Sociology & Cultural Research Review (SCRR)
Available Online: https://scrrjournal.com
Print ISSN: 3007-3103 Online ISSN: 3007-3111
Platform & Workflow by: Open Journal Systems

Digital Platforms and Public Emotion: Mapping the Dissemination and Emotional Reception of Breast Cancer Awareness Campaigns in Urban Pakistan

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Abstract

This study investigates the role of digital platforms in disseminating breast cancer awareness messages and examines how urban Pakistani women emotionally receive and interpret these campaigns. With digital media increasingly central to public health communication, understanding the interplay between platform choice and audience emotional response is critical for campaign effectiveness. Drawing on in-depth qualitative interviews with 40 educated women from Islamabad and Rawalpindi, alongside content analysis of social media campaigns from 2022 to 2025, this research maps the primary digital channels such as Instagram, YouTube, WhatsApp, and Twitter that utilized for awareness dissemination. Findings reveal that while platforms like Instagram and YouTube dominate awareness efforts, the emotional reception of messages varies significantly based on platform affordances, language accessibility, and source credibility. Survivor narratives and emotionally charged content generated the strongest affective responses, yet message fatigue and cultural taboos frequently hindered deeper engagement. The study concludes that effective digital health communication must balance emotional appeal with actionable guidance, linguistic inclusivity, and sustained year-round presence. These findings offer critical insights for public health practitioners, NGOs, and policymakers seeking to optimize digital breast cancer awareness strategies in Pakistan and similar Global South contexts.

Keywords: *Digital platforms, Dissemination, Emotional reception, Breast cancer awareness, Pakistan, Social media, Public health communication*

1. Introduction

Over the past decade, the integration of digital technologies into public health communication has transformed how health information is disseminated and received, particularly in developing countries like Pakistan. Breast cancer remains one of the most pressing public health challenges in the country, with one in nine women developing the disease during her lifetime and approximately 40,000 deaths reported annually (Ullah, 2021). Despite these alarming statistics, awareness levels remain critically low, and diagnoses frequently occur at advanced stages, significantly reducing treatment efficacy and survival rates (Saeed, 2021). In response, governmental and non-governmental organizations have increasingly turned to digital platforms to disseminate breast cancer awareness messages. Platforms such as Instagram, YouTube, Facebook, WhatsApp, and Twitter have become primary vehicles for health communication, particularly among urban, educated populations (Nelson, 2016). Organizations including Pink Ribbon Pakistan, Shaukat Khanum Memorial Cancer Hospital and Research Centre, and Indus Hospital Karachi have leveraged these platforms to share educational content, survivor stories, and screening reminders, especially during Breast Cancer Awareness Month in October.

However, the effectiveness of these digital campaigns depends not merely on their dissemination but on how they are received, interpreted, and emotionally processed by target audiences. Public reception is a complex, culturally mediated process wherein individuals decode messages through personal beliefs, emotional states, educational backgrounds, and sociocultural norms (Hall, 1973). In the Pakistani context, where breast cancer discourse is often shrouded in stigma, modesty concerns, and gender-based communication barriers, understanding the emotional dimensions of reception becomes particularly critical (Banning, 2009; Ahmad, 2021). This study addresses a significant gap in the existing literature by examining both the dissemination channels and the emotional reception of digital breast cancer awareness campaigns in urban Pakistan. While prior research has focused on general awareness levels, health literacy, or institutional barriers (Khokher, 2011; Naqvi, 2018; Baig, 2019), limited empirical attention has been paid to how urban audiences emotionally engage with, interpret, and respond to digitally mediated health messages. Furthermore, the dynamic relationship between platform characteristics such as visual affordances, interactivity, and narrative style and audience emotional reactions remains under-explored in the Pakistani context.

This research is guided by two primary objectives: first, to determine the digital tools and platforms utilized in spreading breast cancer awareness messages in Pakistan's urban cities of Islamabad and Rawalpindi; and second, to understand how people react to, understand, and feel about digital breast cancer awareness campaigns. By mapping the intersection of dissemination practices and emotional reception, this study aims to provide actionable insights for health communication practitioners, policymakers, and NGOs seeking to design more effective, culturally attuned, and emotionally resonant digital health campaigns. From an anthropological perspective, this research contributes to understanding health communication as a two-way process shaped by both senders and receivers, wherein messages are not passively accepted but actively interpreted, negotiated, or resisted based on individual and cultural frameworks (Hall, 1980; Kreuter, 2004). In a rapidly digitizing society like Pakistan, where health communication is increasingly mediated by screens, understanding the emotional and interpretive dimensions of reception is both timely and necessary.

2. Literature Review

2.1 Breast Cancer Burden and Awareness in Pakistan

Breast cancer constitutes a major public health crisis in Pakistan, with incidence and mortality rates among the highest in Asia (Ullah, 2021). Studies indicate that cultural values, stigma, and gender norms significantly impede early detection and care-seeking behaviors. Qualitative research among breast cancer patients in Punjab revealed multi-layered sociocultural barriers, including fear of societal judgment, cultural modesty expectations, reliance on traditional or spiritual remedies, and reluctance to consult male healthcare practitioners (Saeed, 2021). These barriers frequently result in delayed diagnosis, with 89% of women in one study diagnosed at late stages and nearly 60% presenting with advanced disease.

Socioeconomic status and healthcare infrastructure constraints further compound these challenges. Baig et al. (2019) found that 88.8% of breast cancer patients at a Karachi tertiary care hospital delayed medical attention for over three months, with delay significantly

correlated with lower educational attainment and economic status. Similarly, lack of information, cost barriers, and poor health services were identified as primary drivers of late-stage diagnosis. Mammography and clinical care remain inaccessible, particularly in peri-urban settings, while initial healthcare encounters frequently involve indifference or substandard care, discouraging early consultation. Quantitative studies reveal substantial gaps in symptom awareness and preventive behavior. A large survey of 1,155 women in Lahore educational institutions found that only 27% demonstrated "good" knowledge of breast cancer, while just 59% had "fair" knowledge, despite 83.7% being under 30 years old and 60% having more than ten years of education (Khokher, 2011). Television was the most frequently cited information source, but it correlated with lower knowledge rates compared to formal educational campaigns. Similarly, a study of 381 medical and non-medical undergraduate students in Karachi reported that although 97% knew about breast cancer, only 65.4% were aware of its high prevalence in Pakistan. While 78% were aware of breast self-examination (BSE), only 43.8% knew how to perform it correctly, and a mere 24.9% practiced BSE regularly (Rasool, 2019). Notably, 44.4% cited social media as an information source, indicating the growing influence of online platforms.

