**To Say or Not To Say: The Influence of Interpersonal Communication Message Structure on Child Nutrition Promotion**

Florence Tsuma, Prof. Hellen Mberia and Prof. Idah Muchunku

# To Say or Not To Say: The Influence of Interpersonal Communication Message Structure on Child Nutrition Promotion

[1*]Florence Tsuma
Technical University of Mombasa

[2]Prof. Hellen Mberia
Jomo Kenyatta University of Agriculture and Technology

[3]Prof. Idah Muchunku
Multimedia University of Kenya

**Abstract**

**Purpose:** This study analyzed the influence of Interpersonal Communication (IPC) message structure in thepromotion child nutrition. The study which was guided by the Health Belief Model (HBM) and employed the mixed methods research design.

**Methodology:** A sample of 10 Health Professionals (HPs) drawn from Public Healthcare facilities and 247 residents with children aged 5 years and below was drawn from Ganze Constituency in Kilifi County. Data was collected through questionnaires and interviews. Quantitative data was analyzed using descriptive and inferential statistics while thematic analysis was used to analyze qualitative data.

**Findings:** The study found that incorporation of the 7Cs of effective communication was vital in Health Communication and Behaviour Change Communication specifically from a child nutrition perspective, with the strongest effect achieved through messages that were both concrete and coherent. Additionally, the ethos appeal proved to be the most powerful appeal in child nutrition communication.

**Unique Contribution to Theory, Practice and Policy:** The study recommends that communicators should ensure child nutrition messages are packaged in line with the 7Cs of effective communication. It also recommends for audience analysis research prior to the dissemination of CNI messages to ensure messages are structured using the appropriate tone, stylistic devices and persuasion appeals.

**Keywords:** *Interpersonal Communication, Child Nutrition*

## INTRODUCTION

According to the International Food Policy Research Institute [IFPRI] (2016), malnutrition is a problem of staggering size worldwide; large enough to threaten the world's sustainable development ambitions for the post-2015 period. Kamenwa (2017) notes that Kenya has an estimated 2 million stunted children and is ranked 12th globally and the highest in Africa in child stunting levels. In Kilifi County, the prevalence of stunting among children under five years stands at 39%, additionally, 4.7% and 18.2% of children under five years are wasted and underweight across the county (County Government of Kilifi [CGK], 2018).

According to Merlino (2017), in order to promote gainful transformation in healthcare, effective vertical, horizontal and diagonal communication must be incorporated in all aspects of care delivery. Atkin & Rice (2012), stated that the effectiveness of behavior change communication is dependent on the nature of IPC message content designed to move the target audience towards a desired response. Scholars such as Tyagi & Rathi (2015); and Romanova, Marino & Ibrahim (2022) further proposed that in order for one to establish effective communication, one must follow the 7Cs of clarity, conciseness, concreteness, correctness, coherentness, completeness and courteousy. Bello (2017) further noted that effective communication influenced a patient's adherence and satisfaction and a HPs safety standard and job satisfaction.

Apart from observing the 7Cs that promote effective communication, a goal of IPC is to persuade the intended audience to chance or take up a certain position. In rhetorical analysis, Aristotle proposed three appeals i.e. appeals to ethos (credibility), pathos (emotion) and logos (reason). According to Balint and Bilandzi (2017), one of the main problems in communicating health issues to audiences is overcoming possible resistance to persuasive attempts to change cherished habits and familiar ways of living. Research reveals that messages that influence positive emotions in health campaigns tend to increase attention to messages, recall, positive attitudes and compliance to recommended behaviors (Monahan as cited in Wright Sparks & O'Hair , 2012).

According to Seidman (2020) people are active listeners when they are in a state of anxiety, therefore, a message that evokes fear opens one up to persuasion (Seidman, 2020). Strong emotional and scary appeals may fail to meet stipulations of correctness and accuracy by inflating the probability or magnitude of the risk and may also scare those who are already scared, thus failing to produce desired protective practices or norms (Muthusmay, Levine & Weber, 2009). Therefore, to be both ethical and practical, communication interventions that aim to elicit people's sense of vulnerability to risk by appealing to their emotions of fear and dread, need to include information that enhances their capacities to adopt the recommendations (Thompson, Parrott & Nussbaum, 2011). Johnson & Witte (2003) argued that health messages should also contain cues to action as per the HBM in order to capture audience attention.

