Evidence based risk and crisis communication

General recommendations for crisis stages and future COVID-19 pandemic scenarios

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Acknowledgements: Order of Portuguese Psychologists

Abstract

Contents

This document makes a set of general recommendations about risk and crisis communication, tailored for:

1. the differing crisis stages resulting from current and future COVID-19 situations, namely maintenance, resolution and evaluation; and

2. four future scenarios for resolving or maintaining the crisis in accordance with the assessment of the public's perceived degree threat as determined by people's level of individual and/or social control over the situation and the levels of perceived demands and resources.

Goals

When faced with ever increasing types of health risk, for the economy, and for society in general, any intervention or communication strategy should always aim to ensure that current and future events are seen more as a *challenge* (available resources are seen as adequate to deal with current and future demands) than as a *threat* (available resources are judged to be non-existent or inadequate to deal with needs).

Recommendations

Recommendations should be adequate to meet the needs of the current crisis stage as well as those of future pandemic scenarios. However, these can generally be summarized as:

- ✓ *A multi-method longitudinal study* should be carried out to monitor psychosocial variables in support of evidence-based communication. E.g., perceptions of risk and of key variables deepen our understanding of how individuals and groups with different characteristics and vulnerabilities perceive and respond to the crisis.
- ✓ *Maintain risk perception at moderate-high levels,* i.e., communicate that even in the event the situation improves, the risk will remain; this is necessary to encourage the ongoing practice of protective behaviours.
- ✓ *The perception of demands should be reduced while that of resources boosted.* All communication should attenuate the perception of individual and collective effort and danger (health, economic, etc.) and increase awareness of personal resources (e.g., optimism, hope, and resilience) and social resources (e.g., official risk reduction actions and available community support).
- ✓ *Prepare for the future.* The public must be encouraged to adapt to the "new normal", while maintaining protective behaviours, learning for future situations, promoting future planning, maintaining and increasing trust in health and other authorities.
- ✓ *Citizens, groups and organizations* should be encouraged to get involved in planning and proposing mitigation and adaptation activities for the present and the future.

Communication in a pandemic: Contributions of psychology

Technically speaking, risk assessment entails a systematic process for elucidating the nature of the risk by characterizing and assessing it using up-to-date scientific knowledge (Aven et al., 2015). This assessment is typically carried out by specialists in the medical and natural sciences, among others.

However, the public can also carry out its own risk assessments, which means trying to understand, characterize and assess the risk in the light of their own knowledge, perceptions, and feelings. Such individual's subjective risk (Aven et al., 2015), should be analysed by specialists from the social and human sciences, namely psychologists.

This analysis is extremely important, since risk or crisis communications recommending protective behaviours can be ineffective if they fail to take into account individuals' perceptions and the public's awareness of the various associated risks. Appropriate risk awareness is a necessary condition for people to be motivated to take precautions and protect themselves and others, encouraging them to follow recommendations and adopt the necessary behaviours for mitigating the crisis (DGS-GTPCC, 2020).

As such, it is important to identify and analyse risk perceptions, individual and social representations of the crisis situation, beliefs about protective behaviours and other situational factors, sources and consequences of the risk, the popular language and terminology used, and other variables that enable specialists to understand how differing individuals and groups, with their various characteristics and vulnerabilities, perceive and respond to the crisis. This characterization aims to provide evidence for the development of risk and crisis communications and interventions that are customized for the target population's understanding, emotions, motivations, and behaviours (DGS-WGPCC, 2020).

It is particularly important to customize communication regarding: 1) *perceptions of demand* – subjective evaluations of the threat, uncertainty, and effort required by the situation; and 2) *perceptions of personal and/or social resources* – subjective measurement of knowledge, skills and abilities (e.g., problem solving), personal characteristics or dispositions (e.g. psychological resilience and optimism), and external support (e.g., informational, institutional) for dealing with the demands placed by the situation and for performing during the crisis.

Risk vs. crisis communication

Risk communication aims to exchange or share knowledge, information and data related to risk, within and between different target groups, such as regulators, stakeholders, the media, the general public and specific groups (Aven et al., 2015). **In a crisis, risk communication** has similar objectives that are specifically applicable in extreme, unexpected and potentially stressful situations deviating from "normality" (Gaspar, Barnett, & Seibt, 2015). The latter is defined as a precise and effective communication aimed at different audiences in emergency situations (Glick, 2007). Moreover, they are differentiated by a specific set of characteristics:

Risk communication	Crisis communication
Messages regarding known probabilities of negative consequences and how they may be reduced; addressing technical understandings (hazards) and cultural beliefs (outrage)	Messages regarding current state or conditions regarding a specific event; magnitude, immediacy duration and control/remediation; cause, blame, consequences
Principally persuasive, i.e., advertising and public education campaigns	Principally informative, i.e., news disseminated through media or broadcast through warning system
Frequent/routine	Infrequent/nonroutine
Sender/message centered	Receiver/situation centered
Based on what is currently known, i.e., scientific projections	Based on what is known and what is not known
Long-term (precrisis) Message preparation, i.e., campaign	Short-term (crisis) Less preparation, i.e., responsive
Technical expert, scientist	Authority figures/emergency manager, technical experts
Personal scope	Personal, community, or regional scope
Mediated; commercials, ads brochures, pamphlets	Mediated; press conferences, press releases, speeches, websites
Controlled and structured	Spontaneous and reactive

Table 1. Risk versus crisis communication (Reynolds & Seeger, 2005)

Risk communication and crisis communication: Comprehensive recommendations for different crisis stages

These types of communication – risk and crisis communication – can occur either simultaneously or sequentially, depending on the stage of a crisis. According to the CERC model (Crisis & Emergency Risk Communication; Reynolds & Seeger, 2005), crises can be described in 5 stages: Pre-crisis; Initial Phase; Maintenance Stage; Resolution; Evaluation. These are equivalent to the alert and response levels identified in the National Disease Preparedness and Response Plan for the new Coronavirus COVID-19 (see Figure below), and the CERC model can be illustrated as comprising these levels:

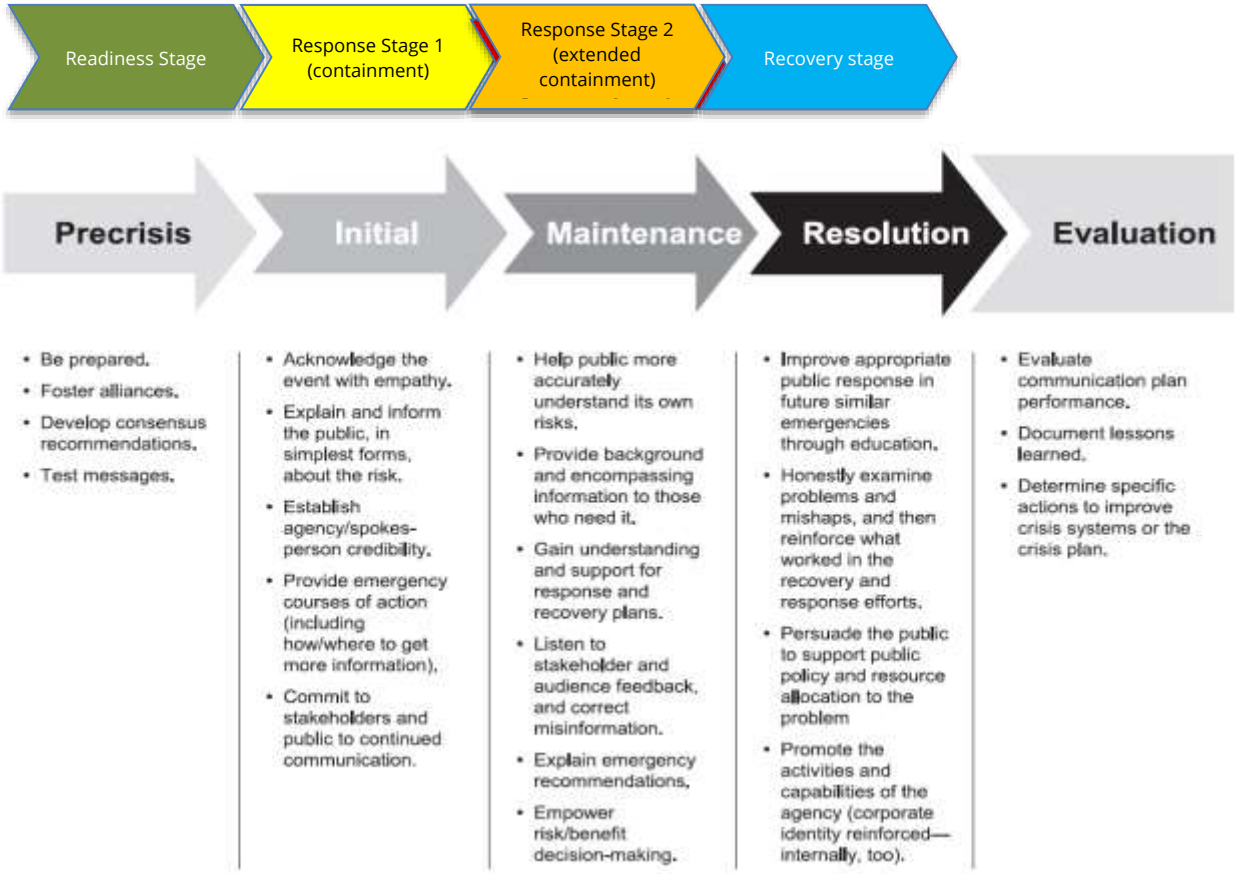

Figure 1. CERC model with the pandemic stages in Portugal. Adapted from DGS-GTPCC (2020), Reynolds, Hunter-Galdo, & Sokler (2002) and DGS (2020)

In the COVID-19 pandemic, **Response Stages 1 and 2** ("Containment" / "Extended Containment") corresponded to the "Initial Stage" and part of the "Maintenance Stage" of CERC, which relied on risk communication supported by the monitoring of psychosocial data (see DGS-GTPCC, 2020) based on the DecodeR paradigm (Domingos, Gaspar, et al, 2019), focusing on the necessary prevention behaviours independent of danger type (e.g. respiratory etiquette). Two overall objectives guided this stage (DGS-GTPCC, 2020):

1. *To increase risk awareness*, sensitizing people to its presence (relative to an earlier "normal" situation in which there would have been less or no risk).

2. *Maintaining public risk perception* at moderate-high levels (but not overly high so as not to induce feelings of helplessness), and amidst risk aware individuals, perception of its ongoing nature should be maintained even as the situation improves, so that protective behaviours are continued.

Response Stages 2 and 3 ("Extended Containment" and "Mitigation") correspond to the "Maintenance Stage" of the CERC model, characterized by a prevalence of crisis communication focusing specifically on COVID-19 evidence (see DGS-GTPCC, 2020; Domingos, Gaspar, et al., 2019) and on the prior risk communication. Two main goals guided this stage (DGS-GTPCC, 2020):

1. *Reduction of perceived demands*: Reducing the perceived effort required to comply with protective behaviour recommendations (e.g., promoting the idea that it is "easy / simple" to wash your hands) and attenuating the situation uncertainty (e.g., causes and consequences of contagion; effectiveness of implemented measures; quarantine criteria; figures such as mortality rates to be disseminated together with alternative non-numeric formats or graphs/pictograms), and the recommend behaviours (e.g., exactly what can be done to reduce the risk).

2. *Increased perception of available (personal and social) resources:* Empowering people with knowledge, skills and abilities (e.g. facilitating problem solving of issues like "what to do if there's a mask shortage?") and external support (e.g., strengthening community support networks for vulnerable groups; increasing the quality of information available but not its quantity to avoid complexity and information overload), and reinforcing positive dispositions (e.g., resilience, as in "what can we learn from this crisis that we can apply next?" and optimism, as in "no crisis lasts forever").

Additional goals include:

- *Preventing and reducing biased beliefs*: Currently news delivery exceeds the speed of virus transmission, making it necessary to combat myths and false ("breaking") news. In order to diminish the rise of social risk, health based "counter-information" should be provided that highlights the risks of alternative behaviours (e.g., miracle cures) and reduces biases (e.g., unproven contagion hotspots).

- *Mitigating communication's collateral effects:* For example, efforts should be made to avoid promoting negative stereotypes, prejudiced behaviour and social avoidance (e.g., towards Chinese, migrants, or COVID-19 sufferers in Portugal).

- *Promoting health literacy:* Health crises such as the current one represent an opportunity to promote health literacy, and, particular, to remind the public to reinforce fundamental behaviours such as respiratory etiquette and hand hygiene.

In the COVID-19 pandemic, the **Recovery Stage** corresponding to the "Resolution Phase" of the CERC model has not yet been reached. Three general goals should guide this stage of risk communication:

1. *Raising awareness, motivating and training the public to increase future resilience:* It is important to raise awareness of the “new normal” that emerged following the first pandemic wave and how it was “the same, but different” from our prior reality. It is equally important to motivate the public and share resources that will empower and enable people to protect themselves effectively in the future. Whether new waves arise or not, it is important to realize that life will not be as it was before. New protective behaviours (e.g., respiratory etiquette, hand hygiene, and other habits) are now a “new normal” to be kept up and transferred into the future so that future pandemics may be met with better preparation, prevention and control.