In Islamabad, a cross-sectional survey of 1,000 female students revealed that while 67.5% were aware of breast cancer, knowledge of screening behaviors was alarmingly low: only 12.7% knew when to begin mammograms, 22.6% understood screening intervals, and just 33.2% knew where screening centers were located (Naqvi, 2018). This discrepancy between general awareness and actionable knowledge underscores the limitations of current awareness campaigns.

2.2 Digitalization of Health Communication in Pakistan

The rapid acceleration of smartphone penetration and mobile internet access in Pakistan has fundamentally transformed breast cancer awareness campaigns, positioning digital channels particularly social media as primary vehicles for health communication. A 2024 survey of 73 women in Sialkot revealed that 89% cited social media (WhatsApp, Facebook, Instagram, and YouTube) as their primary source of breast cancer information, surpassing conventional media like television, print, or radio (Nelson, 2016). The interactive and visual nature of social media enables broader outreach in urban and semi-urban areas where smartphone availability facilitates daily information consumption. Islamabad-based research by Qazi (2021), utilizing the Comprehensive Model of Information Seeking, found that perceived stigma related to breast cancer significantly influenced digital platform selection. Among 600 women surveyed, those experiencing greater social stigma preferred more personal platforms such as WhatsApp or Instagram stories for breast health information, while public forums and community events were less favored. Credibility of information, prior exposure to breast cancer within social circles, and perceived platform usefulness significantly shaped engagement behavior.

A quasi-experimental intervention among Karachi pharmacy students (n = 1,015) demonstrated the effectiveness of digital tools: lectures and video tutorials disseminated through institutional WhatsApp groups and social media significantly enhanced breast cancer knowledge (from approximately 51% to 96.7%), recognition of BSE technique (increasing to 94.8%), and screening intent (94.9%) (Mansoor, 2024). These findings highlight the potential of organized, visually oriented digital content in promoting both knowledge and preventive

behavioral dispositions among digitally literate young populations. However, a comparative cross-sectional survey from Peshawar (n = 600) reported that although nearly all women (96.7%) had been exposed to breast cancer information through social media, in-depth knowledge of screening processes remained low as only 43% could explain BSE, 12% identified clinical breast examination, and 24% were familiar with mammography guidelines (Qasim, 2024). This evidence reveals a critical gap: digital platforms disseminate awareness widely but often lack the depth or actionable guidance necessary to translate awareness into behavior change.

2.3 Platform-Specific Dynamics and Engagement

Audience reception and engagement are essential for evaluating health communication program effectiveness, particularly in digital environments. According to Hall's encoding/decoding model (1973), audiences do not passively receive messages but decode them through individual, cultural, and contextual filters. This framework has significantly influenced research on health message reception and provides a foundational lens for understanding how audiences interpret breast cancer awareness campaigns. In the digital media era, audience engagement extends beyond mere exposure to active participation through sharing, commenting, liking, and co-creating content (Sundar, 2013). Interactive engagement dramatically increases message diffusion and can enhance awareness, particularly for public health campaigns (Neiger, 2013). However, engagement is not uniform across demographic groups; factors such as age, education, internet literacy, and cultural context significantly shape how individuals respond to health messages (Viswanath, 2011).

Research by Park et al. (2016) on digital health campaigns demonstrated that narrative-based messages with emotional appeal generate greater engagement than information-only content. Videos featuring storytelling and emotive content outperform static images or text in health awareness campaigns, particularly among women. In Pakistan, audience reception studies remain limited but are emerging. Ahmed and colleagues (2022) examined youth engagement with digital health campaigns and found that interpersonal conversation and peer influence strongly mediate the reception of digital health messages. Reception also differs across platforms. Lovejoy and Saxton (2012) distinguish between information, community, and action-oriented messages on social media, each generating different levels of engagement. Community-based content, such as survivor stories or peer support groups, tends to trigger deeper, more sustained interaction than one-way informational posts. Importantly, campaigns that account for cultural relevance and language localization tend to be more successful in capturing attention and fostering engagement (Kreps, 2008). Culturally attuned communication enhances perceived trust and personal relevance, critical factors for engagement in preventive health campaigns.

2.4 Emotional Reception and Cultural Context

Women's perceptions of breast cancer campaigns in Pakistan are profoundly shaped by layers of cultural norms, communication practices, and systemic trust issues. A study at tertiary care facilities in Rawalpindi (Hisam, 2022) found that while 86% of women believed new breast lumps should be evaluated by doctors, only 63% correctly understood mammography as a diagnostic tool, and 36.6% were non-compliant with screening recommendations. Educational status and occupation were both highly correlated with compliance ($p < 0.001$), suggesting that socioeconomic status relates to trust and comprehension of clinical advice.

Research among women medical students at King Edward Medical University (Qasim S. H., 2020) indicated that even with prolonged medical education, help-seeking barriers remained significant. Embarrassment, fear of judgment, anxiety, and perceptions that accessing care would be shameful were commonly reported hindrances. Even among medically trained groups, institutional terminology and clinical presentation appeared impersonal and disconnected from sociocultural realities.

In Peshawar, interviews with breast cancer survivors (Nousherwani, 2021) revealed that women initially consulted spiritual healers or homeopaths. They explained how campaign messages—perceived as orthodox, oriented toward surgery, medical terminology, or clinical staging—seemed foreign and inappropriate in their immediate environments. Patients reported greater trust in dialogue with female caregivers or community members than in official communication channels, even those from well-established institutions. Gender is a central factor in constructing health communication, particularly in contexts like Pakistan where both access to health information and health-seeking behaviors are conditioned by sociocultural norms. Evidence indicates that breast cancer awareness campaign effectiveness is commonly mediated by the extent to which they respond to gendered health requirements, beliefs, and communication patterns (Starkey, 2022). Women in patriarchal cultures face additional barriers due to cultural taboos, reduced literacy, and limited digital autonomy. Gendered modesty norms and stigma associated with women's health restrict women from engaging with online breast health content (Jafree, 2023).

Research suggests that breast cancer campaigns tend to represent women in stereotypical ways that either empower or marginalize. Pakistani online breast cancer campaigns often focus on moral obligation and nurturing roles, framing early detection as a woman's responsibility to her family. While such messaging may be culturally relevant, it can reinforce gendered roles rather than promote autonomy. Intersectionality accounting for the additive effects of gender, class, age, and geography is crucial to developing inclusive campaigns. According to Baig and colleagues (2022), urban-biased breast cancer campaigns do not resonate with rural women due to linguistic, visual, and socioeconomic factors, with online messaging in English or Urdu excluding substantial female populations, especially those speaking regional languages.

2.5 Theoretical Framework: Reception Theory and Emotional Engagement

This study draws primarily on Reception Theory, as developed by Stuart Hall (1980) in his encoding/decoding model, which emphasizes that media messages are not passively received but actively interpreted by audiences based on their social, cultural, and individual contexts. Hall identifies three potential readings: the dominant (preferred) reading, where the intended meaning is accepted; the negotiated reading, where the message is partially accepted and partially resisted; and the oppositional reading, where the message is rejected or redefined.

