

Spanish press coverage of the Covid-19 crisis. When front pages alarm and editorials reassure

Cobertura de la Covid-19 en la prensa de calidad. Cuando las portadas alarman y los editoriales tranquilizan



Bertran Salvador-Mata. Adjunct lecturer in the Communication department of the Universitat Pompeu Fabra and third-year PhD student at the same university. He has published several publications in indexed journals and over 250 citations in Google Scholar. He is currently the co-director of the journal *Comunicació. Revista de Recerca i d'Anàlisi*, included in the Web of Science-JCR.
Universitat Pompeu Fabra, Spain
bertran.salvador@upf.edu
ORCID: 0000-0002-0499-0350



Sergi Cortiñas-Rovira. Senior lecturer in the Communication department of the Universitat Pompeu Fabra. He has published around fifty papers in the fields of journalism, scientific communication, sports journalism and pseudoscience. He has a PhD in Social Communication and is a graduate in Chemistry and Journalism. He is also a Professor at the UPF-BSM (Barcelona School of Management).
Universitat Pompeu Fabra, España
UPF Barcelona School of Management, Spain
sergi.cortinas@upf.edu
ORCID: 0000-0002-7252-5418

Received: 26/10/2022 - Accepted: 07/12/2022 - Early access: 13/12/2022 - Published: 01/01/2023 Recibido: 26/10/2022 - Aceptado: 07/12/2022 - En edición: 13/12/2022 - Publicado: 01/01/2023

Abstract:

The journalistic state of emergency that occurs during a health crisis is characterised by a substantial increase in the number of news items and a heightened risk of incurring in journalistic dysfunctions. These may vary between different sections of a newspaper. This study has examined 124 front pages and 151 editorials from *El País*, *La Vanguardia*, *El Mundo* and *El Periódico* published between 17/04/2020 and 17/05/2020 by applying inductive content analysis. 26% of the front pages contained journalistic dysfunctions of at least one of the 8 subtypes described. However, these were only found in 14% of the editorials, mostly being linguistic in nature. The editorials

Resumen:

El estado de excepción periodístico que se produce durante una crisis sanitaria se caracteriza por un incremento sustancial del número de noticias y una mayor probabilidad de cometer disfunciones periodísticas. Estas pueden aparecer de modo diferencial en función de la sección del periódico en el que se publican. En este trabajo se ha realizado un análisis de contenido inductivo de 124 portadas y 151 editoriales publicadas en los diarios El País, La Vanguardia, El Periódico y El Mundo entre el 17/04/2020 y el 17/05/2020. En el 26% de las portadas se han detectado disfunciones periodísticas de al menos uno de los 8 subtipos descritos por metodología inductiva. En el 14% de los editoriales se han encon-

How to cite this article:

Salvador-Mata, B. and Cortiñas-Rovira, S. (2023). Spanish press coverage of the Covid-19 crisis. When front pages alarm and editorials reassure. *Doxa Comunicación*, 36, pp. 65-85.

<https://doi.org/10.31921/doxacom.n36a1831>

tended to convey a message of rigour, prudence, and calm. This seems to concur with the journalistic theorem affirming that, during a serious health crisis, the most truthful and reassuring information is to be found in editorials rather than on front pages, which are more alarmist and sensationalist. A new corollary is proposed for this theorem: journalistic dysfunctions in editorials increase in a polarised political context.

Keywords:

Alarmism; Covid-19; editorial; front page; journalistic dysfunction.

trado disfunciones, la mayoría de entidad lingüística. Los editoriales suelen transmitir un mensaje de rigor, prudencia y sosiego. Se verifica el teorema periodístico que afirma que, en el curso de una crisis sanitaria grave, en los editoriales se encuentra la información periodística más veraz y tranquilizadora, en contraposición a las portadas, que tienden al alarmismo y al sensacionalismo. Se añade un corolario a este teorema: las disfunciones periodísticas en los editoriales se incrementan si se da en un contexto de polarización política.

Palabras clave:

Alarmismo; Covid-19; disfunción periodística; editorial; portada.

1. Introduction

Health crises can become disruptive for journalists' duties, creating a kind of state of emergency in communication. The communication of emergencies supposes a major and fundamental challenge and brings with it a notion of risk. *Risk society* or *risikogesellschaft*, to which both Giddens and Beck have dedicated efforts (Beck; Lash & Giddens; 1997; Beck, 2006), configures a framework of reference from which one can understand reflexive modernity and the notion and communication of risks. In contemporary society, one can look to the future under the premise of risk, in the modern sense of the word (Galindo, 2015), especially relevant in the handling of health crises which require a difficult balance between economic, health and political measures. Crises are the essence of a (post)modernity characterised by a presumed absence of visible power, in an increasingly globalised context and where control structures become invisible (Hardt & Negri, 2000). This makes the crises proliferate in a type of continuum, with constant rallies.

Uncertainty and risk are the result of a society that lives looking to the future (Beck, Lash & Giddens, 1997) and which has constructed its relationship with what is to come in an ongoing calculation of possibilities. The future is perceived, therefore, as a result of comparing and assessing risks and uncertainties. In this context, communication of such risks to society becomes essential for crisis management, including health crises.

There is a reason the WHO considers communication risks to be one of its principal activities as an organisation. Part of its bibliography consists of a series of reflections and recommendations in this regard: from guides to establish the basic elements of communication during health emergencies (WHO, 2017a), systematic reviews which help establish basic criteria for recommendations (WHO, 2017b), or effective communication studies by the media (WHO, 2005a), to guides on how to communicate outbreaks (WHO, 2005b). As a complement, numerous reviews have analysed and systematised these and other recommendations, and have applied them, with nuances, to defined crisis contexts, such as, for example, outbreaks of Ebola, Zika and yellow fever (Toppenberg-Pejcic et al., 2019) or the bird flu pandemic (Abraham, 2011). In parallel, several crisis communication models have been developed, from that of Reynolds & Seeger (2005) to that of Sandman (1993), and decalogues of proposals for the management of risk communication (Pont-Sorribes & Cortiñas-Rovira, 2011).

The relationship with the public becomes essential when dealing with health crises, in terms of dialogue and the level of details, evaluating scientific evaluations of risk and correlating with the needs of the audience (Seeger, 2006), whilst coordinating

with credible sources. The relationship must begin as early as possible and must be built on bidirectional communication channels. The risk must be recognised, analysed, and expounded honestly, even when faced with mistakes, whoever makes them (Sandman, 1993).

