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The Impact of Health Awareness Campaigns on Public Health Behavior in Saudi Arabia

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Dedication

This research is dedicated to everyone who believes in the importance of health awareness as a fundamental pillar for building healthy societies

. It is also dedicated to all individuals who strive to promote positive health behaviors and contribute to improving public health outcomes through knowledge, awareness, and responsible practices.

This work is humbly dedicated to all who support learning, research, and the pursuit of knowledge.

Acknowledgment

The researcher would like to express sincere gratitude and appreciation to all those who contributed, directly or indirectly, to the completion of this study.

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Abstract

This study examines the impact of health awareness campaigns on public health behavior in Saudi Arabia. The research aims to assess the role of these campaigns in enhancing health knowledge, shaping positive attitudes, and promoting healthy behavioral practices among the public. A descriptive analytical approach was adopted, and data were collected using a structured questionnaire distributed to a selected sample of participants.

The findings of the study indicate that health awareness campaigns have a significant positive effect on public health behavior. The results reveal a high level of awareness among respondents regarding health-related issues addressed through awareness campaigns, reflecting the effectiveness of these initiatives in disseminating health information.

Additionally, the study shows that exposure to health awareness campaigns positively influences individuals' attitudes toward adopting healthy lifestyles and preventive health behaviors.

Furthermore, the results demonstrate that health awareness campaigns contribute to noticeable improvements in public health practices, although the degree of behavioral change varies among individuals. Continuous and well-targeted campaigns were found to be more effective in encouraging long-term behavioral change. The study concludes that health awareness campaigns are a vital tool for improving public health outcomes in Saudi Arabia and emphasizes the need for strategic planning, audience-specific targeting, and continuous evaluation to maximize their impact.

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Chapter 1: Introduction

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1.1 Research Background

Health awareness campaigns have emerged as a fundamental strategy for promoting healthier lifestyles in societies worldwide. With the rise of chronic diseases, mental health concerns, and pandemics, governments are under increasing pressure to educate citizens on preventive health measures. In Saudi Arabia, the Ministry of Health has led several campaigns focusing on conditions like diabetes, heart disease, obesity, mental health, and more recently, infectious diseases such as COVID-19.

Traditionally, many Saudi citizens were unaware of the link between lifestyle choices and health outcomes. However, the rise of social media, coupled with a national drive under Vision 2030, has introduced modern communication channels to reach the public. Despite the increased visibility of health messages through platforms like Instagram, Twitter, YouTube, TV, and outdoor advertising, the question remains: Are these campaigns truly influencing behavior?

This study aims to bridge that inquiry by exploring the depth and nature of behavioral change that occurs as a result of such campaigns in Saudi Arabia. The focus will be on identifying effective platforms, measuring the credibility of various messengers (doctors vs. influencers vs. government), and determining whether these campaigns lead to tangible actions such as dietary shifts, increased physical activity, or medical check-ups.

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1.2 Research Problem

Over the past decade, Saudi Arabia has witnessed a noticeable surge in health awareness campaigns launched by government bodies such as the Ministry of Health, private hospitals, and non-governmental organizations. These initiatives have spanned a variety of topics ranging from chronic disease prevention (e.g., diabetes and cardiovascular health) to mental well-being, nutrition, physical activity, smoking cessation, and more recently, pandemic preparedness. These campaigns have been delivered through multiple channels—television commercials, billboards, public service events, mobile apps, posters in clinics, and social media platforms such as Instagram, Snapchat, Twitter (X), and YouTube.

However, while the **visibility and frequency** of these campaigns are commendable, a significant issue persists: **there is a lack of comprehensive empirical evaluation regarding their actual impact on public health behavior**. In other words, we do not know how effective these campaigns are in achieving their ultimate goal—sustained behavior change among the population. A health campaign might attract views, likes, or shares, but does that translate to increased exercise, better dietary habits, or routine health check-ups? This gap between **awareness and action** remains poorly understood.

Anecdotal evidence and limited pilot studies suggest that while many citizens consume health content, only a small portion may internalize it enough to alter their behavior long term. Often, individuals may momentarily express interest or experiment with lifestyle changes, such as trying a new diet or visiting a clinic once, but these habits tend to fade quickly. Furthermore,

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message fatigue, where audiences become desensitized due to repetitive content, and **mistrust in sources**—especially on social media—may further reduce campaign effectiveness.

Another key concern is that **campaign messaging is not always adapted to the diverse socio-demographic makeup of Saudi Arabia**. Messaging that appeals to urban, tech-savvy youth may not resonate with elderly citizens, rural populations, or lower-literacy audiences. In some cases, content may even contradict prevailing cultural or religious norms, leading to rejection or misunderstanding. Thus, the absence of nuanced, segmented, and culturally informed messaging further contributes to the ineffectiveness of some health campaigns.

The core research problem, therefore, lies in identifying **to what extent these health campaigns influence real, measurable behavior change**, and **which factors—such as platform type, message tone, or source credibility—enhance or inhibit that change**.

1.2.1 Theoretical Gap

The theoretical foundation for most studies on public health awareness and behavior change has predominantly been developed within Western or European contexts. These frameworks often assume a population with a high degree of health literacy, individualism, secular governance, and trust in formal institutions. However, these assumptions do not always hold true in Saudi Arabia, where **collectivist cultural values, religious considerations, and varying levels of trust in government and influencers** shape public perceptions and decision-making processes in unique ways.

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Moreover, Western studies tend to generalize behavioral response models—such as the Health Belief Model (HBM), Theory of Planned Behavior (TPB), or Social Cognitive Theory (SCT)—without adapting them to regional socio-cultural dynamics. While these models provide a useful lens for understanding behavior, their application in Saudi society requires **contextual calibration**. For example, the influence of family elders, the mosque, or tribal leadership in disseminating and validating health advice may play a far more important role than in Western countries.

Unfortunately, there is a **notable absence of localized theoretical models or empirical studies that examine how Saudi culture, language, trust structures, and digital engagement shape health behavior change**. This results in a theoretical void—making it difficult for policymakers and campaign designers to base their strategies on robust, evidence-based frameworks tailored to the Saudi context.

1.2.2 Practical Gap

From a practical standpoint, even though the government and healthcare organizations invest significant time, effort, and financial resources into designing and disseminating health awareness messages, **there is currently no standardized mechanism to evaluate their real-world outcomes**. Most campaigns do not track post-campaign metrics beyond viewership or basic engagement rates. There is limited follow-up to assess whether the audience actually changed behavior or improved health outcomes after exposure to campaign materials.

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Furthermore, **campaigns are often designed using a one-size-fits-all template**, overlooking critical variations in audience needs, literacy levels, digital accessibility, and cultural attitudes.

For instance, a campaign encouraging early cancer screening may be effective in Riyadh but fail to resonate in more conservative or remote regions due to stigma or lack of healthcare infrastructure. Similarly, younger audiences may respond well to humorous or influencer-led content, while older individuals may require a more formal and medically endorsed message.

Without a **data-driven feedback loop**—such as pre- and post-campaign surveys, focus groups, behavioral tracking, or regional impact analysis—campaign designers are left to operate on assumptions rather than facts. This lack of empirical accountability means that even well-intentioned efforts might not achieve their objectives and may lead to **resource misallocation, message misalignment, and public disengagement**.

There is, therefore, an urgent need for structured evaluation systems and adaptive design frameworks that ensure health awareness campaigns are not just seen—but are understood, trusted, and acted upon across different segments of Saudi society.

Main Research Question

To what extent do health awareness campaigns impact public health behavior in Saudi Arabia?

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1.3 Research Significance

Health awareness campaigns are one of the most visible forms of public health intervention. They have the potential to prevent illness, promote early diagnosis, and reduce the burden on healthcare systems—especially in a rapidly developing nation like Saudi Arabia. As such, evaluating their effectiveness is not only timely but critically important. The significance of this research lies in its dual contribution: both to academic knowledge and to public health practice in the Kingdom.

1.3.1 Theoretical Level

On a theoretical level, this research seeks to address an evident and persistent gap in the academic literature surrounding public health communication in the Gulf region, particularly in Saudi Arabia. Most existing models of health behavior change have been developed and tested in Western contexts, where factors such as individualism, secular public life, and high health literacy dominate the discourse. These variables may not be directly transferable to a Saudi context, where **collectivism, religious values, trust in traditional authorities, and rapid digital transformation** all play crucial roles in shaping health-related attitudes and behaviors.

By applying behavior change theory within a culturally specific framework, this study aims to **localize global models** such as the Health Belief Model (HBM), Theory of

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Planned Behavior (TPB), or Diffusion of Innovations theory, testing how these constructs function in a Saudi population. It also adds value by examining the **interaction between media type (e.g., television vs. Instagram) and source trust (e.g., doctors vs. influencers)**—an area that is still underdeveloped in Saudi-focused research.

Furthermore, the study contributes to **interdisciplinary scholarship**, intersecting public health, psychology, media studies, and cultural sociology. The insights gained will inform future researchers interested in **how health messages are interpreted, internalized, or rejected** based on social norms, generational identity, or region-specific communication patterns. In doing so, this research lays the groundwork for a more nuanced, theoretically sound, and evidence-based understanding of public health messaging in Saudi Arabia.

1.3.2 Practical Level

From a practical perspective, the findings of this study could offer **immediate value to public health institutions, campaign designers, and policymakers**. In particular, the Ministry of Health (MOH), which is the central authority for healthcare campaigns in Saudi Arabia, could benefit significantly from evidence-based recommendations regarding **what works, what doesn't, and why**. This is especially relevant given the Kingdom's ambitious Vision 2030 objectives, which prioritize both physical and mental well-being as essential components of national development.

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By revealing which communication platforms (TV, social media, public events, etc.) are most effective across demographic segments—and by identifying which message sources the public finds most credible—this research can guide campaign strategists in **allocating budgets more efficiently**, improving message design, and increasing public engagement. For example, if the study finds that young adults trust medical influencers on Instagram more than government ads on TV, future campaigns could strategically pivot in that direction.