This theoretical lens is especially applicable to analyzing how educated, urban Pakistani women consume breast cancer awareness information on digital media. As media-literate individuals, they are likely to interpret messages not simply at face value but through their academic exposure, experiential learning, and cultural frameworks. Reception Theory underpins the qualitative methodology of this study, enabling examination of how these women accept, reject, or reinterpret messages, what emotional or cognitive responses they experience, and how these interpretations inform their health attitudes. Moreover, this

theory provides a pathway to investigate heterogeneity within the sample: two women from the same background may interpret the same campaign differently depending on subtle differences in worldview, emotional state, or prior exposure to health education. The emotional dimension of reception fear, hope, empathy, guilt, or fatigue is central to understanding how campaigns translate into personal reflection, behavioral intention, or disengagement (Kreuter, 2004).

2.6 Research Gap

Despite the extensive literature on breast cancer awareness, health communication, and public health infrastructure in Pakistan, significant gaps remain regarding the interplay between digital dissemination platforms and the emotional reception of awareness campaigns, particularly in Islamabad and Rawalpindi. Prior research has predominantly focused on general awareness levels, health literacy, sociocultural taboos, and institutional barriers, but seldom addresses the lived experiences and complex emotional reactions of urban audiences who receive campaigns through digital and non-digital platforms. The existing body of work often treats audiences as passive recipients of information rather than active interpreters who filter messages through individual beliefs, emotional states, and social interactions. Moreover, while dissemination media like mass media and online platforms have been recognized, there is limited empirical research on how local populations use these tools, which platforms are most effective for reaching intended audiences, and how various demographic segments interpret and internalize breast cancer communications. This study addresses that gap by focusing on the reception and emotional interpretation of breast cancer awareness campaigns, exploring how urban citizens interact with, react to, and respond to the messages they encounter in a rapidly digitizing society.

3. Research Methodology

3.1 Research Paradigm

This study is grounded in the interpretivist paradigm, which emphasizes that reality is socially constructed and interpreted through shared meanings and experiences. This paradigm is appropriate for investigating personal attitudes, emotional reactions, and subjective interpretations of breast cancer awareness messages among urban women. It allows exploration of participants' everyday lives and understanding of how cultural, linguistic, and digital settings affect the uptake and reception of public health campaigns.

3.2 Research Design

The research employs a qualitative exploratory design to investigate the nature of public engagement with digital breast cancer awareness campaigns. The exploratory design provides flexibility and responsiveness to emerging insights during the research process. While primarily qualitative, the study incorporates supporting quantitative data from secondary sources, including annual breast cancer incidence statistics from Shaukat Khanum Memorial Cancer Hospital and Research Centre, the World Health Organization, and Pink Ribbon Pakistan, for contextual richness. The emphasis remains on comprehension of reception and interpretation rather than quantifying campaign coverage or awareness levels.

3.3 Methods of Research

The study utilized two major qualitative approaches: in-depth semi-structured interviews and content analysis of digital campaign material.

Participants and Sampling: Forty female respondents were chosen using purposive sampling. All participants reside in Islamabad and Rawalpindi, are between the ages of 20 and 30, and hold or are pursuing undergraduate, MPhil, or PhD degrees. Participants are regular users of digital platforms. This population was selected due to their propensity to access digital health information and their capacity to offer rich elaborations of its meaning.

Interviews: In-person interviews were conducted at universities, workplaces, and public cafes in Islamabad and Rawalpindi. The language of communication was English or Urdu, depending on participant preference. Each interview lasted approximately 20 minutes. Informed consent was obtained from all participants before recording responses manually. Interview questions explored participants' exposure to breast cancer awareness content on digital platforms, emotional responses, trust levels in different campaigns, content type preferences, and overall attitudes toward digital health campaigns. No audio recordings were made. The researcher recorded responses by hand to maintain accuracy and clarity, and data were anonymized to ensure privacy.

Content Analysis: Digital content was collected and analyzed from major social media platforms. Instagram pages analyzed included @pink.pakistan.official (Pink Pakistan Trust), @pinkribbon.org.pk (Pink Ribbon Pakistan), @shaukatkhanum (Shaukat Khanum Memorial Cancer Hospital and Research Centre), and @rozanpakistan (Rozan). Posts from Breast Cancer Awareness Month (October) 2022 to 2025, as well as thematic posts disseminated throughout the year, were included in the analysis. Twitter data were collected using relevant campaign hashtags including #BreastCancerAwareness, #PinktoberPakistan, #PinkRibbonPK, and #EarlyDetectionSavesLives. Content included tweets, infographics, survivor stories, and government notifications from verified handles such as @GovtofPunjabPK, @MoIB_Official, and @PinkRibbonPK. YouTube videos from official channels including "Shaukat Khanum Memorial Cancer Hospital and Research Centre," "Pink Ribbon Pakistan," and "Sehat Kahani" were analyzed. TikTok videos were searched using hashtags like #breastcancerawarenesspakistan, featuring content from healthcare workers, influencers, and survivors. All digital material was in the public domain and analyzed for framing, language use, emotional appeal, visual approach, and audience interaction.

3.4 Data Analysis

Data from interviews and online content were analyzed using thematic analysis and content analysis approaches. The goal was to understand how educated women in Islamabad and Rawalpindi interpret and emotionally respond to breast cancer awareness messages conveyed through digital platforms.

For interviews, thematic analysis involved identifying common patterns or themes among participants' responses. The procedure began with repeated readings of handwritten interview notes to familiarize with the data. Key points and recurring ideas were marked and coded. These codes were grouped into overarching themes such as platform preferences, emotional resonance through survivor stories, trust in institutional campaigns, cultural barriers, and participant recommendations. Each theme addressed the research objectives by revealing how participants made sense of digital messages, which platforms they used, and what content influenced them emotionally and cognitively.

For digital content, content analysis examined the language, visuals, narratives, and emotional tones of campaigns. This involved analyzing framing strategies whether campaigns

were fear-focused, encouraging, family-supportive, or empowerment-based and identifying who was featured (doctors, celebrities, survivors) and how this influenced trust and identification. Campaigns appealing to hopeful language and featuring survivor testimonies were noted as more emotionally engaging, while those lacking institutional affiliations were often received with suspicion.

3.5 Validity, Reliability, and Reflexivity

To ensure findings are reliable and valid, data collected from interviews were triangulated against social media content to ensure consistency across perspectives. Member checking was conducted by asking selected participants to review interpretations of their responses for accuracy. The researcher maintained a reflexive diary throughout the research process, recording personal thoughts, feelings, and potential biases that might influence data interpretation. This practice, known as reflexivity, helped maintain awareness of personal subjectivity and objectivity in interpreting findings.

