

Public health communication strategies: Study of their effectiveness

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Abstract

Talking about public health necessarily entails, in addition to other considerations, talking about communication. Without effective communication aimed at the population, public health will have significant impediments to its proper development and implementation, beyond other aspects of an economic, social, planning, political, etc. nature. This article focuses on discerning, from scientific evidence and analysis, the best practices and communication strategies related to public health, while identifying shortcomings and possible errors in this regard, in order to try to provide recommendations or guidelines to improve their effectiveness.

Keywords

Social communication; Public health; Communication strategies; Communication campaigns; Social networks; External communication; Social issues; Road safety; COVID-19; Artificial intelligence and Big-data; Evaluation.

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1. Introduction

It is through appropriate communication strategies and developments that the optimal dissemination of information on disease prevention and the promotion of healthy practices among citizens can be achieved (**Anker et al.**, 2016). An adequate transmission of public health messages allows the training and education of the audience, avoiding the spread of hoaxes and falsehoods and increasing their knowledge about positive behaviors for their personal well-being, as well as the promotion of prevention actions that reduce the prevalence of certain diseases and minimize the time of detection and diagnosis of the same.

There is an underestimation of some public health problems that may be related to ineffective or low frequency of awareness-raising messages

Therefore, public health awareness campaigns also influence the social perception of the importance of the diseases themselves. The scientific literature indicates that there is an underestimation of some public health problems that may be related to the ineffective or low frequency of awareness messages (**Snyder**, 2007). The failure to effectively inform the public about the high prevalence of a disease, or taking up too much space in the media with less prevalent issues, distorts the viewers' perception of its real importance.

This is a phenomenon that occurs in several countries. By way of evidence, a series of cases from very different places are cited below. In Spain, a study was carried out to evaluate the perception of the importance of social and health problems, identifying an underestimation of the risk of cardiovascular disease as the problem with the lowest score, despite the fact that it has the highest number of deaths both nationally and internationally (**Alonso-Pla et al.**, 2019). A study was also carried out in the Dominican Republic, which revealed a great underestimation of the importance of road accidents in the country. Only a minority of citizens were close to the actual number of road fatalities. More than half of

those surveyed considered that there were less than 500 deaths per year, when in fact there were around 2000 people killed in road accidents, being the first cause of external death in the country, and representing one of the highest fatality rates per inhabitant both in Latin America and worldwide (**Alonso-Pla et al.**, 2023).

Another study analyzed the reasons for the reduction in the number of children vaccinated in Australia, showing that parents' decision making was based on subjective perception of risk marked by ignorance, as they believed their children were less likely to contract the diseases for which they were to be immunized than to experience side effects from the vaccines (**Bond; Nolan**, 2011). This has implications beyond childhood vaccination, since it also applies to the rejection by part of the population of vaccination for new epidemics such as COVID-19, which has also been influenced by this type of subjective perceptions (**Ullah et al.**, 2021; **Ghaddar et al.**, 2022).

These cases are but a small example of how inadequate communication, or lack thereof, can lead to social distortion of the prevalence of certain public health problems, with important repercussions for the population as a whole. If the population's subjective perception of fundamental public health issues is not generated from adequate education, training and communication processes, citizens tend not to carry out the preventive behaviors necessary to avoid becoming involved in problems of great importance for individuals and society as a whole and, as a result, the risk of the spread of diseases and other health problems increases. This lack of preventive action can lead to a greater negative impact on overall public health, underscoring the importance of clear and effective communication to correct misperceptions and encourage healthy behaviors (**Davis; Duke**, 2018).

This article provides a series of indications, based on scientific evidence, on best practices in communication strategies for public health messages, as well as identifying current deficits and offering recommendations for improving their effectiveness.

2. Effective communication strategies

Historically, heterogeneous communication strategies have been employed in public health awareness messages (**Faus-Real et al.**, 2023). The way of transmitting information has evolved over the years, with commercial advertising techniques, among others, having been adapted to promote healthy attitudes and behaviors.

In this sense, and although there are some differences depending on the issues addressed in the campaigns, the strategies employed in the early years of their implementation were generally informative in nature, since their main purpose was to educate viewers by transmitting clear and persuasive messages (**Pinto et**

If the population's subjective perception of fundamental public health issues is not generated from adequate education, training and communication processes, citizens tend not to carry out the necessary preventive behaviors. As a result, the risk of spreading diseases and other health problems is increased

al., 2022). Subsequently, impact communication strategies began to be used, making use of raw and realistic images and messages, as well as emotional ones, to provoke the viewer's involvement, empathy and reflection (**Dunlop et al.**, 2008). In recent years, various techniques have been used, including those previously mentioned, together with humor, metaphors and others of a more creative nature, in order to attract the viewer's attention and increase his or her memory of the message (**Gough et al.**, 2017). In this way, it is intended that such strategies and communicative processes have a greater formative effect and induce, in a more effective and sustained manner, favorable changes and adaptations of attitudes and forms of behavior with respect to the problems addressed.

