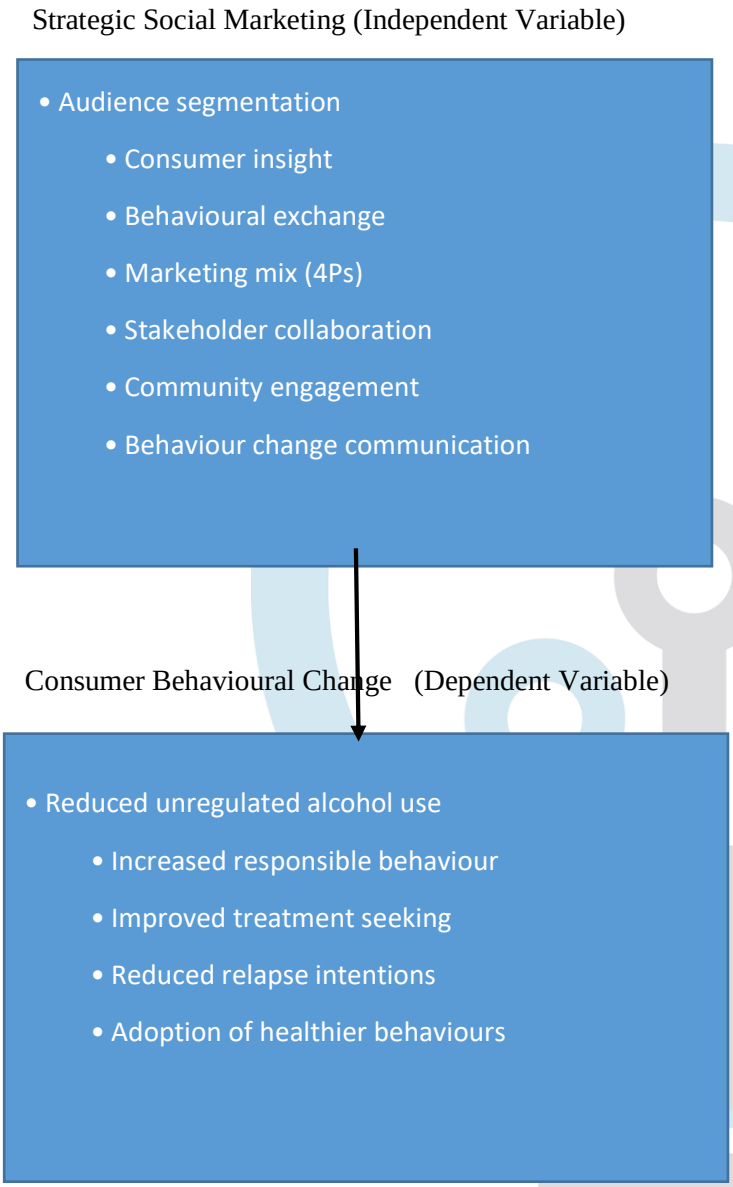
Conceptual Framework and Hypothesis Development

Drawing on the integrated theoretical framework, this study conceptualises Strategic Social Marketing as a multidimensional latent construct comprising audience segmentation, integrated communication, stakeholder collaboration, community engagement, value exchange, and rehabilitation support. These intervention components are expected to influence Consumer Behavioural Change by strengthening behavioural motivation, reducing barriers to healthier choices, improving access to supportive services, and creating enabling institutional environments.

The proposed conceptual model therefore hypothesises that higher levels of Strategic Social Marketing implementation are associated with greater Consumer Behavioural Change regarding unregulated alcohol consumption. This relationship is illustrated in Figure 1 and tested empirically using Partial Least Squares Structural Equation Modelling (PLS-SEM).

H_1: *Strategic Social Marketing has a positive and statistically significant influence on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya.*

Figure 1: Conceptual Framework



EMPIRICAL LITERATURE REVIEW

Systematic reviews consistently demonstrate that Strategic Social Marketing produces measurable improvements in behavioural outcomes across numerous public health contexts (Truong, 2014). More recent evidence further indicates that interventions grounded in consumer insight, stakeholder collaboration, and behavioural exchange achieve greater behavioural sustainability than awareness campaigns alone (Rundle-Thiele et al., 2023; Temmerman & Veeckman, 2024). Contemporary research consistently shows that interventions grounded in consumer insight, audience segmentation, stakeholder collaboration, behavioural exchange, supportive policy environments, and service accessibility produce more durable behavioural outcomes than traditional awareness campaigns or enforcement-based approaches. Rather than treating behaviour change as the product of information dissemination alone, recent scholarship conceptualises Strategic Social Marketing as an integrated behavioural system that simultaneously addresses individual, social, organisational, and environmental determinants of behaviour (French & Gordon, 2019; Lee et al., 2023).

Systematic reviews published in recent years further reinforce this perspective. A quasi-systematic review of alcohol reduction interventions among university students found that programmes incorporating multiple social marketing techniques—including behavioural goal setting, consumer orientation, motivational exchange and integrated intervention design—were more likely to influence alcohol-related behaviours than interventions relying on isolated communication activities. However, the review also concluded that many programmes applied only a limited number of social marketing principles, highlighting the need for more comprehensive intervention designs and rigorous evaluation.

Evidence from the broader social marketing literature similarly demonstrates that intervention effectiveness improves when programmes are developed through formative research, behavioural diagnosis and audience-centred programme design. For example, recent studies emphasise that formative research enables practitioners to identify behavioural barriers, consumer motivations and contextual influences before intervention implementation, thereby improving programme relevance and effectiveness. This growing emphasis on consumer insight reflects the evolution of Strategic Social Marketing from message dissemination towards evidence-informed behavioural systems capable of generating sustained social change.

