

Message Framing Strategies in Ebola Health Communications: A Qualitative Inquiry from Mbarara University Students

Frank B. Ahimbisibwe¹, Atuhaire Privah², Alinda Laureen³, Arisiima Nicolette¹

¹Faculty of Business and Management Sciences, Mbarara University of Science and Technology, Mbarara, Uganda

²Department of Mass Communication, Makerere University, Kampala, Uganda

³Faculty of Applied Sciences & Technology, Mbarara University of Science and Technology, Mbarara, Uganda

Email: frank.ahimbisibwe@must.ac.ug, atuhaire.privah@gmail.com, alindalaureen.c@gmail.com, nicolatarisiima@gmail.com

How to cite this paper: Ahimbisibwe, F.B., Privah, A., Laureen, A. and Nicolette, A. (2025) Message Framing Strategies in Ebola Health Communications: A Qualitative Inquiry from Mbarara University Students. *Open Journal of Epidemiology*, 15, 908-915.

<https://doi.org/10.4236/ojepi.2025.154060>

Received: June 6, 2025

Accepted: November 2, 2025

Published: November 5, 2025

Copyright © 2025 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

This study explores the use of message framing strategies in Ebola health communications in Uganda. As health institutions navigate the aftermath of the Ebola epidemic, effective communication remains essential for restoring public trust, encouraging continued health-seeking behaviors, and promoting adherence to preventive practices. This qualitative research focused on how positive and negative message framing such as gain-framed messages (emphasizing benefits of compliance) and loss-framed messages (highlighting consequences of non-compliance) have been applied in public health messaging as conceptualized by university students. A qualitative case study design was used, involving in-depth interviews with students, as well as content analysis of health communication materials such as posters, announcements, and media broadcasts. The findings reveal that gain-framed messages were more effective in promoting positive behavioral intentions and routine health service utilization, while loss-framed messages were more impactful in reinforcing infection prevention protocols. The study recommends a balanced and context-sensitive message framing strategy to enhance public engagement and health outcomes in post-epidemic communication efforts.

Keywords

Message Framing, Behavioral Intentions

1. Introduction

In the aftermath of the Ebola epidemic, effective communication remains a cornerstone of public health efforts. The way messages are framed, either emphasize-

ing benefits (gain-framed) or highlighting risks (loss-framed)—can significantly influence health behaviors [1], by revealing both the potential and limitations of this practice. Different studies have underpinned the importance of message framing, highlighting that it has the potential to promote preventive practices and adherence to public guidelines, particularly among young adults [2]. However, studies of this nature are primarily conducted in high-income countries, leaving a knowledge gap in better understanding the operation of framing strategies in the African context, encouraging the global generalization of finding and thus providing a gap that requires context-specific inquiries. Mbarara Regional Referral Hospital as a key healthcare provider in Western Uganda, has played a central role in disseminating critical health information, shining a light on the limited information on communication strategies and perception of message framing by university students. This study seeks to assess the message framing strategies employed in the hospital's Ebola health communications and their effectiveness in influencing public perception [3].

The study is theoretically grounded in prospect theory, which posits that individuals respond differently to the same information framed as gains versus losses, and in approach–avoidance motivation frameworks, which suggest that individuals differ in sensitivity to positive versus negative cues [4]. Additionally, the analysis draws on the Extended Parallel Process Model (EPPM), which emphasizes that threat-based messages impact behaviour only if perceived efficacy is sufficient [5]. Integrating these perspectives allows for a more nuanced understanding of how different students interpret and respond to Ebola health communications.

The objectives of the study were to identify the types of message framing strategies (gain-framed, loss-framed, neutral) used in health communication materials in Ebola; assess the perceived effectiveness of different message framing approaches; evaluate the influence of message framing on students' health-seeking behavior and adherence to preventive health measures and lastly recommend effective communication strategies for future public health crises.