## Problem Statement

A long-standing question in persuasive health message design research is what type of evidence is most persuasive, with great effort focused on exploring narrative versus statistical evidence (Han and Fink, 2012). A study conducted by Boeynaems, Burgers, Konjin & Steen, (2017) suggests that combining metaphor and hyperbole can create extreme and intense frames and that research should thus further explore the effects of these potentially very impactful frames. Boeynaems *et al.* (2017) however noted that most studies focused on direct effects of metaphorical frames on political persuasion and not on health persuasion; thus the need to study such stylistic devices in the context of health communication.

Several government and sponsored health campaigns seek to eradicate the malnutrition problem. However, their impact is yet to fully manifest due to diverse challenges in Kenya's communication systems and strategies (Ministry of Health [MOH], 2014; Ministry of Public Health and Sanitation,2012). Such challenges include: insufficient funds to support sustained health communication in the country, insufficient health communication skills among health communication personnel, inconsistency of messaging, limited health communication research and weak dissemination as well as feedback of health communication information and the lack of communication policies andguidelines to guide implementation of health communication interventions (MOH, 2014). Therefore, it is important to analyze the potential and influence of media rich IPC in the promotionof child nutrition.

**Theoretical Framework**

This study was anchored on the Health Belief Model (HBM) originally proposed by Rosenstock (1966) and modified by Becker (1974). The model suggests that for behavior change to occur, individuals: 1)must have an incentive to change, 2)feel threatened by their current behavior, 3)feel change would be beneficial in some way and have few adverse consequences and4)must feel competent to carry out the change (Naidoo and Wills, 2016).The model argues that people will be more motivated to act in healthy ways if they believe they are susceptible to a particular negative health outcome and that people will not act to prevent a negative health outcome that is unlikely to afflict them (Carpenter, 2010). Most people make a rough assessment about whether they are at risk based on the following factors: personal experience, ability to controlthe situation and a feeling that the illness or danger is rare. Where a situation is not well known, people have an unrealistic optimism that it will not happen to them (Naidoo &Wills, 2016).

The model equally predicts that the stronger people's perception of the severity of the negative health outcome, the more they will be motivated to act to avoid that outcome (Rosenstock as citedin Carpenter, 2010). The individual must perceive that the target behavior will provide strong positive benefits, specifically, the target behavior must be likely to prevent the negative health outcome. Finally, the model argues that if people perceive there are strong barriers that prevent their adopting the preventative behavior, they will be unlikely to do so (Carpenter, 2010). The individual engages in a cost benefit analysis wherein they weigh the actions effectiveness against perceptions that it may be expensive, dangerous, unpleasant, and inconvenient, as such the combined levels of susceptibility and severity provide the energy or force to act; while the perception of benefits (less barriers) provides a preferred path of action (Rosenstock, as cited in Peterson and DiClemente, 1994).

The model also includes a cue to action whereby the individual is spurred to adopt the preventativebehavior by some additional external element such as a mass media campaign or advice from friends or internal cues like a negative change in bodily state (Rosenstock, as cited in Carpenter, 2010). Self-efficacy describes a person's belief in their own ability to do something- in health promotion, this is usually used to think about whether someone feels capable of making a health behavior change (Northrop, Crow & Kraszewski, 2016).

This theory was relevant to this study because the drive to take action or inaction in regard to child nutrition can be explained by the HBM. How IPC messages are structured influences ones perceived susceptibility, perceived severity, perceived barriers, acts as the stimulus needed to trigger the decision-making process to accept a recommended health action. Conner & Norman (2022) noted that HBM provides meaningful insights on individual health practice and can be a beneficial tool to guide health promotion and health communication campaigns.
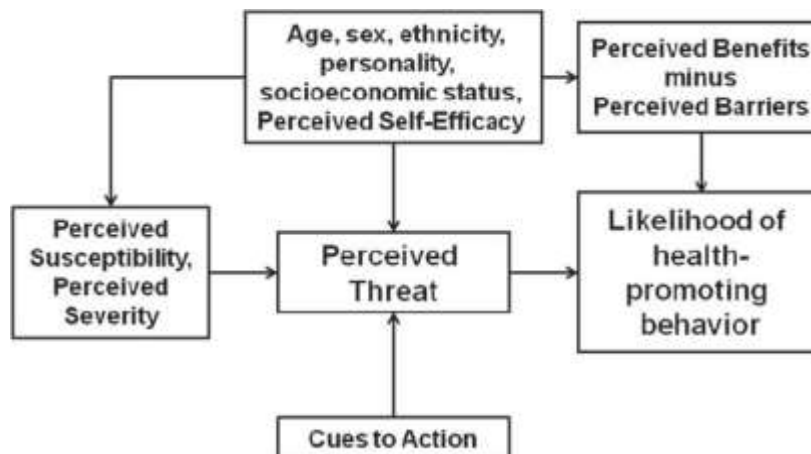
*Figure 1: Schematic representation of the Health Belief Model (Saunders, Frederick, Silverman & Papesh, 2013)*

