

PERCEPTIONS OF THE 2025 CHOLERA VACCINATION COMMUNICATION CAMPAIGN IN JUBA, SOUTH SUDAN

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF JOURNALISM, MEDIA AND
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Abstract

The purpose of this study was to examine the perceptions of the 2025 cholera vaccination campaign in Juba, South Sudan, focusing on how credibility, emotional appeals, logical reasoning, social proof, and message framing influenced community attitudes. Guided by the Health Belief Model and Elaboration Likelihood Model, the study adopted a qualitative interpretivist approach. Data was collected through semi-structured interviews with 20 participants, primarily community members, health workers, and youth leaders in Juba. Findings revealed that source credibility was a major factor, with participants prioritizing trust in local leaders over mass media. Emotional appeals created urgency through fear of disease and hope for protection, while logical reasoning depended on audience health literacy. Social proof was essential for mobilization, and gain-framed messages were generally more persuasive. However, misinformation and delayed communication remained significant obstacles. The study concludes that future campaigns should prioritize "lead-time" for sensitization and utilize familiar community figures to build long-term vaccine trust.

Keywords: perceptions, cholera vaccination, communication campaigns, message framing, social proof, South Sudan, qualitative research

Declaration

I, Taban Caroline, hereby declare that this is my original work, is not plagiarized, and has never been submitted to any other institution of learning for any award.

A handwritten signature in black ink, appearing to read 'Caroline', with a stylized, angular flourish above the name.

Signed: _____

Date: 4 March 2026

Taban Caroline

(S23M54/019)

Approval

This is to certify that this dissertation has been prepared by Taban Caroline and submitted to Uganda Christian University. This dissertation is submitted with the approval of the University Supervisor.

Supervisor

Name: Professor James Kiwanuka-Tondo



Signature: _____ **Date:** _13/03/26_

Dedication

I humbly dedicate this work to the Almighty God for His grace, faithfulness, and the strength He has granted me throughout this academic journey.

With deep gratitude, I also dedicate this dissertation to my family and friends — especially Lucia Jovani, Kule Elia Emilio, Beatrice Aloyo, and the rest of my family members who have raised, supported, and shaped me into the person I am today. Your impact on my life and scholarship cannot be fully expressed in words. Thank you for walking with me through this journey.

May God bless you abundantly.

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Chapter one: Introduction

1.0 Introduction

This chapter provides an overview of the study, beginning with the background and problem of vaccine acceptance in fragile contexts such as South Sudan. It outlines the study's purpose, objectives, research questions, scope, and justification, and presents the conceptual and theoretical frameworks that guide the research.

1.1 Background to the Study

Vaccination is widely recognized as one of the most cost-effective public health interventions globally, significantly reducing morbidity and mortality associated with infectious diseases (World Health Organization [WHO], 2023). Vaccines have contributed to the near-eradication of diseases such as polio and the dramatic reduction of measles, diphtheria, and tetanus cases worldwide (Andre et al., 2008). Despite these successes, vaccine hesitancy—defined as the delay in acceptance or refusal of vaccines despite availability—remains a critical barrier to achieving optimal immunization coverage (MacDonald, 2015). Hesitancy arises from a complex interplay of factors, including mistrust in institutions, misinformation, socio-cultural beliefs, fear of side effects, and structural barriers to healthcare access (Larson et al., 2015; West, Green, & O'Neill, 2023).

In sub-Saharan Africa, vaccination coverage often falls below global targets, with fragile states exhibiting the lowest rates. While the WHO recommends a minimum coverage of 90% for routine immunization, several countries report significantly lower uptake, particularly during emergency vaccination campaigns (GAVI, 2024; WHO, 2024). Challenges in this region include logistical constraints, conflict and insecurity, weak health systems, and limited health literacy. These factors not only reduce access to vaccines but also amplify distrust and misinformation, particularly during outbreaks of diseases such as cholera, measles, and polio (Agwu et al., 2019; UNICEF, 2021). In countries such as Nigeria,

engaging religious leaders significantly improved polio vaccine coverage, illustrating the power of social proof and cultural alignment in vaccine acceptance (UNICEF, 2016).

Focusing on East Africa, countries such as Uganda, Kenya, and South Sudan face similar but context-specific challenges. For example, community engagement and sensitization are critical for successful vaccination campaigns. In Uganda, house-to-house education by community health workers increased uptake for measles and human papillomavirus (HPV) vaccines, demonstrating the importance of locally trusted messengers in addressing hesitancy (Ndejjo et al., 2023). Despite regional efforts to improve coverage, outbreaks continue to occur, highlighting gaps in both vaccine access and communication strategies (WHO, 2022). These challenges suggest that effective vaccination campaigns depend not only on vaccine availability but also on trusted, contextually relevant communication.

In South Sudan, immunization coverage is particularly low due to a combination of fragile governance, ongoing conflict, and weak health infrastructure (GAVI, 2024). Cholera vaccination campaigns, including the 2025 campaign in Juba City, have been implemented to mitigate the risk of outbreaks during the rainy season, when contaminated water sources increase transmission (UNICEF, 2025). These campaigns have faced multiple challenges, including fragmented messaging, weak coordination among stakeholders, limited cultural adaptation, and community skepticism (UNICEF, 2025; WHO, 2024).

The 2025 cholera vaccination communication campaign in Juba was implemented alongside the Oral Cholera Vaccine (OCV) campaign by the Ministry of Health, with support from the World Health Organization (WHO), UNICEF, and partner organizations (WHO, 2025; UNICEF, 2025; Ministry of Health, South Sudan, 2025). The campaign aimed to increase awareness of cholera risks, encourage vaccine uptake, address misinformation, and promote protective health behaviors among residents (WHO, 2025). Communication

messages emphasized the benefits and safety of vaccination, protection of individuals and families from cholera, and the importance of community participation in preventing outbreaks (UNICEF, 2025). These messages were disseminated through multiple communication channels, including radio broadcasts, community dialogues, house-to-house sensitization, public announcements, health workers, community leaders, youth volunteers, and interpersonal communication activities. They were delivered in English, Arabic, and locally understood languages to ensure accessibility and comprehension among diverse population groups in Juba (WHO, 2025; UNICEF, 2025). By combining mass media and community-based engagement strategies, the campaign sought to reach diverse audiences and improve public understanding and acceptance of cholera vaccination (Ministry of Health, South Sudan, 2025; UNICEF, 2025).

Examining how different population groups perceive these campaigns is essential for improving communication strategies and vaccine uptake. Understanding the perspectives of healthcare workers, community leaders, and adult community members (18+) can inform approaches that enhance trust, relevance, and acceptance of vaccination. Social dynamics, including the influence of trusted leaders and peers, as well as message framing (gain-framed versus loss-framed appeals), play an important role in shaping participation and addressing hesitancy (Hornik, 2002; Kiwanuka-Tondo, Hamilton, & Jameson, 2009). A deeper understanding of these factors in the South Sudanese context can support the development of culturally sensitive and evidence-informed communication strategies that improve vaccine acceptance and reduce preventable disease burden.

1.2 Statement of the Problem

Existing scholarship on vaccination communication predominantly focuses on high-income or stable countries where health systems function effectively, and trust in institutions is comparatively higher (Snyder et al., 2004; Kiwanuka-Tondo, Hamilton, & Jameson, 2009).

In contrast, fragile states such as South Sudan are underrepresented in empirical research examining how communication campaigns are perceived rather than measured for quantitative effect.

Many studies adopt a positivist paradigm, emphasizing measurable outcomes of campaigns, but this approach fails to capture the lived experiences, interpretations, and perceptions of communities in fragile contexts (Palinkas et al., 2015; Smith et al., 2022). Moreover, most campaigns rely on top-down messaging models with minimal adaptation to local socio-cultural, historical, and linguistic contexts (West et al., 2023).

Although models such as the Health Belief Model (HBM) and Elaboration Likelihood Model (ELM) have been widely applied in health communication, there is limited understanding of how they function in low-literacy, collectivist, and trauma-affected populations. Similarly, few studies examine how different persuasive strategies—credibility, emotional appeal, logical arguments, social proof, and message framing—are interpreted by healthcare workers, community leaders, and adult community members in fragile settings.

This study addresses these gaps by adopting an interpretivist qualitative approach to examine perceptions of the 2025 cholera vaccination communication campaign in Juba, South Sudan. By focusing on what key informants perceive, understand, and prioritize, the study provides insights to improve culturally responsive and effective communication strategies.

1.3 Purpose

The purpose of this study is to examine perceptions of the 2025 cholera vaccination communication campaigns in Juba, South Sudan, focusing on how persuasive elements such as ethos (credibility), pathos (emotional appeal), logos (logical reasoning), social proof, and message framing influence community understanding and attitudes toward vaccination.

1.4 Objective

The specific objectives of the study were:

1. To describe perceptions of credibility-based messaging (ethos), emotional appeals (pathos), and logical arguments (logos) in the 2025 cholera vaccination campaign in Juba.
2. To understand how social proof, including the influence of trusted community figures, is perceived in shaping attitudes regarding cholera vaccination.
3. To examine how message framing (gain vs. loss) is perceived in the 2025 cholera vaccination campaign in Juba.

1.5 Research Questions

1. How are credibility-based messaging (ethos), emotional appeals (pathos), and logical arguments (logos) perceived by stakeholders in the 2025 cholera vaccination campaign in Juba?
2. How is social proof, including the influence of trusted community figures, perceived in shaping attitudes regarding cholera vaccination?
3. How is message framing (gain vs. loss) perceived by stakeholders in the 2025 cholera vaccination campaign in Juba?

1.6 Scope of the Study

This study focuses on Juba, South Sudan, and covers the period of the 2025 cholera vaccination campaign. It targets adults aged 18 and above, with three groups of key informants: healthcare workers (5–8), community leaders (5–8), and community members (5–9), totaling 15–25 participants.

The study examines perceptions of communication strategies employed during the campaign, including ethos, pathos, logos, social proof, and message framing, to understand how these strategies are interpreted and experienced by different community stakeholders.

1.7 Justification

Understanding perceptions of vaccination campaigns is essential for designing communication strategies that are contextually relevant and culturally sensitive. This study provides insight into how different groups interpret messages and respond to persuasive strategies, which can inform future public health interventions and policy decisions in fragile contexts such as South Sudan.

1.8 Significance

The findings of this study provide critical insights for public health professionals and policymakers in South Sudan and similar settings, informing the design of more effective vaccination campaigns. Offering insights into how communication strategies are interpreted by healthcare workers, community leaders, and community members. The findings make a contribution to the field by informing policymakers, health authorities, and NGOs on culturally adapted approaches to improve cholera vaccine acceptance. The study also contributes to our theoretical understanding of the HBM and ELM in low-literacy and conflict-affected populations.