A more effective strategy is to intersperse high-impact campaigns that present the negative consequences of the health issues addressed with others that employ less harsh communication strategies

On the other hand, it should be noted that the effectiveness of public health campaigns is not usually evaluated systematically. However, existing research on the subject points to differences in the effectiveness of the strategies employed. A direct comparison of their effects shows that the greatest recall and change in attitudes is achieved through impact campaigns (**Pérez-Campo**, 2000). Some studies emphasize that the emotionality of the audiovisual piece is a key variable in behavioral change (**Diegelmann et al.**, 2020). In this line, presenting realistic images with the negative consequences of certain behaviors, such as drug use or lack of physical activity, induces in the viewer a feeling of fear that has proven to be effective for attitude and behavior change (**Suman et al.**, 2021). But the repeated use of this type of campaign can lead to audience habituation, with a consequent desensitization, so that violent scenes do not generate the same impact if they are broadcast over a prolonged period of time (**Lewis et al.**, 2019). A clear example of this phenomenon is the images that appear on tobacco packages in a large number of countries, a measure that reduced the consumption of this substance in the months following its implementation, but which was not as effective in the long term due to the habituation and desensitization of consumers (**Miller et al.**, 2011). Therefore, a more effective strategy is to intersperse high-impact campaigns that present the negative consequences of the health issues addressed with others that employ less harsh communicative strategies, as concluded by several research studies in the area of social advertising (**Antonetti et al.**, 2015; **Lu; Jin**, 2022).

In relation to purely informative campaigns, studies underline the difficulty of achieving changes in attitude or behaviour only with this type of advertisement (**Giannini et al.**, 2013). The function of information campaigns is to transmit data that are unknown to the population. Recently, during the COVID-19 pandemic, many information campaigns were carried out because it was necessary to transmit specific measures and rules for the audience, such as the mandatory use of masks or social distancing, explaining the reasons for the implementation of these actions. Thus, the usefulness of the informative campaigns is not related to generating awareness, but to fostering understanding of the motivations for establishing the measures and increasing the recall of these messages through the persistence and reiteration of the slogans and ideas launched in the

advertisements (Brown; Albarracín, 2006). And, in this way, the change in behavior will depend mainly on the profile of the viewer (Gaona-Pisonero; Pastor-Martínez, 2009). People who trust the sender of the message, as well as those who only need to be aware of the information to maintain the preventive behavior presented, will tend to adopt these behaviors after receiving these types of messages (Ulleberg, 2001). Conversely, individuals who habitually engage in more dangerous behaviors are more likely to resist behavior change, regardless of the information provided (Masuri et al., 2012).

Research on the effectiveness of humor in public health campaigns shows contradictory results. The most effective humorous devices are absurdity and exaggeration, precisely because they have been shown to be easier for viewers to understand, compared to other techniques such as satire and irony

Research on the effectiveness of humor in public health campaigns presents contradictory results. On the one hand, there are studies that point out that humor can hinder the understanding of messages, especially in serious issues where the viewer does not understand the use of this strategy in the communication of information (Yoon; Tinkham, 2013; Weinberger; Gulas, 1992). In this line, the importance of the campaign design and the adequate selection of the specific humorous resource to be applied is emphasized. Those considered most effective are the absurd and exaggerations, precisely because they have been shown to be easier for viewers to understand, compared to other techniques such as satire and irony (Chan, 2011). From this, it is important that the communicative resource does not distort the understanding or relevance of the message, being potentially more effective the use of low complexity techniques. Other studies indicate that generating surprise, with unexpected scenes or messages, increases the capture of attention and the memory of what was transmitted (Alden et al., 2000).

Certainly, each type of communication strategy in public health campaigns presents potential drawbacks or inadequacies of effectiveness, along with the appropriate aspects for its purposes. Hence, the most effective dynamic to generate positive changes in the behavior of citizens is to complement and intersperse campaigns with a higher level of realism and impact, with others that remind the viewer of the message without requiring high levels of harshness in the message or strategy (Faus-Real et al., 2021; Yousef et al., 2021). Recently, it has even been decided to use different techniques and approaches in the same campaign, bringing into play more creative elements that complement the messages and guidelines conveyed.