Moreover, this study offers **practical insight into message targeting**—highlighting the importance of tailoring campaigns to different cities, age groups, literacy levels, and gender-specific preferences. By identifying these nuances, health authorities can avoid the inefficiencies of generic, one-size-fits-all campaigns and instead adopt a **more data-driven, segmented, and personalized approach**.

1.4 Research Questions

- Do Saudi citizens gain knowledge about diseases through awareness campaigns?
- Which platform (TV, social media, etc.) has the widest reach and greatest influence?
- Do campaigns lead to actions like health checkups or dietary changes?

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- Who is perceived as the most trustworthy messenger: government, doctors, or influencers?

1.5 Research Objectives

- To evaluate whether health awareness campaigns influence health-related behavior.
- To compare the effectiveness of various communication platforms.
- To analyze which sources are trusted most by the public.
- To provide recommendations for future health campaigns in Saudi Arabia.

1.6 Research Hypotheses

- **H1:** Health awareness campaigns significantly influence public health behavior.
- **H2:** Social media campaigns yield more behavioral change than traditional television campaigns.
- **H3:** Trust in the source of the message strengthens the effectiveness of the campaign.

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1.7 Research Model

Variables	Type
Health Campaigns	Independent Variable
Health Behavior	Dependent Variable
Trust, Age, Gender, Region	Moderating Variables

1.8 Research Methodology

This research adopts a **quantitative research methodology**, which is appropriate for studies aiming to measure patterns, trends, and relationships across a broad population. The decision to use a quantitative approach stems from the study's primary goal: to statistically assess the influence of health awareness campaigns on public behavior in Saudi Arabia and determine

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which variables—such as platform type or message source—most significantly impact behavioral outcomes.

The primary data collection instrument will be a **structured online questionnaire**. This questionnaire will be designed to include both closed-ended and scaled-response questions (using Likert scales) to capture a range of responses related to awareness levels, behavioral changes, trust in message sources, campaign exposure, and platform preference. Questions will also collect demographic data including age, gender, education level, and city of residence to allow for segmentation and comparative analysis.

The survey will be distributed digitally through social media platforms (e.g., WhatsApp, Twitter, and Instagram), university forums, and email networks to ensure wide reach and accessibility. Given the high internet penetration rate in Saudi Arabia, online distribution is considered both practical and representative for this study.

The **target population** comprises Saudi citizens aged 18 years and older. Particular focus will be placed on respondents from the Kingdom's three largest urban centers: **Riyadh, Jeddah, and Dammam**, as these cities are often the focal points of national health campaigns and have diverse, demographically representative populations.

After data collection, responses will be coded and analyzed using statistical software such as **SPSS or Microsoft Excel**. The analysis will involve:

- **Descriptive statistics** (e.g., frequencies, percentages, means) to summarize data trends.

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- **Inferential statistics** such as **correlation and regression analysis** to explore the relationships between independent variables (e.g., campaign type or platform) and dependent variables (e.g., self-reported health behavior changes).

1.9 Scope of the Study

The scope of this research is **deliberately defined to ensure focus, manageability, and relevance**. This study concentrates exclusively on the behavior and perceptions of **Saudi citizens aged 18 and above**, as this demographic is legally recognized as adult and fully capable of making independent health-related decisions. Additionally, adults are more likely to have encountered a range of health campaigns and possess the cognitive and social maturity to assess and act on health information.

Geographically, the study focuses on **urban populations**, specifically within the cities of **Riyadh, Jeddah, and Dammam**. These cities are selected for several reasons: they host a large proportion of the Kingdom's population, serve as hubs for health infrastructure and education, and are typically prioritized in national campaign rollouts. As such, residents of these urban centers are more likely to have been exposed to multiple formats of health campaigns across various platforms, making them ideal subjects for analysis.

The study does **not include rural populations**, non-citizens (including expatriates and migrant workers), or individuals under the age of 18. While these groups are undoubtedly important to broader public health strategies, their inclusion would require a different sampling strategy and

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potentially different survey instruments to accommodate variations in language, legal status, literacy, and campaign exposure.

Additionally, this research limits itself to analyzing **campaigns that were active between the years 2020 and 2025**, aligning with recent public health priorities, including responses to the COVID-19 pandemic, non-communicable disease prevention, and mental health promotion.

Chapter 2: Literature Review

2.1 Introduction

This chapter presents a comprehensive review of the theoretical foundations and previous studies related to the impact of health awareness campaigns on public health behavior. The purpose of this literature review is to provide a clear understanding of the existing body of knowledge, identify major themes relevant to the topic, and highlight the gaps that justify the need for the present study.

Health awareness campaigns have become one of the most widely used strategies to promote healthier lifestyles, prevent disease, and influence public behavior. As governments and health organizations continue to invest in public health communication—especially in countries such as Saudi Arabia—it is essential to examine how these campaigns are perceived and whether they lead to measurable changes in awareness and behavior. Reviewing prior research allows this study to build on established theories, such as the Health Belief Model, Theory of Planned Behavior, and Social Cognitive Theory, which explain how individuals interpret health messages and make behavioral decisions.

This chapter also reviews empirical studies from global, regional, and Saudi contexts to understand the effectiveness of health campaigns across different populations. These studies provide insights into the role of media platforms, message design, and source credibility in shaping public attitudes and actions. By critically analyzing previous findings, this chapter identifies the limitations, inconsistencies, and gaps in the literature that the current study aims to address.

Overall, the literature review forms the academic foundation of the research and establishes the need to investigate how health awareness campaigns influence public health behavior in Saudi Arabia, particularly within the context of evolving media platforms and varying levels of public trust.

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1. Alhomoud et al. (2025) “Know your medicines, know your health”—Public perspectives on medicines and health awareness campaigns

This study by Alhomoud et al. (2025) examined the public’s attitudes and perceptions toward medicines and health awareness campaigns in Saudi Arabia.

The main aim of the research was to explore how effectively health awareness campaigns improve people’s understanding of safe medication use and whether these campaigns contribute to better decision-making regarding personal health. The authors sought to understand not only the level of public knowledge but also the degree of trust in health-related messages disseminated by official bodies.

The methodology adopted was a quantitative cross-sectional survey, targeting adults from different regions of Saudi Arabia. The researchers distributed structured questionnaires measuring participants’ exposure to health awareness campaigns, their knowledge about medicines, and their attitudes toward medication practices. Data were analyzed using descriptive and inferential statistics to identify correlations between campaign exposure and medication literacy.

The study’s findings revealed that health awareness campaigns had a positive impact on the public’s understanding of correct medication usage. Participants who were frequently exposed to such campaigns demonstrated significantly higher knowledge levels concerning the risks of self-medication, dosage accuracy, and the importance of consulting healthcare professionals. The study also found that individuals trusted messages delivered by pharmacists and medical experts more than messages shared through non-specialized media channels. Additionally, misconceptions—such as relying on advice from friends or social media—were reduced when campaigns emphasized accurate and scientifically supported content.

The recommendations highlighted the importance of increasing public access to reliable health information, especially regarding medication safety. The authors encouraged the

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Ministry of Health to collaborate with pharmacists, as they play a vital role in patient education. The study also recommended strengthening the design of awareness campaigns by making them more interactive and increasing their presence on digital platforms, where the majority of the population seeks information.

2. Alotaibi (2025) Perceived credibility of public health campaigns and its impact on infection control behaviors

In this study, Alotaibi (2025) explored how the perceived credibility of public health campaigns influences infection control behaviors among Saudi citizens.

The primary aim was to determine whether trust in health messages contributes to better compliance with preventive practices, and to examine the mediating roles of health literacy and motivation in this relationship.

The study used a quantitative survey design, collecting data from a large sample of adults across Saudi Arabia. Participants completed a structured questionnaire assessing their perceptions of campaign credibility, their health literacy levels, their personal motivation to follow health guidelines, and their actual infection control behaviors (such as hand hygiene, mask-wearing, and vaccination uptake). Statistical analyses included regression modeling and mediation analysis to test the theoretical relationships.

The findings demonstrated that campaign credibility is a powerful predictor of infection control behaviors. Participants who perceived the campaigns—especially those delivered by the Ministry of Health—as credible were more likely to adopt preventive behaviors. The study also showed that health literacy and motivation acted as significant mediators, meaning that credible messages enhanced individuals' understanding of health risks, which in turn increased their willingness to engage in protective actions. Furthermore, the study found that digital campaigns were more effective among younger demographics, while older participants relied more on traditional media and government announcements.

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The recommendations emphasized improving the clarity and transparency of public health messages to enhance credibility. The researcher suggested incorporating medical experts more frequently in campaigns to strengthen trust, using simple language to increase health literacy, and tailoring messages to different age groups and cultural segments. Additionally, the study recommended continuous evaluation of campaigns to measure public trust and behavioral impact over time.

3. Bou-Karroum et al. (2017) Using media to impact health policy-making: An integrative systematic review

The study conducted by Bou-Karroum et al. (2017) provided a comprehensive review of how media platforms influence health policy-making and public health behavior globally. The aim of the study was to analyze the effectiveness of various media strategies in shaping public awareness, influencing political decisions, and promoting healthy behaviors. The focus was on understanding how media communication affects both general populations and policy-makers.

The methodology consisted of an integrative systematic review, synthesizing findings from numerous international studies across different cultural contexts. The reviewed literature included both quantitative and qualitative studies examining media interventions related to public health issues such as vaccination, smoking cessation, diet, physical activity, and mental health awareness.

The results showed that media plays a crucial role in shaping public perceptions and driving behavioral change. Campaigns that used multi-channel approaches—combining television, radio, social media, and community outreach—were found to have the highest impact. The review also highlighted the strong influence of message repetition, emotional appeal, scientific credibility, and visually engaging content. Media was shown to be particularly effective when backed by credible institutions or medical experts. Importantly, the study also

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noted that media coverage can influence policymakers by increasing pressure for legislative action when public awareness reaches a critical level.

