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The COVID-19 pandemic and journalistic ethics: Spanish citizens' demand for external control of health communication in the media

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The disinformation that threatened media coverage in Spain during the COVID-19 pandemic was perceived as a serious threat by the population, which became a crucial ethical challenge for health information. This nationwide study is part of a global research project whose primary objective was to know and delve further into the behavior of citizens in the face of journalistic information related to COVID-19, to determine the channels used by audiences to learn about the pandemic and their personal informative interaction through social networks (Twitter, Facebook, Instagram). The field sample (June 2022) comprised 1,800 online surveys (carried out using the CAWI system) of persons aged 18 years and older residing in the country. Quotas were established by sex, age and Autonomous Community. The sampling error is ± 2.34 , with a confidence level of 95.5% and $p = q = 0.5$. The data collected were processed with the IBM SPSS Statistics 26 package. The results confirm a majority belief (values 4 + 5/5) that journalism pursues the truth (59.5%). They also show in adults the predominance of a high confidence in their ability to detect falsehoods, as opposed to the low self-perception confessed by young people. Inversely proportional is the verifying effort of these population groups. There is no homogeneous agreement that discrimination against vulnerable groups (obese people, smokers, the elderly, migrants) was encouraged despite the medium-high caliber of the assessment (3.35/5.00). The most notorious finding was to confirm the majority social demand (values 4 + 5/5 = 72.6%) to implement some external control on the professional collective that guarantees ethical adequacy and quality in the informative coverage of health issues, which suggests a system of journalistic co-regulation.

KEYWORDS

health communication, disinformation, media ethics, self-regulation, COVID-19, Spain

1 Health and information: a necessary connection of rights in the age of infodemics

1.1 Poor journalistic product harms health and weakens society

Over the last 5 years, 2020–2024, the world has endured a double and terrifying health pandemic (COVID-19) and an information pandemic (infodemic¹) (García-Marín, 2020; López-Pujalte and Nuño-Moral, 2020; Sánchez-Duarte and Magallón Rosa, 2020; Gallotti et al., 2020; Quian, 2023). Disinformation on COVID-19 (*disinfodemia*) created confusion about medical science, with an immediate impact on every person on the planet and on entire societies that was more toxic and lethal than disinformation on other subjects and is in direct opposition to verifiable and reliable information, proper to science and journalism (Posetti and Bontcheva, 2020). The reliability and accuracy of the contents of health information available on the Internet has long been a matter of concern (Eysenbach, 2002). It is understandable, therefore, that the combination of these threats should have aroused great concern in society and that society should have demanded the maximum protection from the Administrations, an action-reaction correspondence that is customary at times of serious crises of whatever nature (epidemics, terrorism, natural disasters, public insecurity...). Infodemic assumes that “a few facts, mixed with fear, speculation and rumor, amplified and relayed swiftly worldwide by modern information technologies, have affected national and international economies, politics and even security in ways that are utterly disproportionate with the root realities” (Rothkopf, 2003). It should be combated by facilitating an accurate translation of knowledge, strengthening verification processes, promoting health literacy and monitoring misinformation on social networks and web platforms (Eysenbach, 2020).

At the height of the health emergency, it is no exaggeration to say that the survival of the population literally depended on the quality and veracity of the information disseminated in the media. The fear of the undesirable consequences of misinformation was already on the agendas of all world leaders (Pomeranz and Schwid, 2021; Heiss et al., 2021) and alarm had already spread among the population due to the circulation of hoaxes, especially and notably through the dominant social networks such as Twitter (nowadays X), Facebook, WhatsApp, YouTube, Instagram or TikTok (Gisoni et al., 2022).

Therefore, guaranteeing to the maximum the excellence of the journalism offered by the media was a crucial commitment (Casero-Ripollés, 2020), especially when the population's trust in the news does not even reach 40% (Reuters Institute for the Study of Journalism, 2024). Ensuring and combining scientific truth and informative truth -the right to health with the right to information- was and continues to be an inescapable challenge in all spheres of any country (Vasconcellos-Silva and Castiel, 2020), following in the wake of the ethical recommendations that proliferated in the most critical moments of the pandemic (Mauri-Ríos et al., 2020).

Studies on a worldwide level show that audiences' faith in the media is based, above all, on transparency regarding how messages are prepared (72.0%) and on maintaining high ethical standards (69.0%) (Reuters Institute for the Study of Journalism, 2024). On the other hand, the need for a climate that enables and fosters an ethical environment in the news organization among those who make up the news organization (ownership, leadership, management, workers and audiences) in the current changing ecosystem of newsrooms (Council of Europe, 2015a) is not questioned (Luengo et al., 2017).

Health is the basic foundation for the recognition of the inherent dignity and inalienable rights of all members of the human family and the foundation of freedom, justice and peace in the world: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services,” states Article 25.1 of the Universal Declaration of Human Rights (United Nations, 1948). At the European level, the Charter of Fundamental Rights of the European Union states: “Everyone has the right of access to preventive health care and the right to benefit from medical treatment under the conditions established by national laws and practices. A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities” (art. 35) (European Union, 2009). The current Spanish Constitution, (1978) also proclaims the recognition of the right to health protection (art. 43).

