



## The role of emotions in health-promoting behavior campaigns | Fact-sheets collection from the Portuguese COVID-19 pandemic Task Force on Behavioral Sciences

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### Abstract

Behavioral activation requires both cognitive and emotional processes. Fast and automatic decisions are highly dependent of emotional states and, therefore, emotion activation is widely used in marketing initiatives. Health promotion campaigns traditionally opted by using threatening messages, aiming to raise awareness of health risks and to promote adherence to health behaviors. However, the evidence does not support the hypothesis that using fear-inducing messages promotes systematically the expected health protection behavior. Instead, the use of messages promoting positive emotions associated with the target behavior should be the first choice for health promotion programs. The effect of messages on emotional experiencing should be tested as much as possible (considering most vulnerable groups), before launching large-scale campaigns, as well as its effectiveness on the desired health behavior activation.

**Keywords:** COVID-19, Decision making, Emotion, Health-promotion campaigns, Evidence-based policies, Policy brief.

### Introduction

Human behavior is driven by two types of cognitive processes: *System 1 processes* that occurs spontaneously, intuitively, and do not require conscious deliberation nor attention, and *System 2 processes* that requires reflection, motivation, concentration, and higher energy consumption (Stanovich & West, 2000; Kahneman & Frederick, 2002). The psychologist and Noble Prize laureate Daniel Kahneman summarized these two processes as the fast and slow modes

of thinking. In his book entitled *Thinking, Fast and Slow*, the author describes the two systems as the following: "*System 1* operates automatically and quickly, with little or no effort and no sense of voluntary control" and "*System 2* allocates attention to the effortful mental activities that demand it, including complex computations [...] often associated with the subjective experience of agency, choice, and concentration" (Kahneman, 2011).

Moreover, information processing, decision making, and behavior are deeply influenced and guided by emotions (Brosch et al., 2013; Lerner et al., 2015). Marketing is one of the fields where more research has been done on the way emotions influence consumer behavior (Achar et al., 2016). Understanding the biases and the heuristics of the audience is critical to marketers if they want to influence consumers' behavior and bring their brands to the top sales. The so-called *System One Marketing* emerged with the main objective of helping brands becoming the intuitive choice. *System1 Group*, for example, is a well-known private company pioneering the practical application of behavioral science in marketing, creating digital tools for emotional measurement and predicting advertising and brand effectiveness (Kearon, Ewing, & Wood, 2017).

Emotional appeals have been widely used in public health campaigns (e.g., Dillard & Nabi, 2006; Lang & Yeghyan, 2008), particularly appeals using negative emotions as a strategy to elicit health preventive and protective behaviors (Dunlop, Wakefield, & Kashima 2008; Becheur & Valette-Florence, 2014). As a matter of fact, the persuasive power of fear appeals has been extensively studied and its effectiveness openly discussed (Tannenbaum et al., 2015; Stelow et al., 2020). Meta-analytical techniques have shown that the stronger the fear is aroused by a fear appeal, the more persuasive it is (Witte & Allen, 2016). However, results presented by the same authors indicate that fear appeals motivate adaptive but also maladaptive actions, highlighting the need for pointing out effective and easy-to-perform solutions when communicating threats (Witte & Allen, 2016).

During the COVID-19 pandemics, the need to communicate effectively – aiming to promote new protective behaviors (e.g., to increase the frequency of hand washing, to keep social distancing, to use face mask) – proved to be crucial as a mean to mitigate the spread of SARS-CoV-2 (Brossard et al., 2020; Finset et al., 2020; Thompson et al., 2022) and, by doing so, to control the number of severe cases of COVID-19. Compared to individuals who received rational messages (i.e., information targeting health literacy promotion), emotionally appealed messages have been shown to

be more effective, increasing the willingness to vaccinate (Böhm et al., 2019).

Climate change is another field where affect and emotions have been explored as drivers for climate change perception and action (Nabi, Gustafson, & Jensen, 2018; Brosch, 2021). Message appeals eliciting negative emotions increases intentions aligned with climate change mitigation or adaptation (Hine et al., 2016) and both risk perception and perceived collective control, when compared to low-threat messages (Hornsey et al., 2015). Hope has been systematically explored as an important component of fear appeals' efficacy, contributing to the persuasive success of fear-based messages (Stern, 2012; Nabi & Myrick, 2018).

Public health campaigns aiming to promote health protective behaviors need to use evidence-based communication strategies, considering behavior change principles, in order to be effective (Parsons, Newby, & French, 2018). In this sense, the effectiveness of a public health campaign largely depends on the ability to have a clear definition of the communication objectives and of target audience characteristics. Emotions plays an important role as a major component of the communication's efficacy. Furthermore, before its implementation, the emotional effectiveness of a campaign should be tested (Otamendi & Martín, 2020).