The communication of risks occupies a fertile spot in the journalistic field and starts with the idea that the public has a right to know the risks and dangers of a critical situation. How this communication should proceed, however, is a matter for debate. Some posit drawing the gloomiest possible picture to generate a situation where the population is ready for the worst, and thus avoid panic should the crisis really get worse, what has been called inoculation theory (Jones, 2010; Anderson & McGuire, 1965). This fits with philosophical positions such as the heuristic of fear, defended by the philosopher Hans Jonas (1995), whereby, faced by fear of a future catastrophe, morals must produce a preventative action, although the calamity itself is only a possibility. They share with the WHO (2005a) the necessity of giving a swift alert about a crisis situation. Even so, it is not clear that painting an exaggeratedly negative scenario at the beginning is the best option, rather, it is more common to strike a balance between known risks and the uncertainties to be communicated, without utilising empty words.

Reynolds and Seeger (2005) propose a model for crisis management and the communication of risks. Divided into five phases, it establishes the following periods: pre-crisis (where warnings are given and risks communicated), initial event (where uncertainty should be reduced and effective messages given), maintenance (continue to reduce uncertainty and keep up the effective messages), resolution (resolution, discussion of the cause and new risks, and forecasting of future risks), and evaluation (to evaluate the response and the lessons learnt). Supposing that crises tend to follow a pattern, this model seeks to anticipate and serve as a guide for communication management depending on the phase and the time.

Despite previous experiences, journalism is severely disrupted in a pandemic, making journalistic dysfunction more probable. This is aggravated by the lack of specific protocols -in addition to deontological codes, which may appear highly generic-. Moreover, the against-the-clock nature of the task and the lack of scientific training among staff, apart from a few specialised journalists, may play a part, (Cortiñas-Rovira et al., 2014; Cassany-Viladomat, Cortiñas-Rovira & Elduque-Busquets, 2018).

The journalistic state of emergency during a health crisis is characterised by, among other aspects, a substantial increase in the number of news items. Over the period April 27 to May 3, 2009, coinciding with the H1N1 flu (or type A influenza) crisis, Duncan (2009) detected 3,979 items dealing directly with H1N1 flu in a selection of the main European media. For a month in a non-crisis time (January 15 to February 15, 2009), the total number of articles on health matters in general was only 2,824. Zanetti et al., (2012) found an over-exposure of the subject during the same crisis, especially on the front pages of Italian media. Lewison (2008) reported a peak with the SARS 2003 outbreak, especially concentrated in the week of April 20, practically tripling in number compared to March 23. In that same crisis, Chan et al., (2003) detected a correlation between the increase in the number of publications and new cases, but also discovered a lapse when there was no coverage of the outbreak, just as it began.

The same pattern has been observed in the case of Covid-19. Lázaro-Rodríguez and Herrera-Viedma (2020) found a boom in media output concerning the crisis, with its peak in Spain coming with the decree of the State of Alarm, when over 45,000 digital news items were found, which, moreover, represented the lion's share of content published in the press. This fact

correlates with the pandemic-related boom in scientific information of scientific information, as indicated by Torres-Salinas (2020) analysing its publication in different data bases (Scopus, PubMed Central & WoS among others).

Beyond this excess of information, these communication crises were characterised by a series of journalistic dysfunctions which, to a greater or a lesser degree, were repeated. Among the dysfunctions previously identified in contexts of health crises were, mainly, the periods or frames of alarmism, sensationalism, generation of the language of fear (Altheide, 2002) or the utilisation of bellicose or deliberately exaggerated language. These were found, for example, in the case of H1N1 flu (Liuccio et al., 2012; Trucchi; Domnich & Casabona, 2011). In Italy, up to 47.9% of the infographics analysed had an alarming tone, with considerable use of sensationalist images (Zanetti et al., 2012). In Spain, an analysis of media coverage of the early stages of the same virus also detected alarmism, sensationalism, lack of deeper information on science matters and a lack of rigour in some content (Camacho, 2009; Cortiñas-Rovira; Pont-Sorribes & Alonso-Marcos, 2015).

These studies indicate that journalistic dysfunctions do not follow a single pattern in the different sections of a paper. Cortiñas-Rovira, Pont-Sorribes and Alonso-Marcos (2015) have set out a theorem which states that more trustworthy and pertinent information concerning health crises is found in editorials than on front pages. This study intends to test this theory applied to journalistic production at the height of a worldwide pandemic, that of Covid-19.

Any crisis like a pandemic supposes maximum tension for the media, but the case of Covid-19 brings other difficulties to the table which were far less serious in other health crises: (1) reduction in the number of workers due to the pandemic, (2) mobility problems, (3) complications with access to sources, especially doctors, who were also overwhelmed by the situation, and (4) possible emotional effects on journalists and sources.

All of this adds up to a truly complex journalistic context, worthy of analysis. This study analyses journalistic output published over a month at the height of the Covid-19 crisis to analyse the most frequent journalistic dysfunctions in these news items, as well as to establish a comparison between two distinct elements: editorials and front pages, with the intention of defining their differences and contributions to the education and literacy of the population in a crisis. Furthermore, it intends to test the theorem proposed by Cortiñas-Rovira, Pont-Sorribes and Alonso-Marcos (2015).

2. Methodology

This study analyses journalistic coverage at the height of the pandemic by looking at the content reflected on the front pages and in the editorials of four of the main Spanish dailies (*El País*, *El Mundo*, *la Vanguardia* and *El Periódico*) over the period from 17/04/2020 to 17/05/2020.

This period has been chosen, partially coinciding as it does with other studies into Covid-19 (Torres-Salinas, 2020), because that was the equator of the first State of Alarm (15/03/2020 to 21/06/2020). It represents approximately a third of said period, thus being a significant sample, which allows analysis of the development of media handling of the pandemic.

The front pages and editorials published digitally in the newspapers analysed were compiled for the sample. The various newspapers' library services were employed for the front pages, while for the editorials the FACTIVA tool was utilised, filtering by dates, type of content (editorial) and newspaper. From the total of items gathered, all those which did not touch on the

Covid-19 pandemic or derived matters (economic, educational or health measures) were excluded. The final n was 124 front pages and 151 editorials. *La Vanguardia* and *El Mundo* published a large number of editorials which met the criteria for inclusion, therefore their weight in the sample is greater than the other two newspapers.

Table 1. Description of the sample analysed

	Front page	Editorials
	<i>Total</i>	<i>Total</i>
<i>El País</i>	31	26
<i>El Periódico</i>	31	29
<i>La Vanguardia</i>	31	50
<i>El Mundo</i>	31	46
	124	151

Source: created by the authors

Once the sample was compiled, mixed (qualitative and quantitative) inductive content analysis was applied. The authors examined both individually and qualitatively all those elements present on the front pages (headline, epigraph, subtitle, main and secondary items, frieze and photographs) and in the editorials (title, subtitle, text) susceptible to containing journalistic dysfunctions. The different dysfunctions identified were placed together and agreed consensually one by one.