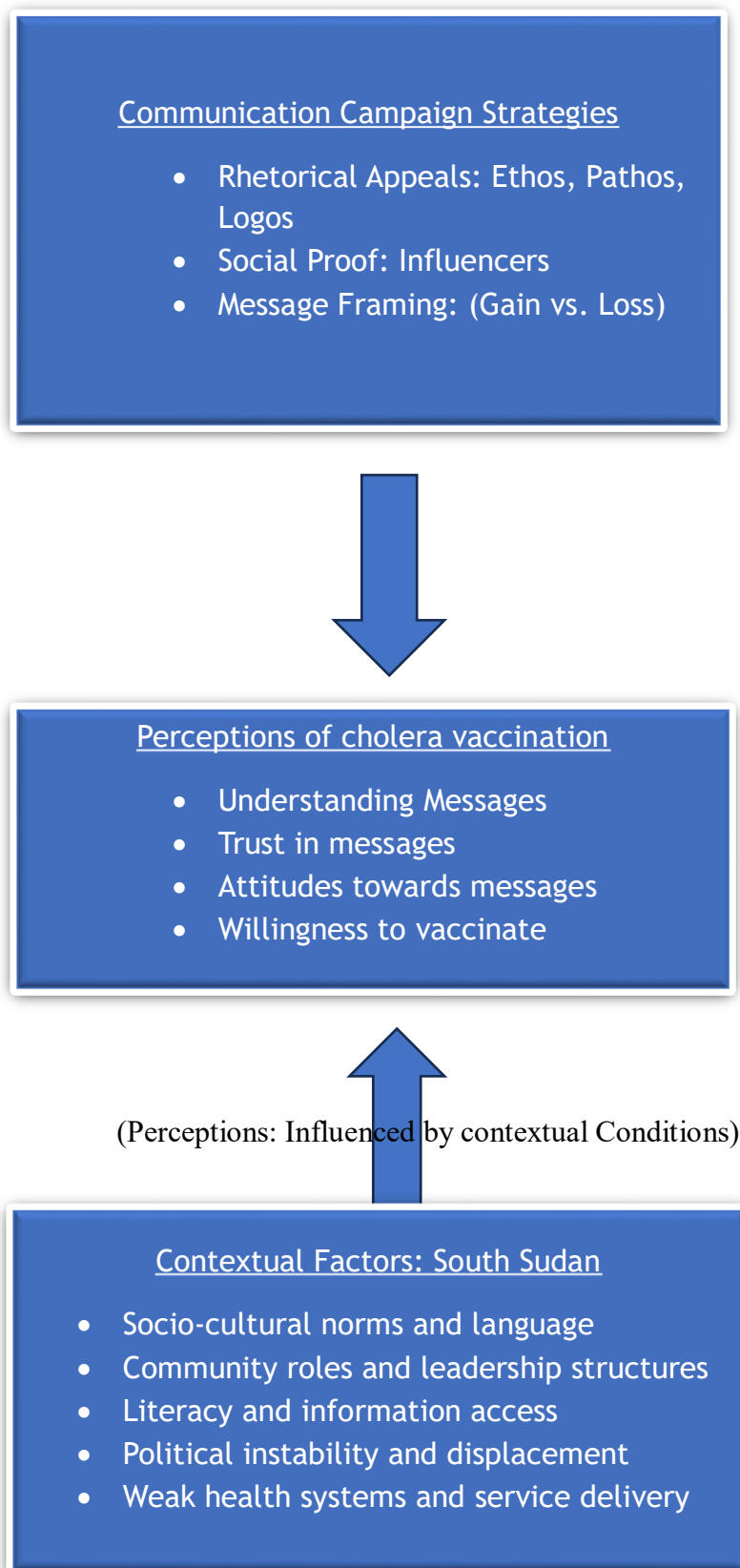
1.9 Conceptual Framework

This section presents a conceptual framework for understanding how communication campaigns influence vaccine acceptance in fragile contexts such as South Sudan. Focusing on relationships among key concepts rather than measurable variables, it examines how rhetorical strategies interact with social proof and message framing to shape perceptions of cholera vaccination. In fragile contexts, messages are interpreted through cultural, social, and historical experiences, making community trust both a mediator and an outcome of communication effectiveness (Kiwanuka-Tondo, Hamilton, & Jameson, 2009).

1.9.1 Concept Framework

Figure 1.1

Illustration of the relationship between the concepts of the study



1.9.2 Discussion of Concept

This study is based on the understanding that communication campaign strategies influence how individuals perceive vaccination messages, which in turn shapes their willingness to accept or hesitate toward vaccines. The framework highlights three main concepts: communication campaign strategies, perceptions on cholera vaccination, and contextual factors.

Communication campaign strategies. Communication campaign strategies are used to convey vaccination messages. These include credibility-based messaging (ethos), emotional appeals (pathos), logical arguments (logos), social proof, and message framing. These strategies shape how messages are received, understood, and trusted. For example, messages from respected healthcare workers or community leaders can enhance credibility, emotional appeals can evoke empathy or concern, logical arguments provide clear reasoning, social proof encourages acceptance through the influence of trusted figures, and framing emphasizes either the benefits of vaccination or the risks of non-vaccination.

Perceptions of cholera vaccination. These reflect how participants interpret, trust, and respond to campaign messages. These perceptions include understanding, attitudes, and intentions regarding vaccination. They capture how people make sense of the messages within their own experiences, showing whether they are willing, hesitant, or resistant to vaccinate. In this study, perceptions are explored qualitatively through participants' lived experiences rather than being measured quantitatively.

Contextual factors. These encompass the social, cultural, and environmental conditions that influence how messages are interpreted. In Juba, these include socio-cultural norms, language, literacy levels, and the roles of community leaders. Broader conditions, such as political instability, population displacement, and weak health systems, also shape

trust and access to information. Together, these factors illustrate the complex environment in which cholera vaccination communication occurs.

Overall, the framework emphasizes that effective vaccination communication depends not only on the design of messages but also on how individuals perceive and interpret them within their social, cultural, and political realities. Exploring these concepts provides insights for developing culturally responsive and contextually appropriate health communication strategies.

1.10 Theoretical Framework

This study employs an integrated theoretical framework combining the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM) to explore how communication campaigns shape perceptions of cholera vaccination in South Sudan. The two models complement each other: HBM explains the cognitive factors influencing vaccine-related decision-making, while ELM provides insights into how persuasive communication strategies—such as credibility, emotional appeals, social proof, and message framing—affect how individuals interpret and respond to vaccination messages.

1.10.1 Health Belief Model (HBM)

The HBM, developed by Rosenstock (1950), is widely applied in health communication to explain individual health behaviors. It posits that the likelihood of engaging in preventive behavior, such as vaccination, is influenced by six key constructs:

Perceived susceptibility refers to an individual's belief about their risk of contracting a disease, while perceived severity pertains to the belief regarding the seriousness of the disease's consequences. Perceived benefits involve the belief that vaccination is effective in reducing risk, whereas perceived barriers encompass obstacles such as fear of side effects, myths, misinformation, or logistical constraints. Cues to action include external prompts,

such as media campaigns, reminders, or endorsements from community leaders, and self-efficacy represents the confidence in one's ability to access and receive the vaccine.

HBM provides a foundation for understanding why individuals may hesitate or accept vaccination and how campaigns can address these perceptions.

1.10.2 Elaboration Likelihood Model (ELM)

The ELM, developed by Petty and Cacioppo (1986), explains how people process persuasive messages through two routes. The central route involves careful consideration of message content, such as logical arguments, facts, and evidence (logos), while the peripheral route relies on cues such as the credibility of the messenger (ethos), emotional appeals (pathos), social influence, or message framing.

ELM is relevant to this study because it helps to understand how communication strategies are interpreted. Credibility-based messaging functions as a peripheral cue when trusted figures endorse vaccination. Emotional appeals activate affective responses, logical arguments encourage careful consideration, social proof demonstrates acceptance through peers or leaders, and message framing emphasizes either the benefits of vaccination (gain framing) or the risks of non-vaccination (loss framing). This conceptual lens allows the study to examine how campaign messages influence participants' perceptions and interpretations in a fragile context.

1.10.3 Integrating HBM and ELM

Together, the HBM and ELM offer a comprehensive framework. HBM explains the cognitive motivations behind vaccine decision-making—why individuals may resist or accept vaccination based on risk perceptions, barriers, and benefits. While ELM explains the communication mechanisms—how rhetorical appeals, social proof, and framing influence persuasion and attitude change.

In a fragile context like South Sudan, where mistrust, misinformation, and limited access to services are common, this integrated framework allows the study to explore both cognitive motivations and communication mechanisms that shape perceptions of cholera vaccination.

Although not explicitly framed as an encoding and decoding theory, the Elaboration Likelihood Model (ELM) inherently captures the communication process between message producers and receivers. In this study, encoding is reflected in how health authorities and partners design and deliver vaccination messages using rhetorical appeals, social proof, and framing strategies, while decoding is reflected in how participants interpret, evaluate, and respond to these messages. However, the study remains primarily grounded in perception and message interpretation rather than adopting a full reception theory framework.

1.10.4 Application to Vaccination Communication Campaigns

The integrated HBM and ELM framework guides the exploration of how communication strategies in the 2025 cholera vaccination campaign are perceived and interpreted by participants in Juba.

From the HBM perspective, the study examines participants' perceptions of susceptibility, severity, benefits, barriers, cues to action, and self-efficacy in relation to vaccination. This helps understand why individuals may accept, hesitate, or reject vaccination based on their beliefs and experiences.

From the ELM perspective, the study explores how participants interpret credibility-based messaging (ethos), emotional appeals (pathos), logical arguments (logos), social proof, and message framing. This reveals how persuasive elements influence their understanding, trust, and attitudes toward vaccination messages.

By combining these perspectives, the study can capture both the cognitive motivations behind vaccination decisions and the mechanisms through which communication strategies

shape perceptions. This conceptual application ensures that interviews focus on participants' lived experiences and interpretations within the social and contextual realities of Juba.

1.11 Conclusion

The integration of the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM) provide a comprehensive lens for this study. While the HBM explains the cognitive factors influencing vaccine acceptance, the ELM highlights how persuasive strategies such as ethos, pathos, logos, social proof, and message framing shape decision-making. Together, they capture both the motivations behind health behavior and the mechanisms of persuasion, ensuring the framework aligns with the study's objectives and context.

Chapter two: Literature review

2.0 Introduction

This chapter reviews existing literature on communication campaigns and the drivers of vaccine hesitancy and acceptance, with a focus on fragile contexts such as South Sudan. It begins with the theoretical foundations guiding this study—the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM)—and their global applications. The chapter then narrows to African and East African contexts before examining evidence from South Sudan and looking at the 2025 cholera vaccination campaign in Juba City in context. Finally, it synthesizes rhetorical appeals, message framing, and social proof, identifying key gaps that justify this research.

2.1 Theoretical Foundations of Health Communication Campaigns

Health communication campaigns are deliberate, systematic efforts to influence health behaviors through targeted messages delivered across multiple communication channels (Atkin & Rice, 2013). Their effectiveness often depends on strategies grounded in behavioral and communication theories, which provide structured explanations for why individuals adopt—or resist—health behaviors (Larson et al., 2014; WHO, 2024). Two widely applied frameworks in global health campaigns are the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM). HBM conceptualizes behavior in terms of cognitive perceptions—susceptibility, severity, benefits, and barriers—moderated by cues to action and self-efficacy (Rosenstock, 1974; Champion & Skinner, 2008). ELM complements HBM by explaining persuasion through two routes: the central route, where audiences evaluate rational arguments, and the peripheral route, which relies on cues such as credibility, emotional appeals, and social influence (Petty & Cacioppo, 1986; Hornik et al., 2018).

Cross-cultural evidence suggests that both models are broadly relevant, although effectiveness is influenced by contextual factors such as literacy, trust in authorities, and

sociocultural norms (Larson et al., 2014; West et al., 2023). While many campaigns globally have successfully applied these frameworks, challenges remain: peripheral-route persuasion may be short-lived without reinforcement, central-route strategies require sufficient literacy and motivation, and top-down approaches often fail to accommodate local contexts (Smith et al., 2022). Integrating HBM and ELM provides a conceptual lens to explore both cognitive perceptions and the ways communication strategies are interpreted, offering a strong foundation for analyzing vaccination communication in fragile contexts.

2.1.1 Health Belief Model (HBM)

The Health Belief Model (HBM), first developed by Rosenstock (1974), posits that health behavior is shaped by individuals' perceptions of susceptibility (risk of contracting a disease), severity (seriousness of the consequences), benefits (effectiveness of a recommended action), and barriers (obstacles to taking action). These factors are moderated by cues to action (such as reminders or health campaigns) and self-efficacy (confidence in one's ability to act) (Champion & Skinner, 2008). In vaccination campaigns, the HBM predicts that people are more likely to accept vaccines if they feel personally at risk of the disease, perceive it as serious, believe vaccination is effective, and face minimal barriers to access (Janz & Becker, 1984; Rosenstock et al., 1988).

The Health Belief Model (HBM) provides structured constructs for designing health messages and has been widely applied across preventive health interventions, including vaccination campaigns (Champion & Skinner, 2008; Carpenter, 2010). It is particularly useful for identifying and reducing practical and psychological barriers, helping campaign designers anticipate reasons for hesitancy (Rosenstock et al., 1988).

Despite these strengths, the HBM has several limitations. The model assumes decision-making is individual, thereby underestimating collective and communal influences that are common in African and other collectivist contexts (Kiwauka-Tondo & Snyder,

2002). It also tends to overemphasize rational cognition, neglecting the role of emotions, trust, and narrative persuasion in shaping vaccine decisions (Larson et al., 2014).

Furthermore, its effectiveness is limited in contexts where mistrust of institutions undermines acceptance of official health messaging (Smith et al., 2022).

2.1.2 Elaboration Likelihood Model (ELM)

The Elaboration Likelihood Model (ELM), developed by Petty and Cacioppo (1986), explains how persuasion occurs via two distinct routes: the central route, where individuals carefully evaluate factual arguments, and the peripheral route, where they rely on cues such as source credibility, emotional resonance, or social influence. This dual-process framework has been widely applied in health communication to understand why some messages generate deep, lasting behavior change, while others produce only temporary shifts (Petty & Cacioppo, 1986; Petty & Wegener, 1999).