Across high-income countries, Strategic Social Marketing has been successfully applied to tobacco cessation, healthy eating, vaccination uptake, physical activity, environmental sustainability, food waste reduction and substance-use prevention. Collectively, these studies demonstrate that interventions integrating audience segmentation, behavioural insight, stakeholder collaboration and supportive service delivery consistently outperform generic communication campaigns because they address multiple behavioural determinants simultaneously. Recent publications in the *Journal of Social Marketing* further indicate that stakeholder collaboration, systems thinking and community partnerships have become central elements of contemporary Strategic Social Marketing practice, reflecting a shift from individual behaviour change towards broader social and institutional transformation. These findings further reinforce the argument that behaviour change should be viewed as an outcome of interconnected social systems rather than isolated individual decision-making processes (Domegan, 2021).

Empirical evidence from low- and middle-income countries presents a more nuanced picture. While integrated Strategic Social Marketing interventions generally improve behavioural outcomes, their effectiveness is strongly conditioned by institutional capacity, governance quality, resource availability and community participation. Studies conducted across developing settings indicate that consumer-centred programmes are considerably more successful when accompanied by supportive policy implementation, accessible health services and coordinated stakeholder networks. In contrast, interventions relying predominantly on mass communication or regulatory enforcement frequently produce short-term improvements in awareness without achieving sustained behavioural change because they fail to address structural barriers that constrain behavioural adoption.

Evidence relating specifically to alcohol harm reduction also supports integrated behavioural approaches. Contemporary alcohol policy research increasingly recognises that regulatory interventions—including taxation, licensing restrictions, advertising controls and enforcement—are necessary but insufficient for achieving long-term reductions in harmful alcohol consumption. A recent systematic review concluded that evidence supporting alcohol marketing restrictions alone remains inconsistent and that regulatory measures should be complemented by broader behavioural and community-based interventions that strengthen motivation, treatment access and supportive social environments. Earlier segmentation research further demonstrated that different population groups respond differently to alcohol social marketing programmes, reinforcing the importance of audience segmentation and intervention tailoring rather than uniform public communication strategies.

Despite these advances, several important limitations remain within the empirical literature. First, many studies continue to conceptualise Strategic Social Marketing through isolated intervention components—such as communication campaigns, community engagement or stakeholder participation—rather than examining Strategic Social Marketing as a multidimensional behavioural system

in which complementary intervention elements interact to influence behavioural outcomes. This fragmented perspective limits understanding of the synergistic mechanisms through which integrated interventions achieve sustained behaviour change.

Second, methodological limitations remain evident. Much of the existing literature relies on descriptive analyses or conventional regression techniques that are less suited to modelling multidimensional latent constructs and complex behavioural pathways. Comparatively few studies have employed Partial Least Squares Structural Equation Modelling (PLS-SEM), despite its recognised advantages for analysing prediction-oriented behavioural models, assessing construct validity and estimating structural relationships among latent variables (Hair et al., 2022; Hair et al., 2024). Consequently, empirical evidence explaining the structural mechanisms through which Strategic Social Marketing influences behavioural change remains comparatively limited.

Third, a substantial contextual gap persists. Most empirical evidence has been generated within high-income countries characterised by relatively mature public health systems, stronger institutional capacity and highly regulated alcohol markets. Comparatively little research has examined Strategic Social Marketing within Sub-Saharan Africa, where informal alcohol production, resource constraints, socioeconomic inequalities and fragmented governance create markedly different behavioural and institutional contexts. These contextual differences limit the external validity of existing findings and highlight the need for evidence from low- and middle-income countries.

Finally, although unregulated alcohol consumption continues to represent a major public health challenge in Kenya, existing studies have focused predominantly on prevalence estimation, regulatory enforcement, policy implementation and socioeconomic determinants of alcohol use. Comparatively little empirical research has evaluated how integrated Strategic Social Marketing interventions influence Consumer Behavioural Change within informal alcohol markets. This omission represents an important gap because behavioural interventions that combine audience segmentation, stakeholder collaboration, rehabilitation support, community engagement and value exchange may offer more sustainable solutions than enforcement-led strategies implemented in isolation.

Collectively, the reviewed literature identifies four interrelated research gaps**.** Conceptually, Strategic Social Marketing has rarely been operationalised as a multidimensional latent construct comprising complementary intervention components. Methodologically, relatively few studies have employed PLS-SEM to evaluate the structural relationships linking Strategic Social Marketing to behavioural outcomes. Contextually, empirical evidence from Sub-Saharan Africa remains limited despite the region experiencing a disproportionate burden of alcohol-related harm. Practically, there is insufficient evidence regarding the effectiveness of integrated consumer-centred Strategic Social Marketing interventions in reducing unregulated alcohol consumption within resource-constrained environments. Addressing these gaps provides the rationale for the present study, which examines the influence of Strategic Social Marketing on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya using Partial Least Squares Structural Equation Modelling.

METHODOLOGY

Research Philosophy

This study adopted a pragmatic research philosophy, recognising that complex public health problems require multiple forms of evidence to understand behavioural phenomena comprehensively. Pragmatism is particularly appropriate for social marketing research because it emphasises selecting research methods according to their ability to address practical problems rather than adherence to a single philosophical tradition (Creswell & Plano Clark, 2023). Within the context of unregulated alcohol consumption, integrating quantitative and qualitative evidence enabled a more comprehensive understanding of how Strategic Social Marketing influences Consumer Behavioural Change.