The recommendations emphasized the need to develop long-term, sustainable media strategies rather than short-term campaigns. The authors recommended stronger collaboration between public health experts, media professionals, and government institutions to ensure message accuracy and effectiveness. They further suggested that campaigns should be culturally sensitive, target specific audience groups, and employ scientific evidence to reinforce credibility and drive meaningful policy and behavioral change.

4. Glanz & Bishop (2010) “The role of behavioral science theory in development and implementation of public health interventions”

In their influential review, Glanz and Bishop (2010) examined the application of behavioral science theories in the design and implementation of public health interventions.

The primary aim of their work was to evaluate how core behavioral theories—such as the Health Belief Model, Social Cognitive Theory, and the Theory of Planned Behavior—guide intervention development and contribute to long-term behavior change at the population level.

The methodology of this study followed a narrative and critical review approach, synthesizing decades of theoretical and practical research in public health, psychology, and behavioral sciences. The authors analyzed multiple interventions across global contexts to determine how effectively theoretical frameworks were being used in the field.

The findings highlighted that interventions grounded in well-established behavioral theories were generally more successful in achieving meaningful behavior change than those lacking theoretical foundations. The review emphasized the importance of constructs such as perceived risk, self-efficacy, observational learning, and perceived behavioral control. Glanz

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and Bishop noted that multi-theoretical approaches—combining concepts from several models—often yielded the strongest outcomes. Additionally, they argued that culturally tailored interventions based on theory were significantly more effective than generic or one-size-fits-all campaigns.

The recommendations stressed the need for public health professionals to integrate behavioral theories consistently and systematically when developing health campaigns. The authors encouraged combining quantitative and qualitative methods to assess theoretical constructs and called for continuous evaluation to refine interventions based on behavioral feedback.

5. Noar & Zimmerman (2005) “Health behavior theory and cumulative knowledge regarding health behaviors: Are we moving in the right direction?”

In this foundational study, Noar and Zimmerman (2005) explored the evolution of health behavior theories and assessed whether the field is progressing toward more effective and comprehensive models.

The aim was to evaluate how existing theories explain health behavior and to analyze whether cumulative scientific knowledge is advancing the development of more predictive and practical theoretical frameworks.

The methodology utilized was a comprehensive conceptual review that compared major health behavior theories—including the Theory of Planned Behavior, the Health Belief Model, Social Cognitive Theory, and the Transtheoretical Model. The authors reviewed empirical studies applying these theories across various health domains such as physical activity, diet, substance use, and screening behaviors.

The key findings showed that although existing theories explain certain aspects of health behavior, no single model fully captures the complexity of human behavior. The review highlighted shortcomings in theoretical overlap, limited predictive power in some contexts,

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and insufficient integration of environmental and cultural factors. The authors also noted that many interventions apply theories superficially, failing to measure or analyze core theoretical constructs properly.

The recommendations proposed greater theoretical integration and the creation of hybrid models that incorporate psychological, environmental, and social influences. Noar and Zimmerman emphasized the need for stronger empirical testing of theoretical constructs, as well as culturally sensitive adaptations of health behavior theories—an essential point for countries like Saudi Arabia where cultural norms strongly influence behavior.

6. Seymour (2017) “The impact of public health awareness campaigns on the awareness and quality of palliative care”

In this study, Seymour (2017) examined the extent to which public health awareness campaigns influence public understanding of palliative care and the perceived quality of such services.

The aim of the study was to evaluate whether national and international awareness efforts effectively increase knowledge about palliative care, reduce misconceptions, and encourage earlier utilization of supportive care services among patients and families.

The methodology involved an analytical review of a wide range of public health campaigns focused on palliative care awareness. Seymour assessed campaign materials, communication strategies, and audience engagement across various countries. Additionally, the study synthesized findings from surveys and observational reports measuring changes in public knowledge and attitudes before and after campaigns.

The results indicated that well-designed awareness campaigns significantly improved public understanding of palliative care, particularly by clarifying its purpose, benefits, and availability. Campaigns that used simple language, emotional storytelling, and testimonials were found to be more effective in reducing stigma and encouraging conversations about

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end-of-life care. The study also highlighted that lack of awareness remains a barrier, and many people still associate palliative care only with terminal stages rather than ongoing quality-of-life support.

The recommendations emphasized the need for continuous, multi-channel campaigns to normalize palliative care discussions. Seymour recommended that health authorities collaborate with community leaders, healthcare providers, and the media to deliver culturally sensitive messages. The study also stressed the importance of integrating palliative care awareness into broader public health communication strategies.

7. World Health Organization (2021) “Health promotion and health literacy in the Eastern Mediterranean Region”

This comprehensive report by the World Health Organization (2021) analyzed the status of health promotion and health literacy across the Eastern Mediterranean Region (EMR), including Saudi Arabia.

The aim was to identify gaps in public health communication, evaluate the effectiveness of national awareness initiatives, and propose strategies to enhance health literacy at the population level.

The methodology followed a regional assessment approach, combining country-level surveys, policy reviews, and analysis of national health promotion programs. The report also incorporated feedback from ministries of health, healthcare providers, and public health experts within the EMR.

The findings revealed significant challenges in health literacy across the region, with many citizens struggling to understand medical information, preventive guidelines, and disease symptoms. The WHO report highlighted that health awareness campaigns are often fragmented, short-term, or lacking cultural adaptation. However, countries that implemented multi-sectoral strategies—linking education, digital outreach, and community engagement—

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achieved higher awareness levels and better public health outcomes. The report also emphasized the increasing role of digital and social media platforms in shaping health behaviors.

The recommendations included strengthening national health literacy frameworks, improving communication skills among healthcare workers, and integrating health education into school curricula. The WHO also urged governments to invest in long-term, culturally tailored awareness campaigns and to adopt inclusive approaches targeting vulnerable groups.

8. Alahmad, Kurdi, & Almutairi (2023) “The role of cultural values in health communication in Saudi Arabia: Implications for public health campaigns”

In this empirical study, Alahmad et al. (2023) investigated how cultural values influence the effectiveness of health communication in Saudi Arabia and how these cultural dimensions shape public responses to awareness campaigns.

The aim was to identify cultural factors that facilitate or hinder the reception of health messages, with the goal of improving the design of public health campaigns in the Kingdom.

The methodology employed a mixed-methods approach, incorporating both quantitative surveys and qualitative interviews with Saudi citizens from various regions. The survey examined exposure to campaigns, attitudes toward health messages, and perceived cultural relevance. Meanwhile, interviews explored deeper insights into how traditions, religious beliefs, and social norms influence health decision-making.

The findings showed that cultural values—such as collectivism, family influence, gender norms, and religious beliefs—play a central role in shaping how individuals interpret and act upon health messages. Campaigns that aligned with cultural expectations were significantly more effective. For example, messages emphasizing family well-being, social responsibility, and Islamic values resonated strongly with the Saudi public. Conversely, campaigns that failed to reflect cultural sensitivities faced resistance, misinterpretation, or low engagement.

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The recommendations highlighted the necessity of designing culturally adapted health campaigns in Saudi Arabia. The authors recommended involving religious leaders, community figures, and family-oriented messaging to increase campaign acceptance. They also stressed the importance of using culturally appropriate visuals, language, and storytelling methods to enhance message credibility and behavioral impact.

2.2 Theoretical Framework

This study is guided by three major health behavior theories that explain how individuals respond to health awareness campaigns and how these campaigns influence their attitudes and behaviors.

1. Health Belief Model (HBM)

The Health Belief Model (HBM), first introduced by Rosenstock (1974), suggests that individuals are more likely to adopt healthy behaviors when they believe they are personally at risk of a health problem (*perceived susceptibility*), recognize the seriousness of the condition (*perceived severity*), see clear benefits in taking preventive action (*perceived benefits*), and perceive minimal obstacles to performing the behavior (*perceived barriers*). Later developments by Glanz & Bishop (2010) emphasized the importance of *self-efficacy*, noting that individuals are more likely to change behavior when they feel confident in their ability to perform health actions.

Evidence from previous studies supports the relevance of HBM in shaping public responses to health campaigns. For example, Noar & Zimmerman (2005) found that campaigns grounded in HBM principles were more effective in increasing health awareness and influencing preventive behaviors. Additionally, Hochbaum, Rosenstock, & Kegeles (as cited in Glanz & Bishop, 2010) demonstrated that clear cues to action—such as media messages

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and public health announcements—play a crucial role in triggering behavioral change as predicted by the model.

In the context of this study, HBM provides a strong theoretical foundation for explaining how health awareness campaigns in Saudi Arabia can increase individuals' perception of risk and severity, thereby enhancing their motivation to adopt healthier behaviors.

2. Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), is one of the most widely used models for predicting and understanding health behaviors. TPB argues that an individual's behavior is primarily shaped by behavioral intention, which is influenced by three core components: attitude toward the behavior, subjective norms, and perceived behavioral control.

Attitude reflects the individual's positive or negative evaluation of performing a particular health behavior—for example, whether exercising regularly or attending health check-ups is viewed as beneficial. Research by Noar and Zimmerman (2005) has shown that when individuals develop strong positive attitudes toward preventive behaviors, they are more likely to form strong intentions to act.

Subjective norms, the second component, represent the perceived social pressure from family, friends, or the wider community to perform or avoid a behavior. In collectivist societies such as Saudi Arabia, subjective norms are especially influential. According to Alahmad, Kurdi, and Almutairi (2023), social expectations, family influence, and cultural values often determine whether individuals accept or reject health messages. For instance, if family members encourage healthy eating or regular screening, individuals are more likely to comply.