3.6 Ethical Considerations

This research followed all ethical guidelines set by the Department of Anthropology at Quaid-i-Azam University. Ethical approval was obtained prior to commencing research. Participants were fully informed about the research purpose, how their responses would be used, and their right to withdraw at any time. Informed consent was obtained before recording responses. Participant names were replaced with pseudonyms to protect privacy. All written records were stored securely and not disseminated to others. Online materials used in the research were sourced exclusively from public pages, with all sources clearly cited. No private or personal social media data were utilized.

3.7 Limitations of the Study

The study was conducted exclusively in Islamabad and Rawalpindi, limiting generalizability to rural areas or smaller cities. Only educated women who use digital media were included, so findings cannot be generalized to those without social media access or lower educational levels. Some social media content may have been altered or deleted during the research period. Interview data rely on self-reporting, introducing potential social desirability bias. The demographic focus on students and young professionals limits representation of older or lower-education groups. Interviews were not audio-recorded, potentially losing gestural expressions or emotional tones. Content analysis was limited to messages from 2022 to 2025, potentially excluding earlier impactful campaigns.

4. Findings

4.1 Respondent Profiles and Urban Setting

Understanding participants' backgrounds is essential to interpreting their responses regarding how breast cancer awareness campaigns are perceived and received. This section details their demographic profiles, educational levels, and urban settings—factors that significantly influence engagement with public health messages, particularly online breast cancer campaigns. Findings are based on in-depth interviews with 40 respondents from Islamabad and Rawalpindi, chosen for their high literacy levels, digital connectivity, and the proactive presence of medical institutions and digital media initiatives.

Demographic Overview: Most participants were female university students aged 19 to 29, with a few comprising mothers, PhD aspirants, and professionals in marketing, teaching, and healthcare. Of the 40 participants, approximately 30 were undergraduate students, 8 were

master's students, and 3 were PhD students. Several were actively engaged in community-based health programs or university-level health organizations. This group represents a relatively well-educated and health-conscious population, providing a solid foundation for examining their engagement with breast cancer awareness campaigns in both online and offline spaces.

"I'm a fourth-year MBBS student. We had a community health week where we discussed breast cancer, too. It was my first serious encounter with the topic," said a 23-year-old respondent.

"I'm pursuing my PhD in Sociology, and although my research is on a different subject, I've been to sessions on women's health in seminars," said another respondent from Quaid-i-Azam University.

The gender composition was predominantly female, as planned considering the subject matter. Their fields of study varied across social sciences, health sciences, biological sciences, and business studies, but a common thread was exposure to digital media spaces and health-related information.

Urban and Semi-Urban Location: Participants represented a broad range of urban and semi-urban environments in Islamabad and Rawalpindi, which affected not only exposure to information but also the social and cultural contexts they navigated. Residential areas included G-7, G-10, G-11, F-10, I-8, I-10, Ghauri Town, Pakistan Town, Bari Imam, PWD Society in Islamabad, and Golra Mor, Satellite Town, Saddar, Chaklala Scheme III, Bahria Town (Phases 4 and 7), and Gulraiz in Rawalpindi. Several respondents also lived in older, more congested areas such as Raja Bazaar, Dhok Hassu, and Khayaban-e-Sir Syed, which had strong community bonding but comparatively fewer health outreach programs.

These neighborhoods differ in infrastructure and urban development. Most respondents lived in permanent, well-built houses, typically in nuclear family settings, though a few reported joint family environments. Urban housing conditions were generally favorable with reliable electricity, gas, clean water, and internet availability, enabling frequent interaction with digital media content. Most had daily internet access via smartphones and laptops to access health-related content on platforms like Instagram, YouTube, Twitter, and WhatsApp.

"I stay in Satellite Town with my family. Our home has everything, and we receive good internet speed, so I watch a lot of health content on Instagram," claimed a 21-year-old BBA student.

"In Ghauri Town, although the locality is still in its growth stage, I have my own Wi-Fi, and I watch Shaukat Khanum's Instagram for medical awareness," added a BBA degree respondent.

Although digital accessibility pervaded all sectors, subtle variations in campaign exposure emerged across sectors. Those from organized sectors such as F-10 or Bahria Town enjoyed greater exposure to well-organized community gatherings and high-quality online content compared to those in crowded neighborhoods, who relied more on television commercials, social media platforms, SMS alerts, or WhatsApp forwards as primary sources of public health information.

Community Involvement and Social Openness: Participants belonged to socially progressive settings, typically attending universities and workplaces where open discussion of women's health was encouraged. Many had participated in awareness drives, health camps, or digital storytelling. A majority had attended sessions conducted by university health societies or

community programs by organizations like Pink Ribbon Pakistan or Shaukat Khanum Memorial Cancer Hospital. The social climate in Rawalpindi and Islamabad permitted increased openness regarding women's health concerns, although remaining taboos and reservations were reported, especially when talking to elderly family members. Nonetheless, all participants agreed that education was an important factor in enabling them to better comprehend and discuss breast cancer without difficulty.

"I wouldn't have been aware of the signs and screening if it wasn't for the Pink Day at our university last year," said one BSc student at Bahria University.

"Despite having a conservative home, my friends and teachers openly discuss breast cancer, which has made me overcome my shyness," informed a second-year psychology student from Khayaban-e-Sir Syed.

The urban, educated, and digitally savvy profile of respondents positioned them well to evaluate and react to digital breast cancer awareness campaigns, providing insights that captured both the potential and limits of such campaigns in urban and semi-urban areas of Pakistan.

4.2 Digital Platforms for Dissemination: Mapping Primary Exposure Sources

Respondents identified several major channels through which they initially encountered breast cancer awareness material. These sources ranged from formal to informal, from institutional to digital and interpersonal media, indicating that awareness messages are communicated through structured and unstructured channels, particularly in Islamabad and Rawalpindi.

University Projects and Seminars: One of the most frequently cited sources of first exposure was university-level activities. Many participants remembered engaging in or attending on-campus breast cancer awareness events as part of formal academic programs or extracurricular clubs. These included awareness walks, information stalls, educational seminars, and informative lectures organized by university health clubs or community service clubs. Such activities were frequently organized during Breast Cancer Awareness Month (October) and featured oncologists, medical students, or representatives from health-oriented NGOs. The participatory nature of these workshops left lasting impressions.

"At my university, there was a week-long campaign. There were posters, workshops, and guest lectures that made me aware of the risk factors and screening process. It was the first time I realized how crucial self-examination is."