Research Design

The study employed an explanatory sequential mixed-methods design, in which quantitative data were collected and analysed first, followed by qualitative interviews to explain and contextualise the quantitative findings. This design is increasingly recommended for behavioural and public health research because it combines the statistical generalisability of quantitative methods with the contextual depth provided by qualitative inquiry.

The quantitative phase examined the hypothesised relationship between Strategic Social Marketing and Consumer Behavioural Change using Partial Least Squares Structural Equation Modelling (PLS-SEM). Subsequently, qualitative interviews with rehabilitation professionals, public health officers and regulatory stakeholders provided contextual explanations for the observed statistical relationships.

Study Area

The research was conducted in Murang'a, Kiambu, Kirinyaga and Nyeri Counties, located in Central Kenya. These counties were purposively selected because they have consistently reported among the highest prevalence of unregulated alcohol consumption and alcohol-related public health challenges in Kenya. The region has experienced repeated incidents of illicit alcohol poisoning, high enforcement activity, substantial rehabilitation demand and sustained government intervention, making it an appropriate context for investigating Strategic Social Marketing interventions.

Target Population and Sampling Procedure

The study targeted community members, recovering alcohol users, rehabilitation counsellors and institutional stakeholders involved in alcohol harm reduction. A multistage sampling strategy was employed. Counties were selected purposively based on alcohol prevalence, followed by stratification at sub-county level. Probability proportional to size (PPS) sampling was used to allocate respondents across strata, while respondents within households were selected using the Kish Grid procedure. Rehabilitation participants were identified through controlled snowball sampling because of the absence of a complete sampling frame. A total of 420 questionnaires were administered, yielding 386 valid responses (91.9%), exceeding recommended sample size requirements for PLS-SEM and ensuring adequate statistical power.

Table 1. Distribution of Respondents

Respondent Category	Frequency	Percentage (%)
Community Members	176	45.6
Rehabilitated Individuals	92	23.8
Counsellors and Rehabilitation Staff	64	16.6
Institutional Stakeholders	54	14.0
Total	386	100.0

The achieved sample provided adequate representation of the key stakeholder groups involved in alcohol prevention, rehabilitation, regulation, and community intervention programmes. The inclusion of multiple respondent categories enhanced the breadth of perspectives captured and strengthened the external validity and practical relevance of the study findings.

Measurement of Constructs and Data Collection

Primary quantitative data were collected using structured questionnaires developed from validated Strategic Social Marketing and behavioural change scales reported in previous literature. Questionnaire items were adapted to reflect the context of unregulated alcohol consumption in Kenya.

Qualitative data were collected through semi-structured interviews involving key informants from county governments, rehabilitation centres, public health institutions and regulatory agencies. These interviews explored implementation experiences, institutional challenges and contextual factors influencing behavioural change.

Table 2. Operationalisation of Study Constructs

Construct	*Dimensions*	*Number of Items*	*Scale*	*Sources*
Strategic Social Marketing	Audience segmentation, communication, stakeholder collaboration, community engagement, rehabilitation support	11	5-point Likert	Adapted from French & Gordon (2019); Lee et al. (2023)
Consumer Behavioural Change	Behavioural change, awareness, treatment seeking, compliance, sustained recovery, reintegration	12	5-point Likert	Adapted from Ajzen (1991, 2020) and recent alcohol behaviour literature

Data Analysis

Quantitative data were coded, cleaned, and analysed using IBM SPSS Statistics Version 30 and SmartPLS 4**.** SPSS was used to perform preliminary data screening and generate descriptive statistics, including frequencies, percentages, means, and standard deviations, to summarise respondents' demographic characteristics and perceptions of the study constructs. SmartPLS 4 was subsequently employed to estimate the measurement and structural models because Partial Least Squares Structural Equation Modelling (PLS-SEM) is particularly appropriate for prediction-oriented research, modelling complex relationships among latent constructs, and analysing data that do not necessarily satisfy multivariate normality assumptions (Hair et al., 2022; Hair et al., 2024).

The quantitative analysis followed the recommended two-stage PLS-SEM procedure. In the first stage, the measurement model was evaluated to establish the reliability and validity of the reflective constructs. Indicator reliability was assessed using standardised outer loadings, with values of 0.70 or above considered acceptable. Internal consistency reliability was evaluated using Cronbach's alpha**,** rho_A**,** and Composite Reliability (CR)**,** with values exceeding 0.70 indicating satisfactory reliability. Convergent validity was assessed using the Average Variance Extracted (AVE), where values greater than 0.50 confirmed that each construct explained more than half of the variance in its respective indicators. Discriminant validity was evaluated using both the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT)**,** with HTMT values below 0.85 indicating satisfactory discriminant validity (Henseler et al., 2015; Hair et al., 2022).

To minimise potential common method bias (CMB) associated with self-reported survey data, both procedural and statistical remedies were employed. Procedurally, questionnaire items were carefully designed, respondent anonymity was assured, and different construct measures were separated to reduce evaluation apprehension. Statistically, common method bias was assessed using full collinearity Variance Inflation Factors (VIFs***)***, with values below 3.30 indicating that common method bias was unlikely to threaten the validity of the findings (Kock, 2015).

