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Using behavioural science to design public health social media campaigns

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ABSTRACT

Communicating health risks via social media is an important objective for public health organisations. Behavioural science theoretical constructs can help enhance the design, implementation and evaluation of social media campaigns. In this Practice article, we document the WHO's experience in developing social media messaging using gist and verbatim constructs to influence risk perceptions related to measles and intentions related to measles vaccination. We share our experience to support other public health communication practitioners who may seek to incorporate behavioural science into their social media campaigns to achieve desired shifts in health-related attitudes and intentions in target audiences.

SUMMARY BOX

⇒ Despite the growing significance of social media in public health communication, two few campaigns are built intentionally using behavioural science theoretical constructs.
⇒ Public health organisations can draw on behavioural science to enhance the design, implementation of their messaging campaigns to positively impact people's risk perceptions and intentions related to health.
⇒ We draw on our experience developing a WHO social media campaign using gist and verbatim constructs to create messages designed to influence risk perceptions related to measles, and attitudes and intentions related to measles vaccinations.
⇒ This experience can be of use to other public health practitioners or organisations who may wish to design social media campaigns incorporating behavioural science theoretical constructs.

INTRODUCTION

Communicating risk is a crucial component of health promotion.[1 2] Social media is a globally important means through which people access information, including related to health.[3 4] However, too few behaviour change interventions including communication campaigns are intentionally and systematically built on behavioural science theory and constructs.[5 6] In this Practice article, we draw on our experience developing a social media campaign, which used behavioural science theoretical constructs—specifically gist and verbatim representations—to inform the design and implementation of messages communicating the risk of measles and encouraging positive attitudes and intentions related to measles vaccination. The measles campaign formed part of a wider multicampaign project aiming at studying, via online experiments, whether using different message framings and representations can enhance social media health communication.

Two processes were central to the design of the messaging campaign. First, we conducted a scoping review of the literature on message framing constructs and how they have been used to inform health behaviour and risk communication. Second, we held an ideation workshop (where group discussions were focused on idea-generation and thinking creatively on the campaign objectives) between WHO staff and a geographically and demographically diverse external advisory group of experts in behavioural science, message framing and social media.

Although results and research on the impact of the overall project will be published in due course, here we detail the process followed for the development of our measles campaign, which included a targeted campaign focused on parents of children aged 0–5 years (the key demographic for measles vaccinations). The campaign compared gist messaging against verbatim messaging. Gist messaging involves integrating dimensions of information to distil its 'essence' and communicate the essential ('bottom-line') meaning—for example, of why something poses a risk—whereas verbatim messaging emphasises exact words or numbers (ie, presenting relatively uninterpreted facts and details).[7]

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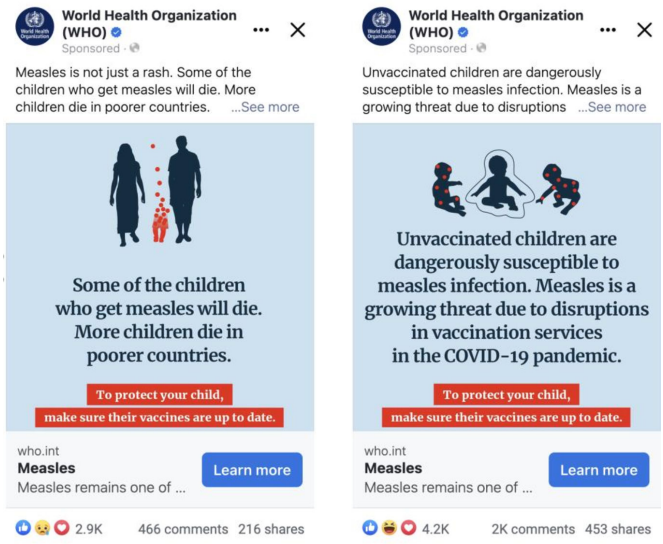
Identifying a behavioural science construct for enhancing social media messaging