In the field of information, similar prominent recognition is conferred: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers” (art. 19) (United Nations, 1948). This right is a foundation of democratic Europe (art. 11.1) (European Parliament, 2009). In the case of Spain, it is enshrined in Article 20 (Spanish Constitution, 1978).

We are therefore faced with the confluence and interrelation of two fundamental rights that must be administered and preserved with the greatest possible stringency and responsibility. Consequently, the simultaneous concern of governments, media companies, the professional group of journalists and the public was to correctly articulate this inescapable purpose of protecting public health, while protecting freedom of expression and the right to information, and to consolidate the obligation to investigate reality and report it honestly (Valenti et al., 2023). The disinformation generated, as a main effect, an increase in distrust toward the media and politicians among Spanish citizens (Casero-Ripollés et al., 2023).

1.2 Increasing the study of ethics in health communication is a priority

Certainly, analyses that have been carried out on the link between journalistic coverage and the COVID-19 pandemic are numerous and exhaustive on a global scale. The correlations of thematic keywords in health journalism research converge preferentially on terms such as “journalism,” “covid-19,” “social media,” “content analysis,” “science journalism,” “health communication” and “ethics,” but the latter at a secondary level (Feng, 2024). The number of research studies and the dissemination of their respective results has grown exponentially in recent years. However, in the case of Spain, although relevant, studies

1 An excessive amount of information makes it difficult for people to find reliable sources and trustworthy guidance when they need it.

dealing with the specific approach from journalistic deontology are infrequent, whatever aspect they deal with, be it journalistic self-regulation and deontological codes (Mauri-Ríos et al., 2020; Díaz-Campo et al., 2021), manipulation and social networks (Catalán-Matamoros, 2020), television (Rosique and Crisóstomo, 2022), photojournalism (Maciá-Barber, 2020) or consumption habits (Bernal-Triviño, 2020). Even less work exists in relation to the specific health information disseminated by the media in that country: case studies and bibliometrics (Peñafiel-Saiz et al., 2020), crisis communication (Costa-Sánchez and López-García, 2020; Elías, 2020), specialized journalism (Velásquez, 2023), the danger of alternative sources (Elías and Catalán-Matamoros, 2020), the relevance of the contribution of institutional, scientific and health information sources by Spanish verification platforms (Newtral, Maldita and VerificaEFE) (Sanahuja-Sanahuja and López-Rabadán, 2022) or the consumption of information during the COVID-19 pandemic (Quian et al., 2023).

2 Method

2.1 Objectives

The main objective of this research was to examine in depth how Spanish citizens behaved in the face of the news related to the COVID-19 pandemic and to ascertain their perception of the ethics of the media coverage to which they were exposed on a daily basis: their personal assessments (positive/negative/neutral), their evaluation of the quality of the information (veracity) and their demands in this regard to increase and strengthen it (regulation, control).

This global purpose was subdivided into a battery of research questions that would make it possible to accurately capture, through closed questions (Q), the perspectives of the interviewees on the work of information professionals (mission of journalism, conception of quality, dysfunctions detected); their self-perception of their level of media literacy (discernment of the truth, proactive information contrast); their perception of possible abuses (discrimination against vulnerable groups); and, finally, their individual position on the surveillance and intervention of news organizations and messages in the field of the health system and individuals' wellbeing (external control, self-regulation, co-regulation).

Simultaneously, two hypotheses were established to be validated or refuted. The first, that media coverage during the COVID-19 pandemic in Spain generated or increased stigma and discrimination against disadvantaged social groups, such as obese people, the elderly, migrants or smokers. The second conjecture, in response to this harmful treatment, is that society demanded control and supervision to verify the quality of the health content disseminated by the media as a whole.

2.2 Research questions (RQ) and hypotheses (H)

In relation to the information provided by the people interviewed ($n = 1,800$) we sought to:

RQ1. Determine their opinion on the main mission of journalism ("Journalism aims to seek the truth and make it public").

RQ2. Establish the degree of personal self-perception about their level of media literacy ("It is easy for me to identify news or information about the COVID-19 pandemic that distorts reality or is even false").

RQ3. Determine the level of social concern about misinformation about the COVID-19 pandemic ("The existence of news or information about the COVID-19 pandemic that distorts reality is a problem for our country").

RQ4. Know the personal habit of contrasting and verifying informative messages related to COVID-19 ("When faced with news or information that generates doubts in my mind, I turn to web portals, online resources or computer verification tools to contrast information about COVID-19 (Maldita.es, Newtral, VerificaEfe, Verifica RTVE, First Draft News, Latam Chequea, Salud sin bulos...").

RQ5. Map citizens' assessment of the ethical assumptions present or absent during the media coverage of COVID-19 in Spain ("During the pandemic, journalists have covered COVID-19 following the ethical principles of truthfulness and impartiality").