Secondly, the dysfunctions were coded, grouping them together for a total of seven categories, named by consensus. These categories or “frames” were acquired inductively from indicators such as metaphors, examples, arguments, images... We assumed that these frames did not appear explicitly and, therefore, it was necessary to perform an immersive process in the sample to categorise and interpret the results (as in, for example, Ardévol-Abreu, 2015). It was attempted, where possible, to link the categories of dysfunctions or frames to standardised concepts in the bibliography (for example, alarmism, language of fear, sensationalism, use of bellicose language); in other cases, specific dysfunctions, of a more deontological nature (inappropriate dealings with disadvantaged collectives; invasion of privacy), were named as the sample required. For the front pages, it was necessary to create an additional code: includes opinion.

The dysfunctions identified and coded in the study were the following: (1) creating social alarm, (2) fostering the language of fear, (3) use of bellicose or catastrophic language, (4) use of deliberately exaggerated language, (5) sensationalism, (6) invasion of privacy, (7) inappropriate treatment of disadvantaged social groups or other sensitive collectives. An eighth had to be added for the front pages: (8) not respecting the divide between information and opinion.

Thirdly, quantitative frequencies were established by the number and type of dysfunction detected in each newspaper.

As the coding process was inductive, it is biased in favour of the dysfunctions on the front pages, as these were more recurrent and varied. Even so, in some cases editorials also contain the dysfunctions, as will be seen in the results and discussion.

The principal objective of the study is to identify the dysfunctions present in these pieces, and to compare their frequency, aetiology, and importance by the section they appear in (editorials or front pages) and the newspaper.

The secondary objective of the study is to verify whether, in the context of Covid-19, the journalistic theory propounded for the A Flu (H1N1) health crisis is supported, that is, that editorials contain more reliable information (Cortiñas-Rovira; Pont-Sorribes; Alonso-Marcos, 2015).

3. Results

From the total of 124 front pages analysed, dysfunctions were identified in 33 (26% of the total). On these front pages, up to 63 different dysfunctions were counted (1.9 dysfunctions per front page). Regarding the editorials, fewer items containing dysfunctions were found, 21, corresponding to 14% of the total. Except in one case, only one dysfunction was found per editorial. Table 2 shows the data obtained by newspaper and genre analysed.

Table 2. Front pages & editorials with dysfunctions & total # of dysfunctions per newspaper

	Front pages			Editorials		
	Total	With dysfunctions	Total dysfunctions	Total	With dysfunctions	Total dysfunctions
<i>El País</i>	31	7	13	26	4	4
<i>El Periódico</i>	31	13	23	29	2	2
<i>La Vanguardia</i>	31	4	8	50	4	4
<i>El Mundo</i>	31	9	19	46	11	12
	124	33	63	151	21	22

Source: created by the authors

The medium with most dysfunctions on its front pages is *El Periódico*, with 23 dysfunctions on 13 different front pages, closely followed by *El Mundo*, with 19 dysfunctions on 9 front pages. In the editorials, the newspaper with by far the greatest number of dysfunctions is *El Mundo*, with 11 editorials including some type of dysfunction (nearly 24% of the total of the sample).

Table 3 reflects all the dysfunctions found on the front pages by type. The commonest dysfunction identified is number 4 (use of deliberately exaggerated language), which occurred on 14 occasions. The second most frequent is type 2 (fostering the language of fear), identified 11 times. Then come types 1 (creating social alarm) and 5 (sensationalism), with 10 appearances

each. Including opinion (dysfunction 8) was identified on 7 occasions. Type 6 (invasion of privacy) was seen 5 times, number 3 (use of bellicose or catastrophic language) on four occasions. Type 7 (inappropriate treatment of disadvantaged social groups) was only found on two occasions.

Examination of the editorials gives varied results. Dysfunctions were found in 21 of the 151 editorials (14%), though in all the editorials, bar one, no more than a single dysfunction was discovered. The aetiology of these dysfunctions was the 4th (use of deliberately exaggerated language), on 13 occasions and the 3rd (use of bellicose or catastrophic language), on 9 occasions. There is, therefore, no appearance of alarmist speech, nor of that which causes fear, nor sensationalism, nor invasion of privacy nor inappropriate treatment of vulnerable collectives. In this sense, any infringements present in the editorials are minor, in that they do not incur in the prime malas praxis described in the introduction, but rather are of a linguistic character.

It was found that any infringements in the editorials tend to be of a political nature, related to argument and the political arena. The newspaper *El Mundo* accumulates most of these editorials with dysfunctions. *El Periódico*, with only 2 editorials with dysfunctions, is the newspaper incurring in fewest journalistic errors in that category.