This study sought to analyze how IPC message structure influenced child nutrition promotion. In so doing it analyzed how IPC message structure influenced the various facets of the HBM. Wright et al, (2012) noted that individuals varied considerably in terms of the type of persuasive message appeals that influenced their cognitions and behaviors. A long- standing query in health communication research is which is most persuasive between narrative versus statistical evidence (Han & Fink, 2012). O'Keefe (2011) further noted that in health interaction, the emphasis of most messages lied on the repercussions of adopting or not adopting certain behavior. The HBM explains this as the personal analysis of perceived benefits verses perceived barriers to behavior change. According to Balint & Bilandzi (2017), resistance to persuasive attempts and unwillingness to make lifestyle changes are some of the main problems facing health communication, therefore communicators need to flexible and patient enough to navigate through such challenges.

A study conducted by Boeynaems *et al.* (2017) suggested that using a combination of stylistic devices had the potential of creating extreme and powerful frames, however, further research was needed to examine the influence of these possibly impactful frames. Boeynaems *et al* (2017) further noted that most studies focused on use and effects of stylistic devices in the context of political persuasion and not in health persuasion.

**METHODOLOGY**

In evaluating the influence of IPC message structure on child nutrition promotion in Kilifi County,the Mixed Methods Research (MMR) design was adopted. This study was carried out in Ganze Constituency of Kilifi County. A sample size of 10 Health Professionals (HPs) was drawn using the Purposive sampling technique while 247 respondents consisting of residents with children aged 5 years and below was determined using the multistage sampling technique. Interviews were usedto gather data from the sample of 10 HPs whereas the Survey method was used to gather data fromthe sample of 247 respondents.

**FINDINGS**

This study examined the influence of IPC message structure on child nutrition promotion in Kilifi County, Kenya. This was founded on the premise that the structure of a message i.e. its understandability, persuasion appeals and stylistic devices may influence its uptake and acceptance. In order to establish factors that influenced the understandability of a message, respondents were asked to identify possible message structures that made the message more

understandable to them- thus more influential. The message structures examined were based on the 7Cs of effective communication as proposed by Romanova, Marino &Ibrahim (2022) & Tyagi & Rathi (2015)

Findings revealed that a message was more influential if more that one of the 7Cs was applied as only 11.3 % of respondents identified only a single quality while 88.7% stated that the use of a combination of the 7Cs influenced their child nutrition decisions. Child nutrition messages that were concrete and coherent were preferred as they were easy to follow and understand. Additionally, none of the respondents stated that short and grammatically correct messages in isolation were adequate enough to influence their child nutrition decisions; however, these two factors were considered alongside other factors.

Responses from interviewees also indicated that HPs utilized the 7Cs of effective communication; either knowingly or unknowingly in their interaction with patients. Interviewees were asked to explain how they structured their message to ensure it was accepted by the local residents.The following are excerpts from some of the interviewees:

Interviewee 2: *"I use the local language. Many of our patients are from the Mijikenda tribe and so because I can speak in Giriama, they can easily understand"*

Interviewee 8: *"I try to simplify everything as much as possible and I speak slowly, if I rush,* they won't *remember. I also repeat the important points several times so that it's harder for them to forget"*

This study also analyzed the influence of various persuasion appeals in promoting child nutrition.The results of this analysis were presented in Table 1.