ELM offers several strengths for designing health communication campaigns. It explains why audiences respond differently to rational versus emotional appeals, providing a comprehensive framework for tailoring messages to diverse audiences (Petty & Cacioppo, 1986). The model also justifies the use of ethos (credibility), pathos (emotion), and social proof in vaccine campaigns, which research has shown to be particularly persuasive in shaping attitudes toward vaccination (Hornik et al., 2018; O’Keefe, 2016). Moreover, ELM is flexible and adaptable for populations with mixed literacy levels, allowing communicators to combine central and peripheral routes to reach audiences effectively (Petty & Wegener, 1999).

However, the model also has limitations. Central-route persuasion requires high literacy and strong motivation, conditions often lacking in fragile and conflict-affected contexts (Chaiken & Trope, 1999; Petty & Cacioppo, 1986). Peripheral-route persuasion, while accessible, may produce only short-term effects without repeated reinforcement,

making it less reliable for sustained behavior change (O’Keefe, 2016). Finally, ELM does not address structural barriers to vaccine uptake—such as availability, affordability, or health infrastructure—which lie outside the scope of persuasion-based communication (Hornik et al., 2018; Noar, 2006).

2.1.3 Synthesis of Theories

The Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM) provide complementary insights for understanding vaccine communication in fragile contexts. HBM emphasizes cognitive motivations, highlighting how perceptions of susceptibility, severity, benefits, and barriers shape how individuals interpret vaccination messages (Rosenstock, 1974; Champion & Skinner, 2008). Numerous studies have applied HBM to vaccination behavior across diverse contexts and diseases. For example, Brewer et al. (2007) demonstrated that perceived susceptibility and severity significantly predicted influenza vaccination uptake among older adults in the United States. In HPV vaccination research, Gerend and Shepherd (2012) found that perceived benefits and personal risk strongly influenced vaccine intentions among adolescents.

During the COVID-19 pandemic, Wong et al. (2021) showed that perceived benefits and self-efficacy were strong predictors of vaccine acceptance in Hong Kong, while Ilesanmi et al. (2021) found that perceived barriers, including fears of side effects, reduced willingness to vaccinate in Nigeria. Similarly, Shiragami et al. (2021) reported that perceived barriers influenced COVID-19 vaccine hesitancy in Japan. These studies confirm that HBM constructs are robust predictors of vaccination behavior across different socio-cultural and regional settings.

ELM complements HBM by explaining how persuasive communication strategies influence the processing of messages. ELM distinguishes between central route processing, where audiences carefully evaluate factual arguments, and peripheral route processing, where

they rely on cues such as messenger credibility, emotional resonance, or social proof (Petty & Cacioppo, 1986; Petty & Wegener, 1999). Nan (2012) demonstrated that audiences motivated to process information centrally responded more strongly to high-quality arguments, while peripheral cues, such as trusted messengers, influenced attitudes when involvement was low. Hurd et al. (2013) showed that combining credible statistics with relatable testimonials increased intentions to receive the meningococcal vaccine among college students. During the COVID-19 pandemic, Guidry et al. (2021) found that emotionally resonant messaging delivered by trusted community figures effectively increased vaccine acceptance through peripheral-route mechanisms. Banerjee et al. (2021) also reported in India that central-route arguments paired with endorsements from credible health workers improved confidence in COVID-19 vaccines.

Several studies have explicitly integrated HBM and ELM to provide a more comprehensive understanding of vaccination behavior. Jones et al. (2015) combined HBM constructs with ELM message processing to study HPV vaccination, finding that logically structured arguments increased perceived benefits while emotional storytelling reduced perceived barriers. Li and Liu (2022) applied both models to COVID-19 booster campaigns in China, demonstrating that central-route scientific arguments enhanced perceptions of severity and benefits, while peripheral cues such as expert endorsements strengthened trust and reduced hesitancy. In fragile and conflict-affected settings, this integrated approach is particularly valuable. Larson et al. (2014) emphasized that vaccine hesitancy is influenced not only by cognitive beliefs but also by trust dynamics and social narratives, requiring both motivational and communicative analysis. During the Ebola outbreak in Liberia, communication strategies combining factual risk information with trusted community voices increased adherence to vaccination campaigns (Jalloh et al., 2020). By integrating HBM and ELM, researchers can examine both the beliefs underlying vaccination decisions and the

persuasive mechanisms that influence how messages are interpreted, which is critical in contexts like South Sudan where mistrust, misinformation, and social complexity intersect.

2.1.4 Global Applications

Globally, vaccination campaigns have demonstrated the practical relevance of both HBM and ELM in improving vaccine uptake across diverse populations. HBM has guided campaigns for influenza, HPV, and COVID-19 vaccines. In the United States, influenza vaccination campaigns emphasizing susceptibility and severity increased uptake among older adults (Brewer et al., 2007; Carpenter, 2010). HPV vaccination programs in North America demonstrated that highlighting vaccine benefits and addressing perceived barriers improved vaccine intentions (Holman et al., 2014). During the COVID-19 pandemic, Wong et al. (2021) reported that emphasizing benefits and self-efficacy increased vaccine acceptance in Hong Kong, while Kebede et al. (2020) and Matsuyama et al. (2022) showed similar findings in Ethiopia and Kenya, respectively. In Japan, Shiragami et al. (2020) found that concerns about side effects influenced vaccine hesitancy, further confirming the relevance of HBM constructs.

ELM-informed strategies have also been widely applied. The World Health Organization (2024) combined central-route arguments, including scientific evidence, with peripheral cues such as testimonials, community endorsements, and visual storytelling during World Immunization Week and COVID-19 vaccination campaigns. CARE International's multi-country campaigns leveraged storytelling, trusted local messengers, and community role models, illustrating the importance of peripheral-route persuasion in populations with limited literacy or motivation to process technical information. In Lebanon, the American University of Beirut's COVID-19 vaccination campaign integrated risk communication emphasizing susceptibility and severity with peripheral cues such as leadership endorsements and peer testimonials, achieving high vaccination coverage (PMC, 2023). In India, Banerjee

et al. (2021) demonstrated that combining factual risk information with credible messenger endorsements significantly increased vaccine confidence among rural populations. During the Ebola crisis in Sierra Leone, communication strategies that blended HBM-aligned risk messaging with emotionally resonant storytelling delivered by respected community figures improved adherence to vaccination and health prevention measures.

These global experiences illustrate that integrating cognitive and persuasive approaches maximizes vaccination uptake by addressing both internal motivations and the persuasive characteristics of communication strategies. Such integration is particularly relevant for fragile and conflict-affected contexts, where trust deficits, misinformation, and cultural narratives strongly influence vaccine hesitancy. Theory-driven, contextually adapted, and culturally sensitive campaigns that attend to both what people believe and how they process messages are essential for improving vaccination outcomes in settings such as South Sudan.

2.2 Health Communication Campaigns and Vaccine Uptake in Africa

African vaccination campaigns face persistent barriers such as poverty, low literacy, political instability, and mistrust of government (West et al., 2023; WHO, 2024). Many campaigns rely heavily on mass media and top-down messaging, but evidence shows these often fail to address cultural and trust-related challenges (Kiwanuka-Tondo & Snyder, 2002; Palinkas et al., 2015).

For instance, in Nigeria, early polio campaigns grounded in risk–benefit appeals (HBM) failed due to rumors linking vaccines to infertility, demonstrating the limits of purely rational approaches (Renne, 2010; Larson et al., 2014). Success was later achieved when religious leaders reframed vaccination as consistent with Islamic teachings, highlighting the power of ethos and social proof (Manoff, 2011).

Similarly, Uganda's immunization drives achieved higher uptake when health workers used storytelling and interpersonal dialogue, aligning with ELM's emphasis on emotional and credibility cues (Ndejjo et al., 2015). These findings suggest that African campaigns achieve higher vaccine uptake when cognitive clarity (HBM) is combined with rhetorical resonance and persuasive strategies (ELM).

2.3 Health Communication and Vaccine Acceptance in East Africa

Vaccine hesitancy in East Africa is shaped by a combination of cultural beliefs, political narratives, and levels of trust in institutions. In Uganda, studies have shown that health communication campaigns that engaged faith-based organizations, including churches and mosques, significantly improved vaccine acceptance. These findings highlight the importance of trusted messengers as peripheral cues, consistent with the Elaboration Likelihood Model (ELM), which suggests that the credibility and trustworthiness of sources can enhance persuasion when audiences are not fully motivated to process messages centrally (Ndejjo et al., 2023; Petty & Cacioppo, 1986).

In contrast, government-led HPV vaccination campaigns in Kenya faced resistance due to widespread misinformation and low public trust. This illustrates the limitations of relying solely on central-route persuasion, which assumes that individuals will carefully evaluate evidence when trust or engagement is low (Larson et al., 2014; Betsch et al., 2015).

Similarly, Tanzania's response to COVID-19 underscores the influence of political narratives: the president's public denial of vaccines significantly reduced uptake, demonstrating how negative social proof can undermine rational, evidence-based appeals (Smith et al., 2022; Bavel et al., 2020). These cases highlight that political messaging and social norms can strongly shape health behaviors, especially in contexts of uncertainty or low institutional trust.

Overall, evidence from East Africa suggests that interventions relying solely on the Health Belief Model (HBM)—focused on perceived susceptibility, severity, benefits, and barriers—are insufficient to overcome vaccine hesitancy. Campaigns that blend HBM constructs with ELM-informed strategies, including the use of credible sources, emotional appeals, and culturally relevant messaging, are more effective in promoting vaccine acceptance. By addressing both cognitive and affective dimensions of decision-making, these strategies increase the likelihood that communities adopt recommended health behaviors (Jenkins et al., 2021; Ndejjo et al., 2023).

2.4 South Sudan: Emerging Evidence and Gaps

South Sudan presents one of the most complex environments for vaccine communication, shaped by prolonged conflict, weak health systems, widespread displacement, low literacy, and pervasive mistrust of government and external actors (GAVI, 2024; WHO, 2024). These structural and sociopolitical conditions, including religious beliefs, cultural norms, conflict dynamics, and weak health systems, create persistent barriers to vaccine uptake, limiting the effectiveness of conventional, top-down campaigns (Smith et al., 2022; Kiwanuka-Tondo & Snyder, 2002).

Evidence from UNICEF (2016) shows that vaccination campaigns achieved higher coverage when local leaders—such as chiefs, teachers, and pastors—endorsed vaccination, demonstrating the influence of credibility, social proof, and trusted messengers (Cialdini, 2009; Kiwanuka-Tondo et al., 2009). However, WHO (2024) reported that in some states, coverage remained below 50%, often due to widespread rumors, misinformation, and fears regarding side effects, underscoring the limitations of campaigns that rely solely on HBM-style risk–benefit appeals (Renne, 2010; Larson et al., 2014).

The Vaccine Confidence Project (2022) found that while 77% of respondents considered vaccines safe, hesitancy persisted because of distrust in authorities, fear of adverse

effects, and limited access to culturally appropriate information (Betsch et al., 2015; Larson et al., 2014). These findings confirm the relevance of the Elaboration Likelihood Model (ELM), which emphasizes trust, emotion, framing, and peripheral cues in shaping behavior, particularly in low-literacy, low-trust settings (Petty & Cacioppo, 1986; Hornik et al., 2018).

Despite these insights, most vaccine campaigns in South Sudan remain donor-driven, top-down, and rarely evaluated against behavioral theory or adapted to local sociocultural contexts (Smith et al., 2022; Kiwanuka-Tondo & Snyder, 2002). Few studies examine the roles of youth leaders, gender dynamics, informal networks, or digital media in influencing vaccine decisions (Ndejjo et al., 2015; Jenkins et al., 2021). Additionally, the combined effects of HBM constructs, ELM mechanisms, and communication strategies—such as rhetorical appeals, social proof, and message framing remain underexplored (Hornik et al., 2018; Manoff, 2011). These gaps highlight the urgent need for theory-informed, context-sensitive research to guide effective vaccine communication in fragile, conflict-affected environments.

South Sudan has faced recurring cholera outbreaks, particularly in urban centers such as Juba, due to a combination of high population density, poor sanitation, limited clean water access, and under-resourced healthcare infrastructure (WHO, 2024). The country's fragile sociopolitical environment—including decades of conflict, displacement, and weak institutional trust—further complicates public health interventions, including vaccination campaigns (Smith et al., 2022; West, Green, & O'Neill, 2023).

2.5 The 2025 Cholera Vaccination Campaign in Juba, South Sudan

In response to a cholera outbreak in 2025, the Ministry of Health, in collaboration with UNICEF, WHO, and local NGOs, implemented a mass vaccination campaign targeting adults and high-risk populations in Juba's urban and peri-urban areas (WHO, 2025). The campaign employed a multi-channel communication strategy, including radio broadcasts,

community meetings, house-to-house sensitization, and the engagement of healthcare workers and community leaders as trusted messengers. Messages were designed to convey the benefits of vaccination, address fears regarding side effects, and highlight the importance of immunization for community health (Ministry of Health, UNICEF, & WHO, 2025).