2. Method

This study adopted a qualitative case study design, allowing for an in-depth exploration of message framing strategies. Mbarara University of Science and Technology (MUST), located in Mbarara District, Uganda was the study area from where (N = 300) students participated in the study. Other participants in the study included Health communication officers and Healthcare professionals (doctors, nurses) within Mbarara (N = 15). Purposive sampling was used to select key informants (e.g., communication officers, senior health workers) while Convenience sampling was used for student participants. The Data Collection Methods included In-depth interviews with health workers and communication staff; Focus group discussions with students; Document/content analysis of posters, flyers, announcements, and digital materials used Ebola and lastly Observation of communication practices and message delivery. Data analysis was done qualitatively us-

ing thematic analysis while Communication materials were categorized based on framing types and analyzed using content analysis techniques.

Analytic Extension: Framing Dimensions and Individual-Difference Markers

Beyond valence, our scheme included additional framing dimensions that usually make an appearance in health communication discussions, including but not limited to motivational target (self-interest vs. prosocial), efficacy content that looks at self-efficacy and responsive-efficacy cues that follow fear-appeal logic, normative cues which compare injunctive to descriptive norms, temporal focus which looks at a comparison of immediate to future outcomes, the format of evidence that highlights the difference between narrative example and statistical information, to mention but a few. The scheme was iterative with a consensus, where all disagreements that arose were resolved by thorough discussion.

Individual differences were qualitatively operationalized into categories that revolved around regulatory orientation (promotion vs. prevention), locus of control, perceived fear, institutional trust, and role identity. A cross-case analysis was done which examined how these markers intersected with message frames to reveal for whom and under what conditions frames were effective [6].

3. Results

The qualitative analysis of students' responses following exposure to differently framed messages about Ebola preventive behavior revealed distinct patterns of interpretation, emotional response, and behavioral intention. Three dominant thematic areas emerged: 1) *Perceived Relevance and Personal Responsibility*, 2) *Emotional Engagement and Message Credibility*, and 3) *Behavioral Intention and Public Health Motivation*. While participants across all message frames acknowledged the importance of Ebola prevention, the tone and framing of the messages significantly influenced their cognitive and emotional engagement.

Theme 1: Perceived Relevance and Personal Responsibility

Participants in the positive framing group consistently expressed that the message resonated with their personal values and identity. Many interpreted the content as empowering, emphasizing that prevention is both achievable and personally relevant. Students in this group frequently used words such as “*encouraging*”, “*uplifting*,” and “*motivating*” to describe their reaction to the message.

“The message didn't make it sound like we were helpless. It made me feel like my actions could really make a difference, even on a small scale.”—Female Participant 05 (Positive Frame)

This sense of ownership over health practices was particularly strong among students who viewed themselves as future community leaders or public health advocates. Positive framing appeared to affirm their roles as active agents of change.

In contrast, participants exposed to negatively framed messaging acknowledged the seriousness of the issue but framed their responses more defensively. They

tended to perceive the message as accusatory or guilt-inducing, leading to mixed feelings about personal responsibility. Although the information was factually like the positive frame, its presentation was interpreted quite differently.

“I know prevention is important, but the way the article put it made it feel like we’re already failing. That kind of tone can make you feel judged instead of encouraged.”—Male Participant 20 (Negative Frame)

Students in fear-framed conditions often described the message as overwhelming or emotionally taxing. Rather than enhancing their sense of agency, the fear-based language created a sense of powerlessness or disengagement.

“Honestly, the message made me feel like everything was out of control. It talked about dying, being condemned, and I just shut down after a while.”—Female Participant 90 (Fear Frame)

Theme 2: Emotional Engagement and Message Credibility

The tone of each message frame influenced not only emotional reactions but also perceptions of the credibility of the message. Participants in the positive framing condition reported that the tone helped them remain emotionally engaged without feeling distressed or manipulated. They regarded the message as both informative and compassionate.

“It struck a balance—it was serious, but it didn’t scare me. It gave me a reason to care without freaking me out.”—Male Participant 132 (Positive Frame)

The negative framing, while still perceived as fact-based, sometimes led participants to question the intent behind the message. Students noted that the use of loss-oriented language might be effective in some contexts but could also alienate readers who feel personally attacked or blamed.