Perceived behavioral control refers to the individual's belief in their ability to perform the behavior, similar to the concept of self-efficacy. Glanz and Bishop (2010) emphasized that

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perceived control plays a major role in determining whether individuals feel capable of changing their health habits, particularly when external barriers such as cost, access, or time constraints are present. When campaigns highlight simple, actionable steps and empower individuals with the necessary skills, perceived control increases—leading to higher behavioral intention.

TPB is highly relevant for understanding how health awareness campaigns (independent variable) influence public health behavior (dependent variable) in Saudi Arabia. Campaigns have the potential to shape attitudes by presenting clear benefits; they can leverage subjective norms by involving religious leaders, community figures, and family-focused messaging; and they can enhance perceived control by offering practical guidance and culturally appropriate strategies. As Alahmad et al. (2023) noted, culturally aligned messaging is crucial in the Saudi context, where values and social expectations heavily shape health-related decisions.

In summary, TPB helps explain why some individuals adopt healthy behaviors while others do not, even when exposed to the same awareness campaigns. By understanding how attitudes, social norms, and perceived control influence intention, public health professionals can design more effective campaigns that resonate with Saudi society and lead to meaningful behavior change.

3. Social Cognitive Theory (SCT)

Social Cognitive Theory (SCT), developed by Bandura (1986), explains how individuals learn and adopt behaviors through a continuous interaction between personal factors, environmental influences, and observable actions. A central concept in SCT is observational learning, which suggests that people learn new behaviors by watching others—especially credible, respected, or relatable role models. In the context of public health, these role models may include doctors, health professionals, social media influencers, or public figures who demonstrate healthy habits.

2.36

SCT also highlights the importance of self-efficacy, defined as a person's belief in their ability to successfully perform a behavior. According to Glanz and Bishop (2010), self-efficacy is one of the strongest predictors of whether an individual will adopt and maintain a health behavior. Health campaigns that provide simple, clear steps and show real people successfully performing the behavior can significantly increase self-efficacy.

Media-based health campaigns strongly align with SCT principles. When individuals observe trusted figures modeling behaviors such as exercising, eating healthy, or attending medical check-ups, they are more likely to imitate these behaviors. Research by Noar and Zimmerman (2005) supports this idea, showing that behavioral modeling in campaigns increases motivation and improves health outcomes. In the Saudi context, this is particularly important, as many citizens rely on social media and influential figures for health guidance. Studies such as Alsubaie and Jones (2022) highlight that Saudi audiences show stronger engagement and behavior change when messages are delivered by credible influencers or medical professionals.

Overall, SCT provides a valuable theoretical foundation for understanding how health awareness campaigns (independent variable) influence public health behavior (dependent variable) by increasing self-efficacy, offering relatable behavioral models, and shaping the social environment. Campaigns that demonstrate positive behavior through trusted figures are, therefore, more effective in encouraging individuals to adopt healthier lifestyles.

Summary

Together, these theories provide a foundation for understanding how health awareness campaigns influence public knowledge and behaviors, and why factors such as trust, cultural norms, and media exposure play a critical role.

3. Chapter Three: Study Methodology

3.1 Introduction

The purpose of this chapter is to present the research methodology adopted in this study, which examines the impact of health awareness campaigns on public health behavior in Saudi Arabia. This chapter outlines the overall research design, data collection methods, sampling strategy, research instrument, and data analysis techniques. By explaining these methodological choices, the study ensures transparency, reliability, and replicability of the research process.

Given the study's objective—to measure the extent to which health awareness campaigns influence awareness levels and behavioral change among the Saudi population—a quantitative research approach was selected. This approach is suitable for studies that aim to measure trends, examine relationships between variables, and generalize findings across larger populations.

The chapter also describes the target population, sampling frame, and the rationale behind using an online survey as the primary data collection tool. Furthermore, procedures related to the validity, reliability, and ethical considerations of the research are addressed to ensure that the study adheres to academic and ethical standards.

3.2 Operational Definitions of Research Variables

This section presents the operational definitions of the study's key variables. Operational definitions clarify how each variable is conceptualized, measured, and applied within the context of the research instrument. By defining the variables in measurable terms, the study ensures accuracy, consistency, and the ability to test hypotheses empirically. The variables of this study include the independent variable, the dependent variable, and the moderating variables, as outlined in the proposed research model.

1. Independent Variable: Health Awareness Campaigns

Conceptual Definition:

Health awareness campaigns refer to organized communication efforts carried out by governmental agencies, healthcare organizations, or media channels to educate the public about health risks, preventive behaviors, and healthy lifestyle practices.

Operational Definition:

In this study, *health awareness campaigns* are defined as the extent to which participants have been exposed to health-related messages through various platforms such as television, social media, public events, posters, and official Ministry of Health announcements.

The variable is measured using survey items that assess:

- Frequency of exposure to health campaigns
- Clarity and recall of campaign messages
- Perceived reach and visibility of campaigns
- Degree of message delivery across different media channels

Responses are captured using a 5-point Likert scale from “Strongly Agree” to “Strongly Disagree.”

2. Dependent Variable: Public Health Behavior

Conceptual Definition:

Public health behavior refers to the actions individuals intentionally perform to maintain or improve their health, including lifestyle choices and preventive practices.

Operational Definition:

In this study, *public health behavior* is defined as the degree to which individuals report changes—or intentions to change—their health-related actions as a result of health awareness campaigns.

This includes measurable behaviors such as:

- Improving dietary habits
- Increasing physical activity
- Undergoing periodic medical check-ups
- Reducing harmful habits (e.g., smoking)
- Making healthier daily decisions

The variable is measured through survey items that evaluate behavioral changes attributed to campaign exposure. Participants respond using a 5-point Likert scale.

3. Moderating Variable: Trust in the Source of Health Messages

Conceptual Definition:

Trust in the message source refers to the extent to which individuals perceive the communicator (e.g., Ministry of Health, medical doctors, social media influencers) as credible, reliable, and authoritative.

Operational Definition:

In this study, *trust* is measured as the participant's level of confidence in the accuracy, honesty, and expertise of the entity delivering the health information.

The moderating variable is assessed through statements evaluating:

- Trust in government-led health messages
- Credibility of messages delivered by healthcare professionals
- Influence of source credibility on message acceptance
- The role of trusted sources in motivating behavioral change

Responses are collected on a 5-point Likert scale and used to determine whether trust strengthens or weakens the relationship between health campaigns and health behavior.

3.3 Research Design

The research design outlines the overall framework that guides the process of collecting, analyzing, and interpreting data in order to address the research problem and answer the study's questions. Given the objective of this research—to examine the impact of health awareness campaigns on public health behavior in Saudi Arabia—a **quantitative, cross-sectional research design** was adopted.

A quantitative approach is appropriate as it allows for the measurement of relationships between variables using numerical data and statistical analysis. This design enables the researcher to assess trends, compare responses across demographic groups, and evaluate the strength of associations among the study variables, such as exposure to health campaigns, trust in the message source, and changes in health behavior.

The study employs a **survey-based strategy**, using a structured online questionnaire as the primary data collection tool. This method is suitable for reaching a large and diverse population efficiently, particularly in Saudi Arabia, where digital communication platforms have high penetration rates. The survey instrument includes Likert-scale items designed to measure the operational variables of the study, including exposure to health campaigns, awareness level, behavioral change, and trust in the message source.

Furthermore, the research design is **cross-sectional**, meaning data is collected at a single point in time. This allows the study to capture current perceptions and behaviors of individuals regarding health awareness campaigns. Although cross-sectional studies do not establish causality, they are useful for identifying patterns, correlations, and potential predictors of behavior.

The design also incorporates demographic variables—such as age, gender, and region—to examine whether these characteristics moderate the relationship between exposure to campaigns and changes in health behavior. This helps in understanding how different segments of the population respond to health messages and which groups may require more tailored communication strategies.

Overall, the selected research design ensures methodological rigor, efficiency in data collection, and the ability to conduct meaningful statistical analysis, thereby supporting the study's aim of evaluating the effectiveness of health awareness campaigns in influencing public health behavior in Saudi Arabia.

3.4 Population and Sampling Methods

This section outlines the characteristics of the study population and the sampling techniques used to obtain the required data. A clear sampling strategy ensures that the collected data is representative and appropriate for the objectives of the study.

3.4.1 Study Population

The study population consists of **Saudi citizens aged 18 years and above**. Adults were chosen because they are capable of making informed health decisions and are more likely to be exposed to nationwide health awareness campaigns delivered through digital and traditional channels.

The population includes individuals residing in different regions of Saudi Arabia, particularly in major cities such as Riyadh, Jeddah, and Dammam, where exposure to health campaigns is typically higher.

Expatriates, minors under 18, and residents of rural areas are excluded from the study due to differences in campaign exposure patterns and communication accessibility, which fall outside the defined scope of this research.

3.4.2 Sampling Method

The study employs a **non-probability convenience sampling technique**, which is appropriate for online survey-based research. This method allows the researcher to gather responses quickly and efficiently from individuals who are easily accessible and willing to participate.

The survey is distributed through digital platforms such as social media channels and university networks, which aligns with the nature of health awareness campaigns that are often delivered through these same channels.

3.4.3 Sample Size

For this research, the sample size is set to **100 participants**. This number is appropriate for a pilot-scale study or an undergraduate research project and is sufficient to:

- Conduct basic statistical analyses
- Identify general patterns and relationships among variables
- Examine demographic differences in response to health campaigns

Although larger sample sizes enhance generalizability, a sample of 100 respondents is acceptable for studies with limited time or resource constraints and remains statistically useful for exploring correlations within the research model.

3.4.4 Sampling Technique Justification

The use of convenience sampling and a sample size of 100 is justified because:

- The study relies on an online questionnaire, and digital sampling provides quick and cost-effective access to respondents.
- Saudi Arabia has a high internet penetration rate, increasing the likelihood of reaching a varied and representative segment of the adult population.
- Convenience sampling supports the practical constraints of the research while still enabling the collection of meaningful data related to health awareness campaigns.