**Table 1: Comparative Analysis of Persuasion Appeals in Child Nutrition Messages**

|  | Logos | Pathos | Ethos |
|---|---|---|---|
| Strongly Disagree | 4.9 | 20.6 | 7.3 |
| Disagree | 7.7 | 22.3 | 19.0 |
| Neither agree nor disagree | 27.5 | 23.5 | 12.6 |
| Agree | 39.7 | 18.2 | 34.8 |
| Strongly Agree | 20.2 | 15.4 | 26.3 |
| Total | 100.0 | 100.0 | 100.0 |

Research findings revealed that ethos was the most effective persuasive appeal as 61.1% of respondents either agreed or strongly agreed that it influenced them; followed by logos and pathoswith 59.9 % and 33.6% respectively. In corroboration to this, Seidman (2020) argued that not all messengers are created equal: some people are more persuasive than others and the most persuasivepeople experts in their fields.

Interviewees were asked to explain how they structured their message to ensure it was accepted bythe local residents. Research findings reveled that fear was the dominant appeal used when structuring such messages. An interviewee stated:

Interviewee 1: *"I try to make them see the effects of malnutrition, that it can delay a child's milestones and affect them even mentally. I don't focus so much on the benefits of proper feeding.All parents want healthy children. I have not met one who wants an unhealthy child."*

Interviewee 10: "*I mainly try to show them the negativity of malnutrition. That is what seems to work. Then other information follows."*

These interviewee responses indicated that HPs largely focused on the threat of malnutrition in order to trigger a favorable response; therefore, further cementing the claims of several health

communication scholars such as Cohen et al, (2007), Khandakar & Rana (2016) and Harju (2020) on the overuse of fear appeals by HPs.

The findings of this study also revealed that there existed local proverbs and sayings in line with nutrition. However, the influence of these stylistic devices was minimal as a majority of respondents indicated that they had no comment to the statement "Sayings and proverbs influencemy decision on what I feed your child" while only 1.2% either agreed to strongly agreed.

Correlation, Regression and ANOVA analysis was conducted in order to determine the relationship between the structure of IPC messages and Effective Child Nutrition Promotion as well as to test the research hypothesis: There is no statistically significant influence of IPC messages on the effectiveness of child nutrition promotion in Kilifi County- Kenya. Results were as follows:

**Table 2: Correlation Analysis for IPC Message Structure and Effective ChildNutrition Promotion**

|  |  | Nature of IPC Messages | Child Nutrition Promotion |
|---|---|---|---|
| IPC message structure | Pearson Correlation | 1 | .460** |
|  | Sig. (2-tailed) |  | .000 |
|  | N | 247 | 247 |
| ChildNutrition | Pearson Correlation | .460** | 1 |
|  | Sig. (2-tailed) | .000 |  |
|  | N | 247 | 247 |

**. Correlation is significant at the 0.05 level (2-tailed).

Results indicated that there was a significant positive relationship between IPC message structureand Child Nutrition since the correlation coefficient is 0.46 (r=0.46, p=0.000<0.05) and the relationship is moderate since the value of r=0.46 approaches to 0.5 at which there is moderately strong correlation.

**Table 3: Regression Model Summary for IPC Message Structure**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .460ᵃ | .211 | .208 | .37934 |

a. Predictors: (Constant), IPC Message structure

Since the adjusted R2 is 0.208. only 20.8% of child nutrition would be explained by IPC message structure and the remaining 79.2% of child nutrition was due to other factors that were not included in this model.

**Table 4: Regression Analysis Coefficients for IPC Message Structure**

| Model |  | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
|  |  | B | Std. Error | Beta |  |  |
| 1 | (Constant) | 2.477 | .089 |  | 27.982 | .000 |
|  | IPC Message structure | .265 | .033 | .460 | 8.106 | .000 |

The regression model is statistically significant since p=0.000<0.05. Thus, the model fits to predict the dependent variable. Therefore, the model can be expressed as Y=2.477+0.265X,

where Y= Child nutrition and X= Nature of IPC

**Table 5: ANOVA analysis for IPC Message Structure**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 9.456 | 1 | 9.456 | 65.711 | .000[b] |
| | Residual | 35.254 | 245 | .144 | | |
| | **Total** | **44.710** | **246** | | | |

a. Dependent Variable: Child Nutrition Promotion
b. Predictors: (Constant), IPC message structure

The regression model is significantly fitted to predict the dependent variable since $F_{1,245};0.05=3.85<65.711$ with p=0.000<0.05. Hence, IPC message structure did have influence on Child Nutrition. Therefore, based on the findings of these statistical analysis (Correlation, Regression and ANOVA) the research hypothesis "There is no statistically significant influence of IPC messages on the effectiveness of child nutrition promotion in Kilifi County- Kenya" was rejected.