Table 3. Dysfunctions identified on the front pages of the newspapers by type

	Disfunción (localización, fecha)	Tipo de disfunción
El País	La generación triturada (Titular pieza secundaria, 26/04/20)	4
	Ataúdes de cartón en Nueva York (Fotografía central, 28/04/20)	5
	Fusiles contra el confinamiento (Titular pieza secundaria, 2/05/20)	3
	Los jóvenes, arrasados por la crisis (Titular pieza secundaria, 10/05/20) // "En la desescalada se pueden cometer errores muy traumáticos" (Titular pieza principal, cita de Carmen Calvo, 10/05/20)	4 // 2, 1
	¿Es lícito infectar a personas sanas para buscar una vacuna? (Titular pieza secundaria, 14/05/20)	1, 2
	La epidemia hundió Detroit en 72 horas (Friso, 16/05/20)	4, 2
	¿Hay que encerrar a los viejos? (Friso, 17/05/20, Opinión)	2, 1, 7
El Periódico	Imagen de la morgue (Fotografía central, 17/04/20)	5
	Imagen de un niño reconocible (Fotografía central, 18/04/20)	6
	Imagen de niños reconocibles (Fotografía central, 22/04/20)	6
	Esperanza y miedo en la UCI (Titular noticia secundaria, 23/04/20) // Imagen de un box de la UCI (Fotografía central, 23/04/20)	2, 5 // 6, 5
	Pánico en el país de los bares (Titular pieza secundaria, 25/04/20)	2, 1
	La catástrofe exige reformar los geriátricos (Titular pieza secundaria, 28/04/20)	4
	España, campeona en "crispación" vírica (Subtítulo pieza principal, 06/05/20)	8, 4
	La escuela del virus (Titular pieza principal, 08/05/20) // Imagen de niños reconocibles en conferencia (Fotografía central, 08/05/20)	4 // 6
	La pandemia amenaza con más miseria a América Latina (Titular pieza secundaria, 10/05/20)	2
	El virus aboca a la extinción a la venta ambulante (Titular pieza secundaria, 11/05/20) // Imagen de un profesional sanitario con equipo de protección (Fotografía central, 11/05/20)	4 // 1, 5
	Pobreza: sobrevenida (Titular pieza principal, 14/05/20)	1
	Muerte y devastación económica en dos meses de confinamiento (Subtítulo pieza principal, 15/05/20)	1, 5, 4
	El miedo al hambre se suma a los impagos de facturas (Subtítulo pieza secundaria, 17/05/20)	2
La Vanguardia	Las aterradoras cifras del virus en las residencias: ¿qué ha pasado? (Titular pieza secundaria, 26/04/20)	4, 2
	Más muertos que en la Guerra del Vietnam (Pie de fotografía, 1/05/20) // Imagen de una mujer arrastrando un muerto (Fotografía central, 1/05/20)	3, 2 // 5
	Invasión de franceses desconfinados en la Jonquera (Titular pieza secundaria, 12/05/20)	3, 1
	El virus dejará un cierre masivo de comercios (Pie de la fotografía central, 13/05/20)	4
	Los mellizos del coronavirus (Titular pieza secundaria, 20/04/20) // Imagen de dos recién nacidos reconocibles (Fotografía central, 20/04/20)	4 // 6
El Mundo	Un Gobierno rebasado rectifica en horas sobre el paseo infantil (Titular pieza principal, 22/04/20)	8
	El naufragio de la gestión deja a Sánchez más solo que nunca (Titular pieza secundaria, 23/04/20) // Fin a la morgue de hielo, símbolo de la pandemia (Titular pieza secundaria, 23/04/20)	8 // 5, 4, 1
	Illa tergiversa los datos para doblar la curva de la pandemia (Titular pieza principal, 25/04/20)	8
	Control de temperatura en súper chinos de Madrid (Pie de fotografía central, 29/04/20)	7
	El Estado se prepara para un aluvión de demandas por la mala gestión del COVID-19 (Titular pieza principal, 04/05/20)	8
	Sánchez amenaza con "el caos" para alargar su estado de alarma (Titular pieza principal, 05/05/20)	8
	Fotoportada de Ayuso vestida de luto (Foto central, con cita "Vamos a la ruina económica", 10/05/20)	5, 1, 2, 4
	"Alrededor de un mes más" de estado de alarma exorbitado (Titular pieza principal, 17/05/20) // Los "supercentíficos" al rescate de la humanidad (Friso, 17/05/20)	8 // 4, 3, 5

Source: created by the authors

The violations of the deontological codes found in the sample analysed are set out and explained in context below:

3.1. Dysfunction 1: creating social alarm

Discourse, images or content in general which encourages or contributes to social alarm was detected on 10 front pages (8% of the sample). However, this dysfunction was not found in any of the editorials analysed. Such dysfunctions were identified in both headlines and photos on front pages where they created or could create alarm among readers. Among the examples found are: *Should the elderly be locked up?* (*El País*, 17/05/20), *Death and economic devastation in two months of confinement* (*El Periódico*, 15/05/20), a front-page photo of Ayuso (leader of the Madrid regional administration) (Image 1), accompanied by the text: *"We're headed for economic ruin"* (*El Mundo*, 10/05/20), *The virus will cause massive shop closures* (*La Vanguardia*, 13/05/20), *Calvo: "Traumatic mistakes may be made during the de-escalation"* (*El País*, 10/05/20), *The virus drives street traders to extinction* (*El Periódico*, 11/05/20) and an inappropriate front-page photo, with a close-up of a doctor wearing all kinds of protective gear whilst taking a selfie (*El Periódico*, 11/05/20, Image 2). Social alarm grows from such examples due to the use of specific terms that cause alarm in society (death and devastation, ruin, mass closures, traumas, extinction) and a deliberate use of images, unrelated to any communicative or informative function (the symbology accompanying Image 1, for example, resonant of mourning, suffering and desperation faced by catastrophe; the same happens with Image 2, where a highly protected medic has been chosen taking a selfie).

Image 1. Front page of *El Mundo* (10/05/2020)



The medium with most headlines of this kind over the period analysed is *El Periódico*, on four occasions, followed by *El País*, on three.

3.2. Dysfunction 2: fostering the language of fear

On 11 occasions (9% of the sample) situations and discourse which foster the so-called “language of fear” were discovered. Clear examples of headlines were found with the inappropriate substantives “fear of hunger”, “panic in the land of bars”, “fear in the ICU”, or adjectives (“terrifying”). The full examples are: *Fear of hunger on top of unpaid bills* (*El Periódico*, 17/05/20), *Panic in the land of bars* (*El Periódico*, 25/04/20), *Hope and fear in the ICU* (*El Periódico*, 23/04/20), and *The terrifying virus figures in old age homes: What has happened?* (*La Vanguardia*, 26/04/20). Hardly more edifying is the headline *Is it licit to infect the healthy in search of a vaccine?* (*El País*, 14/05/20) because of the unease it could cause.

Image 2. Front page of *El Periódico* (11/05/2020).



In this aspect, again, *El Periódico* is the newspaper which most abused expressions and rhetorical resources to, indirectly, foster the growth of the language of fear. On the other hand, *El Mundo* is the one which incurred least in this dysfunction, with a single front page.

3.3. Dysfunction 3: use of bellicose language

In the sample analysed, dysfunction 3 was not common on the front pages (only 4 times did we detect infringements in this regard). However, 9 editorials showed an excessive use of bellicose language to report on the vicissitudes of the health crisis, indicating that it is a more frequent dysfunction in longer, argumentative, or opinionated discourse. Concerning front pages,

it is a minor dysfunction, although it may also occur in images (over-representation of the military in media coverage of appearances).

The utilisation of bellicose or catastrophic language is especially ill-advised in coverage of a pandemic of this type, as it increases social alarm and the language of fear, even when not directly incurring in these dysfunctions. In this sense, three examples can be cited: *Invasion by deconfined French in La Junquera* (*La Vanguardia*, 12/05/20); *More dead than in the Vietnam war* (*La Vanguardia*, 01/05/20), *Rifles against confinement* (*El País*, 02/05/20). In these examples, the use of military terminology is observed (invasion, rifles) and, on the front page of *La Vanguardia* (01/05/20), a direct comparison is established between a war and the Covid-19 situation.

In the editorials, though less evident, there are also comparisons between a conflict and the anagement of Covid-19. In the editorial of 05/05/20 in *La Vanguardia*, this phrase appears: “it has not been demonstrated that the fragmentation of power when faced by an enemy like Covid-19 is a better solution for the country as a whole than a single command”. In this example, the use of “enemy”, as well as the military term –very popular during the pandemic– of “command”, contribute to establishing a comparison between the pandemic and a military conflict by use of typically military terms. Other editorials have compared the pandemic directly with wars, such as the editorial in *El Mundo* on 30/04/20 where the following phrase appears: “But Moncloa does not seem to be able to keep from partisan ambushes even when under the cosh of the worst tragedy since the Civil War”, comparing the pandemic with the Spanish Civil War, and moreover utilising military terms such as “ambush”.