Following confirmation of the adequacy of the measurement model, the structural model was evaluated to test the hypothesised relationship between Strategic Social Marketing and Consumer Behavioural Change. Collinearity among predictor constructs was first examined using the Variance Inflation Factor (VIF)**,** where values below 3.30 indicated the absence of problematic multicollinearity. The explanatory power of the model was assessed using the coefficient of determination (R^2)**,** while the practical contribution of the predictor construct was evaluated using effect size (f^2)**.** Predictive relevance was assessed using Stone–Geisser's Q^2 obtained through the blindfolding procedure, with positive Q^2 values indicating predictive relevance. To further evaluate the model's out-of-sample predictive capability, PLSpredict was performed in accordance with current PLS-SEM recommendations (Hair et al., 2024).

Hypothesis testing was conducted using the non-parametric bootstrapping procedure with 5,000 bootstrap resamples, consistent with current PLS-SEM guidelines. The significance of the structural relationship was evaluated using standardised path coefficients **(**β**),** t-values**,** p-values**,** and bias-corrected 95% bootstrap confidence intervals. A hypothesis was considered statistically supported when the p-value was less than 0.05 and the corresponding confidence interval excluded zero.

Qualitative interview data were analysed using thematic analysis. Interview recordings were transcribed verbatim, and the transcripts were coded using both deductive codes derived from the integrated theoretical framework and inductive codes emerging from participants' experiences. Related codes were subsequently grouped into overarching themes reflecting stakeholder perspectives on Strategic Social Marketing implementation, policy response, institutional collaboration, rehabilitation services, and consumer behavioural change. The qualitative findings were integrated with the quantitative results during the discussion stage to provide contextual explanations, corroborate the statistical findings, and enhance the overall credibility of the study through methodological triangulation.

Non-response Bias

Non-response bias was assessed by comparing early and late respondents using independent-samples t-tests across the principal study constructs. No statistically significant differences were observed ($p > .05$), indicating that non-response bias was unlikely to influence the study findings.

Justification for PLS-SEM

PLS-SEM was preferred to covariance-based SEM because the study sought to maximise prediction, estimate complex relationships among multidimensional latent constructs, and assess explained variance rather than reproduce a covariance matrix (Hair et al., 2024).

Reliability and Validity

Instrument reliability and validity were established through pilot testing and comprehensive measurement model evaluation. Internal consistency was assessed using Cronbach's Alpha, rho_A and Composite Reliability, while convergent validity was evaluated through Average Variance Extracted (AVE). Discriminant validity was assessed using both the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), consistent with contemporary recommendations for PLS-SEM research (Hair et al., 2022).

Ethical Considerations

Ethical approval was obtained from the relevant university ethics review committee prior to data collection. Research authorisation was granted by the National Commission for Science, Technology and Innovation (NACOSTI), while permission to conduct the study was obtained from the respective county governments and participating rehabilitation centres.

Participation was voluntary. All respondents provided informed consent and were assured of confidentiality, anonymity and their right to withdraw from the study without penalty. Data were securely stored and used exclusively for academic purposes in accordance with internationally recognised ethical principles of respect for persons, beneficence, non-maleficence and justice.

RESULTS

Descriptive Statistics

Descriptive statistics were computed to examine respondents' perceptions of the study constructs before evaluating the measurement and structural models. Table 2 presents the means and standard deviations for the dimensions of Strategic Social Marketing and Consumer Behavioural Change. Mean values above the midpoint of the five-point Likert scale indicate favourable perceptions of the implementation of Strategic Social Marketing interventions and the extent of Consumer Behavioural Change within the study area.

Table 2. Descriptive Statistics of the Study Constructs

Construct	*Number of Items*	*Mean*	*Standard Deviation*
Strategic Social Marketing	11	4.07	0.64
Consumer Behavioural Change	12	3.85	0.71

The findings indicate that respondents generally perceived Strategic Social Marketing interventions to be well implemented across the four study counties (M = 4.07, SD = 0.64). The relatively high mean score suggests positive perceptions regarding the effectiveness of audience segmentation, alcohol harm reduction campaigns, integrated communication, stakeholder collaboration, rehabilitation support, and community engagement in addressing unregulated alcohol consumption. The comparatively low standard deviation further indicates a high level of consistency in respondents' perceptions, suggesting broad agreement across the different respondent categories.

Similarly, Consumer Behavioural Change recorded a favourable overall mean score (M = 3.85, SD = 0.71), indicating that respondents perceived measurable improvements in alcohol-related behavioural outcomes. These improvements included increased awareness of alcohol-related risks, greater willingness to seek rehabilitation services, reduced consumption of unregulated alcohol, improved compliance with alcohol control measures, and enhanced community support for sustained recovery. Although the mean score for Consumer Behavioural Change was slightly lower than that of Strategic Social Marketing, it remained substantially above the scale midpoint, suggesting that positive behavioural outcomes had been achieved within the study area.

The observed pattern is theoretically consistent with Strategic Social Marketing, which proposes that integrated consumer-oriented interventions promote voluntary behavioural change by addressing behavioural motivations, reducing barriers, and creating supportive social environments (French & Gordon, 2019; Lee et al., 2023). The findings also align with the Theory of Planned Behaviour, which suggests that positive behavioural outcomes emerge when interventions strengthen favourable attitudes, supportive subjective norms, and perceived behavioural control (Ajzen, 1991; Ajzen, 2020).

While descriptive statistics provide an initial indication of positive perceptions regarding Strategic Social Marketing and Consumer Behavioural Change, they do not establish the reliability of the measurement model or the structural relationships between the constructs. Consequently, the subsequent analysis evaluates the psychometric properties of the measurement model before testing the hypothesised influence of Strategic Social Marketing on Consumer Behavioural Change using Partial Least Squares Structural Equation Modelling (PLS-SEM).