**Discussion**

According to the World Health Organization (2020), accurate information if availed in a timely manner, in a language that is easily understood and through a trustworthy channel can make a bigimpact in health outcomes or emergencies. Similarly, a study by Muchunku (2015) revealed that message understandability increased if a message was: simple (72.9%), applicable (59.4%), conveyed through an appropriate medium (42.6%), conveyed through an appropriate language (40.6%), believable (37.6%), conveyed to a receptive recipient (33.9%), conveyed by an ideal source (16.1%), in line with the opinions of family and peers (13.7%) and complex (12.8%). Additionally, a study by Amarch (2022) noted that effective communication from HPS could counter the consequences of low health literacy levels, however the same study noted that HPs spoke too fast, rarely used examples to expound on issues, made use of medical terms that patientsdid not understand and never explained the results of medical tests thereby revealing that HPs messages were lacking in the area of clarity, completeness and coherence.

Seidman (2020) argued that not all messengers are created equal: some people are more persuasivethan others and the most persuasive people are likable, trustworthy and expert. Clark, Wegener, Habashi, & Evans (2011) also noted expert sources provoked deeper processing of messages as such messages were expected to be more accurate and credible even if they went against ones existing views.

The local sayings identified by the respondents revealed a dominant theme: hunger. This revealedthat hunger was a huge challenge that the community was battling with. The sayings also revealedthat the community was aware of the power of nutrition as they even equated the power of vegetables to the power of witchcraft. Further, it was noted that the quest to end hunger was not an individual one but rather community initiative whereby members of the community would "receive the letters of hunger and respond appropriately" either by providing information or food.

**CONCLUSION AND RECOMMENDATIONS**

**Conclusion**

Child nutrition messages that were concrete and coherent were preferred as they were easy to follow and understand. Among respondents, Ethos was the preferred persuasion appeal, while pathos was preferred among HPs. There existed several stylistic devices within the local

language with regardto nutrition, however they did not prove to be influential in promoting child nutrition. The narratives however created a window that enabled the researcher to see through the community and deduce that hunger/ the lack of adequate food was a problem that the community faced. Additionally, the community recognized the importance of food and the sharing of resources in a bidto avert hunger.

## Recommendations

Communication experts should ensure child nutrition messages are packaged in line with the 7Cs of effective communication by conducting a thorough audience analysis prior to the disseminationof CNI messages to ensure that the messages relayed not only abide by the conventions of the 7Csbut also utilize appropriate persuasion appeals and stylistic devices.

## REFERENCES

Amarch, D. (2022). Health literacy and doctor-patient communication among HIV/AIDS patientsin Homa Bay county, Kenya. PHD Thesis in Health Communication. Jomo Kenyatta University of Agriculture and Technology

Balint, K., & Bilandzi H. (2017). Health Communication through Media Narratives: Factors, Processes, and Effects. *International Journal of Communication*. 11, 4858–4864

Bello,O. (2017). Effective Communication in Nursing Practice: A literature review. (Bachelors Thesis, Förnamn Efternamn).

Boeynaems, A., Burgers, C., Konjin, E.,& Steen, G. (2017). The Effects of Metaphorical Framing on Political Persuasion: A Systematic Literature Review. Metaphor and Symbol. 32(2). 118-134, DOI: 10.1080/10926488.2017.1297623

Conner, M & Norman, P. (2022). *Comprehensive Clinical Psychology.* Elsevier. ISBN 978-0-12-822232-4

Carpenter CR, Sherbino J.(2010). How does an "opinion leader" influence my practice?. CJEM.12(5):431–4. doi: 10.1017/s1481803500012586

Clark. J., Wegener D., Habashi, M. & Evans A. (2011). Source Expertise and Persuasion: The Effects of Perceived Opposition or Support on Message Scrutiny. *Personality and Social Psychology Bulletin*. 3(1). 90-100 https://doi.org/10.1177/0146167211420733