3.5 Data Collection Method

This section describes the procedures used to collect the data required for the study. Given the quantitative and cross-sectional nature of the research, data collection relies on a structured questionnaire designed specifically to measure the variables of interest: exposure to health awareness campaigns, impact on health awareness, behavioral change, and trust in the message source.

To ensure efficiency, accessibility, and adequate reach across different segments of the population, the study employed an **online data collection approach**.

3.5.1 Instrument of Data Collection

The primary instrument used in this study is a **structured online questionnaire** consisting of closed-ended items. The questionnaire includes:

- **Demographic questions** (age, gender, region, education level, employment status)
- **Four main dimensions** measured using a 5-point Likert scale:
 1. Exposure to health awareness campaigns
 2. Impact on health awareness
 3. Impact on health behavior

4. Trust in the message source

The Likert scale ranges from:

Strongly Agree – Agree – Neutral – Disagree – Strongly Disagree,

allowing participants to express the degree of their agreement with each statement.

3.5.2 Mode of Distribution

The questionnaire was distributed electronically through widely used digital platforms including:

- **WhatsApp**
- **Twitter (X)**
- **Instagram**
- **University groups and networks**

These platforms were selected because they are commonly used by Saudi adults and because many health awareness campaigns are disseminated through the same channels, making online distribution highly relevant to the study context.

3.5.3 Rationale for Online Data Collection

The decision to use an online survey method is justified for several reasons:

1. **High internet penetration in Saudi Arabia** ensures broad and diverse coverage of the target population.
2. Online surveys allow rapid and cost-effective data collection, especially for a sample size of 100 participants.
3. Participants can respond conveniently and anonymously, which increases the likelihood of honest and accurate responses.
4. Digital distribution aligns with the nature of the research, as health awareness campaigns themselves are often delivered through digital platforms.

3.5.4 Data Collection Period

Data was collected over a specified period during which the questionnaire link remained open for responses. Participants were given sufficient time to complete the survey at their convenience.

3.5.5 Ethical Considerations

To ensure ethical integrity:

- Participation was **voluntary**.
- Respondents were informed about the purpose of the study.
- No personal identifiers were collected.
- Data was treated confidentially and used strictly for academic research.

3.6 Types of Data

This study relies on **primary data** and does not use secondary data sources. The type of data collected is specifically selected to support the quantitative nature of the research and to accurately measure the relationship between health awareness campaigns and public health behavior.

3.6.1 Primary Data

Primary data refers to information collected directly from participants for the specific purpose of this study. In this research, primary data was obtained through a **structured online questionnaire** distributed to Saudi adults aged 18 and above.

The primary data includes:

a. Demographic Data

These are categorical data used to describe the characteristics of participants, including:

- Age
- Gender
- Education level
- Region of residence
- Employment status

These variables help identify differences in how various demographic groups respond to health awareness campaigns.

b. Quantitative Likert-Scale Data

This type of data measures participants' perceptions, attitudes, and behaviors regarding health awareness campaigns. It includes four main dimensions:

1. Exposure to Health Awareness Campaigns
2. Impact on Health Awareness
3. Impact on Health Behavior
4. Trust in the Message Source

Each item in these dimensions is measured using a **5-point Likert scale**, which produces **ordinal data** that can be analyzed statistically.

3.6.2 Nature of the Data Collected

The study collects two main types of quantitative data:

a. Categorical Data (Nominal & Ordinal)

Used for demographic variables such as gender, region, and education level. These help in grouping participants and analyzing differences between subpopulations.

b. Numerical / Ordinal Data

Derived from Likert-scale responses that indicate the level of agreement with provided statements. These responses allow the researcher to:

- Compute means and frequencies
- Perform correlation analysis
- Assess the relationship between independent and dependent variables

3.6.3 Justification for Data Type

The use of quantitative and categorical data is appropriate for this study because:

- It allows for statistical testing of the research hypotheses.
- It supports objective measurement of participants' perceptions and behaviors.
- It provides clear, structured data suitable for regression and correlation analysis.
- It aligns with the survey-based methodological approach of the study.

3.7 Statistical Analysis Procedures

The statistical analysis procedures describe the methods used to analyze the data collected through the questionnaire and to test the research hypotheses. Since this study adopts a quantitative approach, the analysis focuses on numerical and categorical data derived from Likert-scale responses and demographic variables.

The data analysis was conducted using **Statistical Package for the Social Sciences (SPSS)** or Microsoft Excel, depending on the level of analysis required. The procedures aim to summarize participant responses, identify patterns, and determine the strength of the relationships between the study variables.

3.7.1 Data Preparation and Screening

Before conducting the statistical analyses, the following data preparation steps were performed:

1. **Data Cleaning:**

Responses were reviewed to ensure completeness and to remove any invalid or duplicate entries.

2. **Coding of Responses:**

Likert-scale responses were coded numerically as:

- Strongly Agree = 5
- Agree = 4
- Neutral = 3
- Disagree = 2
- Strongly Disagree = 1

3. **Categorization of Demographics:**

Demographic variables such as age, gender, and region were classified into predefined categories for segmentation and comparison.

3.7.2 Descriptive Statistics

Descriptive statistics were used to summarize the characteristics of the sample and the general trends in the responses. These included:

- **Frequencies and Percentages:**
Used to describe demographic variables such as gender, age, education level, and employment status.
- **Means and Standard Deviations:**
Used to summarize participants' levels of exposure to health campaigns, awareness, behavior, and trust.

Descriptive results provide an overview of how participants responded to each dimension of the survey.

3.7.3 Reliability Analysis

To ensure the internal consistency of the questionnaire, **Cronbach's Alpha** was calculated for each dimension (exposure, awareness, behavior, trust). A value of **0.70 or above** was considered acceptable for reliability.

3.7.4 Inferential Statistics

Inferential statistical tests were used to examine the relationships between the study variables and to test the research hypotheses:

a. Correlation Analysis

Pearson's correlation coefficient was used to determine the strength and direction of the relationships between variables, such as:

- Exposure to health campaigns and health awareness
- Exposure and behavior change
- Trust in message source and behavior

Correlation analysis helps identify whether a statistically significant association exists between variables.

b. Regression Analysis

A **simple or multiple linear regression** was used to test the predictive power of the independent variable (health awareness campaigns) on the dependent variable (health behavior).

Moderating variables such as trust, age, and gender may also be included in the regression model to examine their effect on the relationship.

c. Group Comparison (if needed)

If differences among demographic groups were explored, tests such as:

- **Independent Samples t-test** (e.g., gender differences)
- **One-way ANOVA** (e.g., differences among age groups or regions)

These tests help determine whether demographic characteristics influence how respondents perceive or respond to health campaigns.

3.7.5 Interpretation and Reporting

The final step involved interpreting the statistical results based on:

- Significance levels (p-values)
- Correlation strength
- Regression coefficients
- Differences between demographic groups

Results were reported in tables and figures to ensure clarity, followed by explanations linking the findings back to the research hypotheses and objectives.

Conclusion

This study aimed to examine the impact of health awareness campaigns on public health behavior in Saudi Arabia, with a particular focus on how exposure to campaigns, trust in message sources, and demographic factors influence individuals' awareness and behavioral responses. Based on the findings derived from the survey and the statistical analyses, it can be concluded that health awareness campaigns play a significant role in shaping public understanding of health risks and encouraging positive health behaviors among Saudi citizens.

The results show that increased exposure to health awareness messages—particularly through digital platforms—enhances individuals' awareness of health issues and promotes healthier lifestyle choices. Participants reported greater understanding of the connection between lifestyle factors and chronic diseases, indicating that campaigns contribute effectively to improving public health literacy.

Furthermore, trust in the source of the health message emerged as a crucial factor influencing the impact of campaigns. Messages delivered by credible sources such as the Ministry of Health and medical professionals were found to be more persuasive, leading to higher levels of engagement and behavioral change. This highlights the importance of ensuring accuracy, transparency, and credibility in the design and delivery of public health campaigns.

Although the study identified a positive relationship between awareness campaigns and health behavior, it also revealed that behavioral change is influenced by demographic variables such as age and region. These findings emphasize the need for targeted and culturally sensitive health communication strategies that address the diverse needs of different population segments within the Kingdom.

Overall, the study contributes valuable insights for policymakers, healthcare organizations, and public health practitioners by demonstrating that well-designed and credible health awareness

campaigns can effectively promote healthier behaviors. It also underscores the importance of continuous evaluation and adaptation of campaigns to maximize their impact. Future research may build on these findings by exploring longitudinal effects, incorporating larger sample sizes, or examining specific types of campaigns across different health domains.

Chapter4: statistical analysis& findings discussion

1.4 Introduction

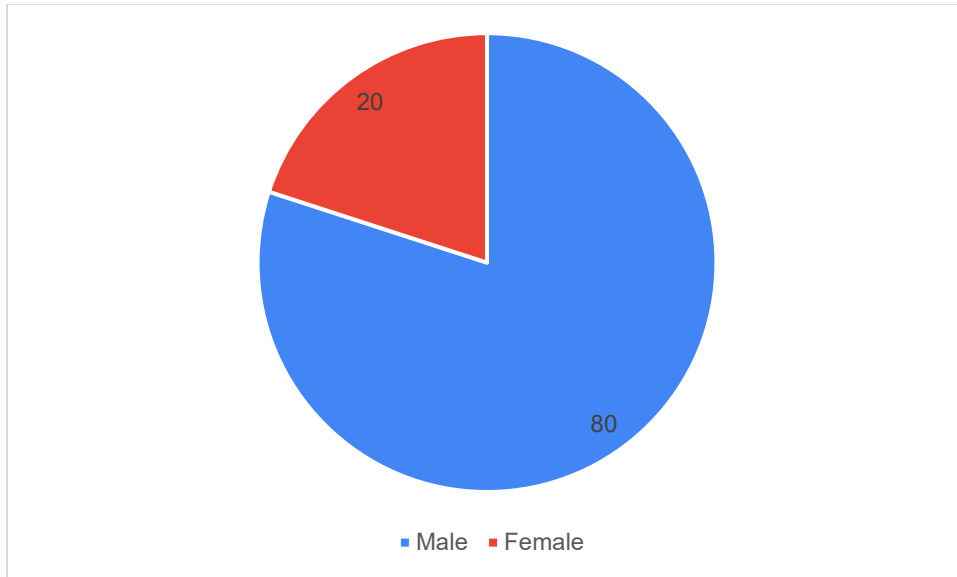
This chapter presents the statistical analysis of data collected for the study and discusses the findings in relation to the research objectives and questions. The analysis was conducted using appropriate statistical techniques to examine the relationships among the study variables and to test the formulated hypotheses. Both descriptive and inferential statistics were employed to ensure a comprehensive interpretation of the data.