## Relevant pieces of knowledge for public health action

- Emotions strongly influence attention as well as motivation for behavioral activation (Tyng et al., 2017).
- Positive emotions have a more powerful effect than negative emotions in voluntary decision making (Wu et al., 2018). The choice of which type of feeling or emotion to promote via campaigns depends on the purpose of the communication. For example, the appeal to responsibility works better when promoting actions that aim at donation behavior, frequently used in campaigns promoted by ONGs (Kemp, Kennett-Hensel, & Kees, 2013; Coleman et al., 2020).

- The use of prosocial public health messages associated with positive emotional responses, rather than threatening messages, are particularly effective in promoting the adoption of health protective behaviors at both individual and community level (Jordan, Erez, & Rand, 2020; Heffner, Vives, & Hall, 2021).
- Fear seems to have a relatively weak effect on the promotion of health-related attitudes, intentions, and behaviors when compared to positive emotions (Witte & Allen, 2000; Ruiter et al., 2014).
- Fear appeals must be used cautiously, as it can have a backfire effect if the target audience does not have a strong perception of the proposed behavior-related effectiveness or if not having strong self-efficacy perception to perform the behavior (Witte & Allen, 2000; Brennan & Binney, 2010; Duhachek, Agrawal, & Han, 2012; Coleman et al., 2020; Garfin, Silver, & Holman, 2020).
- There is lack of evidence about the association between individual differences, such as sociodemographic characteristics (age, sex, etc.) or personality traits, and the processing of fear appeal messages (Witte & Allen, 2000).
- Alarmism and the continuous flow of negative news by traditional media can generate fear or panic, thus reducing the chance of mobilizing the public to the adoption of health protective behaviors. Prolonged exposure to negative news, namely within a context of uncertainty, can result in the amplification of these negative emotions (Lep, Babnik, & Beyazoglu, 2020).
- In social media, there is not only a propagation and a global synchronization of the of emotions expression, but also an increase in the intensity of this expression (Coviello et al., 2014). Disinformation campaigns and conspiracy theories related with the COVID-19 vaccine use emotional manipulation strategies focusing on negative emotions such as fear or anxiety (Chou & Budenz, 2020; Fisher et al., 2020; Sear et al., 2020).
- Negative emotions elicited by disinformation campaigns can be countered with appeals to positive emotions to reduce the mistrust, xenophobia, and exposure to disinformation, including prosocial messages that appeal to

altruism and positive impacts, namely regarding vaccination (James et al., 2021; Tanaka et al., 2021; Böhm & Betsch, 2022), and that promote the hope or more control over the pandemic (Ojala, 2012; Bavel et al., 2020; Jordan et al., 2020; Lwin et al., 2020).

- In designing health campaigns, rather than focusing on individual emotions conditions (e.g., fear) or sets of emotions aroused by the message, it is important to explore the flow of emotional experience during exposure to the message. This flow, marked by one or more emotional changes can switch between negative emotions and positive emotions (e.g., fear and relief), and between positive and negative emotions (e.g., joy and sadness) (Nabi, 2015).

## Calls for action

- Having as objective an effective promotion of health protective behaviors through emotional appeals, the communication and interventions must always be based on the best scientific evidence available.
- Health behavior changes campaigns should be tested in advance and their effectiveness must be evaluated before the campaign is implemented. In the case of campaigns that use videos, the need for preview evaluation of the effect is even more relevant, considering that the videos promote more dynamic and intense emotional flows.
- The effectiveness of public health campaigns must be systematically assessed and analyzed, which means to have in advance a plan to measure its success.
- In campaigns aiming to promote health protective behaviors, the priority must be given to the use of emotional appeals (targeting System 1 decision making) that elicit positive emotions.
- Instead of using threatening public health messages, priority must be given to the use of prosocial messages that promote the adequate perception of evidence-based effectiveness (in terms of health protection)

and self-efficacy for the performance of the behavior in the target audience. In the cases when fear-evoking messages are unavoidable (e.g., when it is necessary to promote risk awareness), the fear-activating messages must be accompanied by easy to understand and feasible what-to-do (how-to-handle) messages. It is critical that the messages promote increased perception of behavior effectiveness and self-efficacy for the realization of the same, that is, that the target audience feels capable to respond to the threat with which it is confronted, and that such behavioral response contributes effectively to minimize the threat (Witte & Allen, 2000).

- In campaigns that use fear-inducing messages (not being possible to use positive-emotion messages, as first-option always), the use of evidence-based references to risk vulnerability and to the severity of associated health problem, associated with feasible action cues, makes the message most effective to activate health protection behaviors. To increase the susceptibility perception of the target audience, easy-to-understand language must be used in the message. Furthermore, to be effectively motivating and promoting behavior change, the message must focus on a realistically threat, giving clues for actions that are perceived as accessible and feasible (Witte & Allen, 2000).

## Disclosure

This work has been adapted from the original policy brief document, developed by the Work Package 3 of

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