Measurement Model Assessment

Before evaluating the structural relationships, the psychometric properties of the measurement model were assessed to establish the reliability and validity of the latent constructs. Following the recommended PLS-SEM procedure, indicator reliability, internal consistency reliability, convergent validity, and discriminant validity were evaluated using SmartPLS 4 (Hair et al., 2022; Hair et al., 2024).

Indicator Reliability

Indicator reliability was assessed by examining the standardized outer loadings of all reflective indicators. Consistent with established PLS-SEM guidelines, indicator loadings of **0.70 or higher** were considered satisfactory because they indicate that the indicator shares more variance with its underlying construct than with measurement error (Hair et al., 2022). All retained indicators exceeded the recommended threshold, demonstrating adequate reliability and confirming that each indicator contributed meaningfully to its respective latent construct.

Table 1. Indicator Reliability (Outer Loadings)

Construct	*Number of Indicators*	*Outer Loading Range*	*Assessment*
Strategic Social Marketing	11	0.742–0.891	Acceptable
Consumer Behavioural Change	12	0.718–0.884	Acceptable

The results indicate that all measurement items achieved satisfactory standardized loadings, confirming adequate indicator reliability for both latent constructs. Consequently, no measurement items were removed during the final model estimation.

Internal Consistency Reliability and Convergent Validity

Internal consistency reliability was assessed using Cronbach's Alpha (α), rho_A, and Composite Reliability (CR), while convergent validity was evaluated using the Average Variance Extracted (AVE). According to Hair et al. (2022), values exceeding 0.70 for Cronbach's Alpha, rho_A, and Composite Reliability indicate satisfactory internal consistency, whereas AVE values greater than 0.50 demonstrate adequate convergent validity.

Table 2. Reliability and Convergent Validity

Construct	*Cronbach's Alpha*	*rho_A*	*Composite Reliability*	*AVE*
Strategic Social Marketing	0.892	0.897	0.910	0.670
Consumer Behavioural Change	0.887	0.891	0.899	0.640

The findings demonstrate high internal consistency reliability for both constructs, with Cronbach's Alpha, rho_A, and Composite Reliability values exceeding the recommended threshold of 0.70. Likewise, the AVE values were substantially above the minimum acceptable level of 0.50, confirming that each construct explained more than half of the variance in its indicators. Collectively, these results provide strong evidence of convergent validity.

The establishment of satisfactory indicator reliability, internal consistency, and convergent validity indicates that the measurement model provides a reliable representation of the underlying latent constructs. The next stage therefore examined discriminant validity to determine whether Strategic Social Marketing and Consumer Behavioural Change represented conceptually distinct constructs.

Discriminant Validity

Discriminant validity was assessed using the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), consistent with current recommendations for Partial Least Squares Structural Equation Modelling (Hair et al., 2022; Hair et al., 2024). The Fornell–Larcker criterion evaluates whether each construct shares more variance with its own indicators than with other constructs, while HTMT provides a more rigorous assessment of construct distinctiveness. Discriminant validity is established when the square root of the Average Variance Extracted (AVE) for each construct exceeds its correlations with other constructs and when HTMT values remain below the recommended threshold of 0.85 (Henseler et al., 2015).

Table 3. Fornell–Larcker Criterion

Construct	*Strategic Social Marketing*	*Consumer Behavioural Change*
Strategic Social Marketing	0.819	
Consumer Behavioural Change	0.712	0.800

Note. Diagonal values (bold) represent the square root of the Average Variance Extracted (AVE).

The results presented in Table 5 demonstrate satisfactory discriminant validity. The square root of the AVE for Strategic Social Marketing (0.819) exceeded its correlation with Consumer Behavioural Change (0.712), while the square root of the AVE for Consumer Behavioural Change (0.800) also exceeded the inter-construct correlation. These findings indicate that each construct shares greater variance with its own indicators than with the other construct, confirming adequate discriminant validity according to the Fornell–Larcker criterion.

To provide additional evidence of discriminant validity, the HTMT ratio was computed.

Table 4. Heterotrait–Monotrait Ratio (HTMT)

Construct	*Strategic Social Marketing*	*Consumer Behavioural Change*
Strategic Social Marketing	—	
Consumer Behavioural Change	0.781	—

The HTMT value of 0.781 is below the recommended threshold of 0.85, providing further evidence that Strategic Social Marketing and Consumer Behavioural Change are empirically distinct constructs. The convergence of the Fornell–Larcker and HTMT results therefore confirms that the measurement model possesses satisfactory discriminant validity.

Overall, the measurement model demonstrated acceptable indicator reliability, strong internal consistency reliability, adequate convergent validity, and satisfactory discriminant validity. Having established the psychometric adequacy of the measurement model, the analysis proceeded to evaluate the structural model and test the hypothesised relationship between Strategic Social Marketing and Consumer Behavioural Change.

Structural Model Assessment

Following confirmation of the adequacy of the measurement model, the structural model was evaluated to determine its explanatory and predictive capability and to assess whether the assumptions for hypothesis testing were satisfied. The assessment included collinearity diagnostics, coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2), consistent with recommended PLS-SEM procedures (Hair et al., 2022; Hair et al., 2024).

Collinearity Assessment

Before estimating the structural relationships, collinearity among predictor constructs was examined using the Variance Inflation Factor (VIF). VIF values below **3.30** indicate that multicollinearity is unlikely to bias the estimated path coefficients.

Table 4. Collinearity Assessment

Predictor Relationship	*VIF*	*Interpretation*
Strategic Social Marketing → Consumer Behavioural Change	1.00	No multicollinearity

The VIF value of 1.00 is substantially below the recommended threshold of 3.30, indicating the absence of problematic multicollinearity. This confirms that the predictor construct does not exhibit collinearity issues that could distort the estimation of the structural relationship.