3.4. Dysfunction 4: use of deliberately exaggerated language

This is the commonest dysfunction both on front pages (14 times) and in editorials (13 times). Exaggeration, or aggrandisement of an event or situation happens both in headlines and in arguments or documentation in editorials.

This problem is similar to the previous one, being of linguistic character. This dysfunction may sometimes lead to other incorrect journalistic practices, such as alarmism or sensationalism. Such exaggerations, beyond the effects of an eye-catching headline, do not contribute to responsible conduct by journalists. To give some examples: *The epidemic sunk Detroit in 72 hours* (*El País*, 16/05/20), *A generation crushed* (*El País*, 26/04/20), *“Super scientists” to the rescue of humankind* (*El Mundo*, 17/05/20), *The virus drives street traders to extinction* (*El Periódico*, 11/05/20), this last also being an example of alarmism. It would clearly seem to be an exaggeration to say that Detroit was sunk in 72 hours, that an entire generation was going to be crushed by the crisis, that there are “super scientists,” or that street traders are going to be extinguished forever (it is an open-air activity).

Other examples can be observed in the following editorials: *A colossal and overwhelmed government* (*El Mundo*, 04/05/20), where the term *colossal* strives to exaggerate and set a counterpoint to *overwhelmed*. An excessively free use of the adjective “condemned” is seen in the following editorial: *Catering condemned* (*El Mundo*, 30/04/20). Descriptions such as “historic”, especially when accompanied by “collapse” represent a deliberate exaggeration when describing a situation, as in the editorial: *“Spain, towards a historical collapse* (*El Mundo*, 01/05/20).

Although all the media analysed have incurred in this dysfunction, it is in *El Periódico* where most examples are found on front pages (6) and in *El Mundo* where most come in editorials (5).

3.5. Dysfunction 5: sensationalism

As 10 front pages display this dysfunction (approximately 8% of the sample) it is one of the commonest. No examples were found in the editorials analysed.

Appealing to the senses is a habitual praxis for journalists in this type of circumstances. Sensationalism is often intimately linked to alarmism and the language of fear, which aggravates the end result for the reader. This study has detected different examples, to a greater or lesser degree. The five front-page photos cited here are fine examples: Morgue. (*El Periódico*, 17/04/20), Cardboard coffins in New York (*El País*, 28/04/20), Front page of Ayuso, as mentioned above (Image 1), in strict mourning, with a sorrowful look and verging on tears, with the text: “We’re headed for economic ruin” (*El Mundo*, 10/05/20), Coronavirus twins (*El Mundo*, front-page photo, 20/04/20) and The end of the ice rink morgue, symbol of the pandemic (*El Mundo*, 23/04/20).

3.6. Dysfunction 6: invasion of privacy: violation of intimacy, especially in children

5 front pages have been identified where people’s intimacy was invaded, with particular emphasis on minors. This dysfunction was not observed in any of the editorials analysed.

Image 3. Front page of *El Periódico* (8/05/2020)



It is a journalist's duty, as made clear in the deontological codes of the profession, to avoid clearly identifiable minors appearing in photographs. This is especially relevant in situations of pain and suffering. It goes without saying that this is even more serious on a front page. Five violations of this were detected including photographs of children: photos of children on the front page, recognisable and inside their own homes (*El Periódico*, 22/04/20), a photo of children on the front page, recognizable and in a public place (*El Periódico*, 18/04/20), photos of children on the front page, recognizable and in a hospital (*El Mundo*, front-page photo, 20/04/20). A separate case is that of the full front page "The virus school" (*El Periódico*, 08/05/20), where 9 children appear, all identifiable, name and age included, inside their homes, recorded on a cam (Image 3). Regardless of any good intentions behind this approach (explaining what the school of the future will be like), the headline "The virus school" causes confusion, something always to be avoided, as it could be interpreted as the most seriously affected school or the one with most cases.

3.7. Dysfunction 7: inappropriate treatment of disadvantaged social groups or other sensitive collectives

This dysfunction was only identified on two front pages, the lowest number among all the dysfunctions analysed. It was not observed in any editorials.

The clearest case refers to Chinese immigrants: *Temperature controls in mega-Chinese shops in Madrid* (*El Mundo*, 29/04/20), which also contains a questionable photograph. It hardly seems relevant to the story to mention the nationality of the owners of the business. Even less so when we consider the stigmatisation denounced by this collective in the initial phases of the pandemic. The second case, less obvious, comes in the headline "Should the elderly be locked up?" (*El País*, 17/05/2020), where the vulnerable collective is people in their later years.

3.8. Dysfunction 8: not respecting the divide between information and opinion

This final dysfunction has been specifically coded to point to those front-page news items that do not adhere to the principle of objectivity that is presupposed for all journalistic pieces excepting those on the opinion page. There are 7 occasions on which front pages or elements on them do not respect the principle of objectivity. Logically, this dysfunction was not a consideration when analysing the editorials.

The health crisis led to a political crisis, something infrequent in previous epidemic crises as they usually took place abroad. The behaviour of the dailies varied greatly concerning the separation of information and opinion on the front pages. *El Mundo* is the one which most frequently violated this deontological principle, with the introduction of opinion in apparently informative headlines. It can be observed how, on several occasions this straying from informative language had subtle linguistic nuances (utilisation of the possessive form "su (his)", in "su State of Alarm") or with other more evident forms, through the use of highly value-laden adjectives (exorbitant State of Alarm; poor management; overwhelmed government), or substantives (sinking) and verbs (distort) full of intention: The complete phrases in *El Mundo* are: "Around another month" of exorbitant State of Alarm (17/05/20), The sinking of his management leaves Sánchez more isolated than ever (23/04/20), An overwhelmed government rectifies in hours concerning exercise for kids (22/04/20), Illa distorts the data to bend the curve of the pandemic (25/04/20), Sánchez threatens "chaos" to extend his (su) State of Alarm (05/05/20) and the State gets ready for an avalanche of

lawsuits due to the poor management of COVID-19 (04/05/20). The other three dailies do not display evidence of this problem, except in one isolated and barely significant case: *Spain, champion of viral “political tension”* (*El Periódico*, 6/05/20).

3.9. Editorials and internal coherence in a newspaper

As previously indicated, analysis of the editorials has given completely different results, having hardly anything to do with the front pages. The principal dysfunctions of the front pages (alarmism, sensationalism, language of fear) almost completely disappear in the editorials. The infringements detected in the editorials, often confined to political disputes, are restricted to semantic exaggerations (lethal demonstrations on March 8th, shameful chaos, misshapen government) or bellicose or catastrophic uses of language (civil war, catastrophe).