2. *Recognizing, learning, planning, adjusting and changing*: We must accept that there are no perfect responses in a crisis, particularly when faced with newly emerging risks. Identifying the mistakes made, learning from them, and using this acquired knowledge to plan and adjust future mitigation responses is essential. The accompanying communication will restore and strengthen confidence in health and other authorities involved in the pandemic response. This trust is essential for promoting not only the public's adequate response to future health crises, but also to health recommendations for combating day-to-day risks.

3. *Involving the public, groups and organizations*: Future cases of epidemics or pandemics will necessitate an effective response from all elements of the social system (e.g., regulators, stakeholders, media, the general public and other specific groups) and will encourage joint efforts towards action and knowledge creation. This effective response can be increased by involving citizens, groups and organizations in society, which may increase the perception of individual and social control over future events, social mobilization, and the creation of knowledge networks shared and recognized by all, thus increasing available social resources and reducing inequalities. This allows, for example, each citizen to properly understand the information and function as a reliable communication channel in the community: the information communicated by official sources can be shared by each citizen and with those who may not have access to digital or social media platforms (e.g., isolated people, the elderly or people with low socioeconomic resources who are vulnerable in an epidemic). The citizen becomes, then, a public health agent, capable of countering disinformation, empowering themselves and others.

Risk and crisis communication: Global recommendations for future pandemic scenarios

From a psychological point of view, the best future pandemic scenario is one that gives a greater perception of control at the individual and social levels – "Episode without new occurrences or with anticipated occurrences (e.g., seasonal), in which there is a lower perception of demands (threat, effort, uncertainty), a greater perception of available resources to deal with the demands (e.g., knowledge of protective behaviours; availability of emotional, instrumental, institutional support, etc.; positive dispositional characteristics such as optimism, hope, and resilience), and effective epidemic control resources (e.g., group immunity, vaccine, etc.)".

Scenario	Situation characteristics	Crisis phase (CERC)	Hazard template features						Communication type		Communication recommendations
			Demands			*Resources*			*Risk*	*Crisis*	
			D	E	U	KSC	D	ES			
#1	*Normalization of pandemic episode* (no new epidemic outbreaks in Portugal)	3. Resolution (complete) 4. Evaluation	+	+++	+	+++	++	+++	√		- Reduce perception of demands (E) - Raise awareness, motivate and train to increase future resilience - Recognize, learn, plan, adjust, change - Involve citizens, groups and organizations
#2	*Adaptation to chronic pandemic with anticipated reoccurrence*: New epidemic episode with predicted cyclical reoccurrences (e.g., seasonal) **with** epidemic control resources (group immunity and/or vaccine, etc.)	2. Maintenance 3. Resolution (complete) 4. Evaluation	++	+++	+	++	+	+++	√		- Maintain risk perception at moderate-high levels - Increase in the perception of available resources (KSC, D) - Raise awareness, motivate and train to increase future resilience - Recognize, learn, plan, adjust, change - Involve citizens, groups and organizations
#3	*Adaptation to chronic pandemic with anticipated occurrence*: New epidemic waves of expected cyclic occurrence (e.g., seasonal) **without** epidemic control resources	2. Maintenance 3. Resolution (*constrained*)	++	+++	++	++	+	++	√		- Maintain risk perception at moderate-high levels - Reduce perception of demands (E, U) - Increase perception of available resources (KSC; D; ES)
#4	*Adaptation to a chronic pandemic with unexpected occurrence*: New epidemic waves of unexpected cyclic occurrence **with or without** epidemic control resources	2. Maintenance (*inability to proceed to resolution*)	+++	+++	+++	+	-	++	√	√	- Reduce perception of demands (T; E; U) - Increase perception of available resources (KSC; D; ES)

Caption: D = Danger; E = Effort; U = Uncertainty; KSC = Knowledge, Skills and Capabilities; D = Dispositions; ES = External Support.

Conclusion

Risk and crisis communications or interventions that recommend a range of protective behaviours can be ineffective if they fail to take into account how individuals assess the characteristics of a situation, the demands placed on them, and the resources available for dealing with it. Thus, it is important to identify and analyse risk perception and variables enabling us to understand how individuals and groups, with their varying characteristics and vulnerabilities, perceive and respond to the crisis. This will provide evidence for the development of risk and crisis communication that is customized to the target population's understanding, emotions, motivations, and behaviours (DGS-GTPCC, 2020).

In a world in which the emergence of new risks is ever more frequent and with greater hazardous potential, it is important to promote in the public a high level of resilience that allows them to deal effectively with current and future situations of increased risk to their health, the economy, and society in general. As such, the goal of intervention and communication strategies should always be that current and future events be assessed as a *challenge* (perception that sufficient resources are available to deal with current and future requirements) rather than a threat (perception of insufficient or inexistent resources to meet demands).

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