Despite these efforts, several challenges affected the campaign's reception. Historical mistrust of health interventions, fueled by past experiences with fragmented or poorly coordinated campaigns, influenced community attitudes (UNICEF, 2025). Rumors and misinformation linking vaccines to foreign influence or infertility circulated widely, demonstrating the critical role of perceptions in shaping vaccine acceptance. Adults in Juba often relied on healthcare workers and community leaders to interpret messages, illustrating the influence of social proof in low-trust settings.

Evaluations of the 2025 campaign indicated that while vaccine coverage was substantial in some areas, hesitancy persisted, particularly among residents with limited access to credible information or those exposed to conflicting messages (WHO, 2025). This highlights the importance of not only delivering vaccines but also designing communication strategies that are culturally sensitive, contextually grounded, and attentive to community perceptions.

Overall, evidence from the 2025 cholera vaccination campaign in Juba indicates that, despite multi-channel communication and trusted messengers, vaccine acceptance remained uneven. This reflects a broader pattern in which exposure to messages does not automatically translate into uptake in contexts marked by mistrust and misinformation. In such settings, interpretation is shaped by messenger credibility, prior experiences with health interventions, and prevailing social narratives, highlighting the complexity of vaccination communication in fragile contexts where behavioural outcomes are mediated by both informational and socio-cultural factors.

2.6 Integration of Rhetorical Appeals, Message Framing, and Social Proof

Rhetorical strategies enhance vaccine campaigns when adapted to local contexts. Ethos (credibility) is effective when trusted leaders endorse vaccines, reflecting the peripheral-route persuasion of the Elaboration Likelihood Model (Petty & Cacioppo, 1986; Cialdini, 2009). Pathos (emotional appeals and storytelling) motivates communities by evoking empathy and hope, aligning with ELM's recognition of affective influence (Hornik et al., 2018; Manoff, 2011). Logos (facts and statistics) reflects the Health Belief Model's rational focus on perceived benefits and barriers, but is often insufficient in fragile states, where trust and collective norms shape decisions (West et al., 2023).

In fragile settings like South Sudan, effective vaccine campaigns combine rhetorical appeals, message framing, and social proof to maximize impact. Kiwanuka-Tondo, Hamilton, and Jameson (2009) argue that blending classical rhetoric with behavioral theory improves message effectiveness, especially in collectivist African contexts. Ethos builds trust when messages are delivered by respected figures such as religious or community leaders (Smith et al., 2022; UNICEF, 2016). Pathos leverages stories of survival or protection to connect with audiences and motivate behavior change (West et al., 2023; Manoff, 2011). Logos, through factual and transparent information, strengthens decision-making by clarifying vaccine benefits (Hornik et al., 2018).

Message framing further shapes audience responses. Gain-framed appeals, such as emphasizing the protection of children's health, are generally more effective for preventive actions like vaccination (Rothman & Salovey, 1997; Feldman, 2022). Loss-framed appeals, which stress risks of not vaccinating, can sometimes backfire if perceived as coercive or fear-mongering (Tversky & Kahneman, 1981).

Social proof reinforces vaccine acceptance by showing that peers and leaders are getting vaccinated. This mechanism aligns with social learning theory, where individuals

model observed behavior (Bandura, 2001). In contexts of low institutional trust, peer influence and visible role models play a decisive role (Cialdini, 2009; UNICEF, 2016). For example, public figures and community leaders publicly receiving vaccines have been shown to encourage wider uptake in African settings (Kiwanuka-Tondo et al., 2009).

The 2025 cholera vaccination campaign in Juba provides a practical context in which rhetorical appeals, message framing, and social proof intersect with the Health Belief Model (HBM) and Elaboration Likelihood Model (ELM).

By integrating rhetorical appeals, message framing, and social proof with HBM and ELM, the campaign offers a rich context for interpreting the perceptions around the 2025 cholera vaccination communication campaign in Juba and how these mechanisms influence vaccine uptake. This aligns directly with the study objectives and provides a theoretical and practical foundation for the present research.

2.7 Synthesis and Gaps in Literature

The reviewed literature demonstrates that health communication theories provide valuable but partial insights into vaccine acceptance in fragile contexts. The Health Belief Model (HBM) explains how perceptions of risk, benefits, barriers, and self-efficacy shape individual health behaviors (Rosenstock, 1974; Carpenter, 2010). However, its emphasis on rational, individual decision-making limits its effectiveness in collectivist societies like South Sudan, where trust, community influence, and cultural narratives play a decisive role (Kiwanuka-Tondo & Snyder, 2002; Larson et al., 2014).

The Elaboration Likelihood Model (ELM) complements HBM by showing how persuasion occurs through both logical arguments (central route) and peripheral cues such as credibility, emotion, and social proof (Petty & Cacioppo, 1986; Hornik et al., 2018). In low-literacy, low-trust environments like South Sudan, ELM is particularly relevant because it

accounts for the effectiveness of rhetorical appeals, message framing, and endorsements by credible messengers (West et al., 2023; UNICEF, 2016).

Despite these insights, research on vaccine communication in South Sudan is sparse and largely based on donor reports rather than empirical, theory-driven studies (UNICEF, 2016; GAVI, 2024). Most campaigns remain top-down, lacking cultural adaptation and community participation, and single-theory approaches fail to capture the complexity of vaccine decision-making in fragile states (Kiwanuka-Tondo & Snyder, 2002; Smith et al., 2022). These gaps underscore the need for research focused on the 2025 cholera vaccination campaign in Juba, examining perceptions of healthcare workers, community leaders, and adult residents.

2.8 Conclusion

While behavioral theories guide global vaccine communication, effective campaigns in fragile African contexts must adapt by using rhetorical appeals and participatory approaches. However, few studies have evaluated such integrated strategies in South Sudan's unique sociopolitical setting. This study addresses that gap by examining how perceptions influence communication vaccination campaigns using rhetorical strategies, social proof, and message framing.

Chapter three: Methodology

3.0 Introduction

This chapter outlines the research methodology employed in this study to examine perceptions of adult community members, youth leaders, volunteer leaders, and healthcare workers regarding the 2025 cholera vaccination communication campaign in Juba, South Sudan. It describes the research design, study area, participants, data collection methods, and data analysis procedures. It also highlights the ethical considerations adhered to throughout the study. The study adopts a qualitative descriptive approach, using in-depth interviews and thematic analysis to investigate the experiences and perspectives of key stakeholders involved in vaccination communication campaigns in South Sudan.

3.1 Research Design

This study adopted a qualitative descriptive research design to examine perceptions of the 2025 cholera vaccination communication campaigns in Juba, South Sudan. A qualitative descriptive design is appropriate for studies seeking a straightforward, comprehensive summary of events or experiences in everyday terms. It allows the collection of rich, detailed data to provide clear insights into the attitudes, beliefs, and interpretations of individuals without extensive theory development, making it well-suited to examine perceptions of vaccination messages (Sandelowski, 2000; Creswell & Poth, 2018).

3.1.1 Paradigm

This study was situated within the interpretivist paradigm, which assumes that reality is socially constructed and that knowledge is generated through the meanings individuals assign to their experiences (Schwandt, 2014). Interpretivism emphasizes subjectivity, context, and multiple realities, contrasting with positivism, which seeks generalizable laws (Guba & Lincoln, 1994). In interpretivist inquiry, the researcher does not stand apart from the

phenomenon but engages closely with participants to understand how they interpret their lived experiences (Creswell & Poth, 2018).

This paradigm was appropriate for the present study because perceptions of vaccination campaigns are deeply embedded in cultural narratives, social trust, and political histories—all of which cannot be fully captured through quantitative approaches (Denzin & Lincoln, 2018). Interpretivism allows for the understanding of diverse viewpoints, situational dynamics, and context-specific meaning-making, which is critical in fragile contexts like South Sudan, where mistrust, conflict, and misinformation shape vaccine-related behaviors (Bryman, 2016; Flick, 2018). By adopting this paradigm, the study prioritizes insider perspectives and seeks to generate contextually grounded insights rather than universal laws.

3.1.2 Approach

A qualitative approach was employed to facilitate an in-depth investigation of participant experiences through non-numerical data (Creswell, 2014; Patton, 2015). Qualitative research aligns with interpretivism by emphasizing meaning-making, thick description, and flexible exploration of complex social realities (Geertz, 1973; Denzin & Lincoln, 2018). Unlike quantitative research, which measures variables across large samples, qualitative inquiry captures the nuances of human interaction, cultural influence, and lived experience (Marshall & Rossman, 2016).

In the context of vaccination campaigns, a qualitative approach enables the researcher to understand why and how individuals accept or resist vaccines, and how communication strategies intersect with community norms, institutional trust, and collective identity (Flick, 2018; Silverman, 2020). This approach is especially valuable for studying fragile states, where social and political instability complicates health interventions and where narratives, rumors, and social proof strongly shape health behaviors (Guest, Namey, & Mitchell, 2013).

3.1.3 Method

The study employed semi-structured in-depth interviews as the primary method of data collection. Interviews were conducted primarily with community members to understand their perceptions, experiences, and interpretations of the 2025 cholera vaccination campaign (Kvale & Brinkmann, 2009; Creswell & Poth, 2018).

In-depth interviews are particularly suited for capturing detailed individual perspectives and allowing participants to express their experiences in their own terms. This approach was used to achieve a rich and nuanced understanding of how communication strategies—including rhetorical appeals, social influence, and message framing—influence vaccine acceptance.

The study adopted a qualitative descriptive design with a cross-sectional approach, collecting data at a single point in time to provide a snapshot of current vaccination communication practices in the 2025 cholera vaccination communication campaign in Juba, South Sudan (Creswell & Creswell, 2018; Babbie, 2020).

3.2 Area of Study

The study was conducted in Juba, South Sudan, a region in Central Equatoria. Juba, the capital city, is found in one of the more stable regions in South Sudan, but it still faces significant challenges related to conflict, political instability, and low trust in health systems. In addition, conflict and displacement can influence public trust in health institutions and affect how communities receive and interpret vaccination messages. This is particularly relevant in Central Equatoria, where the International Committee of the Red Cross (ICRC) reported that over 39,000 people were affected by conflict in 2021 (ICRC, 2021).

However, the region is ethnically diverse, and there are varying levels of access to healthcare and vaccination services (UNICEF, 2023). The socio-political climate, combined with the challenges posed by conflict and displacement, creates a unique environment in

which vaccination campaigns must navigate various obstacles (Schots et al., 2022). This study focuses on understanding how communication strategies can be tailored to address these challenges, as well as examining community members' perceptions of vaccination in this specific region.

3.3 Sources of Information

This research relied on primary data to examine perceptions of communication campaigns and vaccination acceptance in South Sudan. Primary data was gathered through semi-structured in-depth interviews with community members, healthcare workers, and community leaders. These interviews provided firsthand insights into participants' perceptions, experiences, barriers, and motivators related to vaccine uptake and communication processes.

3.4 Population and Sampling Techniques

The study population was drawn from the total population of Juba City, which was estimated at approximately 525,000 residents according to the most recent demographic data (South Sudan National Bureau of Statistics [SSNBS], 2023). Within this broader population, the target population consisted of adult community members aged 18 years and above who were exposed to the 2025 cholera vaccination communication campaign, as confirmed through participants' responses regarding their awareness of campaign messages, communication channels, and related activities during the interview process. These adults constituted the primary analytic group, as the study sought to understand community-level perceptions of vaccination messages and the factors influencing vaccine acceptance in an urban, post-crisis context.

In addition, the study included adult community members, as well as key informants comprising community leaders and healthcare workers who were directly involved in planning, implementing, or supporting the cholera vaccination campaign. These key

informants provided complementary perspectives on message dissemination, interpretation, and community engagement dynamics that extended beyond the experiences of general community members.

Purposive sampling was employed to select information-rich participants with direct experience of the vaccination campaign, in line with qualitative research principles (Palinkas et al., 2015). Information-rich participants were identified based on their involvement in, exposure to, or leadership roles related to the 2025 cholera vaccination communication campaign, including healthcare workers, community leaders, and adult community members who had interacted with campaign messages or activities. Following the recommendation of Guest, Bunce, & Johnson (2006) that 15–25 participants are sufficient for thematic saturation in qualitative studies, a total of twenty (20) participants were interviewed, the majority of whom were community members.