The editorials analysed basically revolve around three discursive lines: (1) continual calls for prudence, for responsibility, for major political and social agreements, and to not forget the human dimension of the crisis; (2) applause for the exemplary conduct of citizens during confinement, and for healthcare workers for their dedication, and (3) criticism of politicians for various motives (lack of responsibility, the lack of agreements, political tension and for the mistakes made). These three discursive lines are quite homogeneous in the four papers studied.

In general, the thesis that the newspaper analysed were alarmist and often irresponsible on their front pages during the pandemic, while being prudent and responsible in their editorials, can be defended. To put it another way, the capacity for analysis and criticism that the papers proved to have in their editorials, was not shown systematically on their front pages. While in their editorials they were calling for responsibility and prudence, the front pages demonstrated a notable degree of irresponsibility. Such a lack of coherence was observed in all of the dailies analysed.

Three editorials have been chosen from the study period which referred at some length to questions related to communication or journalism. Given their relevance in the context of this study, it is important to show the whole message:

In times of doubt, free, truthful, independent, and verified information is more vital than ever to prevent people from falling victim to hoaxes, lies and fake news, increasingly abundant not only on the social networks but in some media and some parties and political representatives. (*La Vanguardia*, 17/04/20)

[...] for the common good, transparency is an obligation for all the Administrations affected, regardless of their ideology. (*El País*, 26/04/20)

It is important that users reinforce their analytical skills and, when necessary, their scepticism to deal with unverified messages. (*La Vanguardia*, 28/04/20)

The three messages cited follow the same educational and paternalistic tone mentioned previously: calls for responsibility addressed to politicians and citizens. The former are asked for transparency; the latter, to be alert to abundant disinformation and are invited to heighten their scepticism, “not only on the social networks but in some media”.

This statement from an editorial in *La Vanguardia* referring to “some media” as something alien, brings to mind the ‘third-person effect’ (Davison, 1983), well-characterised in previous studies into professional journalism, for example, an ethnographic paper on Spanish scientific journalists as a collective (Cortiñas-Rovira et al., 2014). This phenomenon postulates

that individuals tend to overestimate certain effects in others and underestimate them in themselves. On one hand, journalists perceive the work of other media as a potential threat, whilst assuring –or implying– that their medium is free of such vices. By extension, if this were true and all journalists acted as they say they do, all mala praxis would have disappeared from the media.

3.10. Aggrandisement of the issue and an excess of political voices

In light of the volume of items dedicated to the pandemic, it is worth wondering if the issue has been overstated, as other authors have described in previous crises and even in the case of Covid-19 (Lázaro-Rodríguez & Herrera-Viedma, 2020). Due to the type of research carried out in this study, we do not possess sufficient data to respond to that question. We can only state that the pandemic occupied almost all the front pages over the 31 days analysed and took up most of the editorials. It should also be recognised that, unlike previous health crises, this one has had an impact unheralded in recent times, both on purely health aspects –the spread of the illness, speed of propagation, mortality, the extreme measures of confinement, restrictions on mobility–, and on others –economic, political and social crises–.

It is precisely because of this last point that this study has detected an excess of political voices in the dailies analysed, going against the usual recommendations that greater weight should be given to the voices of experts and technicians. This excess has been more evident in some newspapers than in others. In *El Mundo*, the politicisation of the question was a constant, while the phenomenon was also seen in *El País*, but to a lesser degree. *El Periódico* and *La Vanguardia* did not present significant excesses. These results are coherent with previous research. For example, after analysis of almost 4000 news items published in relation with the H1N1 influenza crisis, Duncan (2009) identified politicians as the most cited figures. Consistent with this discovery, in a news sample analysed by Zanetti et al. (2012), more politicians were found to be cited than health authorities.

4. Discussion

This research studied four of the main generalist dailies in Spain for a month to identify which were the commonest dysfunctions and how they were generated. The study's attention was focused on front pages and editorials, two of the most influential parts of a newspaper (the former, as a business card and the hall door of information; the latter, as they define the approach and line of the medium in question).

The main results of this study indicate that there are up to eight different types of dysfunctions in the Spanish generalist media. These are concentrated on the front page of the newspapers, where 26% of the samples analysed contain one or more dysfunction. A total of 63 dysfunctions were identified, on the 124 front pages analysed. The commonest were the use of exaggerated language, the creation of fear and social alarm and a contribution to sensationalism.

The editorials, which are opinion pieces, display less dysfunctional content, tending towards calls for calm and with greater deontological rigour. Only 14% of the editorials analysed contain dysfunctions, 22 dysfunctions amongst the 151 items analysed. Unlike the front pages, in the editorials, only two types of dysfunctions were identified: the use of bellicose or catastrophic language and that of deliberately exaggerated language. Half of the dysfunctions identified were from the newspaper *El Mundo*, partly because that daily published a larger number of editorials associated (in general politically) with Covid-19, and partly because it demonstrated a greater tendency to political polarisation.

These results are coherent with studies from other crises, as seen from the case of SARS 2003, where Lewison (2008) points out that the articles with the highest 'level of scariness' were to be found on the front page and not inside the newspaper. The dissociation between front pages and editorials becomes more intense in terms of alarmism and sensationalism. The examples of alarmism and sensationalism in this study were only detected on the front pages of the media analysed and not in the editorials.

The front pages become the epicentre of the journalistic dysfunctions typical of a health crisis. With the intention of drawing the reader's attention, a more emotive, more sensational tone is adopted. This effect is especially clear in the choice of photographs for the front page, where the image may come to configure a "simulation of reality" (Baudillard, 2003), which may at times abdicate from its informative role. A paradigmatic example of this is the front page of Díaz Ayuso, visibly sorrowful and in strict mourning in *El Mundo* (10/05/2020). That image holds a tremendous symbolic weight, highly emotive, far from any purely informative intention.

The results of this study serve to verify some heuristic theories previously propounded, with the added objective of discussing and improving them. It was seen during the Influenza A crisis that news identified in an editorial is more truthful, rigorous and accurate than that to be found on the front page of the same medium. The following theorem was propounded at the time: *"In a serious health crisis, with unpredictable consequences, the reader will find enough in the editorials to know the basic facts and to take the necessary decisions in a balanced way"* (Cortiñas-Rovira, Pont-Sorribes & Alonso-Marcos, 2015).

This study shows a similar pattern: editorials, despite being opinion pieces, contain within them all the essential information concerning developments in the news deriving from a health crisis. A reader, having read the editorial, apart from hearing a substantiated opinion about the matter, has gained the most relevant data and information, with the added advantage of having gained them in the most deontologically appropriate form, in comparison with front pages (free from sensationalism or alarmist messages). The theory could be improved with the following corollary: "The less politicised a health crisis is, the more applicable the theory of the supremacy of the press editorial, as opposed to front pages, proves to be".