“It felt a bit like fear-light. Not as extreme as the scary one but still had that ‘if you don’t do this, bad things will happen’ tone. It makes you question if it’s about real care or just control.”—Male Participant 100 (Negative Frame)

Fear-framed messages drew the most critical reactions, with many students questioning their accuracy, ethics, and effectiveness. Several students described the content as exaggerated, emotionally manipulative, or culturally insensitive.

“It was trying too hard to scare people. That kind of approach might work for some, but for me, it just made the message seem less trustworthy.”—Female Participant 150 (Fear Frame)

Theme 3: Behavioral Intention and Public Health Motivation

Positive framing appeared most effective in prompting clear and proactive behavioral intentions. Participants frequently identified specific actions they intended to take, such as adhering to hygiene guidelines, attending health seminars, or spreading awareness within their social circles.

“I didn’t know how easy it was to protect yourself. Now I’m thinking of joining the campus Ebola awareness group.”—Female Participant 77 (Positive Frame)

Negative-framed messaging produced more ambivalent responses. While some students acknowledged the importance of prevention, their intentions were often expressed with qualifiers or uncertainty.

“I might try to be more careful, but I m still processing how it made me feel. It was helpful but also kind of heavy.”—Female Participant 33 (Negative Frame)

Students in the fear-framed group showed the least commitment to taking preventive action. Several participants admitted feeling emotionally drained or paralyzed after reading the message, which hindered their motivation to engage.

“The fear just made me want to forget about the whole thing. When you feel scared, sometimes you just want to avoid thinking about it altogether.”—Male Participant 50 (Fear Frame)

Moderation by Individual Differences

Comparisons across cases showed that framing effects followed a pattern systematically influenced by individual differences as follows:

Perceived fear and efficacy

Students who described high fear, but a low perception of efficacy were seen to question the ethical implication or accuracy of fear-framed content and reported avoidance. When specific actionable steps were paired with risk information, the content was then viewed as less manipulative, with stronger intent, consistent with predictions made on the affective costs of loss framing [7].

Role identity

This involves different facets including peer influence, health training and student leadership. Students who fell in these facets were more receptive to prosocial frames coupled with response-efficacy, whereby they superimposed the intentions as delivered onto actions that had impact on the community, like promotion of seminars. Notably, a similar sort of pattern has been identified for prosocial appeals under low-to-moderate fear and some other control beliefs [8].

4. Discussion

Overall, the findings indicate that message framing plays a critical role in shaping student attitudes toward public health behaviors, particularly in emotionally sensitive contexts like Ebola prevention. While all groups recognized the importance of the issue, positively framed messages were the most successful in promoting a sense of relevance, emotional receptiveness, and behavioral intention. Fear-based approaches, despite their dramatic appeal, often backfired—evoking resistance, skepticism, and emotional fatigue. These results suggest that health communication strategies in public health crises must be carefully framed to encourage engagement without inducing fear or guilt, especially among younger populations such as university students.

For each time Uganda gets hit with Ebola, the Ministry of Health takes to media to warn Ugandan of the deadly hemorrhagic fever. The information is often presented in various formats in print, outdoor and broadcast on all possible media platforms. Ugandans are often reminded to not hug or to hold hands, to social distance and constantly wash their hands. The government often takes over the burial of those that die of Ebola, and people are discouraged from holding funeral

rituals or gatherings of any form. According to [9], such health communications play an important role in shaping people's decisions to engage or not engage in particular health behaviors. In that vein, public health advocates often use persuasive messages as one strategy to motivate people to adopt and comply with health recommendation [10]. The commonest approach in the communication of such health information is how the behavior recommendations and health outcomes in a message are framed. Health-promoting messages can be framed in terms of the beneficial consequences of healthy behaviour (gain-framed) or the detrimental consequences of unhealthy behaviour (loss-framed) [9]. A large, and still growing, body of literature is dedicated to investigating which type of frame is more effective under which circumstances and why [11].