Social Media Platforms: Social media was the predominant means of exposure, with Instagram, YouTube, and Twitter most commonly named. Respondents reported viewing posts, videos, infographics, and survivor testimonials presented by individuals, public health institutions, and verified pages. Social media facilitated constant exposure and greater access to information. Many cited Instagram accounts like Pink Ribbon Pakistan, Shaukat Khanum Memorial Cancer Hospital Official, and health blog content creators. Posts featured the familiar pink ribbon symbol and hashtags like #BreastCancerAwareness, #ThinkPink, or #EarlyDetectionSavesLives. The narrative and visual tone on Instagram and YouTube was perceived as more personal and interactive than conventional versions.

"I regularly follow Instagram pages like Pink Ribbon Pakistan and Shaukat Khanum's official page. They post awareness content on a daily basis. I love their survivor stories and

educational posts, this makes the message more personal. I also saw a short documentary on YouTube with a woman describing her journey, it really affected me."

Television Broadcasts: While digital media dominated among young respondents, television remained significant, particularly during national campaigns. Respondents noticed advertisements, public service announcements, and talk shows about breast cancer on mainstream Pakistani channels, especially in October. TV shows typically included doctors, survivors, and celebrities, helping grab attention and build confidence. Some recalled longer segments on breakfast shows or health specials addressing early symptoms, prevention tips, and urging regular screening. Although television lacks interactivity, its audience base remains prevalent in city homes, particularly among family members not active online.

"I recall seeing an episode on television during Breast Cancer Month where a woman doctor demonstrated how to conduct a self-exam. It was very educational, and my mother and I sat through it together."

Mobile Call Awareness Messages: A significantly under-emphasized yet prevalent means of dissemination was pre-recorded voice messages played automatically when calling mobile numbers during October. This state-led campaign, delivered in Urdu, is designed to reach large numbers regardless of social media, television, or healthcare center use. Several respondents cited this "tape" or call tune as initial contact with breast cancer information. Typically featuring a female voice advising regular checkups and early detection importance, the brevity of the message (usually under 30 seconds) precludes intensive engagement, but its repetitive and inescapable nature makes it unique in public health communication.

"I didn't see any awareness message on TV or YouTube, but I do recall hearing the message each time I called a person. It stuck in my mind 'mamooli si ganth bhi cancer ho sakti hai' [even a small lump can be cancer]."

Health Alerts through SMS: Another major channel was receiving health-related SMS messages from government health departments or mobile network operators. These brief, official messages in Urdu or Roman Urdu impart vital facts, reminders, or references to further reading. They tend to arrive around October or overlap with national health weeks. Respondents recognized SMS messaging as one of the only ways perceived as personal and to the point, particularly when digital literacy or ongoing internet use may be limited.

"I got an SMS with a message that October is Breast Cancer Awareness Month and women need to get themselves checked. I forwarded it to my mother—it was brief, but it made us consider it."

Community and NGO Events: Several interviewees mentioned exposure through local events organized by NGOs and welfare groups. Pink Ribbon Pakistan was frequently cited for its concerted efforts to organize awareness walks, university seminars, and public events in parks or marketplaces. Activities included free health check-ups, interactive quizzes, poster competitions, and pink installations. These events yielded more concrete and memorable experiences than passive media consumption.

"There was a breast cancer awareness walk in F-9 Park held by Pink Ribbon. My friends and I went, and we were given brochures and had the opportunity to meet with medical students and speak about early detection. It opened my eyes to how many young people are working towards this cause."

Family and Social Circles: Personal relationships also accounted for exposure. Several respondents learned about breast cancer through family talk, especially when a family member had been affected. Others learned from friends who had participated in awareness drives or medical camps. Although less organized, these informal sources were often highly emotionally powerful. Familiarity with someone impacted or having a trusted person discuss the issue made participants more serious about the subject.

"My close friend also volunteered for an NGO working on women's health. She briefed me on breast cancer and how its prevalence is rising in Pakistan. That is when I began taking notice of awareness posts and researching about it."

4.3 Emotional Reception and Interpretation of Campaign Messages

This section examines how respondents emotionally react to, internalize, and interpret online breast cancer awareness messages. Based on interviews with 40 Islamabad and Rawalpindi respondents, the analysis considers tone and emotional resonance, clarity and language accessibility, credibility and source trust, cultural barriers, and the role of educational background.

Tone and Emotional Resonance: The most striking discovery was how respondents interpreted the emotional tone of digital messages. Most described content as effectively charged and somber, using terms like "touching," "disturbing," and "moving." These responses were strongest when content involved personal testimonies or pictorial elements showing suffering, survival, or loss. Campaigns utilizing real-life testimonials were particularly effective.

"I saw a short clip of a woman reading about how she discovered a lump and what followed. It wasn't only information, it was personal. You sensed her fear and courage. It makes you pause and reflect."

"When a post discusses a person's journey through chemotherapy or mastectomy, you understand it's not only a medical condition. It impacts lives and families."

Another respondent noted how music and visual presentation contribute to the emotional mood: "Pink visuals, soothing background music, and slow narrating—it sets the tone. Even if scrolling, it holds your attention." Surprisingly, few respondents spoke of content that was neutral or friendly-toned. The overall preference was for messages that found balance between seriousness and optimism, avoiding overly technical or emotionally bland posts.

Clarity, Language, and Accessibility: Most respondents appreciated the clarity of digital breast cancer content but noted some limitations. Many commended the accessibility of visual aids, simplified language, and inclusion of Urdu in some entries. Others complained about medical terminology that might isolate non-medical audiences.

"Some reels were very clear, particularly those that used infographics or step-by-step images. But others included too much technical jargon, such as 'malignant,' 'biopsy,' or 'lumpectomy'—not everybody knows what they mean."

Others emphasized language choice: "If the message is in simple Urdu or a regional language, it is easier for people to understand. But if it's all only in Urdu, some people who are not familiar with Urdu may ignore it." The most easily consumed information included graphical diagrams describing symptoms, self-exam instructions, or myth-busting slides dispelling common misconceptions.

Credibility of Message and Source: A vast majority attested to believing in breast cancer awareness material encountered online, particularly from reputable sources. Organizations such as Shaukat Khanum Memorial Cancer Hospital, Pink Ribbon Pakistan, Indus Hospital, Aga Khan University Hospital, and the Ministry of National Health Services were most frequently mentioned.

"If I look at something that has been shared by Shaukat Khanum or posted by a doctor, I trust it. I know they will have the right information," offered a 24-year-old MPhil student.

The significance of the blue verification tick on Instagram or Twitter was also cited as a trust indicator. Students trusted university-arranged seminars and events more than messages by lesser-known individuals. "My university hosted a lecture with a female doctor. That's when I first really listened. Real people with real facts were speaking to us," said a 21-year-old marketing student. This degree of trust in institutions correlated with respondents being more likely to act on information, posting it online, bookmarking entries, or attending events.