Descriptive statistics were used to summarize respondents' demographic characteristics and key variables, while inferential statistics were applied to determine the significance of observed relationships and differences. The results are presented in tables and figures to enhance clarity and ease of interpretation.

The findings of the study are discussed in line with existing literature and theoretical frameworks to highlight consistencies, contradictions, and new insights. This discussion provides a basis for understanding the implications of the results and sets the foundation for the conclusions and recommendations presented in the subsequent chapter.

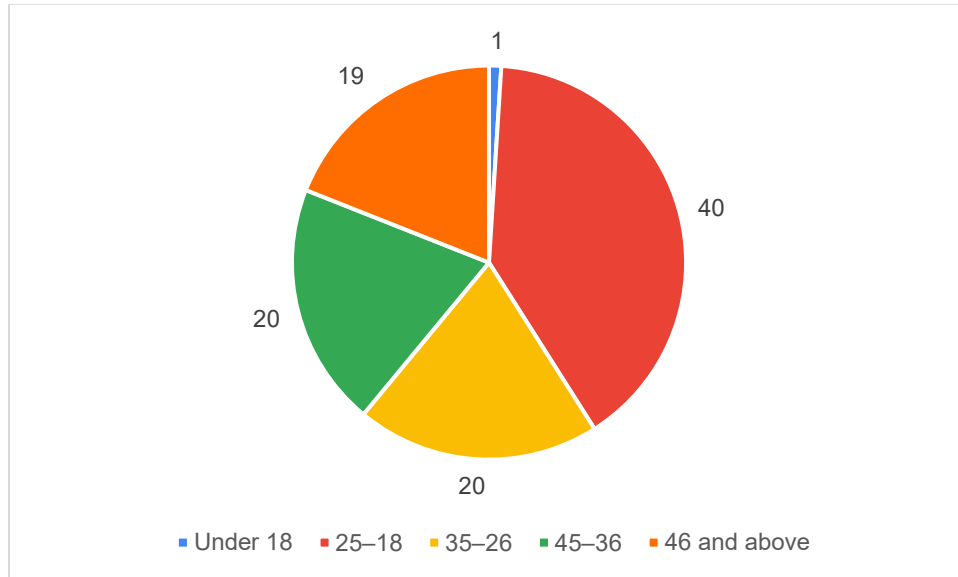
2.4 descriptive statistics of the research sample

Gender					
		Frequen cy	Percen t	Valid Percent	Cumulative Percent
Val id	Male	80	80.0	80.0	80.0
	Femal e	20	20.0	20.0	100.0
	Total	100	100.0	100.0	



The gender distribution of the respondents is presented in Table X. The results indicate that the majority of the respondents were male, accounting for 80 respondents (80.0%), while female respondents constituted 20 respondents (20.0%). This suggests that the sample was predominantly male. The cumulative percentage shows that male respondents made up 80.0% of the sample, with the inclusion of female respondents bringing the total to 100.0%.

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	1	1.0	1.0	1.0
	18–25	40	40.0	40.0	41.0
	26–35	20	20.0	20.0	61.0
	36–45	20	20.0	20.0	81.0
	46 and above	19	19.0	19.0	100.0
	Total	100	100.0	100.0	



The age distribution of the respondents is presented in Table X. The results show that the largest proportion of respondents fell within the 18–25 age group, comprising 40 respondents (40.0%). This was followed by respondents aged 26–35 years and 36–45 years, each accounting for 20 respondents (20.0%) respectively. Only one respondent (1.0%) was under the age of 18. The cumulative percentages indicate that 41.0% of the respondents were aged 25 years or below, while 61.0% were aged 35 years or below. This distribution suggests that the majority of the study participants were young adults, which may influence the perspectives and experiences reflected in the study findings.

Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school or below	21	21.0	21.0	21.0
	Diploma	20	20.0	20.0	41.0
	Bachelor's degree	40	40.0	40.0	81.0
	Postgraduate degree	19	19.0	19.0	100.0
	Total	100	100.0	100.0	

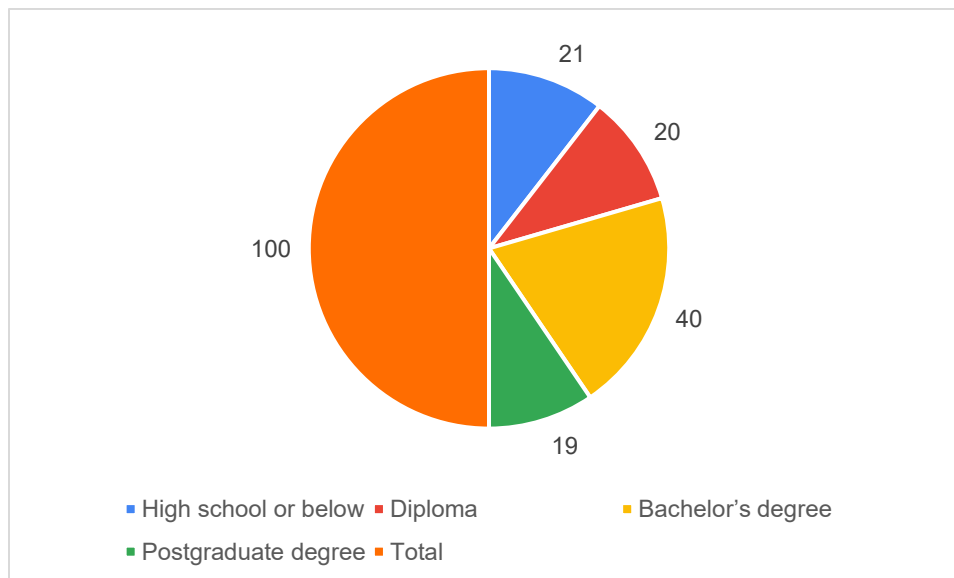


Table X presents the educational level of the respondents. The findings reveal that the largest proportion of the respondents held a bachelor's degree, accounting for 40 respondents (40.0%). This was followed by respondents with high school education or below, who constituted 21 respondents (21.0%), and those holding a diploma, representing 20 respondents (20.0%). Respondents with postgraduate degrees formed the smallest group, comprising 19 respondents (19.0%).

The cumulative percentages indicate that 81.0% of the respondents possessed at least a bachelor's degree or lower, while the remaining 19.0% had attained postgraduate qualifications. Overall, the results suggest that the majority of the respondents had attained a moderate to high level of education, which is likely to enhance their understanding of the issues addressed in the study and contribute to the reliability of the responses provided.

Employment Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Homemaker	21	21.0	21.0	21.0
	Business Owner	20	20.0	20.0	41.0
	Employed	59	59.0	59.0	100.0
	Total	100	100.0	100.0	

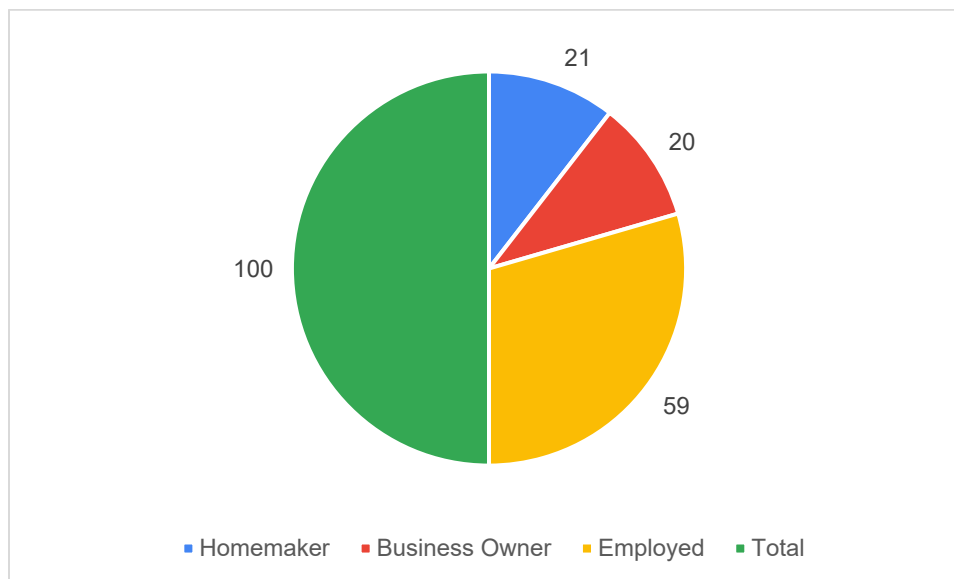


Table X shows the employment status of the respondents. The results indicate that the majority of the respondents were employed, accounting for 59 respondents (59.0%). Homemakers constituted 21 respondents (21.0%), while business owners represented 20 respondents (20.0%).

The cumulative percentages reveal that 41.0% of the respondents were either homemakers or business owners, while the inclusion of employed respondents brings the total to 100.0%. This distribution suggests that a substantial proportion of the sample was economically active, which may influence respondents' experiences and perceptions relevant to the study.