County Government of Kilifi. (2018). Kilifi County Integrated Development Plan 2018 – 2022: "Towards Realizing People-Focused Transformation for Wealth Creation". Retrieved from:www.kilifi.go.ke

Han, B., & Fink, E. L. (2012). How do statistical and narrative evidence affect persuasion?: The role of evidentiary features. *Argumentation and Advocacy*, *49*, 39–58

IFPRI. 2016. *Global Nutrition Report 2016: From Promise to Impact: Ending Malnutrition by 2030*. Washington, DC: International Food Policy Research Institute (IFPRI).

Johnson & Witte (2003) Johnson, L., & Witte, K. (2003). Looking toward the future: Health message design strategies.In T. L. Thompson, A. M. Dorsey, K. I. Miller, & R. Parrott (Eds.), Handbook of health communication. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers. Pp. 473-495.

Kamenwa, R. (2017). State of nutrition in Kenya. Department of Pedeatrics and Child Health AgaKhan University Hospital, Nairobi, KPA Annual Conference Kisumu, 25th -27th April 2017

Merlino, J. (2017). Communication: A Critical Healthcare Competency. Retrieved from: https://www.psqh.com/analysis/communication-critical-healthcare-competency/

Ministry of Health, Republic of Kenya. (2014). *National Health Communication Guidelines in Kenya.* Nairobi: Government Printer

Ministry of Public Health and Sanitation, Republic of Kenya. (2012). National Communication Strategy for Community Health Services. Nairobi, Kenya. Government of Kenya.

Muchunku, I. (2015). Opinion leadership strategies for communicating adaptive climate change information to residents of Kitui Central Constituency in Kenya. (Doctoral Thesis, Jomo Kenyatta University of Agriculture and Technology, Kenya). Retrieved from: http://ir.jkuat.ac.ke/handle/123456789/1771

Muthusmay, N,. Levine, T, & Weber R. (2009). Scaring the Already Scared: Some Problems withHIV/AIDS Fear Appeals in Namibia. *Journal of Communication*, 5(2), 317-344

Naidoo, J & Wills, J. (2016). *Foundations for Health Promotion (4ᵗʰ Ed).* Amsterdam: Elsevier

Northrop M, Crow J&Kraszewski. (2016). *Studying for a foundation degree in health*. New York:Routledge

O'Keefe, D.J. (2012). The Argumentative Structure of Some Persuasive Appeal Variations. *Topical Themes in Argumentation Theory*.

Romanova, I & Marino, A & Ibrahim, A. (2022). The 7 Cs of a successful Communication.Retrieved from: https://www.researchgate.net/publication/359025491_The_7_Cs_of_a_successful_Comm unication

Rosenstock, I.M., Strecher, V.J. and Becker, M.H. (1994) The Health Belief Model and HIV RiskBehavior Change. In: DiClemente, R.J. and Peterson, J.L., Eds., Preventing AIDS Theoriesand Methods of Behavioral Interventions, Plenum Press, New York, 5-24.

Saunders, G. H., Frederick, M. T., Silverman, S., & Papesh, M. (2013). Application of the health belief model: Development of the hearing beliefs questionnaire (HBQ) and its associations with hearing health behaviors. International Journal of Audiology, 52(8), 558-567.

Seidman, G. (2020, March 19). The Best Tactics for Convincing People to Stop the Spread Part1&2: How do you convince people to take precautions against COVID-19? [Blogpost]. Retrieved from https://www.psychologytoday.com/us/blog/close-encounters/202003/the-best-tactics-convincing-people-stop-the-spread

Thompson, T., Parrott, R., & Nussbaum, J. F. (Eds.) (2011). The Routledge Handbook of Health Communication. New York: Routledge.

Tyagi, S., & Rathi, N. (2015). Effectiveness of "7Cs of communication" in the teaching of mathematics at elementary school level. International Journal of Applied Research. 1(13): 377-382

WHO. (2020). *Communicating risk in public health emergencies A WHO guideline for emergency risk communication (ERC) policy and practice*. Geneva: World Health Organization

Wright K, Sparks, L& O'Hair D. (2012).*Health Communication in the 21ˢᵗ Century*. New Jersey:John Wiley & Son