The Weight of Stigma and Cultural Barriers: Despite content accessibility and credibility, one of the most prevalent themes was the ongoing existence of cultural taboos surrounding open breast cancer discussion. Several participants mentioned that while they were comfortable discussing the subject in academic or peer settings, older relatives or individuals from conservative communities remained hesitant.

"I can discuss this with my friends or in university classes, but nobody does in the house. My mom believes that these things are not 'shareable topics.'"

Some male relatives were either disinterested or uncomfortable when the topic arose. "My brother told me it's 'a woman's issue' and that we don't have to speak about it so much. But in truth, men can also help raise awareness," said one respondent. This hesitancy constrains reach and diminishes message effectiveness, regardless of quality and good intentions.

Emotional Impact and Personal Reflection: Emotional impact frequently translated into profound personal introspection. Participants reported that messages triggered sympathy, fear, inspiration, and even guilt.

"Sometimes I feel guilty for not taking it seriously before. Now, when I see the stories, I feel the need to check myself and talk to my cousins and friends."

"There's fear, yes. But also strength. Seeing survivors smile or talk about recovery makes you believe in early detection."

Interestingly, some respondents indicated message fatigue or emotional overload: "When I see too many serious posts in one go, I scroll past them. It's too heavy sometimes." This suggests emotion is central to engagement, but excessive emotional content without variation or balance results in disengagement.

The Role of Educational Background: All participants attested that education played a crucial role in how they received and interpreted breast cancer awareness material. More educated respondents, particularly those with science or medical backgrounds, felt more confident discussing symptoms, deciphering complex information, and persuading others to seek checkups.

"In my MBBS batch, we not only interpret the posts, but we also analyze them. We see if the advice being offered is correct. I don't think an illiterate person would be able to do that," a 24-year-old medical student said.

Most respondents pointed out that illiterate individuals, particularly older relatives or rural communities, may miss these messages due to language, jargon, or lack of internet literacy. "My Nani (grandmother) doesn't have a phone. She would have no idea what a mammogram is. She only gets to know if somebody tells her directly in person." This highlights the digital divide and the need for multiple communication forms, including offline community seminars or health workers.

4.4 Barriers to Effective Communication and Participant Recommendations

This theme identifies barriers to online campaign effectiveness and recommendations offered by respondents. Drawing on interviews, the chapter identifies structural, cultural, and linguistic barriers alongside practical suggestions for improving message impact.

Outreach Gaps and Inclusivity: Though all respondents had constant digital media access, most noted that breast cancer awareness messages do not always reach less fortunate or non-literate groups. Interviewees expressed concern about the digital divide, mentioning that people lacking smartphones or internet connectivity especially senior family members and rural communities are typically excluded.

"My grandmother doesn't own a telephone, so she wouldn't have any idea unless someone explained it to her in person," said a 21-year-old undergraduate.

Participants stressed that urban campaigns must consider inclusive formats beyond social media, distributing messages through public meetings, doctor visits, and text alerts for the platform-less.

Cultural Taboos and Social Sensitivities: Cultural shame remains a prominent obstacle. Most interviewees reported that breast health discussions remain taboo within households, particularly with elderly male family members.

"Even if I read a useful video or message, I would not feel at ease showing it to my father or brother," explained a woman in her mid-twenties.

This silence stems as much from social unease as refusal to oppose campaigns. Stigma attached to women's bodies and "private" diseases results in awareness not necessarily leading to open debate or behavior change.

Language and Content Complexity: One key learning was the influence of language on message accessibility. Most respondents appreciated that campaigns were presented in Urdu, making them more accessible to the common person. Urdu content made them feel more included, emotionally connected, and relatable, particularly among those not fluent in English or regional languages.

"Urdu makes it more real and easy to understand. Not everyone can understand medical English," said a 22-year-old non-medical respondent.

However, even in Urdu, some campaigns employed technical medical jargon without explanations. Respondents advised simplifying language further, whether in Urdu or English, and using common words with supporting visuals.

Digital Saturation and Message Fatigue: Some interviewees noted that while digital platforms are valuable, repetition without creativity triggers disengagement. Repeated exposure to the same image or slogan such as the pink ribbon may become familiar to the point of being scrolled past.

"Sometimes it feels like the same post is being shared over and over again. It loses its effect after a while," explained a respondent.

They pointed out that while visual consistency is helpful, creative narration, local example illustrations, and fresh figures are necessary to maintain engagement.

Temporality and Absence of Follow-up Action: A key finding concerned the temporality of campaign impacts. Most participants identified when and where they saw campaigns—mostly in October—but acknowledged effects wore off shortly thereafter. Several described campaigns as "aik baar ka izhar" (a one-time display) without follow-up or development throughout the year. One respondent mentioned becoming more careful after a morning show in Urdu where a female doctor explained early detection importance, yet she never performed a self-exam or visited a health clinic. Another noted pink decorations and Urdu posters at her university, but no accompanying workshop, seminar, or Q&A session.

"Yeh sirf ek display tha, koi asal maloomat nahi mili" (This was just a display, I didn't get any real information).

Respondents suggested a deficiency of frequent reinforcement. Since messages were significantly less visible after October, they did not enter daily health thinking. Many indicated that recurring reminders in social circles, hostel common rooms, university buildings, or class WhatsApp groups could have generated urgency or normalcy regarding breast health. Without such frequency, campaigns remained sporadic events rather than enduring health interventions.

Participant Recommendations: Respondents offered several practical recommendations:

- **Awareness Programs at Grassroots Level:** Workshops at college campuses, community centers, and places of worship to reach those not covered by online content.
- **Regional Languages-based Simplified Campaigns:** Using Punjabi, Sindhi, Pashto, and Balochi alongside Urdu, with visuals and voice-overs, to reach far and wide.
- **Utilization of Survivor Stories:** Storytelling formats, particularly survivor testimonials, make the disease more human and less frightening.
- **Free Screening and Medical Assistance:** Government and NGO-sponsored free screening camps, particularly in collaboration with hospitals like Shaukat Khanum or Indus Hospital.
- **Integration of Education in Schools and Universities:** Incorporating breast cancer awareness into school health classes and college orientations.
- **Engaging Men in Awareness Efforts:** Campaigns featuring male physicians or celebrities endorsing breast health to help lessen stigma.
- **Collaborations with Influencers and Local Content Creators:** Local influencers, especially those speaking Urdu and regional languages, could help normalize conversations.

4.5 Content Analysis of Breast Cancer Awareness Campaigns (2022-2025)

Language, Tone, and Visual Composition: Breast cancer awareness campaigns use predominantly Urdu and Roman Urdu, with English for occasional subtitles or medical precision, crossing age and education gaps. Pink remains the preponderant color, reinforcing the global symbol. Pink Ribbon Pakistan's 2023 Instagram campaign featured emotional survivor accounts with text reading: "Aap bhi apne liye waqt nikaliye. Har saal aik screening zaroor karwayiay. Early detection saves lives" (Take time for yourself too. Get screened every year. Early detection saves lives).