Although the study sought to include diverse participant perspectives, female representation within certain participant categories, particularly volunteer youth and youth leadership roles, was limited. Participant selection was based primarily on direct involvement, availability, and willingness to participate in the 2025 cholera vaccination campaign. As a result, some campaign-related roles were more heavily represented by males during the data collection period.

The inclusion of healthcare workers and community leaders enriched contextual understanding and supported triangulation of findings, even though the study primarily focused on adult community members.

3.5 Concepts

This study investigated perceptions of the 2025 cholera vaccination communication campaign in Juba, South Sudan. The study focused on how stakeholders understood, interpreted, and evaluated campaign messages, communication sources, and communication

strategies used during the campaign. To guide the inquiry, the study examined two key concepts: communication campaigns and perceptions of communication campaigns. These concepts provided a framework for understanding how campaign messages were experienced and interpreted within the social and cultural context of Juba.

3.5.1 Communication Campaigns

Communication campaigns constitute an important concept in this study. The study focuses on how rhetorical appeals, social influence, and message framing were reflected in the 2025 cholera vaccination communication campaign and how participants perceived and interpreted these communication strategies.

Ethos refers to the credibility or trustworthiness of the communicator, reflected in participants' views of health workers, community leaders, religious leaders, and other campaign messengers. Pathos refers to emotional appeals that evoke feelings such as fear, hope, empathy, or concern. Logos refers to the use of facts, explanations, and logical arguments within campaign messages.

Social influence refers to the role of peers, community members, and respected leaders in shaping how individuals perceive and respond to campaign messages. Message framing refers to how information is presented, particularly in terms of emphasizing either the benefits of vaccination or the consequences of not vaccinating.

These communication elements provide a framework for understanding how participants perceived, interpreted, and responded to the 2025 cholera vaccination communication campaign in Juba, South Sudan.

3.5.2 Perceptions of the 2025 Cholera Vaccination Communication Campaign

Perception is a central concept in this study and refers to how individuals understand, interpret, evaluate, and assign meaning to the communication messages disseminated during the 2025 cholera vaccination campaign. The study focused on participants' experiences with

campaign messages and communication strategies rather than solely on vaccination outcomes. The study explored participants' perceptions of campaign messages, communication sources, and communication strategies used during the vaccination campaign.

The concept of perception was examined through participants' accounts of message understanding, trust in communication sources, emotional responses to campaign messages, perceived credibility and relevance of information, and interpretations of the messages communicated during the campaign. These dimensions provided insight into how communication messages were interpreted and experienced within the social and cultural context of Juba.

3.6 Measurement Levels

This study did not involve numerical measurement as it was qualitative in nature, relying instead on narrative data generated through in-depth interviews. Data were analyzed thematically following Braun and Clarke (2006) to identify patterns of meaning within participants' accounts. In this study, perceptions were operationalized as participants' expressed interpretations, meanings, trust, and evaluations of the 2025 cholera vaccination communication messages. These perceptions were captured through interview responses and systematically coded during analysis to identify recurring themes reflecting how participants understood and responded to campaign communication. This approach is consistent with established qualitative health research practices (Green & Thorogood, 2018).

3.7 Data Collection Procedures and Protocols

The data collection process adhered to ethical and methodological rigor. Semi-structured interviews were used to provide participants with the opportunity to share their experiences in detail, while the researcher probed for deeper insights (DiCicco-Bloom & Crabtree, 2006). Data collection occurred in secure, private settings to maintain confidentiality and comfort for participants. Each session began with an informed consent process, where

participants were briefed about the study, their rights, and the voluntary nature of their participation. Before commencing interviews, participants were asked to describe the campaign messages they had encountered and the channels through which they received them. Additionally, field notes were kept throughout data collection to capture non-verbal cues, environmental factors, and reflections (Emerson, Fretz, & Shaw, 2011).

3.8 Data Collection Instruments and Equipment

To collect high-quality qualitative data, the study used multiple tools tailored to the research objectives. An interview guide was developed based on the study's theoretical framework and research questions, incorporating open-ended questions to elicit in-depth responses from participants (Creswell & Poth, 2018; Patton, 2015). Interview questions focused on participants' perceptions of specific campaign messages concerning cholera prevention, vaccine safety, vaccine effectiveness, and family protection, and respondents were also asked to reflect on how these messages were communicated through different channels and how they influenced their understanding and willingness to participate in the vaccination campaign. Audio recording was used for all interviews with participants' consent to capture tone, pauses, and inflections that are critical for accurate interpretation and transcription (Patton, 2015; Emerson, Fretz, & Shaw, 2011). In addition, note-taking was used to record non-verbal cues, contextual details, and immediate interpretations that may not be evident from audio recordings alone (Bazeley & Jackson, 2013; Green & Thorogood, 2018). These instruments provided rich and reliable data for examining the influence of communication campaigns on vaccine acceptance.

3.9 Quality and Error Control

Several strategies were employed to ensure the credibility, reliability, and trustworthiness of the study findings. Member checking was conducted by sharing summaries of interview findings with participants, allowing them to confirm or clarify the information,

thus enhancing the accuracy of the data (Lincoln & Guba, 1985; Creswell & Poth, 2018).

Additionally, clear documentation of coding procedures and maintaining audit trails provided transparency and allowed for verification of the analysis process (Braun & Clarke, 2006; Green & Thorogood, 2018). These measures collectively enhanced the rigor and trustworthiness of the study's qualitative findings.

3.10 Strategy for Data Processing and Analysis

The study employed thematic analysis (Braun & Clarke, 2006) to systematically analyze qualitative data from interviews and focus groups. The analysis followed six key steps:

Familiarization with the Data. All audio-recorded interviews were transcribed verbatim. Transcripts were read multiple times to immerse the researcher in the data, noting initial observations, patterns, and recurring ideas (Braun & Clarke, 2006; Creswell & Poth, 2018; Emerson, Fretz, & Shaw, 2011).

Generating Initial Codes. Meaningful segments of text from the interview transcripts were highlighted and assigned initial codes manually. Codes captured significant ideas such as community trust, message framing, emotional responses, and perceived barriers (Bazeley & Jackson, 2013; Patton, 2015).

Searching for Themes. Related codes were grouped into broader categories, forming potential themes. This step organized the data around key patterns and concepts relevant to vaccine communication and uptake (Braun & Clarke, 2006; Bowen, 2009).

Reviewing Themes. Themes were reviewed for coherence and distinctiveness. Each theme was compared against the dataset to ensure it accurately represents participants' perspectives and experiences (Nowell, Norris, White, & Moules, 2017; Creswell & Poth, 2018).

Defining and Naming Themes. This was clearly defined, with concise names reflecting their content and significance. This step provided clarity and a focus for reporting, linking themes to theoretical constructs such as the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM) (Rosenstock, 1974; Petty & Cacioppo, 1986; Hornik et al., 2002).

Producing the Report. Final themes were interpreted and presented in the study report. Illustrative quotes from participants were used to support findings, ensuring transparency and credibility. Field notes were used to support contextual understanding during analysis and interpretation of the data (Braun & Clarke, 2006; Emerson et al., 2011; Green & Thorogood, 2018).

3.11 Ethical Considerations

This study adhered to ethical standards to protect participants' rights and ensure research integrity. Informed consent was obtained in writing, and participants were fully informed about the study's purpose, their role, potential risks, and their right to withdraw at any time (Wiles, 2013). Confidentiality was ensured by using pseudonyms and securely storing audio files and transcripts. Cultural sensitivity was observed throughout the study, respecting local customs, language, and social norms. Ethical clearance was obtained from the relevant academic and governmental institutions before data collection.

3.12 Anticipated Methodological Constraints

Several challenges were anticipated during the study. Language barriers arose, as local dialects could complicate communication; this was mitigated through the use of trained interpreters, and translations underwent back-translation to ensure conceptual accuracy (Temple & Young, 2004). Access issues were also found, as security concerns in certain regions limited participant reach; collaboration with local NGOs and community leaders was employed to facilitate safe and ethical access. Additionally, the prevalence of vaccine-related

misinformation influenced the reliability of participants' responses. The research purpose was clearly explained to participants, and probing questions were used to clarify responses, minimizing bias and enhancing data credibility (Patton, 2015; Creswell & Poth, 2018).

3.13 Conclusion

This chapter presented a qualitative methodology for exploring perceptions of the 2025 cholera vaccination communication campaign in Juba, South Sudan. The use of in-depth interviews and thematic analysis enabled the collection of rich qualitative data, providing insights into the effectiveness of communication strategies in a challenging context. The ethical considerations and potential methodological limitations have been discussed, ensuring that the research was conducted with respect for participants and their rights.

Chapter 4: Data presentation and analysis

4.0 Introduction

This chapter presents, analyzes, and interprets the findings from the study on perceptions of the 2025 cholera vaccination communication campaigns in Juba, South Sudan. The analysis is structured according to the study objectives. It is also grounded in participants' responses to specific campaign messages on cholera prevention, vaccine safety, vaccine effectiveness, and protection of families and communities. Community members, as the primary participants, provide the main insights, with youth leaders, health workers, and volunteers offering complementary perspectives. Participant quotations are integrated throughout to illustrate key points and strengthen the interpretations.

4.1 Participant demographics

Participants ranged in age from 18 to 40 years. In total, 20 participants were included, comprising 12 males and 8 females. Community members were the primary focus, as they are the direct recipients of vaccination campaign messages. Youth leaders, volunteer youth, and health professionals provided supporting perspectives to enrich the understanding of vaccine acceptance and awareness.

To ensure clarity and conciseness throughout the analysis, participants are identified using alphanumeric codes that specify their group, age, and gender. For instance, CM denotes Community Members, YL denotes Youth Leaders, VY denotes Volunteer Youth, and HW (or specific titles such as Doctor or Nurse) denotes Health Workers. These labels are combined with demographic data (e.g., CM-40M for a 40-year-old male community member) to provide a brief yet precise reference for each participant's contribution.

Table 4.1*Summary of Study Participants*

Participant Group	N	Age Range (years)	Gender (M/F)	Notes / Involvement
Community Members (CM)	10	18–40	6/4	Primary participants actively mobilized families, shared information, and participated in vaccination campaigns
Volunteer Youth (VY)	2	25–35	2/0	Assisted in community awareness, shared vaccination schedules, and encouraged families to participate
Youth Leaders (YL)	3	25–26	3/0	Supported community mobilization, educated the community on vaccine benefits, and promoted campaign participation
Health Workers / Nurses / Doctors (HW)	5	19–32	3/2	Provided health education, vaccination administration, community awareness, and professional perspectives

Note: The study primarily focused on community members; other participants provided supporting perspectives to enrich the understanding of vaccine acceptance and awareness.

4.2 Emergent Themes and Sub-Themes

The thematic analysis of the semi-structured interviews revealed multiple factors that shaped vaccine communication and acceptance in Juba. Through open and axial coding, the data were organized into overarching themes that reflect both the cognitive and social drivers

of vaccine uptake as well as the rhetorical strategies that influence perception. These themes were identified based on the frequency of mentions, their relevance to the research questions, and their alignment with the Health Belief Model (HBM) and the Elaboration Likelihood Model (ELM).

The findings coalesced around two broad domains. The first domain, rhetorical appeals, includes Ethos (credibility), Pathos (emotional connection), and Logos (logical reasoning). The second domain focuses on social dynamics, represented by Social Proof and Message Framing strategies (gain versus loss). This framework captures both the individual cognitive-motivational processes outlined in HBM—such as perceived susceptibility, severity, benefits, barriers, and cues to action—and the ways in which persuasive messaging, consistent with ELM, affects comprehension, trust, and decision-making.

Ethos, or credibility-based messaging, emerged as a central theme, with participants differentiating between relational credibility (trust grounded in local familiarity and interpersonal influence) and institutional credibility (trust grounded in formal authority, such as government or health institutions). Pathos, or emotional appeals, motivated participants through both fear of disease and hope for protection, demonstrating how affective engagement interacts with perceived susceptibility and severity to drive vaccination decisions. Logos, or logical reasoning, reinforced vaccine uptake through practical and technical information, though interpretation varied according to health literacy and educational background, illustrating central-route engagement under ELM.

Social Proof highlighted the influence of trusted community figures, including chiefs, elders, religious leaders, youth, and women leaders, on collective attitudes toward vaccination. Peer influence, particularly through youth mobilization, was noted as a facilitator for promoting vaccine acceptance. Conversely, the absence of supportive leaders or the

presence of skeptics emerged as barriers to uptake, illustrating the dual-edged nature of social modeling.

Finally, Message Framing was a critical determinant of perception, with gain-framed messages emphasizing protection and positive outcomes generally perceived as motivating, whereas loss-framed messages emphasizing risk and danger were effective only when delivered by credible sources. Exaggerated loss-framed messages, however, risked reinforcing suspicion and mistrust.