According to [1] there are various theories of message framing which suggest that the manner in which these outcomes are framed—in terms of either potential losses or gains—can profoundly affect people's choices and behavior. Gain-framed messages typically highlight the benefits of engaging in health protective behavior or avoiding risky behavior, whereas loss-framed messages highlight the costs of not engaging in health protective behavior or engaging in a risky behavior [12]. Message framing is theoretically grounded in prospect theory [4], which suggests that people respond differently to information highlighting gains versus losses. The theory states that presenting the same information about risk in different ways alters people's perspectives, preferences and actions [4]. Accordingly, people tend to be more accepting of risks when a decision is framed in terms of its associated costs, whereas people tend to be more risk-averse when the same decision is framed in terms of its associated benefits.

Whilst many interventions aimed at promoting health behaviors have relied on the underlying assumption in prospect theory that people respond differentially to gain and loss-framed message, these investigations have yielded interesting but rather mixed results [13] [14]. For instance, although loss framing has been especially effective when promoting breast self-examination [15] HIV screening [16], and mammography utilization, gain-framed messages have encouraged preferences for certain surgical procedures [17], the use of infant car restraints [18], regular physical exercise, and sunscreen utilization [2] [14].

Notwithstanding the findings of this study, there is still a dearth in literature regarding the role of message framing as a strategy within the context of highly dangerous diseases such as Ebola to influence sustainable preventive behaviors. In Uganda specifically, several individuals still fail to adhere to the guidelines as stipulated by government, despite widespread awareness of and concern for the dangers of Ebola. For instance, while Ebola cases had been reported in Kampala and surrounding areas, several public gatherings, weddings, massive prayer holdings, and musical festivals were carried out. On 20th November 2022, the MTN marathon, which was flagged off by the prime minister, registered resounding success in which thousands participated (<https://www.newvision.co.ug/>). Owing to the reckless behaviors exhibited by most Ugandans during the 2022 Ebola attack,

there is need to establish not only the availability of information about Ebola challenges and how it is communicated but also whether it impacts health decisions.

5. Conclusion

Message framing effects in this piece of research heavily relied on person-message fit. In conclusion, therefore, there is a need to further investigate probable moderators in the relationship between message frames and individual decision making in the context of highly dangerous diseases like Ebola. Theory and research seem to suggest that framing effects may be moderated by individual differences in approach-avoidance motivation [9]. Whereas some people are especially sensitive to reward cues and seek to approach positive outcomes (*i.e.*, approach-oriented individuals), others are more sensitive to threat cues and are motivated to avoid negative outcomes (*i.e.*, avoidance-oriented individuals) [19]. Some evidence from literature suggests that individuals may be more receptive to messages that coincide with their motivational orientation. Specifically, gain-framed messages tend to be most effective for approach-oriented individuals, whereas loss-framed messages tend to be most effective for avoidance-oriented individuals [20]. Thus, there could be other possible moderators that intervene or impact the relationship between message frames and behavior, especially in the context of highly dangerous diseases like Ebola

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Rothman, A.J., Wlaschin, J.T., Bartels, R.D., Latimer, A. and Salovey, P. (2013) Framing. In: *Handbook of Approach and Avoidance Motivation*, Psychology Press, 475-486.
- [2] Detweiler, J.B., Bedell, B.T., Salovey, P., Pronin, E. and Rothman, A.J. (1999) Message Framing and Sunscreen Use: Gain-Framed Messages Motivate Beach-Goers. *Health Psychology*, **18**, 189-196. <https://doi.org/10.1037//0278-6133.18.2.189>
- [3] Ort, A. and Fahr, A. (2018) Using Efficacy Cues in Persuasive Health Communication Is More Effective than Employing Threats—An Experimental Study of a Vaccination Intervention against Ebola. *British Journal of Health Psychology*, **23**, 665-684. <https://doi.org/10.1111/bjhp.12310>
- [4] Kahneman, D. and Tversky, A. (2013) Prospect Theory: An Analysis of Decision under Risk. In: MacLean, L.C. and Ziemba, W.T., Eds., *Handbook of the Fundamentals of Financial Decision Making: Part I*, World Scientific, 99-127. https://doi.org/10.1142/9789814417358_0006
- [5] Popova, L. (2011) The Extended Parallel Process Model: Illuminating the Gaps in Research. *Health Education & Behavior*, **39**, 455-473. <https://doi.org/10.1177/1090198111418108>
- [6] Sakshaug, J.W., Schmucker, A., Kreuter, F., Couper, M.P. and Singer, E. (2019) The Effect of Framing and Placement on Linkage Consent. *Public Opinion Quarterly*, **83**, 289-308. <https://doi.org/10.1093/poq/nfz018>
- [7] Goffman, E. (1974) *Frame Analysis: An Essay on the Organization of Experience*.