Through the literature review and ideation workshop, a number of theoretical constructs were identified as being potentially useful for informing social media messaging, including gist and verbatim representations, gain and loss framing, emotional and rational appeals and injunctive versus descriptive social norm framings.[8–10]

We selected gist-based messaging because there is a growing body of research that suggests that gist-based messaging has been shown to be more effective in impacting health-related judgements and behaviours, compared with verbatim messaging.[11] The principles of gist messaging are derived from Fuzzy-trace theory, a dual process model of cognition, assessment and decision-making that has been applied to analyse decisions involving risk.[12] This theory posits that when individuals encounter health-related stimuli, such as communications from a doctor or health organisation, two types of stimuli representations are recorded in memory: a gist representation and a verbatim representation.[13] Gist messaging captures the 'essence' or bottom-line meaning of information, while verbatim messaging involves presenting exact or detailed information (see figure 1 and below for specific examples of gist messaging).[7] Additionally, we felt that learnings from this campaign on the effect of this framing could be applicable to, and tested via, other campaigns focused on different health topics. It needs to be noted that public health organisations may tend towards more verbatim type messages, to convey accurate and nuanced scientific information.[14] We selected measles vaccination as a first health topic among several to be included in the project, since to the best of our knowledge, there is no published research which had tested gist against verbatim messaging on a large, real-world social media public health campaign on this topic. Future findings and learnings from this campaign will thus fill a gap in the literature and add to the evidence base of whether and how to incorporate gist or verbatim-based messaging into public health social media campaigns.



Sample *gist* messages for measles ad campaign

Sample *verbatim* messages for measles ad campaign

Figure 1 Example of social media ad, using gist and verbatim messaging.

Operationalising behavioural science constructs in social media messaging

In order to apply behavioural science constructs to the design of public health social media campaigns and compare effects, it is necessary for the constructs to be operationalised—that is, to translate a theoretical construct (eg, 'the gist') into a piece of visual and/or written communication to be communicated to a social media audience (eg, converting information about measles risk into a short text/content on social media which conveys the gist of measles risk).

For our measles campaign, our team needed to ensure that what we were testing and measuring was indeed a gist representation (eg, 'some of the children who get measles will die') compared with a verbatim, message (eg, 'of those children who get measles, about 1-in-1000 will die'). The gist message provided the essential point (ie, measles is deadly), whereas verbatim message requires more interpretation by the person seeing the message (ie, how risky is 1-in-1000 exactly?) (figure 1). Researchers and practitioners may ensure that satisfactory construct validity is through preintervention surveys and exploratory factor analyses, and/or qualitative research. However, for our measles campaign, since we were testing a real-world campaign, where time was limited, we took a pragmatic approach to ensure that the face validity of the constructs was satisfactory using an extended peer review. We used a multidisciplinary team including experts on immunisation, behavioural sciences and social media communications, who started crafting gist and verbatim representations of core messages

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derived from published WHO reports and webpages. Following this, we prioritised core messages that were suitable for social media, a global audience and were related to risk perception. A leading external expert in research on gist messaging was also involved in the translation of the core message into a gist representation. The wider group of experts in immunisation, behavioural science, risk communication, decision-making sciences and social media provided iterative comments on the messages and visuals until consensus was reached that the final messages were satisfactory operationalisations of gist and verbatim representations.

Additional considerations for using behavioural science constructs in social media messages

During the design of our campaign, there were other considerations which others may also encounter in designing social media campaigns. For example, practitioners need to decide on what format the campaign should take. Social media posts include a number of considerations including its visual form, for example, whether to use static images or short videos, as well as, for example, considerations around text size, visual colour scheme or whether to use square or vertical format messages. For our measles campaign, we chose to use static images, because as part of a wider research project, we felt this was a simpler way to test the impact of the message framing when compared with using short videos, which are more complex media. In evaluating and comparing across campaigns, it is important to ensure that as many potentially confounding variables as possible were held constant—that is, only manipulating the message text and specifically the way the message was being represented in terms of gist or verbatim representations. Social media posts, like all forms of health communication, contain a vast number of elements or covariates that might potentially affect how the message is being received and interpreted, beyond the framing used, and thus its effectiveness.