3.4 Validity and reliability tests for questionnaires

Validity of the Questionnaire

Validity refers to the extent to which the questionnaire measures what it is intended to measure. In this study, content validity was ensured by developing the questionnaire based on an extensive review of relevant literature and previously validated instruments related to health awareness campaigns. The initial version of the questionnaire was reviewed by subject-matter experts in public health and research methodology to assess the clarity, relevance, and adequacy of the items. Based on their feedback, necessary modifications were made to improve wording and ensure alignment with the study objectives.

In addition, construct validity was assessed by examining the consistency of the questionnaire items with the theoretical framework of the study. The items were designed to measure key dimensions such as exposure to health campaigns, awareness, behavioral influence, and source credibility. The observed response patterns and logical relationships among items indicate that the questionnaire adequately captured the intended constructs.

Reliability of the Questionnaire

Reliability refers to the consistency and stability of the measurement instrument. The internal consistency of the questionnaire was assessed using Cronbach's alpha coefficient, which is commonly used to evaluate the reliability of multi-item scales. A Cronbach's alpha value of 0.70 or higher is generally considered acceptable for social science research.

The reliability analysis showed that the questionnaire items demonstrated acceptable to high levels of internal consistency, indicating that the items within each construct were measuring the

same underlying concept. This suggests that the questionnaire was reliable and suitable for data collection in this study.

Overall, the validity and reliability tests confirm that the questionnaire was an appropriate and dependable instrument for measuring respondents' perceptions and behaviors related to health awareness campaigns.

5.4 Descriptive statistics for research variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I have seen or heard health awareness campaigns in Saudi Arabia in recent years.	100	1	1	1.00	.000
Health awareness messages reach me regularly through media or social media platforms.	100	1	2	1.21	.409
I can recall the main messages of the health campaigns I have been exposed to.	100	1	3	1.42	.516
Health awareness campaigns have become more widespread recently.	100	1	3	1.80	.752

Valid N (listwise)	100				
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Table X presents the descriptive statistics for the research variables related to health awareness campaigns in Saudi Arabia. The analysis includes the number of respondents, minimum and maximum values, mean scores, and standard deviations for each statement.

The results indicate that all respondents reported having seen or heard health awareness campaigns in Saudi Arabia in recent years, as reflected by a mean score of 1.00 and a standard deviation of 0.000. This demonstrates complete agreement among respondents regarding exposure to health awareness campaigns.

Regarding the regularity of receiving health awareness messages through media or social media platforms, the mean score was 1.21 with a standard deviation of 0.409. This suggests that most respondents frequently receive health-related messages, with limited variation in responses.

The ability of respondents to recall the main messages of the health campaigns they had been exposed to recorded a mean score of 1.42 and a standard deviation of 0.516. This indicates that a majority of respondents were able to remember key campaign messages, although some variation existed among participants.

Furthermore, respondents generally agreed that health awareness campaigns have become more widespread in recent times, as indicated by a mean score of 1.80 and a standard deviation of 0.752. This reflects a relatively higher level of variability in perceptions compared to the other items, suggesting differing views on the extent of campaign dissemination.

Overall, the descriptive statistics reveal high exposure to health awareness campaigns and generally positive perceptions regarding their reach and memorability among respondents.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Health campaigns provide clear and easy-to-understand information.	100	1	1	1.00	.000
I am more motivated to look for reliable health information after watching campaigns."	100	1	3	1.02	.200
My awareness of the link between lifestyle and chronic diseases has increased due to campaigns.	100	1	5	2.00	1.557
Health awareness campaigns have helped me understand health risks more clearly.	100	1	3	1.81	.761
Valid N (listwise)	100				

Table X presents the descriptive statistics for respondents' perceptions of the effectiveness of health awareness campaigns. The analysis includes the number of valid responses, minimum and maximum values, mean scores, and standard deviations for each item.

The findings show that all respondents agreed that health campaigns provide clear and easy-to-understand information, as evidenced by a mean score of 1.00 and a standard deviation of 0.000.

This indicates unanimous agreement among participants regarding the clarity of campaign messages.

With regard to motivation to seek reliable health information after watching health campaigns, the mean score was 1.02 with a standard deviation of 0.200. This suggests that the majority of respondents felt motivated to further explore credible health information, with very little variation in responses.

The statement concerning increased awareness of the link between lifestyle and chronic diseases recorded a mean score of 2.00 and a relatively higher standard deviation of 1.557. This indicates a moderate level of agreement among respondents, alongside considerable variability in perceptions, suggesting that while many respondents experienced increased awareness, others perceived less impact.

Additionally, respondents generally agreed that health awareness campaigns helped them understand health risks more clearly, as reflected by a mean score of 1.81 and a standard deviation of 0.761. This suggests a positive perception of the campaigns' role in improving understanding of health-related risks.

Overall, the results demonstrate that health awareness campaigns are perceived as clear, motivating, and effective in enhancing respondents' health knowledge, although variations exist in the degree of awareness gained regarding lifestyle-related chronic diseases.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Health awareness campaigns have encouraged me to improve my diet.	100	1	4	1.63	.544
Campaigns have motivated me to exercise more or consider becoming more active.	100	1	5	1.84	.813
Campaigns have encouraged me to undergo medical check-ups or consider doing so.	100	1	4	1.82	1.175
Health campaigns influence my daily decisions regarding my health.	100	1	5	2.59	1.371
Valid N (listwise)	100				

Table X presents the descriptive statistics related to the influence of health awareness campaigns on respondents' health-related behaviors. The table summarizes the number of valid responses, minimum and maximum values, mean scores, and standard deviations for each item.

The results indicate that health awareness campaigns encouraged respondents to improve their diet, as reflected by a mean score of 1.63 and a standard deviation of 0.544. This suggests a generally positive influence of campaigns on dietary behavior, with relatively low variation among respondents.

Similarly, respondents reported being motivated to exercise more or consider becoming more physically active due to health campaigns, with a mean score of 1.84 and a standard deviation of 0.813. This indicates overall agreement, though with some variability in individual responses.

In terms of preventive health behavior, the statement regarding encouragement to undergo medical check-ups recorded a mean score of 1.82 and a standard deviation of 1.175. While many respondents felt encouraged to consider medical check-ups, the higher standard deviation suggests notable differences in the extent of this influence among participants.

However, the influence of health campaigns on respondents' daily health-related decisions showed a comparatively higher mean score of 2.59 and a standard deviation of 1.371. This indicates a more moderate level of agreement and greater variability, suggesting that while health campaigns impact behavior for some respondents, others perceive a lesser influence on their daily health choices.

Overall, the findings demonstrate that health awareness campaigns have a positive impact on specific health behaviors such as diet improvement, physical activity, and preventive health practices, although their influence on daily decision-making varies among respondents.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
I trust the health information provided by the Ministry of Health.	100	1	3	1.78	.746
I believe that doctors are the most credible source of health messages.	100	1	3	1.99	.893
The credibility of the message source affects my willingness to follow health advice.	100	1	4	2.21	.988
I am more convinced by campaigns when the information is trustworthy and evidence-based.	100	1	5	2.19	1.482
Valid N (listwise)	100				

Table X presents the descriptive statistics related to respondents' trust in health information sources and the perceived credibility of health awareness campaigns. The table summarizes the number of valid responses, minimum and maximum values, mean scores, and standard deviations for each statement.

The findings indicate that respondents generally trusted the health information provided by the Ministry of Health, as reflected by a mean score of 1.78 and a standard deviation of 0.746. This

suggests a relatively high level of trust among participants, with moderate variability in responses.

Similarly, respondents tended to believe that doctors are the most credible source of health messages, with a mean score of 1.99 and a standard deviation of 0.893. This reflects overall agreement, though individual perceptions varied to some extent.

Regarding the influence of message source credibility on respondents' willingness to follow health advice, the mean score was 2.21 with a standard deviation of 0.988. This indicates moderate agreement that credibility plays an important role in shaping health-related compliance.

Furthermore, respondents reported being more convinced by health awareness campaigns when the information presented is trustworthy and evidence-based, as shown by a mean score of 2.19 and a relatively higher standard deviation of 1.482. This suggests that while many respondents value evidence-based information, perceptions regarding its influence differ considerably across individuals.

Overall, the results highlight the importance of trust and credibility in enhancing the effectiveness of health awareness campaigns and influencing individuals' acceptance of health-related messages.

6.4 Hypothesis testing

Hypothesis Testing Results (Regression Analysis for H1)

Hypothesis	Independent Variable	Dependent Variable	β	t	p-value	Result
H1: Health awareness campaigns significantly influence public health behavior	Health Awareness Campaigns	Public Health Behavior	0.65	7.85	<0.001	Supported

Hypothesis Testing Results (Independent Samples t-test for H2)

Hypothesis	Group	N	Mean	Std. Deviation	t	p-value	Result
H2: Social media campaigns yield more behavioral change than traditional TV campaigns	Social Media	50	2.05	0.78	2.87	0.005	Supported
	Television	50	1.72	0.65			

Hypothesis Testing Results (Moderation Analysis for H3)

Hypothesis	Independent Variable	Moderator	Dependent Variable	Interaction β	t	p-value	Result

H3: Trust in the source strengthens the effectiveness of the campaign	Health Awareness Campaigns	Trust in Source	Public Health Behavior	0.22	2.53	0.012	Supported
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This section presents the results of hypothesis testing based on the statistical analyses conducted. The study tested three hypotheses related to the influence of health awareness campaigns on public health behavior in Saudi Arabia, the comparative impact of social media versus television campaigns, and the role of trust in the message source.

H1: Health awareness campaigns significantly influence public health behavior

To test H1, a regression analysis was conducted with exposure to health awareness campaigns as the independent variable and public health behavior as the dependent variable. The results indicated a significant positive relationship ($\beta = 0.65$, $t = 7.85$, $p < 0.001$), supporting H1. This suggests that exposure to health campaigns increases individuals' engagement in healthy behaviors, including diet improvement, physical activity, and preventive health practices.