For this purpose, the use of digital and interactive media can be especially useful, which, through artificial intelligence and big data, allow the personalization of ads and messages, increasing the impact on the target audience. Some examples of road accident prevention campaigns that have made use of these emerging technologies can be mentioned. In Canada, interactive street canopies were installed so that passers-by could see silhouettes that followed their movements. And, when these people were confident and fiddling with this system, a vehicle

would appear, surprisingly running over this silhouette, which represented themselves, including the message "Bone vs Steel. You don't stand a chance" (SAAQ, 2018). A similar campaign has been implemented in France, with pedestrians as the target audience. In it, people can be visualized crossing the street in violation of the rules, at which point a loud bang is heard that makes the pedestrians involved think that they were going to be run over imminently. Followed by which the face of those people is projected just before the alleged hit-and-run on an outdoor billboard, with the message "Ne prenez pas le risque de voir la mort en face" (Don't risk seeing death head-on) (DRIEAT Ile de France, 2017). In both cases, a great impact on the message's recipients is observed, which is mostly related to the surprise generated and the personalization of some campaigns that were applied live, not by traditional media. Regarding these two examples, it is important to point out that they are part of outdoor communication forms, not in mass media communication for home consumption, nor in communication in social networks. And, apart from the growing importance and level of impact that is being registered in external communication, its high value of effectiveness can also be found in the echo and repercussion that it generates, precisely, also in conventional media and social networks, as well as in the phenomenon of word-of-mouth communication, with the persuasive reinforcement and trust that this form of transmission of messages through lived experiences entails, in an added way.

3. Challenges and future proposals for public health communication

Public health campaigns face several challenges that affect their potential effectiveness in changing behaviors. Among others, communication in this area suffers from the rapid spread of misinformation in social networks and other digital media (**Kondamudi et al.**, 2023). Awareness campaigns are usually broadcast on a variety of platforms, including social media (**Faus-Real et al.**, 2022). However, messages coming from official institutions have a much smaller diffusion compared to messages from public figures or internet personalities with speeches full of scientific inaccuracies (**Stitini et al.**, 2022). This difference in the scope and procedures of communication means that hoaxes and disinformation have a greater reach in digital media than messages from official entities or professionals in the sector, whose content is scientifically and academically endorsed (**Aimeur et al.**, 2023). In addition, the personalization allowed by the social networks, which seek to attract the user as much as possible time possible, causes certain messages not to reach a certain part of the audience because they do not correspond to their ideals (**Kozyreva et al.**, 2021). This generates an additional difficulty in correcting erroneous viral messages or false beliefs that may be taking root in the population.

On the other hand, and related to the first point, there is a part of the audience that may have a high resistance to change, which seems to be related to a distrust of the sources that deliver health messages, as well as giving greater credibility to other sources of information (**De-Oliveira et al.**, 2021). A situation that is exacerbated by the information overload pre-

Messages coming from official institutions have a much smaller diffusion compared to messages from public figures or internet personalities with speeches full of scientific inaccuracies

sent in both social networks and traditional media (**Bermes**, 2021). The amount of available data and messages received by the population is enormous, and it is a challenge to capture and maintain the attention of the viewers (**Guo et al.**, 2020). For this reason, it is necessary to combine in communication strategies two aspects that, a priori, may seem opposed, namely, surprise and reflection, in order to induce in audiences both attention and assimilation, especially in certain problems in which the receiver is already aware of the essence or the content of the message itself, not being appropriate in these cases to reiterate the same information, due to the possible exposure fatigue that the population may experience, and thus, their disinterest or immobility with respect to what is being transmitted. Along these lines, it is necessary to adapt public health campaigns to the media that broadcast them. On many occasions, the same advertisement is designed and disseminated in a similar way on different platforms. However, the characteristics of the media themselves and the audience that has access to each are different (**García-Perdomo**, 2023). Therefore, the importance of segmenting the population and personalizing messages to increase their effectiveness is highlighted.

Finally, and as a conclusive result of all that has been analyzed and exposed, it is necessary to point out the need to carry out adequate analysis and design of the most effective communication strategies, as well as other formal aspects of public health campaigns, from vectors that combine creativity and scientific method. In this regard, it is also important to point out the need to increase scientific research with an evaluative and applied development orientation. One way of guaranteeing this would be to systematically accompany each communication campaign in this sector with processes and procedures of evaluation of their suitability for the purposes pursued, as well as of the results achieved. Therefore, public calls for the development of health advertisements should include as an indispensable requirement the design of associated strategies for evaluating their effectiveness and the results obtained. This practice, carried out systematically, would contribute to the collection of reliable data on the effectiveness of different communication approaches, allowing the continuous adjustment and improvement of public health campaigns, increasing their impact and effectiveness in the promotion of healthy attitudes and behaviors.

The importance of segmenting the population and personalizing messages to increase their effectiveness is highlighted

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