Another consideration was targeting, and specifically how to use targeting to enhance the impact of the messages. Targeting is a key principle underpinning both social media marketing and health communication—that is, getting the right message to the right demographic.[15] In our measles campaign, we wanted to explore whether, and how much more effective, our messages were for the key target demographic involved in the specific intention or behaviour—in our case, parents of young children aged 0–5-year old, which is the recommended age range for measles vaccinations. For comparison purposes, we set up our campaign, so that the same messages were seen both by parents of young children and a general adult audience. This has implications for social media messaging strategies. One key consideration in public health is whether to target specific high-risk populations (eg, parents of young children in specific countries where vaccination rates are low) or target the wider population, which can sometimes have beneficial effects across the population even where individual risk is low.[16] Although targeting specific demographics can be more costly in terms of social media metrics like cost *per mille* (ie, how much it costs per 1000 impressions of an ad), targeted messaging may prove more cost-effective in terms of cost per person who responds favourably to a campaign.

CONCLUSION AND NEXT STEPS

In this Practice article, we have described some of the practical considerations and decisions made by the team involved in the design and development of public health social media campaigns, which have specific communication objectives, related to shifts in perceptions around risk susceptibility (eg, to measles) and intentions towards a behaviour designed to reduce risk (eg, measles vaccinations). We argue the need for adopting intentional and evidence-based rationales for public health messaging, incorporating behavioural science, which we hypothesise can enhance their effectiveness.

In future work, we will describe the results of the methods we are using to evaluate this and other campaigns, to add to the evidence base of whether using behavioural science constructs, such as gist and verbatim representations, ultimately serve to enhance the effectiveness of social media campaigns aiming at increasing the perceptions of health-related risk. Our team is using a form of randomised experiments on social media, which on some social media platforms are referred to as 'Brand Lift Studies'. In these experiments, a group of randomly selected social media users within a predefined target population are randomly assigned to test groups, which sees a social media post with a given message, and control groups, which see no message, with both groups being sent questions from a brief poll administered directly via the social media platforms.[17] In our measles campaign, we are using these polls to explore participants' risk perceptions (eg, 'how concerned are you about measles?'), attitudes (eg, 'how important do you feel measles vaccines are for children?') and intentions (eg, 'do you intend to get your child vaccinated against measles?'). Such experiments can provide useful insights—not least because they can allow causal inferences to be drawn about whether a certain framing can change perceptions, attitudes and intentions. In order to ensure that effective messages are available to the whole population, following the experiments, the WHO uses messages designed for the research studies in organic social media posts to expand the reach of the best-performing messages further. Indeed, the objective of this research is to generate evidence that can be used in regular social media activities of the organisation and other public health institutions. Also, we need to anticipate that there may not be a real 'winner' in these experiments (eg, two types of message framing may have similar effects).

Finally, we argue the need for deeper behavioural science informed approaches to evaluation and data collection, for example, using attitudinal and behavioural

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outcome measures (eg, risk perception, intentions), which go beyond the usual engagement data (eg, likes and shares) and basic survey questions (eg, message recall), which are common in campaign evaluation. Additional qualitative (eg, focus groups) and quantitative (eg, longer off-platform surveys that experimentally test the same messages) research on different messages and framings could complement and extend the real-world testing of messages.

Given the gaps in knowledge above mentioned, we hope that our documenting of this process will be useful to others seeking to incorporate behavioural science theoretical constructs into public health messaging on social media.

Correction notice This article has been corrected since it published Online to update the author name to Mohamed Gulaid.

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