Table 4.2

Sample Coding Table

Participant Code	Theme	Sub-Theme	Sample Quote
CM-40M	Ethos	Relational Trust	“I help inform neighbors and explain why vaccination is important because people listen to leaders.”
CM-25F	Ethos	Relational Trust	“When the chief encourages us, everyone listens and feels confident to take the vaccine.”
Doctor-29M	Ethos	Institutional Authority	“Government radio stations are best because it’s the most relevant authority in the country.”
Nurse-19F	Pathos	Compassionate Action	“I was emotional seeing adults dying of cholera; it motivated me to educate others.”

CM-20M	Pathos	Family Concern	“It saves lives, especially children; that motivates me to take it.”
YL-25M	Logos	Technical Efficacy	“Cholera vaccine is effective; its doses can sustain you for a period of 3–6 years.”
CM-25M	Logos	Practical Benefits	“Vaccination protects my family from severe diarrhea.”
CM-30M	Social Proof	Negative Influence	“Some elders doubt the influence of vaccination, which discourages others.”
CM-40M	Social Proof	Positive Influence	“I trust community leaders because they understand our context, and people listen to them.”
YL-26M	Social Proof	Peer Influence	“During campaigns, we educate families door to door; seeing familiar young people support vaccination increases acceptance.”
CM-25M	Message Framing	Gain-Framing	“Vaccination protects my family from cholera and severe diarrhea.”
CM-40M	Message Framing	Loss-Framing	“Some people fear dying from cholera if they don’t vaccinate, so they agree to take it.”
YL-25M	Message Framing	Loss-Framing	“Stories of families losing loved ones make people act immediately to vaccinate.”

4.3 Analysis of Rhetorical Appeals: Ethos, Pathos, and Logos

This section addresses the first research objective: to describe community perceptions of credibility-based messaging, emotional appeals, and logical arguments in the 2025 cholera vaccination campaign in Juba. The findings highlight how the three classical rhetorical appeals—Ethos, Pathos, and Logos—interact with social, cognitive, and motivational factors to influence vaccine acceptance.

4.3.1 *Credibility-Based Messaging (Ethos)*

Credibility, or ethos, emerged as a central factor influencing how participants evaluated and accepted vaccination messages. Across interviews, trust in the messenger appeared just as important as the message itself. The findings reveal two main dimensions of credibility: relational credibility, rooted in trust in familiar community figures, and institutional credibility, grounded in formal authority and professional expertise.

Community members consistently emphasized the importance of relational trust. Participants described local leaders, community mobilizers, and health workers as trusted intermediaries who make information understandable and acceptable. CM-40M explained, “I help inform neighbors... and explain why vaccination is important [because] people listen to [leaders].” This statement illustrates how leadership roles within the community carry influence beyond formal authority. Leaders are perceived as close to the people, aware of local concerns, and capable of communicating in culturally relevant ways. Their credibility is not only based on position, but on established relationships and shared social identity.

Similarly, CM-20M stated, “Health workers are the ones I trust most; they have medical knowledge and experience.” This account shows that credibility increases when familiarity is combined with visible expertise. Health workers are trusted not only because they are part of the community, but also because they are perceived as knowledgeable and

experienced in medical matters. The blending of personal trust and professional competence strengthens message acceptance.

Institutional credibility was also present in participants' responses, particularly among those with higher education levels or professional exposure to health systems. Doctor-29M emphasized official communication channels, stating, "Government radio stations [are best] because it's the most relevant authority in the country." This perspective reflects confidence in standardized and government-endorsed information. Institutional sources were viewed as reliable because they are associated with formal structures, regulation, and accountability.

The data indicate that participants often did not view relational and institutional credibility as separate or competing forms of trust. Instead, they appeared interconnected. Institutional messages gained stronger acceptance when reinforced by trusted local figures. Community leaders and health workers played an important role in explaining official guidance, responding to questions, and reassuring hesitant individuals. By translating technical terminology into everyday language and addressing specific community concerns, they strengthened the perceived reliability of institutional information.

Overall, the findings suggest that credibility in Juba operates through layered trust networks. Trust is built through familiarity, social proximity, demonstrated expertise, and association with recognized authority. Vaccination messages were more readily accepted when they were delivered or endorsed by individuals perceived as trustworthy within these networks. This demonstrates that ethos is not limited to formal authority alone, but is deeply embedded in social relationships and community structures.

4.3.2 Emotional Appeals and Motivation (Pathos)

Emotional appeals, or pathos, emerged strongly in participants' narratives about vaccine acceptance. The data show that emotions played a central role in motivating vaccination decisions in Juba. Participants described their choices as influenced by both fear

of the disease and hope for protection. These two emotional dimensions appeared repeatedly across interviews.

Several participants referred to memories of previous cholera outbreaks as shaping their perception of risk. Fear was closely linked to witnessing or hearing about the rapid progression of the illness. CM-40M explained that his decision was influenced by stories he had heard within the community: “I have heard about cholera that created fear, especially stories about people becoming severely dehydrated and dying quickly.” This statement reflects how collective memory of past outbreaks continues to influence present attitudes toward vaccination. The emphasis on “dying quickly” highlights the perceived severity and urgency associated with the disease.

At the same time, participants did not describe fear in isolation. Messages that emphasized prevention and protection generated feelings of reassurance and optimism. The same participant (CM-40M) noted that communication about cholera being preventable “gave hope... and encouraged me to accept vaccination as a way to protect myself and my family.” This indicates that emotional messaging was effective when it presented vaccination as a solution rather than merely emphasizing danger.

Health workers also described emotional experiences linked to the outbreak. Nurse-19F shared her response to witnessing the effects of cholera: “I was emotional seeing children, adults dying of cholera and suffering; it made me feel sad [and motivated me] to encourage my family and other people to vaccinate.” Her account shows how direct exposure to illness and suffering intensified emotional engagement and strengthened her commitment to promoting vaccination within her social networks.

The data, therefore, demonstrate that emotional appeals in the vaccination campaign were grounded in lived experiences, shared memories, and concern for family safety. For instance, fear of severe illness and death increased perceived vulnerability, while hope for

protection encouraged positive action. These emotional narratives consistently appeared across interviews, indicating that pathos was a significant element in how participants understood and responded to vaccination messages in Juba.

4.3.3 Logical Reasoning and Efficacy (Logos)

Logical reasoning (Logos) emerged as a significant factor shaping how community members understood and justified cholera vaccine acceptance. Within the interviews, participants consistently interpreted logical appeals through practical and observable outcomes rather than technical or biomedical explanations. Their reasoning was grounded in lived experience, seasonal risk patterns, and visible consequences of cholera outbreaks.

For instance, CM-40M explained that “vaccination is most important during the rainy seasons when cholera cases increase,” directly linking environmental conditions with heightened disease risk. This statement reflects contextual and experience-based reasoning, where vaccination is perceived as a rational response to predictable seasonal outbreaks. The logic follows an observable cause-and-effect relationship: rainfall increases contamination risk, cholera cases rise, and vaccination becomes necessary during that period.

Similarly, CM-25M emphasized tangible household benefits, noting that the vaccine “protects families from severe diarrhea.” Here, the justification for vaccination is framed around visible outcomes rather than scientific mechanisms. The focus is on preventing suffering within the family unit, reducing severe symptoms, and avoiding health complications. This indicates that for many community members, logical reasoning is measured by the vaccine’s practical impact on everyday life rather than its immunological function.

Another community participant (CM-20M) reinforced this experiential logic by stating that “after seeing the dangers of cholera, one can immediately take his or her children for vaccination to avoid the dangers of cholera.” This response demonstrates how observation

of disease severity strengthens rational decision-making. The memory of past outbreaks and visible deaths provides evidence that vaccination is a sensible and preventive action.

Similarly, CM-40M observed that “most people in the community accept the cholera vaccines because they have seen cholera cause many deaths in the past. They believe the vaccine helps protect their families.” In this case, community memory of mortality functions as rational proof supporting vaccine uptake.

Although the primary focus is on community members, contextual responses from health professionals further clarify this reasoning. For example, Doctor-29M stated that the vaccine “stimulates immunity against *Vibrio cholera* bacteria,” while YL-25M noted that it “can sustain you for a period of 3–6 years.” While these explanations reflect technical knowledge, they indirectly validate the practical claims made by community participants. However, it is important to note that community members themselves did not rely on such scientific language; their logical understanding remained centered on protection, prevention, and seasonal risk reduction.

Overall, the findings demonstrate that logical reasoning among community members operates through observable benefits and lived realities. Vaccination is considered rational because it reduces deaths, prevents severe diarrhea, and offers protection during high-risk seasons. In this context, Logos functions as a practical justification rooted in experience rather than technical comprehension, forming a strong foundation for vaccine acceptance within the community.

4.3.4 Barriers Related to Rhetorical Appeals

Analysis of the interviews revealed that barriers to community acceptance of the cholera vaccination campaign were closely tied to challenges in credibility (Ethos), emotional response (Pathos), and logical understanding (Logos). While participants generally

recognized the potential benefits of vaccination, several communication-related obstacles affected how messages were received and interpreted.

Fear of side effects was frequently mentioned as a major concern. CM-40M explained that resistance often arises from “fear of side effects, lack of information, [and] rumors or mistrust.” Similarly, CM-20M noted that “some parents are eager to protect their children, but others worry about side effects.” These responses illustrate that emotional anxieties about vaccine safety can influence perceptions of the campaign, even when participants understand the protective purpose of the vaccine. Fear was often fueled by stories circulating in the community rather than personal experiences.

Misinformation and rumors also shaped community perceptions. Doctor-29M reported that “people believe vaccines are foreign experiments or that they kill,” while DO-30M added that “some people have myths that mislead others.” Although these comments come from health professionals, they reflect the community’s interpretations and suspicions of the campaign messages. CM-40M similarly observed that “most people in the community accept the cholera vaccines because they have seen cholera cause many deaths in the past. They believe the vaccine helps protect their families,” suggesting that conflicting information can create uncertainty and reduce confidence in messaging.

Delays or gaps in information delivery further affected perceptions. VY-25M highlighted that “some people miss messages because they do not receive information on time,” and CM-40M reported that “others miss messages due to work travel or not receiving information on time.” These examples indicate that timely and consistent communication is critical; even participants who are willing to engage with the campaign may feel uncertain if messages are not delivered clearly or promptly.

A lack of clear explanations also weakened logical reasoning. HW-20F stated that “community members have doubts because they did not receive a clear message about the

vaccination,” and Community Health Worker (CHW-29F) noted that “most people in our community refuse since they lack knowledge about its importances.” These statements show that when information is incomplete or ambiguous, rumors and mistrust can fill the gap, limiting the campaign’s persuasive effect.

Emotional reactions to cholera and the vaccination itself were another important factor. HW-20F reported that “most people refuse vaccines especially adults due to the reaction of the vaccines,” while VY-25M observed that “some people feel awkward about the vaccination, simply because they fear the associated risks related to vaccines.” These responses suggest that emotional engagement must be carefully managed to ensure that messages reassure rather than alarm the community.

Collectively, the findings indicate that barriers to acceptance were not rooted solely in opposition to vaccines but in the community’s perception of the communication itself. Fear of side effects, circulating rumors, delayed or unclear messaging, and insufficient explanation collectively shaped how the campaign was received. Addressing these barriers requires strengthening the credibility of sources, providing clear and timely information, and combining emotional reassurance with practical explanations to improve confidence in the vaccination campaign.

4.4 The Influence of Social Proof on Vaccination Attitudes

This section examines the second objective regarding how social proof and trusted community figures shape attitudes toward cholera vaccination.

4.4.1 Influence of Trusted Community Leaders

Social proof emerged as a key factor shaping community perceptions and confidence in the cholera vaccination campaign. Participants emphasized that chiefs, elders, religious leaders, and women leaders significantly influenced how community members interpreted messages and made decisions. YL-25M, a 26-year-old youth leader, explained that “Chiefs

and religious leaders influence decisions when they support vaccination; the community follows,” highlighting that in Juba, vaccination is not purely an individual choice but a socially mediated one. The support of respected leaders acts as a signal of legitimacy, reassuring community members that participating in the campaign aligns with accepted social norms.

CM-40M, a 40-year-old community member, similarly noted, “I trust community leaders because they understand our context, and people listen to them.” This demonstrates that trust is grounded not only in authority but in cultural competence and familiarity. Community leaders who are aware of local realities can translate public health messages into relatable language, addressing concerns and fears while reinforcing the practical benefits of vaccination. As one participant explained, when leaders actively engage with the campaign, “people feel it is safe and important,” suggesting that visible endorsement functions as both a cognitive and emotional cue that validates the vaccine.