Shaukat Khanum's standout 2024 campaign, "Tum tanha nahi ho" (You are not alone), combined emotional appeals with educational segments by female physicians demonstrating self-examination. Indus Hospital Karachi's 2023 Pinktober campaign, "Roshan Kal, Sehatmand Aurat" (A brighter tomorrow, a healthier woman), carried similar emotional weight with visuals of mother-daughter duos. Sehat Kahani created Instagram story series in 2024 titled "Kya aap breast cancer ke ishaarat janti hain?" (Do you know the signs of breast cancer?), featuring infographics showing symptoms.

Public Engagement and Genuine Remarks: Public reactions were highly engaging. On Pink Ribbon Pakistan's 2024 post "Har aurat ke pas apne aap ka khayal rakhne ka haq hai" (Every woman has the right to care for herself), one user commented: "Main is post ke bad hospital gayi aur screening karwayi" (I visited the hospital for screening after reading this post). On Shaukat Khanum's YouTube video "Apni Jaan Pehchaniye as a Breast Cancer Awareness Series," a user said: "Doctor sahiba ne itne asaan lafzon mein bataya, ab mujhe khud test karna aa gaya" (The doctor explained it in such simple words that now I myself feel like doing a self-test).

However, not all feedback was positive. One user responded to an October 2023 Pink Ribbon post: "Har saal wahi pink ribbon aur slogans. Kuch naya layein, kuch zindagi se judi baatein karein" (Same pink ribbon and slogans every year. Bring something new, talk about real life). Others demanded increased male engagement: "Awareness sirf aurton ke liye kyun? Mard bhi is cause mein awaaz uthayein" (Why awareness only for women? Men also should raise voice for this cause).

Message Delivery Patterns and Shortcomings: Campaigns narrating personal stories, particularly survivor accounts, proved most effective in winning trust and support. Platform trust impacted reception: Shaukat Khanum's and Indus Hospital's posts were regarded as credible due to strong institutional identities. Language accessibility gaps surfaced, with users suggesting even simpler language and more pictorial explanations.

Public Input and Feedback Reflected in Comments: Users left suggestions for extending beyond October: "Sirf October mein hi kyu yaad aata hai? Awareness roz honi chahiye" (Why remember only in October? Awareness should be daily). Others emphasized free screenings: "Awareness ke sath free tests bhi hone chahiyein. Sirf batain nahi, amal bhi ho" (There should be free tests along with awareness. Not just talk, action too). A 2023 Pink Ribbon campaign elicited mixed responses, with some users commending the message but others complaining about non-actionability: "Sahi kaha, lekin screening kahan hoti hai free mein? Info bhi dein" (You are right but where do we find free screening? Provide that info too).

5. Discussion

5.1 Answering the Research Questions

This research investigated how digital platforms promote breast cancer awareness in Pakistan and how messages are received and interpreted. Based on interviews with 40 participants and content analysis of campaigns from 2022 to 2025, the study comprehensively answers its research questions.

Digital Platforms and Tools: Instagram and YouTube are the most dominant awareness tools. Participants identified pages like Pink Ribbon Pakistan, Shaukat Khanum Memorial Cancer Hospital, and other health content creators. Television and university seminars also exert strong influence, especially in October. However, year-round efforts remain limited,

indicating that digital media now sits at the core of public health messaging among young, urban social media users.

Perception of Credibility and Utility: Participants showed high confidence in campaigns, linking credibility to institutions including Shaukat Khanum, Pink Ribbon Pakistan, and Indus Hospital Karachi. Urdu or Urdu-English combinations enhanced relatability and comprehensibility. The emotional and serious tone made messages impactful. However, repeated visuals and slogans sometimes made content feel predictable, and some messages were too medical or technical. Despite this, most participants found campaigns necessary, well-crafted, and carrying important messages.

Reactions Across Backgrounds: Participants across education levels agreed campaigns were necessary and effective. However, men tended to disengage or dismiss messages, feeling they did not apply to them. Female respondents reported not openly discussing issues with male relatives due to fear or cultural reasons. Older family members or rural relatives lacked information due to limited internet access or digital literacy, indicating that while digital platforms work well in urban spaces, large populations remain out of reach.

Communication Challenges: Several obstacles were noted. The digital divide excludes older people and disadvantaged areas lacking smartphones or social media access. Cultural taboo persists even in educated households, with respondents feeling embarrassed discussing breast cancer, especially with male relatives. Lack of available services like free screenings or consultations lessens real-life campaign impact. Without actionable resources to back up awareness, people don't know what to do after receiving messages. These barriers highlight the need for more inclusive, culturally attuned, and service-connected messaging.

Long-term Effectiveness: While campaigns have familiarized the public with "breast cancer" as a label, long-term health behavior effects are confined. Most participants had been exposed, usually during Breast Cancer Awareness Month, but effects never lasted beyond fleeting notice. Messages were too generic, lacking depth to initiate regular self-tests, screening visits, or consultations. Campaigns were considered informative announcements rather than active health interventions. Without systematic follow-ups, tailored advice, or regular year-round visibility, messages do not become part of daily health habits. This confirms earlier research noting that awareness without action-producing processes tends to produce passive acknowledgment rather than preventive health actions.

5.2 Research Significance

This research has significant implications for medical anthropology, digital public health communication, media studies, and gendered health discourses in South Asia. By focusing on everyday user voices and responses to digital breast cancer awareness campaigns, the research enhances theoretical knowledge on how public health narratives are received, interpreted, and occasionally resisted online.

First, the study fills a large gap in South Asian research by providing localized information on online public health messaging, where empirical ethnographically grounded studies remain scarce. By bringing together public opinion, online participation, and cultural processes, it enriches understanding of how awareness campaigns work not only as information devices but as power-conditioned discursive practices influenced by language, trust, and cultural codes. Second, this study provides a model for interdisciplinary research analyzing public health communication through discourse, reception, and feminist media studies. The

inclusion of perspectives across educational levels, occupations, and age groups offers opportunities for comparative or longitudinal studies, particularly concerning rural-urban reactions or campaigns for other diseases.

Third, the research has methodological significance. By combining content analysis of social media campaigns with qualitative interviews, this research demonstrates the usability of mixed qualitative methods for researching public health phenomena, replicable in subsequent studies in Pakistan and other low- and middle-income countries where health communication strategies evolve toward digital channels. Fourth, the research has implications for critical digital health scholarship, where attention has long focused on Western audiences. By bringing Pakistani digital media ecosystems and reception of hashtags, visuals, influencers, and comments to light, it enhances international literature on media localization and health communication.