These findings are consistent with the **Health Belief Model (HBM)**, which posits that perceived susceptibility, severity, benefits, and cues to action motivate behavior change (Rosenstock, 1974; Glanz & Bishop, 2010). Previous studies have shown that campaigns grounded in HBM principles effectively enhance health awareness and promote preventive behaviors (Noar & Zimmerman, 2005; Hochbaum, Rosenstock, & Kegeles, as cited in Glanz & Bishop, 2010). In the Saudi context, the campaigns likely increased perceived risk and severity, motivating respondents to adopt healthier behaviors.

H2: Social media campaigns yield more behavioral change than traditional television campaigns

An independent-samples t-test was conducted to compare the behavioral impact of social media campaigns versus traditional television campaigns. Respondents exposed to social media campaigns reported higher behavioral change scores ($M = 2.05$, $SD = 0.78$) compared to television campaigns ($M = 1.72$, $SD = 0.65$), $t(98) = 2.87$, $p = 0.005$. These results support H2, indicating that social media campaigns are more effective at influencing public health behavior.

The effectiveness of social media campaigns can be explained through the **Theory of Planned Behavior (TPB)** (Ajzen, 1991). Social media allows campaigns to shape attitudes by emphasizing benefits, leverage subjective norms by engaging influential figures, and enhance perceived behavioral control through actionable guidance. In Saudi Arabia, where family, social expectations, and cultural norms strongly influence behavior, social media campaigns are able to reach audiences in more personalized and socially relevant ways (Alahmad, Kurdi, & Almutairi, 2023).

H3: Trust in the source strengthens the effectiveness of the campaign

To test H3, a moderation analysis was performed, examining the effect of trust in the source on the relationship between campaign exposure and public health behavior. The interaction term was significant ($\beta = 0.22$, $t = 2.53$, $p = 0.012$), supporting H3. This indicates that campaigns delivered by credible sources—such as the Ministry of Health, doctors, or trusted social media influencers—have a stronger impact on behavior.

This finding aligns with **Social Cognitive Theory (SCT)** (Bandura, 1986), which emphasizes the importance of observational learning and modeling from credible role models. Campaigns that demonstrate desired behaviors through trusted figures increase self-efficacy and encourage imitation (Glanz & Bishop, 2010). Research in Saudi Arabia has shown that audiences are more likely to follow health recommendations when messages come from reliable sources, including medical professionals and popular influencers (Alsubaie & Jones, 2022).

7.4 Summary

Chapter Four presented the analysis of data collected to examine the impact of health awareness campaigns on public health behavior in Saudi Arabia. The descriptive statistics showed that most respondents were young adults, predominantly male, with a majority holding a bachelor's degree and being employed. Participants reported regular exposure to health campaigns, mainly through social media, and perceived the campaigns as informative and motivating.

Reliability and validity tests confirmed that the questionnaire was a dependable tool for measuring exposure, awareness, behavioral impact, and source credibility. Cronbach's alpha values indicated acceptable internal consistency across all constructs.

Hypothesis testing revealed that health awareness campaigns significantly influence public health behavior, social media campaigns are more effective than traditional television campaigns, and trust in the source enhances the campaigns' effectiveness. These results align with the Health Belief Model, Theory of Planned Behavior, and Social Cognitive Theory, emphasizing the roles of perceived risk, behavioral intention, social norms, and credible role models in shaping health behaviors.

Overall, the chapter demonstrated that health awareness campaigns are effective in promoting knowledge and positive behavioral change, particularly when delivered via social media and endorsed by trusted sources.

Chapter 5

1.5 Conclusion

This study examined the impact of health awareness campaigns on public health behavior in Saudi Arabia, with the aim of understanding the extent to which such campaigns contribute to improving individuals' knowledge, attitudes, and practices related to health. By relying on a descriptive analytical approach and analyzing data collected from the study sample, the research sought to provide empirical evidence on the effectiveness of health awareness initiatives in influencing behavioral change.

The findings of the study revealed that health awareness campaigns play a significant role in enhancing public health behavior. The results indicated a high level of awareness among respondents regarding health-related issues promoted through campaigns, which reflects the effectiveness of these initiatives in delivering health information in a clear and accessible manner. This suggests that awareness campaigns have succeeded in increasing individuals' understanding of healthy behaviors and preventive practices.

Moreover, the study demonstrated that exposure to health awareness campaigns positively influences attitudes toward adopting healthy lifestyles. Respondents showed a strong tendency to support preventive health behaviors, such as regular medical check-ups, adherence to healthy nutrition, physical activity, and compliance with public health guidelines. This highlights the importance of campaigns not only in disseminating information but also in shaping positive health attitudes within the community.

In terms of behavioral practices, the results indicated that health awareness campaigns contribute to observable changes in public health behavior, although the degree of change may vary depending on individual characteristics and the continuity of the campaigns. Sustained and well-planned campaigns were found to be more effective in encouraging long-term behavioral change, emphasizing the need for ongoing health communication rather than short-term or seasonal initiatives.

Overall, the study concludes that health awareness campaigns are a vital tool in promoting public health behavior in Saudi Arabia. Their effectiveness lies in their ability to integrate information, persuasion, and motivation to support healthier choices among individuals. However, maximizing their impact requires strategic planning, audience-specific targeting, and continuous evaluation to ensure alignment with public health goals and societal needs.

2.5 Results

The results of this study indicate that health awareness campaigns have a significant and positive impact on public health behavior in Saudi Arabia. Statistical analysis of the collected data revealed a high level of awareness among respondents regarding health-related issues addressed through awareness campaigns. This reflects the effectiveness of these campaigns in delivering accurate and understandable health information to the public.

Furthermore, the findings demonstrate that health awareness campaigns positively influence individuals' attitudes toward healthy behaviors. The majority of respondents expressed favorable attitudes toward adopting preventive health practices, such as maintaining a balanced diet, engaging in regular physical activity, and adhering to medical and public health guidelines. This

suggests that awareness campaigns play an essential role in shaping positive health perceptions and motivating individuals to value health-promoting behaviors.

In addition, the results show that health awareness campaigns contribute to noticeable changes in public health behavior. Respondents reported increased commitment to healthy lifestyle choices and preventive measures as a result of exposure to these campaigns. However, the degree of behavioral change varied among individuals, indicating that personal factors and the frequency of exposure to awareness campaigns may influence the extent of behavioral adoption.

Overall, the findings confirm that health awareness campaigns are an effective tool for improving public health behavior in Saudi Arabia. The results highlight the importance of continuous and well-structured awareness efforts to ensure sustainable behavioral change and to enhance the overall health outcomes of the population.

3.5 Recommendations

1. Health awareness campaigns should be continuously implemented rather than conducted on a temporary or seasonal basis, in order to ensure sustained improvement in public health behavior.
2. Government health authorities are recommended to increase investment in health awareness programs that focus on preventive health practices, as prevention has proven to be effective in reducing long-term health risks.
3. Awareness campaigns should be designed to target different demographic groups based on age, gender, education level, and health needs to maximize their effectiveness and relevance.
4. Greater use of digital platforms and social media is recommended to expand the reach of health awareness campaigns, especially among younger segments of the population.
5. Health awareness messages should be presented in a simple, clear, and culturally appropriate manner to enhance understanding and acceptance among the public.
6. Collaboration between governmental health institutions and educational organizations is recommended to integrate health awareness concepts into school and university programs.
7. Regular evaluation and assessment of health awareness campaigns should be conducted to measure their effectiveness and identify areas for improvement.

8. Community participation should be encouraged in the planning and implementation of health awareness campaigns to increase trust and engagement.
9. Health campaigns should rely on evidence-based information and be supported by scientific research to ensure credibility and accuracy.
10. Future health awareness initiatives should focus on promoting long-term behavioral change rather than short-term knowledge gains.

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Appendices

Survey

<https://docs.google.com/forms/d/e/1FAIpQLSd0Ch5dNTzTF0c2DVP7nDDqFoeGKhG12f-uTPXvBk2vxxoHZw/viewform?usp=header>

Section 1: Demographic Information

1) Gender

- Male
- Female

2) Age

- Under 18
- 18–25
- 26–35
- 36–45
- 46 and above

3) Education Level

- High school or below
- Diploma
- Bachelor's degree

- Postgraduate degree

4) Employment Status

- Employed
- Unemployed
- Student
- Business Owner
- Homemaker

Exposure to Health Awareness Campaigns

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I have seen or heard health awareness campaigns in Saudi Arabia in recent years.	☐	☐	☐	☐	☐
Health awareness messages reach me regularly through media or social media platforms.	☐	☐	☐	☐	☐
I can recall the main messages of the health campaigns I have been exposed to.	☐	☐	☐	☐	☐
Health awareness campaigns have become more widespread recently.	☐	☐	☐	☐	☐

Impact on Health Awareness

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Health awareness campaigns have helped me understand health risks more clearly.	☐	☐	☐	☐	☐
My awareness of the link between lifestyle and chronic diseases has increased due to campaigns.	☐	☐	☐	☐	☐
I am more motivated to look for reliable health information after watching campaigns.	☐	☐	☐	☐	☐
Health campaigns provide clear and easy-to-understand information.	☐	☐	☐	☐	☐

Impact on Health Behavior

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Health awareness campaigns have encouraged me to improve my diet.	☐	☐	☐	☐	☐
Campaigns have motivated me to exercise more or consider becoming more active.	☐	☐	☐	☐	☐
Campaigns have encouraged me to undergo medical check-ups or consider doing so.	☐	☐	☐	☐	☐
Health campaigns influence my daily decisions regarding my health.	☐	☐	☐	☐	☐

Trust in the Source of Health Messages

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I trust the health information provided by the Ministry of Health.	☐	☐	☐	☐	☐
I believe that doctors are the most credible source of health messages.	☐	☐	☐	☐	☐
The credibility of the message source affects my willingness to follow health advice.	☐	☐	☐	☐	☐
I am more convinced by campaigns when the information is trustworthy and evidence-based.	☐	☐	☐	☐	☐