Participants also indicated that leaders act as both role models and gatekeepers for social acceptance. The mere presence or absence of endorsement influences community confidence: positive engagement encourages participation, whereas silence or skepticism can generate doubt. CM-25M highlighted this, stating, “When community leaders talk about the benefits of vaccination publicly, it motivates people to follow,” illustrating how approval from leaders translates into observable behavior change within the social network. In this sense, vaccination is experienced as a collective responsibility, where following trusted figures reduces uncertainty and strengthens confidence in the campaign’s messages.

These findings suggest that integrating trusted community leaders into the communication strategy is essential. Their visible support not only enhances message credibility but also builds confidence among residents, encouraging them to interpret campaign messages as relevant, reliable, and socially sanctioned. In Juba, community

perceptions of vaccination are therefore closely tied to the behaviors and endorsements of respected local authorities, demonstrating the powerful role of social proof in public health initiatives.

4.4.2 Peer Influence and Youth Mobilization

In addition to traditional leaders, peer influence—particularly through youth mobilization—was reported as a significant factor in shaping community attitudes toward cholera vaccination. Participants noted that seeing familiar peers actively engage in the campaign reduced fear and suspicion, making the vaccine feel safer and more acceptable. YL-26M, a 26-year-old youth leader, described, “During campaigns, we educate families door to door; seeing familiar young people support vaccination increases acceptance.” This highlights the role of relatable community members in modeling positive behavior, demonstrating that social proof operates not only through formal authority but also through everyday social networks.

Women leaders also played an important role in influencing vaccination decisions, particularly among mothers. CM-20M, a 20-year-old community member, explained, “Women leaders encourage mothers to vaccinate their children, and people listen to them.” This demonstrates that peer influence works effectively when it is delivered by individuals who share similar social roles and responsibilities with those they aim to influence. Familiar and trusted faces, whether youth mobilizers or women leaders, provide reassurance and normalize the act of vaccination within the community, bridging gaps in trust that may exist toward external authorities or formal campaigns.

Several participants emphasized that peer influence helps counteract fear and misinformation. CM-25M, reflecting on personal observation, noted, “Seeing people like us take the vaccine makes it feel safer.” The visibility of vaccination behavior among peers creates a ripple effect: as more community members observe others taking part, confidence

and acceptance grow. Peer-led messaging also allows for more culturally sensitive communication, as young mobilizers and women leaders can address concerns in relatable language and provide practical advice tailored to the household context.

However, the effectiveness of peer influence depends on consistency and credibility. Participants reported that when youth or women leaders are absent, hesitant, or poorly informed, their influence is weakened. One youth leader (YL-25M) observed, “In areas where leaders don’t take vaccines publicly, people are hesitant,” emphasizing that modeling positive behavior is crucial to strengthen social proof. This indicates that peer mobilizers must not only engage actively but also be supported with accurate information and visible endorsement to maximize impact.

Overall, the findings suggest that combining traditional authority with peer influence creates a complementary social proof effect. Youth mobilizers and women leaders provide approachable, relatable examples that reinforce the safety and importance of vaccination. By integrating familiar faces into campaign strategies, community perceptions of the cholera vaccination campaign are strengthened, increasing both confidence in the messages and acceptance of the intervention.

4.4.3 Barriers to Social Endorsement

Despite the positive impact of social proof, several barriers limited its effectiveness. Skepticism or absence among influential figures was a primary obstacle. CM-30M, a community member, explained, “Some elders doubt the vaccine, which discourages others,” highlighting how hesitancy among leaders can ripple through social networks. Similarly, YL-25M observed, “In areas where leaders don’t take vaccines publicly, people are hesitant,” showing that visible modeling is essential for reinforcing confidence.

Incomplete or inconsistent engagement of peer influencers also reduced social proof. CM-25M emphasized, “Seeing people like us take the vaccine makes it feel safer,” implying

that when familiar figures are absent or lack sufficient knowledge, the positive influence of peer behavior is weakened. Participants consistently reported that social proof is most effective when leaders and peer influencers are both visible and informed.

Collectively, the findings suggest that social proof strengthens community confidence in vaccination when respected leaders and peers actively demonstrate and endorse participation. Conversely, silence, skepticism, or absence among these influencers can undermine trust and weaken the perceived legitimacy of campaign messages. These insights highlight the need for vaccination strategies that integrate visible leadership, culturally relatable role models, and active peer engagement to enhance acceptance within the community.

4.5 Perceptions of Message Framing: Gain vs. Loss

The final objective explored how different approaches to message framing—gain-framed versus loss-framed—were perceived during the 2025 cholera vaccination campaign in Juba. Participants described how the emphasis on either positive outcomes (gain-framed) or potential dangers (loss-framed) shaped their attitudes, confidence, and motivation to accept vaccination.

4.5.1 Perception of Gain-Framed Messaging

Gain-framed messages, which emphasize protection, positive outcomes, and personal or family benefits, were widely perceived as motivating and confidence-building. CM-25M, a 25-year-old community member, stated, “Vaccination protects my family from cholera and severe diarrhea,” highlighting that the appeal of safeguarding loved ones was a key factor in shaping acceptance. Similarly, CM-20M emphasized the life-saving aspect of vaccination, explaining, “It saves lives, especially children; that motivates me to take it.”

Other participants echoed this perception, noting that gain-framed messages fostered a sense of empowerment and proactive behavior. By framing vaccination as a clear benefit—

protection from illness, prevention of suffering, and safeguarding family health—these messages helped build trust and reduce hesitation. CM-40M observed that “when messages focus on the positive outcomes, people feel more confident to participate because they see a direct benefit.”

The effectiveness of gain-framed messaging appears to be closely linked to observable and relatable outcomes. Participants responded most strongly when messages connected vaccination to everyday life and tangible family protection rather than abstract scientific reasoning. This suggests that emphasizing practical benefits aligns with the community’s experiential understanding of cholera risk and motivates acceptance without triggering fear or suspicion.

4.5.2 Perception of Loss-Framed Messaging

Loss-framed messages, which emphasize risk, danger, and negative consequences of non-vaccination, were also influential but in a more nuanced way. CM-40M, a 40-year-old community member, explained, “Some people fear dying from cholera if they don’t vaccinate, so they agree to take it,” illustrating how perceived personal risk can create urgency and prompt action. Similarly, YL-25M, a youth leader, highlighted the impact of narrative framing: “Stories of families losing loved ones make people act immediately to vaccinate,” showing that vivid examples of harm or death can trigger rapid behavioral responses.

However, participants emphasized that loss-framed messaging was effective only when credibility and trustworthiness were maintained. CM-30M, a 30-year-old community member, warned, “Some think vaccines are a foreign experiment; even danger messages don’t convince them.” This demonstrates that exaggerated or poorly sourced warnings can backfire, fostering suspicion and resistance rather than motivating compliance.

These findings suggest that loss-framed messaging functions best when it communicates real, relatable risks that resonate with community experience, without overstating danger or undermining trust. Messages that appear manipulative, unrealistic, or disconnected from local context may reinforce doubts rather than encourage vaccination.

Collectively, participants' perceptions indicate that balancing gain- and loss-framed messaging is critical. Gain-framed appeals build confidence, emphasize empowerment, and reinforce the practical benefits of vaccination, while carefully calibrated loss-framed messages create a healthy sense of urgency without triggering mistrust. Successful campaigns in Juba appear to require a strategic combination of both frames, tailored to audience understanding, trusted sources, and observable outcomes.

4.6 Summary of findings

The study reveals that community perceptions of the 2025 cholera vaccination campaign in Juba are shaped by multiple interrelated factors, including credibility, emotional engagement, logical reasoning, social proof, and message framing. Trusted local figures—such as chiefs, religious leaders, and women leaders—alongside health workers, play a central role in reinforcing confidence and legitimizing vaccination within the community. Emotional narratives, including stories of families affected by cholera, were reported to motivate action, while factual and practical explanations provided the rational basis for understanding the benefits of vaccination.

Social proof through peer influence and youth mobilization further strengthened positive perceptions. Participants consistently described that seeing respected leaders and familiar community members take or endorse the vaccine encouraged wider acceptance, demonstrating the importance of role modeling in shaping collective behavior. Similarly, message framing was perceived as influential: gain-framed messages emphasizing protection and family safety fostered empowerment and proactive engagement, whereas carefully

communicated loss-framed messages highlighting real risks of cholera created urgency without undermining trust.

The findings also identify persistent barriers to community confidence. Fear of side effects, circulating misinformation, rumors, and delayed or inconsistent communication were highlighted as key challenges that limited the perceived legitimacy of vaccination campaigns. These barriers illustrate that acceptance is not determined solely by the content of the message but also by the timing, clarity, and credibility of its delivery.

Overall, the findings indicate that effective cholera vaccination campaigns require a multi-faceted approach: combining credible and trusted messengers, emotionally resonant narratives, clear practical explanations, visible social modeling, and contextually appropriate message framing. Addressing informational gaps and countering rumors through timely communication is essential for building confidence and reinforcing community trust in vaccination efforts.

Chapter 5: Discussion of results

5.0 Introduction

This chapter discusses the findings of the study on perceptions of the 2025 cholera vaccination communication campaign in Juba, South Sudan. The discussion primarily draws on findings from community members, who formed the main study participants, while insights from health workers and youth leaders provide supporting context. By comparing the results with the theoretical frameworks and literature review, this chapter explains why certain messages were effective and identifies the barriers that limited campaign success.

5.1 Discussion of findings

The following sections interpret the primary data by situating the findings within the broader body of knowledge and theoretical frameworks in vaccination communication campaigns.

5.1.1 Perception of Rhetorical Appeals: *Ethos, Pathos, and Logos*

The study found that **credibility (ethos)** was a central factor shaping community perceptions of the 2025 cholera vaccination campaign. Participants consistently identified health workers, government-affiliated sources, and recognized community leaders as the most trustworthy messengers who understood the community context and could influence public attitudes toward vaccination. This aligns with the Elaboration Likelihood Model (Petty & Cacioppo, 1986), which argues that when audiences face low information or uncertainty, they rely on peripheral cues such as source credibility to evaluate messages. In fragile and post-conflict settings like Juba, this reliance is heightened, as communities may lack access to formal health education. Similarly, Kiwanuka-Tondo et al. (2009) note that trust in the messenger often outweighs message content in influencing health behavior in African contexts, especially where community members rely on familiar figures to interpret complex public health information.

Emotional appeals (pathos) were also highly influential in shaping vaccine acceptance. Participants reported that messages emphasizing cholera deaths, suffering children, and vulnerable families elicited strong feelings of urgency and personal responsibility. These emotional responses appeared to motivate individuals to consider vaccination as a protective action. This supports Hornik et al. (2018), who argue that emotional appeals enhance attention, recall, and motivation during public health emergencies. The findings further suggest that in contexts where technical explanations alone may not engage the audience, emotional framing becomes a critical driver of decision-making. Emotional appeals were particularly effective when grounded in personal observation or local experience, such as seeing cholera cases in the community, demonstrating that affective reasoning is anchored in lived realities rather than abstract fear (Larson et al., 2014).

Logical reasoning (logos) provided a complementary layer of influence. Community members valued practical, observable explanations of vaccine benefits, particularly those related to protecting families from severe illness. Their reasoning often focused on tangible outcomes rather than detailed biomedical mechanisms. Health professionals and youth leaders, however, provided more technical explanations about how the vaccine works. While these explanations reflect scientific knowledge, their primary role in this study was to validate the practical reasoning of community members rather than drive acceptance directly. This pattern aligns with the Health Belief Model (Rosenstock, 1974), which posits that individuals adopt protective behaviors when they perceive clear benefits and manageable barriers.

In sum, the findings indicate that the most persuasive communication in Juba integrated ethos, pathos, and logos, combining credible messengers, emotionally compelling narratives, and practical rational explanations. Campaign messages that successfully blended these appeals were perceived as trustworthy, motivating, and logically sound, reinforcing

confidence and acceptance among community members. These results underscore the importance of designing vaccination campaigns that address not only what is communicated but also who communicates it and how messages connect to local experiences and emotions.

5.1.2 Influence of Social Proof and Social Learning

The findings indicate that social proof was a significant determinant of community perceptions and acceptance of cholera vaccination in Juba. Participants consistently highlighted the role of respected local figures, including chiefs, religious leaders, and women leaders, in shaping attitudes and guiding behavior. Their statements illustrate how the endorsement of trusted authorities' functions as a form of social validation, aligning with Cialdini's (2009) Social Proof theory, which posits that individuals look to the actions of others to determine appropriate behavior, particularly in situations of uncertainty. In Juba's fragile and post-conflict context, reliance on socially recognized authorities appears heightened, as communities often navigate health decisions within collective networks rather than relying solely on formal technical guidance.