In spite of the dysfunctions observed, the results of this study give room for hope. The generalist press possesses methods to deal with these dysfunctions, as can be seen from the content of the editorials. The balance between transmitting scientific information and informing about risks in an uncertain situation is found more ethically and fairly in editorials than on front pages. The media's duty in crisis situations, part of which is to transmit information, guarantee the quality of the same and to establish a relationship of trust with the public (O'Malley; Rainford; Thompson, 2009), is performed and consolidated in the editorials.

Among the additional challenges worthy of mention in coverage of health crises is that the scientific community does not churn out certainties at the pace that content is consumed, so that the media may tend to fill the uncertainties with other types of content (Bjorkdahl; Carlsen, 2018), which causes an explosion of poorly-crafted and alarmist information. In the case of Covid-19, this situation was aggravated by the other 'pandemic' of scientific output (Torres-Salinas, 2020), a fact which meant that many news items could not be filled by scientific facts and so fell more easily into textual or visual alarmism.

The relationship between journalism and the scientific community during health crises is truly complex. Keli, Schönhöfer and Spelsberg (2011) point out that the information problem detected in the media during the H1N1 flu crisis cannot be imputed

to the media alone. The scientific community, with its own interests and occasionally divergent testimonies, may share part of the blame for making the effective communication of risks more difficult. In addition to this, the lack of reviews of some of the scientific studies published, as well as their hasty production, supposed a major challenge which contemporary journalism faced in less than perfect conditions, due to the staff cuts occasioned by continually falling sales.

Furthermore, two evils that are now all but endemic in scientific journalism in particular must be added: (1) the lack of specialised science reporters, and (2) the scant scientific knowledge, except for a few exceptions, in the higher ranks of newspapers, that is, in the control room of the dailies, precisely where strategic decisions are taken concerning the front page.

Another strength of the quality press has been that of keeping pseudoscience off the pages studied. Following the analysis, we can state that the so-called quality press was an adequate filter against pseudoscience and disinformation, which has not always been the case (Cortiñas-Rovira & Salvador-Mata, 2022). This fact is particularly relevant as pseudoscience has circulated in abundance on other channels (instant messaging, social networks, webs of doubtful reliability). Previous studies had indicated the role of other channels in the expansion of pseudo-scientific discourse (Salvador-Mata & Cortiñas-Rovira, 2020).

In a certain sense, it can be stated that the quality press successfully performed its role as gatekeeper against hoaxes and disinformation, a challenge not to be scorned at a time of such confusion at every level.

5. Conclusions

This study has analysed a total of 124 front pages and 151 editorials published over a month at the height of the Covid-19 pandemic. It has been concluded that it is on the front pages where the greatest profusion of journalistic dysfunctions occurs: 26% of those analysed contained some type of dysfunction. Up to eight types of journalistic dysfunctions were detected on them. That turns the front pages, one of the principal elements of a newspaper, and one of those with most impact, into carriers of alarmist and sensationalist messages and creators of fear to a degree not to be taken lightly.

When comparing the messages found on front pages with those published in editorials, a change of tendency is observable. While 63 dysfunctions were listed for front pages, only 22 were detected in editorials (even though 27 more editorials were analysed) and in all cases these were of a linguistic nature, without directly being alarmist, sensationalist, using the language of fear, invading privacy or dealing unethically with vulnerable collectives. Most cases of dysfunctions in the editorials were of a political nature or related to political polarisation.

In conclusion, in terms of news and education, the editorials analysed show the media's ability to share moderate, pertinent, and trustworthy messages. Such behaviour has not been observed as strictly on the front pages, more given to sharing sensationalist or alarmist news or that which contributes to the language of fear. Therefore, it is confirmed that editorials include, in the context of a pandemic, information less tainted by journalistic dysfunctions and of greater information value than front pages.

The crisis constituted a state of emergency which pushed professional journalists to the limit and where there was a higher risk of committing news dysfunctions. However, these can be avoided or minimised. The fact that editorial content was more

moderate and precise allows one to suppose that the newspapers are able to inform without being alarmist. The front pages are the shop window for a newspaper and therefore should strengthen their informative character and avoid journalistic dysfunctions as much as possible. To this end, the production processes followed in the drawing up of editorials should be taken as an example, and should, as much as possible, be carried over into the rest of the newspaper.

6. Acknowledgements

This article has been translated from Spanish by Brian O'Halloran.

7. The specific contributions of each author

	Name & surname
Conception & design	Bertran Salvador-Mata, and Sergi Cortiñas-Rovira
Methodology	Bertran Salvador-Mata, and Sergi Cortiñas-Rovira
Compilation & analysis of data	Bertran Salvador-Mata, and Sergi Cortiñas-Rovira
Discussion & conclusions	Bertran Salvador-Mata, and Sergi Cortiñas-Rovira
Writing, format, checking & approval of versions	Bertran Salvador-Mata, and Sergi Cortiñas-Roviracum

8. Bibliographical references

Abraham, T. (2011). Lessons from the pandemic: the need for new tools for risk and outbreak communication. *Emerging Health Threats Journal*, 4(1).
<https://doi.org/10.3402/ehth.v4i0.7160>

Altheide, D. (2002). *Creating Fear. News and the construction of crisis*. Aldine de Gruyter.

Anderson, L. y McGuire, W. (1965). Prior reassurance of group consensus as a factor in producing resistance to persuasion. *Sociometry*, 28(1), 44-56.
<https://doi.org/10.2307/2786084>

Ardèvol-Abreu, A. (2015). Framing o teoría del encuadre en comunicación. Orígenes, desarrollo y panorama actual en España. *Revista Latina de Comunicación Social*, 70, 423-450. DOI: 10.4185/RLCS-2015-1053

Baudillard, J. (2003). *Power Inferno*. Arena Libros.