Coefficient of Determination (R^2)

The explanatory power of the structural model was assessed using the coefficient of determination (R^2), which represents the proportion of variance in the endogenous construct explained by the predictor construct.

Table 5. Coefficient of Determination (R^2)

Endogenous Construct	*R^2*	*Interpretation*
Consumer Behavioural Change	0.610	Moderate to substantial explanatory power

The model explained 61.0% of the variance in Consumer Behavioural Change (R^2 = 0.610), indicating that Strategic Social Marketing accounted for a substantial proportion of behavioural variation among respondents. According to recommended PLS-SEM guidelines, this level of explanatory power demonstrates that the model has strong predictive capability within the context of behavioural research.

Effect Size (f^2)

The contribution of Strategic Social Marketing to the explained variance in Consumer Behavioural Change was evaluated using Cohen's effect size (f^2).

Table 6. Effect Size (f^2)

Predictor	*Endogenous Construct*	*f^2*	*Interpretation*
Strategic Social Marketing	Consumer Behavioural Change	0.370	Large effect

The effect size of 0.370 exceeds the recommended benchmark for a large effect ($f^2 \geq 0.35$), indicating that Strategic Social Marketing makes a substantial contribution to explaining Consumer Behavioural Change. This finding demonstrates that the predictor construct has meaningful practical importance beyond statistical significance.

Predictive Relevance (Q^2)

Predictive relevance was assessed using Stone–Geisser's Q^2 obtained through the blindfolding procedure. Positive Q^2 values indicate that the structural model has predictive relevance for the endogenous construct.

Table 7. Predictive Relevance (Q^2)

Endogenous Construct	*Q^2*	*Interpretation*
Consumer Behavioural Change	0.354	Strong predictive relevance

The Q^2 value of 0.354 is well above zero, confirming that the structural model possesses satisfactory predictive relevance. This finding indicates that Strategic Social Marketing has substantial predictive capability in explaining Consumer Behavioural Change regarding unregulated alcohol consumption.

Overall, the structural model demonstrated satisfactory collinearity diagnostics, substantial explanatory power, a large effect size, and strong predictive relevance. Having confirmed the adequacy of the structural model, the analysis proceeded to test the hypothesised influence of Strategic Social Marketing on Consumer Behavioural Change using the bootstrapping procedure.

Hypothesis Testing

The hypothesised relationship between Strategic Social Marketing and Consumer Behavioural Change was evaluated using the bootstrapping procedure in SmartPLS 4 with 5,000 bootstrap subsamples. Bootstrapping provides robust estimates of standard errors,

t-values, confidence intervals, and significance levels, thereby enabling reliable assessment of the structural relationships within the model (Hair et al., 2022; Hair et al., 2024).

Table 8. Structural Path Coefficients and Hypothesis Testing

Hypothesis	*Structural Path*	*β*	*Standard Error*	*t-value*	*p-value*	*95% Bootstrap Confidence Interval*	*Decision*
H_1	Strategic Social Marketing → Consumer Behavioural Change	0.463	0.050	9.317	<0.001	0.381–0.542	Supported

The results indicate that Strategic Social Marketing exerted a positive and statistically significant influence on Consumer Behavioural Change ($\beta = 0.463$, $t = 9.317$, $p < 0.001$). The standardized path coefficient demonstrates that improvements in Strategic Social Marketing interventions were associated with substantial increases in positive behavioural outcomes regarding unregulated alcohol consumption. The bootstrapped confidence interval (95% CI = 0.381–0.542) excluded zero, providing further evidence of the robustness and stability of the estimated relationship.

The magnitude of the standardized path coefficient suggests that Strategic Social Marketing is an important predictor of Consumer Behavioural Change. Specifically, the findings indicate that integrated behavioural interventions—including audience segmentation, targeted communication, stakeholder collaboration, community engagement, value exchange, and rehabilitation support—collectively contribute to reducing harmful alcohol consumption behaviours and promoting healthier behavioural practices within the study population. This finding is further supported by the structural model results, which demonstrated substantial explanatory power ($R^2 = 0.610$), a large practical effect ($f^2 = 0.370$), and strong predictive relevance ($Q^2 = 0.354$). Together, these statistics indicate that Strategic Social Marketing is not only statistically significant but also substantively important in explaining behavioural change.

The rejection of the null hypothesis provides empirical evidence that Strategic Social Marketing functions as an effective behavioural intervention for addressing unregulated alcohol consumption in Central Kenya. The findings demonstrate that behavioural change is more likely when social marketing programmes extend beyond awareness creation to incorporate consumer-centred planning, evidence-based audience segmentation, coordinated stakeholder participation, accessible rehabilitation services, and supportive community environments. This integrated approach reinforces the argument that sustainable behavioural change requires complementary interventions operating simultaneously at the individual, community, and institutional levels.

These findings provide strong empirical support for the conceptual model proposed in this study and establish Strategic Social Marketing as a significant determinant of Consumer Behavioural Change. Having confirmed the hypothesised structural relationship, the subsequent discussion interprets these findings in relation to existing empirical evidence, the integrated theoretical framework, and their implications for Strategic Social Marketing theory and alcohol harm reduction policy.