The study further revealed that peer influence and household-level discussions contributed to community acceptance, reflecting Bandura's (2001) Social Learning Theory, which emphasizes observational learning and modeling as critical mechanisms for behavior adoption. Community members reported that seeing peers and familiar youth actively engage with vaccination positively influenced their own decisions. The involvement of youth mobilizers in door-to-door sensitization was also perceived to strengthen community acceptance, as familiar and trusted individuals were able to communicate directly with families. Similarly, participants highlighted the role of women leaders in encouraging mothers to vaccinate their children, demonstrating the importance of role modeling within trusted social networks. These findings confirm that vaccination is not perceived as an isolated individual choice but is strongly embedded within social and relational contexts.

Youth mobilizers played a particularly important role in reinforcing social proof through interpersonal communication. Door-to-door sensitization allowed them to directly address questions, clarify misinformation, and demonstrate participation, which strengthened message credibility. This aligns with literature suggesting that interpersonal communication is often more effective than mass media in influencing health behaviors in low-resource settings, particularly because it allows for dialogue and clarification of rumors (Ndejjo et al., 2015).

Collectively, these findings demonstrate that social proof and social learning operated through both authority figures and peers, emphasizing the importance of visible participation and endorsement. Community attitudes in Juba were shaped by observing trusted figures, engaging with familiar social networks, and seeing vaccination behavior modeled, reinforcing the idea that culturally grounded and socially embedded strategies are essential for enhancing acceptance of public health interventions in fragile settings (Larson et al., 2014).

5.1.3 Resonance of Message Framing (Gain vs. Loss)

Message framing had a significant influence on community perceptions of the cholera vaccine, linking closely with constructs from the Health Belief Model (HBM) (Rosenstock, 1974), including Perceived Benefits, Perceived Susceptibility, Perceived Severity, and Self-Efficacy. Gain-framed messages, which emphasized protection, family safety, and positive outcomes, were widely persuasive. Participants indicated that messages highlighting the protection of family members, particularly children, increased their confidence in vaccination and motivated them to adopt preventive action. These responses demonstrate that highlighting tangible benefits reinforces both Perceived Benefits and Self-Efficacy, motivating individuals to adopt preventive action. This finding aligns with Rothman and Salovey (1997), who found that positive framing encourages preventive behaviors by emphasizing attainable and desirable outcomes.

Community observations also reinforced gain-framed messages. Participants indicated that observing healthy children in their communities reinforced the perceived benefits of vaccination, demonstrating the influence of social validation. This pattern is consistent with Social Learning Theory (Bandura, 2001), which emphasizes that individuals learn and adopt behaviors through observation and modeling. In communal settings such as Juba, witnessing positive outcomes in peers' families appeared to increase confidence in the vaccine and strengthen overall acceptance.

Loss-framed messages, emphasizing danger, risk, and potential death, were effective only when the threat was immediate and the source credible, reflecting the HBM constructs of Perceived Susceptibility and Perceived Severity. The participant statements show that realistic, relatable danger messages can create urgency and motivate protective behavior. However, when perceived as exaggerated or coming from untrusted sources, loss-framed messaging could backfire. The Participant statements indicated that some community members were skeptical of vaccines and less responsive to danger-based messages when they believed the information was untrustworthy, illustrating O'Keefe's (2016) point that fear-based appeals may fail if perceived as manipulative or lacking actionable steps. Participants further highlighted that loss-framed messages were most effective when paired with clear guidance on protective action, such as when and where to get vaccinated. Providing these actionable steps appeared to enhance self-efficacy and make risk communication more meaningful.

Together, these findings suggest that effective message framing in Juba requires a careful balance. Gain-framed appeals reinforce practical benefits, empower decision-making, and build confidence, while credible loss-framed appeals create a sense of urgency and highlight the seriousness of disease risk. Combining both framing strategies with culturally relevant examples, actionable guidance, and visible social proof maximizes resonance,

supporting HBM predictions and Social Learning Theory principles. Campaign messages that are truthful, contextually grounded, and linked to local experiences are more likely to influence behavior positively, demonstrating that message framing alone is insufficient without credibility, clarity, and social validation.

5.2 Limitations and Obstacles

It is important to note the limits of this research. First, this is a qualitative study, which means it focuses on a small group to get deep and detailed information about their feelings and reasons. Because of this, the results do not give a statistical count of what every person in South Sudan thinks. Instead, it provides a "voice" to the people of Juba to help us understand their specific experiences. Second, the study was only done in Juba City. The way people think in the city might be different from the way people live in rural villages, where life is different. However, these findings are still very important because they show exactly how communication works in a busy city during a cholera outbreak.

5.3 Summary of Findings

The study demonstrates that credibility (ethos) is the most influential factor shaping how community members in Juba interpret cholera vaccination campaign messages. Participants consistently identified trusted health workers, government-affiliated sources, and recognized community leaders as authoritative and culturally grounded messengers, confirming that source credibility is critical in contexts where access to formal health education is limited. Logical reasoning (logos) provided an important foundation by explaining practical benefits and safety, helping community members understand why vaccination was necessary. Participants, for example, emphasized tangible outcomes such as protecting children from severe diarrhea and preventing deaths during peak cholera seasons. Emotional appeals (pathos), particularly those highlighting the suffering of vulnerable populations, generated strong feelings of urgency and personal responsibility, motivating

action where rational explanations alone might have been insufficient. Social modeling and social proof further reinforced acceptance, as peers, youth mobilizers, and respected leaders visibly endorsed vaccination, demonstrating the power of observational learning in shaping community behavior.

Overall, these findings suggest that effective communication in fragile, post-conflict settings relies on integrating multiple persuasive strategies. Campaigns that combine credible messengers, clear and contextually grounded explanations, emotionally resonant narratives, and visible social endorsement are more likely to achieve high levels of community acceptance. This underscores the importance of culturally sensitive framing that addresses both informational and affective needs while leveraging local social structures. For future vaccination initiatives in Juba, prioritizing trusted local figures, tailoring messages to lived experiences, and balancing emotional and logical appeals will be essential to maximize coverage and build sustained confidence in public health interventions.

Conclusions and recommendations

6.0 Introduction

This chapter presents the conclusions and recommendations derived from the study of the 2025 cholera vaccination campaign in Juba. It reflects on whether the research objectives were achieved and proposes actionable strategies for future public health communication. By synthesizing the qualitative findings, this chapter provides a final assessment of how rhetorical and social factors influenced the campaign's resonance within the community.

6.1 Conclusion

This study concludes that the research objectives have been successfully achieved by identifying that a combination of credibility, emotional engagement, logical clarity, social influence, and strategic message framing shaped perceptions of the 2025 cholera vaccination campaign in Juba. Trusted messengers, such as health workers and community leaders in collaboration with government institutions, were the primary drivers in building confidence and improving message acceptance. While emotional appeals increased urgency and motivated protective behavior, logical explanations provided the necessary clarity regarding vaccine safety.

Furthermore, social proof strengthened positive attitudes when influential leaders and peers publicly modeled vaccination behavior, effectively normalizing the intervention. Message framing also played a critical role, with gain-framed messages encouraging proactive protection. However, the study concludes that despite these strengths, persistent barriers—such as misinformation and delayed communication—remain significant obstacles. Therefore, while the campaign successfully utilized rhetorical appeals, its full impact was mediated by the speed and cultural relevance of the delivery system. Ultimately, the study concludes that in a fragile and collectivist context like Juba, vaccination communication campaigns are most effective when it moves beyond providing facts to building deep

relational trust. Success depends on harmonizing official messages with the local social structures and emotional realities of the community.

6.2 Suggested areas for future research

While this study addressed its primary inquiries, the following areas represent gaps in the current body of knowledge that warrant future investigation:

1. **Misinformation:** Examine how rumors spread through social media and community networks to influence vaccine decisions in urban South Sudan.
2. **Gender Dynamics:** Investigate the specific role of women leaders in household vaccination decision-making.
3. **Long-term Trust:** Assess how community trust fluctuates over time through repeated health campaigns beyond the context of cholera

6.3 Recommendations

The following recommendations are derived directly from the study's findings and are designed to maximize the impact of future public health interventions in Juba.

6.3.1 Practical Recommendations for Health Communicators

The study found that credibility, or ethos, and social proof were key factors influencing vaccine uptake. Participants reported that they were more likely to trust messages delivered by familiar figures such as youth mobilizers, community leaders, and local health workers. Based on this finding, future campaigns should actively engage these trusted actors as primary communicators.

These community figures should be identified and trained well in advance of the vaccination rollout. Training should focus on presenting accurate and clear information, addressing common community concerns, and communicating in culturally appropriate ways. Door-to-door sensitization led by trusted local figures can enhance relational credibility, increase community confidence, and reduce skepticism.

Additionally, participants indicated that messages that relied solely on technical or scientific data were less effective, as some community members found them confusing. Communication teams should therefore combine factual clarity with emotional relevance. Presenting information in ways that resonate with community values and everyday experiences can motivate participation while helping recipients make informed decisions.

6.3.2 Strategic Recommendations for Message Design

Emotional appeals, or pathos, emerged as a significant motivator for vaccination. Participants emphasized that messages highlighting family protection and community wellbeing were particularly persuasive. In contrast, messages that focused excessively on fear could provoke resistance or anxiety.

Based on this finding, future campaigns should prioritize gain-framed messaging that emphasizes positive outcomes, such as safeguarding children, maintaining family health, and protecting the wider community. Loss-framed messages, which highlight the negative consequences of non-vaccination, should be used sparingly and only when supported by credible, locally recognized testimonials. This ensures that messages remain authentic, reduce fear-based resistance, and encourage constructive behavioral change.

The study also revealed that misinformation and rumors contributed to hesitancy, particularly when communities lacked timely clarification. To address this, a rapid rumor tracking system should be integrated into radio programming and local community monitoring networks. By providing real-time clarification in local languages before vaccination teams arrive, this approach strengthens trust, counters misconceptions, and supports overall vaccine acceptance.

6.2.3 Policy Recommendations for Timely Delivery

The findings indicate that delayed or insufficient pre-campaign communication can create uncertainty and reduce vaccine uptake. To address this barrier, the Ministry of Health

and implementing partners should institutionalize a minimum one-week sensitization lead-time prior to vaccine deployment. This preparatory period should include structured community engagement, radio announcements, and coordinated outreach through local leaders.

Continuous messaging during this period is essential to build awareness, manage expectations, and address emerging concerns. Structured household engagement, particularly in high-density areas, can ensure that families are mentally and socially prepared for vaccination teams. Adequate preparation reduces suspicion, strengthens trust, and increases the likelihood of timely participation.

In addition, integrating communication planning into the earliest stages of campaign logistics can ensure that information dissemination and vaccine delivery occur in a coordinated and complementary manner. Aligning communication timelines with operational planning enhances efficiency and strengthens community confidence in public health interventions.

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Appendix A

Interview Guide

Section	Details / Prompts
Introduction	• Greet the participant and introduce yourself. • Explain the study's purpose: to describe how communication campaigns influence perceptions of cholera vaccination in Juba, South Sudan. • Assure confidentiality and voluntary participation. • Obtain verbal or written informed consent.
Interview Questions	1. Can you describe your role in the community and your involvement, particularly with vaccination programs? 2. What do you know about cholera vaccines and vaccination programs in your area? 3. How do most people in your community feel about cholera vaccines, and why do they choose to take them or refuse them? 4. Have you seen or heard any messages about cholera vaccination in the past year? a. Where did you see/hear them? (Radio, community meetings, posters, social media, etc.) b. Who delivered the message? (Health workers, religious leaders, government officials, NGOs, etc.) 5. How important is it to you that cholera vaccine messages come from trusted sources? Which sources do you trust most, and why? 6. Have you encountered messages that made you feel emotional (fear, hope, empathy, etc.)? How did those feelings affect your thoughts about vaccination?

	7. Have you heard messages that use facts, numbers, or scientific explanations about cholera vaccines? Did this information influence your decision or understanding? 8. Do you know people in your community who influence others to get cholera vaccinated? Who are they, and how do their actions affect you? 9. Have you heard cholera vaccine messages that focus on the benefits of vaccination or on the dangers of not vaccinating? For example, which type of message do you find more convincing, and why? 10. What concerns or doubts do people have about vaccination generally, and what could be done to improve communication about it in your community?
Closing	• Is there anything else you would like to share about your experiences or views on cholera vaccination campaigns? • Thank the participant for their time and remind them of confidentiality.