- Beck, U., Lash, S. y Giddens, A. (1997). *Modernización reflexiva. Política, tradición y estética en el orden social moderno*. Alianza Editorial.
- Beck, U. (2006). *La sociedad del riesgo global*. Siglo XXI editores.
- Bjorkdahl, K. y Carlsen, B. (2019). Introduction: Pandemics, Publics, and Politics- Staging Responses to Public Health Crises en: K. Bjorkdahl y B. Carlsen (Eds), *Pandemics, Publics, and Politics* (pp- 1-19). Palgrave Pivot.
https://doi.org/10.1007/978-981-13-2802-2_1
- Camacho, I. (2009). La 'gripe A' en la prensa española. *Revista Latina de Comunicación Social*, 64, 827-843.
- Cassany-Viladomat, R., Cortiñas-Rovira, S. y Elduque-Busquets, A. (2018). Comunicar la ciencia: El perfil del periodista científico en España. *Comunicar*, 26(55), 9-18.
<https://doi.org/10.3916/C55-2018-01>
- Chan, CY, Jin, B., Rousseau, R., Vaughan, L. y Yu, Y. (2003). Newspaper coverage of SARS: a comparison among Canada, Hong Kong, Mainland China and Western Europe. *Cybermetrics*, 6/7(1).
- Cortiñas-Rovira, S., Alonso-Marcos, D., Pont-Sorribes, C. y Escribà-Sales, E. (2014). Science journalists' perceptions and attitudes to pseudoscience in Spain. *Public Understanding of Science*, 24(4), 450-465.
<https://doi.org/10.1177/0963662514558991>
- Cortiñas-Rovira, S., Pont-Sorribes, C. y Alonso-Marcos, F. (2015). Simulating and dissimulating news: Spanish Media Coverage of the Swine Flu Virus. *Journal of Contingencies and Crisis Management*, 23(3), 159-168.
<https://doi.org/10.1111/1468-5973.12063>
- Cortiñas-Rovira, S. y Salvador-Mata, B. (2022). The suggestive nature of words. Media coverage of homeopathy, acupuncture, reiki and Bach flower remedies in Spanish press 2011-2016. *Journal of Biosocial Science*, 1-15. doi:10.1017/S0021932022000384
- Duncan, B. (2009). How the media reported the first days of the pandemic (H1N1) 2009: results of EU-wide media analysis. Euro Surveillance: *European Centre for Disease Prevention and Control*, 14(30), 19286.
<https://doi.org/10.2807/ese.14.30.19286>
- Galindo, J. (2015). El concepto de riesgo en las teorías de Ulrich Beck y Niklas Luhmann, *Acta Sociológica*, 67, 141-164.
<https://doi.org/10.1016/j.acso.2015.03.005>
- Hardt, M. y Negri, A. (2000). *Empire*. Harvard University Press.
- Jonas, H. (1995). *El principio de responsabilidad. Ensayo de una ética para la civilización tecnológica*. Editorial Herder.
- Jones, S., Waters, L., Holland, O.; Bevins, J. y Iverson, D. (2010). Developing pandemic communication strategies: Preparation without panic. *Journal of business research*, 63(2), 126-132.
<https://doi.org/10.1016/j.jbusres.2009.02.009>
- Keil, U., Schönhöfer, P y Spelsberg, A. (2011). The invention of the swine-flu pandemic. *European Journal of Epidemiology*, 26(3), 187-190. DOI: 10.1007/s10654-011-9573-6

Lázaro-Rodríguez, P. y Herrera-Viedma, E (2020). Noticias sobre Covid-19 y 2019-nCoV en medios de comunicación de España: el papel de los medios digitales en tiempos de confinamiento. *El profesional de la información*, 29 (3), e290302.

<https://doi.org/10.3145/epi.2020.may.02>

Lewison, G. (2008). The reporting of the risks from severe acute respiratory syndrome (SARS) in the news media, 2003-2004. *Health, risk and society*, 10(3), 241-262.

Liuccio, M., Amorese, V., Miconi, A., Romano, V. y Toscano, E. (2012). New" virus and "old" risks. Reflections on H1N1 pandemic in the newspapers in Italy, France and UK. *La Clínica Terapeutica*, 163 (5), e339-48.

O'Malley, P., Rainford, J. y Thompson, A. (2009). Transparency during public health emergencies: from rhetoric to reality. *Bulletin of the World Health Organization*, 87 (8), 614-618. doi:10.2471/BLT.08.056689.

Pont-Sorribes, C. y Cortiñas-Rovira, S (2011). Journalistic practice in risk and crisis situations: Significant examples from Spain. *Journalism*, 12 (8), 1052-1066.

<https://doi.org/10.1177/1464884910388233>.

Reynolds, B. y Seeger, M. (2005). Crisis and Emergency Risk Communication as an Integrative Model. *Journal of Health Communication*, 10, 43-55.

<https://doi.org/10.1080/10810730590904571>

Salvador-Mata, B. y Cortiñas-Rovira, S. (2020). Pharmacists' Attitudes to and Perceptions of Pseudoscience: How Pseudoscience Operates in Health and Social Communication. *Social Work in Public Health*, 35 (5), 321-333.

<https://doi.org/10.1080/19371918.2020.1785983>.

Toppenberg-Pejcic, D., Noyes, J., Allen, T., Alexander, N., Vanderford, M. y Gamhewage, G. (2019). Emergency Risk Communication: Lessons Learned from a Rapid Review of Recent Gray Literature on Ebola, Zika, and Yellow Fever. *Health Communication*, 34 (4), 437-455.

<https://doi.org/10.1080/10410236.2017.1405488>

Torres-Salinas, D. (2020). Ritmo de crecimiento diario de la producción científica sobre Covid-19. Análisis en bases de datos y repositorios en acceso abierto. *El profesional de la información*, 29(2), e290215.

<https://doi.org/10.3145/epi.2020.mar.15>

Trucchi, C., Domnich, A. y Casabona, F. (2011). Communication strategy during the A/H1N1v influenza pandemic in Italy. *Journal of Preventive Medicine and Hygiene*, 52 (3).

<https://doi.org/10.15167/2421-4248/jpmh2011.52.3.278>

Sandman, P. (1993). Responding to community outrage: Strategies for effective risk communication. American Industrial Hygiene Association.

Seeger, M. (2006). Best Practices in Crisis Communication: An Expert Panel Process. *Journal of Applied Communication Research*, 34(3), 232-244.

<https://doi.org/10.1080/00909880600769944>

- World Health Organization (2005a). *Effective Media Communication during Public Health Emergencies. WHO handbook and field guide*. https://www.who.int/csr/resources/publications/WHO_CDS_2005_31/en/
- World Health Organization. (2005b). *Outbreak Communication. Best practices for communicating with the public during an outbreak*.
https://www.who.int/csr/resources/publications/WHO_CDS_2005_32/en/
- World Health Organization. (2017a). *Communicating risk in public health emergencies A WHO guideline for emergency risk communication (ERC) policy and practice*.
<https://apps.who.int/iris/handle/10665/259807>
- World Health Organization. (2017b). *Rapid Grey Literature Evidence Review to Support the Guideline on Emergency Risk Communication. Final Report*.
<https://www.who.int/risk-communication/guidance/process/Final-Report-Rapid-Grey-Lit-Review.pdf?ua=1>
- Zanetti, A.; Vercellesi, L.; Pariani, E. y Laccisaglia, FB. (2012). Analysis of a pandemic in the Italian newspapers: the A (H1N1) experience. *Italian Journal of Public Health*, 9(2), 84-92.
<https://doi.org/10.2427/6343>