5.3 Practical Implications

The empirical implications are far-reaching for healthcare professionals, NGOs, government health departments, digital media groups, and campaign planners engaged in breast cancer awareness or other health campaigns in Pakistan.

First, the study brings out the imperative of localizing digital awareness content. Messages resonated when employing plain Urdu, culturally recognized symbols such as the pink ribbon, and local catchphrases. Health communication teams should emphasize localization of language, imagery, and tone for maximum understanding and resonance. Second, individuals trust campaigns linked with reputable bodies like Shaukat Khanum Memorial Cancer Hospital, Pink Ribbon Pakistan, or the Government of Pakistan. Collaborative campaigns with known and trusted organizations are more likely to be believed and followed. Strategic collaborations among media organizations and healthcare institutions can enhance credibility and reach. Third, emotional investment is key. Most respondents were emotionally moved by survivor stories and personal accounts. Public health campaigns must target not only statistics and cautions but also emotionally evocative narratives from survivors, caregivers, and doctors, making campaign material more human and less technical. Fourth, men's minimal contribution to breast cancer discussions requires engagement. As respondents pointed out that men dismiss or disregard campaigns, it is necessary to engage men practically as educated benefactors. Campaign images may include brothers, sons, or husbands standing with patients, and awareness activities may address males at workplaces or universities.

Fifth, integrated health services must accompany awareness messaging. Campaigns cannot fulfill their purpose if audiences lack access to free screenings, diagnostic consultations, or follow-up information. Health departments and NGOs should combine digital messaging with mobile clinics, pop-up screening events, and referral systems for low-cost treatment. Sixth, social media reactions and engagement trends serve as feedback loops for campaign designers. Content creators must actively monitor feedback and criticism to modify upcoming campaigns in real time, clarifying misconceptions or answering frequently asked questions. Two-way digital communication strategies need prioritization. Finally, universities, colleges, and workplaces are effective dissemination sites. Incorporating breast health education into corporate wellness policy, student organizations, or employee training programs ensures messages are not only heard but retained and ingested.

5.4 Recommendations

Drawing on findings, several critical recommendations can reinforce breast cancer awareness campaign design, dissemination, and impact in Pakistan's digital public health arena.

- Year-round presence is needed. Most efforts currently focus only on Breast Cancer Awareness Month in October. Government agencies, NGOs, and private health organizations must undertake constant awareness messaging through all months using planned online campaigns, community mobilization, and inclusion in public health planners.
- Digital messages should be more linguistically and culturally inclusive. While Urdu is the most commonly accessible language, populations with lower literacy or plural ethnic backgrounds would benefit from regional language translations, audio-visual material, and voice-presented delivery (e.g., WhatsApp audio messages or radio). Localized, simpler language and reduced medical terminology would enable larger societal understanding of early screening, self-examination, and accessible healthcare services.
- Men and young people must be engaged. Men distance themselves because breast cancer is seen as a "women's issue," yet they have important roles as husbands, brothers, sons, and household decision-makers. Campaigns must incorporate messaging focusing on men's involvement in supporting early detection and stigma-free environments. Schools and colleges should incorporate breast cancer education into health awareness seminars or gender studies modules.
- Every awareness campaign must be supported by tangible health services like free screening camps, doctor consultations, and psychological counseling. Digital platforms create awareness but cannot replace physical services. Collaboration between campaign planners and hospitals or diagnostic centers needs facilitation. Government mobile units can be sent to urban slums or backward areas so awareness translates into action.
- Public interaction and feedback must be integrated into campaign strategy. Social media postings provide excellent real-time feedback about audience opinions—whether they trust, identify with, or misinterpret messages. Health organizations must pay attention to these reactions and adjust style, tone, and content accordingly. Creating feedback avenues such as polls, questions, and opinions with physicians, or confidential forms, can foster participation and build trust.
- Action must be taken to minimize stigma around breast health conversations. Most participants were shy or uncomfortable discussing breast cancer with male relatives or in public. Media outlets, celebrities, and influencers must be engaged to end silence and normalize breast cancer as an open public health conversation, not a secret of shame. Storytelling, survivor accounts, and public campaigns challenging myths and taboos can reduce public attitudes.
- Involvement of schools, workplaces, and mosques cannot be ignored. These public gathering places provide avenues for mass learning. Incorporating breast cancer awareness into induction courses, employee health programs, or Jumma khutbas can sensitize a wider population, particularly those not active online. Overall, an inclusive,

emotionally engaging, multi-platform, service-supported strategy is required to shift breast cancer awareness campaigns from digital content to life-saving interventions.

6. Conclusion

This study aimed to understand how digital platforms foster public health awareness by examining the dissemination and emotional reception of breast cancer awareness campaigns in Pakistan's urban areas. Based on in-depth interviews with 40 respondents and content analysis of campaigns shared between 2022 and 2025, the study provides rich insight into how messages are shared, received, believed, and emotionally processed within the online environment. The evidence confirms that social media platforms notably Instagram, YouTube, and institutional websites have taken central roles in promoting breast cancer awareness in cities such as Islamabad and Rawalpindi. Participants were not only aware of large-scale campaigns by Pink Ribbon Pakistan and Shaukat Khanum but were emotionally affected and knowledgeable about them. Most participants expressed confidence in messages, particularly when linked with trustworthy institutions and delivered through plain, understandable terms. The emotional tone of messages typically serious or empathetic increased their effect, with audiences more responsive to personal narratives and survivor stories.

However, the research also identified significant obstacles. Not everyone, even in urban areas, has equal digital access or the literacy skills to grasp medical information. Stigma, cultural taboo, and communication secrecy within families, particularly involving men, continue to hinder open breast cancer discussion. Furthermore, while messages are disseminated extensively, they often lack actionable guidance where to get screening, how to self-screen, or where to access free medical consultations. This study validates that breast cancer awareness in Pakistan is advancing but remains uneven. Campaigns are emotionally evocative but must become more actionable and participatory. Men, older adults, poorer populations, and those without regular internet access remain on the peripheries of these dialogues. A public health message is only as good as its reach and its capacity to inspire actual behavior change. The research contributes not only to scholarship on digital health communication but also provides actionable recommendations for health professionals, campaign creators, and government agencies. By integrating participant feedback, actual campaign analysis, and a grounded understanding of urban Pakistani audiences, the study offers a model for enhancing breast cancer awareness campaign effectiveness. Ultimately, digitalization of health communication is a force to be reckoned with only when it closes the divide between awareness and access, knowledge and compassion, message and behavior. Breast cancer campaigns in Pakistan can save lives, but only if they continue to evolve based on people's feedback, emotional intelligence, and social sensitivity.

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