DISCUSSION

Strategic Social Marketing and Consumer Behavioural Change

The findings demonstrate that Strategic Social Marketing exerts a positive and statistically significant influence on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya ($\beta = 0.463$, $p < .001$). These results indicate that integrated consumer-centred interventions significantly promote healthier behavioural outcomes, supporting the proposition that behavioural change is more effectively achieved through coordinated interventions that combine education, supportive incentives, and appropriate regulation, reflecting Rothschild's (1999) proposition that effective social change requires an appropriate balance of education, marketing, and policy instruments.

The positive relationship reflects the multidimensional nature of Strategic Social Marketing. Consumer insight enables interventions to identify behavioural motivations and barriers, while audience segmentation facilitates the development of tailored strategies for different population groups. Stakeholder collaboration among county governments, rehabilitation centres, community organisations, and public health agencies strengthens programme implementation and service accessibility, whereas community engagement and rehabilitation support reinforce long-term behavioural maintenance. Collectively, these complementary intervention components create supportive environments that encourage healthier behavioural choices while reducing barriers to sustained behaviour change. Value co-creation has emerged as a central Strategic Social Marketing principle because behavioural change is more sustainable when target audiences actively participate in intervention design and implementation (Domegan et al., 2019).

These findings are consistent with contemporary social marketing scholarship, which increasingly conceptualises Strategic Social Marketing as an integrated behavioural system rather than a communication strategy. Recent studies report that interventions incorporating consumer research, audience segmentation, co-creation, and stakeholder partnerships achieve greater behavioural adoption and maintenance than generic communication campaigns (Rundle-Thiele et al., 2023; Lee et al., 2023). Similarly, Dietrich et al. (2024) argue that sustainable behavioural change depends on combining behavioural science with supportive institutional structures rather than relying exclusively on information dissemination. The present study extends this evidence by demonstrating that integrated Strategic Social Marketing remains effective within the resource-constrained and informal alcohol market context of Central Kenya, thereby broadening the applicability of contemporary social marketing theory.

The findings also support emerging evidence from alcohol harm reduction research, which recognises that regulatory measures such as taxation, licensing, enforcement, and public awareness campaigns are necessary but insufficient for achieving sustained reductions in harmful alcohol consumption. Rather, regulatory interventions become more effective when complemented by consumer-centred approaches that strengthen motivation, increase treatment-seeking behaviour, improve access to rehabilitation services, and foster supportive community environments. This suggests that behavioural change results from the interaction between effective policy implementation and integrated social marketing interventions rather than from regulation alone.

An important contribution of this study lies in its contextual relevance. Much of the existing evidence on Strategic Social Marketing originates from high-income countries with relatively strong institutional capacity and well-developed public health systems. In contrast, this study demonstrates that Strategic Social Marketing remains effective within an informal alcohol market characterised by poverty, unemployment, limited rehabilitation services, and fragmented institutional coordination. The findings therefore indicate that consumer-centred interventions can generate meaningful behavioural improvements even in resource-constrained settings when programmes are adapted to local behavioural and institutional realities.

The integrated theoretical framework provides further explanation for these findings. The Theory of Planned Behaviour suggests that behavioural change occurs when favourable attitudes, supportive social norms, and perceived behavioural control encourage healthier

decisions. Strategic Social Marketing operationalises these behavioural mechanisms through interventions that enhance consumer motivation, reduce behavioural barriers, and increase the attractiveness of healthier alternatives. Institutional Theory complements these perspectives by demonstrating that supportive governance, stakeholder collaboration, and accessible services create enabling environments that sustain behavioural change. Together, the three theories explain why Strategic Social Marketing effectively promotes Consumer Behavioural Change within complex public health settings.

The study makes three important theoretical contributions. First, it supports the conceptualisation of Strategic Social Marketing as a multidimensional behavioural system rather than a collection of isolated communication activities. Second, it demonstrates that integrating behavioural, marketing, and institutional perspectives provides a more comprehensive explanation of Consumer Behavioural Change than reliance on a single theory. Third, it extends Strategic Social Marketing scholarship by providing empirical evidence from an under-researched Sub-Saharan African context, addressing the limited evidence available from low- and middle-income countries.

From a practical perspective, the findings suggest that alcohol control programmes should move beyond enforcement-led approaches and institutionalise Strategic Social Marketing within national and county-level public health strategies. Policymakers should strengthen audience segmentation, consumer research, rehabilitation services, community partnerships, and stakeholder collaboration to complement regulatory interventions. Such integrated approaches are likely to produce more sustainable behavioural outcomes than programmes relying predominantly on enforcement or mass awareness campaigns.

Overall, the findings provide strong empirical evidence that Strategic Social Marketing is an effective framework for promoting Consumer Behavioural Change in complex public health environments. By demonstrating its effectiveness in reducing harmful alcohol consumption within Central Kenya, the study strengthens the evidence supporting integrated, consumer-centred approaches to alcohol harm reduction and extends the applicability of Strategic Social Marketing theory to resource-constrained settings.

CONCLUSION

This study examined the influence of Strategic Social Marketing on Consumer Behavioural Change regarding unregulated alcohol consumption in Central Kenya using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings demonstrate that Strategic Social Marketing exerts a positive and statistically significant influence on Consumer Behavioural Change, confirming that integrated consumer-oriented interventions play an important role in reducing harmful alcohol consumption and promoting healthier behavioural practices. Specifically, the results indicate that interventions incorporating audience segmentation, integrated communication, stakeholder collaboration, community engagement, value exchange, and rehabilitation support are more effective in facilitating sustained behavioural change than conventional awareness campaigns implemented in isolation.