North-Eastern UP.

- [8] Lindenberg, S., Fetchenhauer, D., Flache, A. and Buunk, B. (2006) Solidarity and Prosocial Behavior: A Framing Approach. In: Fetchenhauer, D., et al., Eds., *Solidarity and Prosocial Behavior: An Integration of Sociological and Psychological Perspectives*, Springer US, 3-19. https://doi.org/10.1007/0-387-28032-4_1
- [9] Gerend, M.A. and Shepherd, J.E. (2007) Using Message Framing to Promote Acceptance of the Human Papillomavirus Vaccine. *Health Psychology*, **26**, 745-752. <https://doi.org/10.1037/0278-6133.26.6.745>
- [10] Gallagher, K.M. and Updegraff, J.A. (2011) Health Message Framing Effects on Attitudes, Intentions, and Behavior: A Meta-Analytic Review. *Annals of Behavioral Medicine*, **43**, 101-116. <https://doi.org/10.1007/s12160-011-9308-7>
- [11] Van 't Riet, J., Cox, A.D., Cox, D., Zimet, G.D., De Bruijn, G., Van den Putte, B., et al. (2016) Does Perceived Risk Influence the Effects of Message Framing? Revisiting the Link between Prospect Theory and Message Framing. *Health Psychology Review*, **10**, 447-459. <https://doi.org/10.1080/17437199.2016.1176865>
- [12] Gerend, M.A. and Cullen, M. (2008) Effects of Message Framing and Temporal Context on College Student Drinking Behavior. *Journal of Experimental Social Psychology*, **44**, 1167-1173. <https://doi.org/10.1016/j.jesp.2008.02.007>
- [13] Borah, P. (2022) Message Framing and COVID-19 Vaccination Intention: Moderating Roles of Partisan Media Use and Pre-Attitudes about Vaccination. *Current Psychology*, **42**, 30686-30695. <https://doi.org/10.1007/s12144-022-02851-3>
- [14] Rothman, A.J. and Salovey, P. (1997) Shaping Perceptions to Motivate Healthy Behavior: The Role of Message Framing. *Psychological Bulletin*, **121**, 3-19. <https://doi.org/10.1037//0033-2909.121.1.3>
- [15] Meyerowitz, B.E. and Chaiken, S. (1987) The Effect of Message Framing on Breast Self-Examination Attitudes, Intentions, and Behavior. *Journal of Personality and Social Psychology*, **52**, 500-510. <https://doi.org/10.1037//0022-3514.52.3.500>
- [16] Kalichman, S.C. and Coley, B. (1995) Context Framing to Enhance HIV-Antibody-Testing Messages Targeted to African American Women. *Health Psychology*, **14**, 247-254. <https://doi.org/10.1037//0278-6133.14.3.247>
- [17] Wilson, D.K., Kaplan, R.M. and Schneiderman, L.J. (1987) Framing of Decisions and Selections of Alternatives in Health Care. *Social Behavior*, **2**, 51-59.
- [18] Treiber, F.A. (1986) A Comparison of the Positive and Negative Consequences Approaches Upon Car Restraint Usage. *Journal of Pediatric Psychology*, **11**, 15-24. <https://doi.org/10.1093/jpepsy/11.1.15>
- [19] Higgins, E.T. (1997) Beyond Pleasure and Pain. *American Psychologist*, **52**, 1280-1300. <https://doi.org/10.1037//0003-066x.52.12.1280>
- [20] Mann, T., Sherman, D. and Updegraff, J. (2004) Dispositional Motivations and Message Framing: A Test of the Congruency Hypothesis in College Students. *Health Psychology*, **23**, 330-334. <https://doi.org/10.1037/0278-6133.23.3.330>