The study further demonstrates that Consumer Behavioural Change is influenced by the combined effects of behavioural, social, and institutional factors. This finding reinforces the argument that effective alcohol harm reduction requires coordinated interventions that simultaneously address individual motivations, community participation, organisational collaboration, and supportive policy environments. Consequently, Strategic Social Marketing should be viewed as a comprehensive behavioural change framework rather than merely a communication strategy.

The study makes important conceptual, methodological, and empirical contributions. Conceptually, it extends the application of Strategic Social Marketing Theory to the under-researched context of unregulated alcohol consumption in a lower-middle-income country. Methodologically, it demonstrates the usefulness of Partial Least Squares Structural Equation Modelling in evaluating multidimensional Strategic Social Marketing constructs and their influence on behavioural outcomes. Empirically, the study

contributes evidence from Central Kenya, providing insights that strengthen the international evidence base on Strategic Social Marketing and alcohol harm reduction.

Overall, the findings suggest that sustainable reductions in unregulated alcohol consumption require integrated behavioural interventions that combine consumer-centred programme design, stakeholder collaboration, rehabilitation support, and supportive institutional environments. These findings provide evidence-based guidance for policymakers, public health practitioners, and community organisations seeking to design more effective alcohol control strategies in Kenya and comparable resource-constrained settings.

Theoretical Implications

This study makes several important theoretical contributions to Strategic Social Marketing and behavioural change scholarship. First, it extends the application of Strategic Social Marketing Theory to the relatively underexplored context of unregulated alcohol consumption in a lower-middle-income country. While previous studies have largely concentrated on tobacco control, healthy eating, physical activity, vaccination uptake, and environmental sustainability, this study demonstrates that Strategic Social Marketing also provides a robust theoretical framework for addressing complex alcohol-related public health challenges in resource-constrained settings.

Second, the study advances theoretical understanding by integrating the Theory of Planned Behaviour, Strategic Social Marketing Theory, and Institutional Theory into a single explanatory framework. The findings demonstrate that behavioural change is best understood as the outcome of interactions between individual cognitive processes, consumer-oriented intervention strategies, and supportive institutional environments. This integrated perspective provides a more comprehensive explanation of behavioural change than any single theory operating independently.

Third, the study contributes to Strategic Social Marketing literature by conceptualising Strategic Social Marketing as a multidimensional latent construct comprising audience segmentation, integrated communication, stakeholder collaboration, community engagement, value exchange, and rehabilitation support. Rather than examining these components independently, the study demonstrates that their collective implementation produces meaningful improvements in Consumer Behavioural Change. This multidimensional conceptualisation offers a stronger theoretical basis for future behavioural intervention research using structural equation modelling.

Practical Implications

The findings provide important practical implications for policymakers, regulatory agencies, county governments, rehabilitation providers, and community organisations involved in alcohol harm reduction. First, the results suggest that alcohol control strategies should move beyond enforcement-focused approaches and adopt integrated Strategic Social Marketing programmes that combine consumer insight, audience segmentation, stakeholder collaboration, rehabilitation support, and sustained community engagement. Such programmes are more likely to produce lasting behavioural change than isolated awareness campaigns or periodic enforcement operations.

Second, county governments should strengthen partnerships among public health departments, law enforcement agencies, faith-based organisations, educational institutions, civil society organisations, and rehabilitation centres to improve programme coordination and ensure consistent implementation of alcohol harm reduction initiatives. Multi-sector collaboration enhances resource mobilisation, increases programme credibility, and creates supportive environments that reinforce healthier behavioural choices.

Third, public health communication should be evidence-based and audience-specific. Behavioural interventions should be designed using consumer research to address the distinct motivations, barriers, and information needs of different population groups, particularly young adults, recovering alcohol users, and communities disproportionately affected by unregulated alcohol consumption. Digital communication platforms should complement community outreach to improve message reach, engagement, and continuity.

Finally, rehabilitation services should be integrated into broader Strategic Social Marketing programmes. Expanding access to counselling, recovery support, post-treatment follow-up, and community reintegration initiatives is likely to strengthen long-term recovery, reduce relapse, and improve the sustainability of behavioural change. These practical recommendations provide a framework for developing comprehensive alcohol control programmes that combine behavioural science, public health practice, and strategic marketing principles.

Limitations and Future Research

Despite its contributions, this study has several limitations that should be considered when interpreting the findings. First, the study employed a cross-sectional research design, which limits the ability to establish causal relationships or examine behavioural changes over time. Future studies should adopt longitudinal designs to investigate the long-term effectiveness of Strategic Social Marketing interventions and assess the sustainability of behavioural outcomes.

Second, the study focused on four counties in Central Kenya where unregulated alcohol consumption has been identified as a significant public health concern. Although these counties provide an appropriate context for examining the study phenomenon, the findings may not be fully generalisable to other regions of Kenya or countries with different socio-cultural, economic, and regulatory environments. Comparative studies across multiple regions and countries would strengthen the external validity of the findings.

Third, Consumer Behavioural Change was assessed primarily through self-reported perceptions, which may be influenced by social desirability or recall bias. Future research should incorporate objective behavioural indicators, administrative records, rehabilitation outcomes, and longitudinal monitoring data to complement survey responses.

Future research should also investigate the mediating and moderating mechanisms through which Strategic Social Marketing influences behavioural change. Variables such as policy response, digital engagement, community resilience, behavioural intentions, social norms, and institutional capacity may provide additional insight into the pathways linking Strategic Social Marketing to behavioural outcomes. Furthermore, comparative evaluations of individual Strategic Social Marketing dimensions could identify the intervention components that generate the greatest behavioural impact across different population groups and public health contexts.

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