RQ6. Discover their estimation on whether media coverage during the pandemic generated or increased discrimination against certain social groups ("Media coverage during the COVID-19 pandemic has generated or increased stigma and discrimination against certain groups (obese people, the elderly, migrants, smokers)").

RQ7. Determine the profile of those who favor a tighter control of health information and external regulation for the practice of journalism ("It is desirable that there should be external control over journalistic work to monitor the quality of the content disseminated by the media on health issues").

The research proposed two correlated hypotheses: (H1) the feeling of the Spanish population was that the Spanish media coverage during the COVID-19 pandemic generated or increased the stigma and discrimination against certain social groups (obese people, the elderly, migrants, smokers) and, therefore, society considers it advisable that there should be some external control over journalistic work aimed at supervising the quality of the content disseminated by the media on health issues (H2).

2.3 Field sample

To verify or refute both conjectures, a nationwide sample was designed by means of 1,800 online surveys (using the CAWI system) carried out on persons over 18 years of age residing in Spain. Quotas were established by sex, age and autonomous community. The fieldwork was carried out from June 6 to 22, 2022. The sampling error is ± 2.34 with a confidence level of 95.5% and $p = q = 0.5$. Weighting was applied to adjust the population data by autonomous communities, sex and age. Used the Likert scale (1-not at all in agreement; 5-totally agree). The quality control of the work complied with the ISO 20252 standard and the CCI/ESOMAR Code of Conduct. The absolute anonymity of the respondents' answers has been guaranteed, and they are used only in the preparation of statistical tables. This technique was chosen for its speed, improved quality of response and lower cost.

The population of Spain at the date of the research fieldwork (the second quarter of 2022, April 1) was 47,609,145 people (Spanish Statistical Office, 2023), with a gender distribution of 49.03% male and 50.97% female. To ensure the reliability of the data, the sample was adjusted as much as possible to the consistency of these percentages

(49.40 and 50.60%, respectively). Seven ranges were estimated to be representative of social age segmentation: 18–24 (11.1%), 25–34 (16.3%), 35–44 (21.7%), 45–54 (20.4%), 55–64 (15.5%), 65–74 (10.7%) and over 74 (4.3%). The mean age of the participants was 45.58 years. The basic features of the profiles of the respondents are detailed (Figure 1) according to their geographical area of residence, educational background and ideological affiliation:

3 Results

With respect to determining the respondents' feelings about the main mission of journalism (RQ1), 59.5% of the answers (values 4–5, out of 5) showed substantial agreement with the idea that journalism pursues the ideal of seeking the truth and disseminating it to society. For 25.9%, this mission would not be so clear to them. Some 14.7% disagreed with this supposed institutional mission. These overall assessments offer interesting features. The analysis of the values of variable Q16 (“The objective of journalism is to seek the truth and make it public”) shows significant correlations with other variables, such as age ($r = 0.122$). Belief in this function manifests itself inversely: it is lower among young people (around 50%, between 18 and 44 years of age) and increases with age (around 2–3, after 45 years of age). The indices and proportion of values show a very similar curve when compared with the evaluation of the ethicality of COVID-19 coverage ($r = 0.591$) in accordance with the ethical principles of truthfulness and impartiality: the frequency of the maximum value (5/5) decreased 13 points, the same proportion in which the low-intermediate rating (2–3/5) increased. It is worth noting that the defense of the desirability of external supervisory control of health information ($r = 0.087$) in the face of an estimated stigmatization of certain groups ($r = -0.070$) is reflected in the age indicators.

The second inquiry (RQ2) sought to establish the degree of personal self-perception on the level of media literacy (Q21. “It is easy for me to identify news or information about the COVID-19 pandemic that distorts reality or is even false”). The mean score was on a medium-high scale: 3.57 ($\sigma = 0.963$). The percentage of the population recognizing severe difficulty in discovering misinformation was at low values (1 = 2.5%; 2 = 9.2%). The majority were in the medium-high range (3 = 34.2%; 4 = 36.8%), with 17.2% convinced of their full capacity to detect manipulation and lies in COVID-19 information messages. The age correlation, although low, is significant (-0.066): the 55 and older age group declares confidence in its abilities (predominance of 5/5); between 25 and 54, this conviction decreases (4/5), while the youth sector expresses its doubts clearly (3/5).

In correspondence with the previous variable, it was useful to know the personal habit of contrast and verification of informative messages related to COVID-19 of the respondents (RQ3) (Q22. “When faced with news or information that generates doubts in me, I turn to web portals, online resources or computer verification tools to contrast information on COVID-19”). The responses scale up to a mean indicator of 3.45/5.00 ($\sigma = 1.212$) with a low significant correlation ($r = -0.118$). The fit between self-perception and personal effort to verify information is remarkable. The higher the belief of being an easy target of misinformation, the lower the effort to resolve this weakness among young people; this is not the case with adults (over 45 years of age) (Table 1). Deviations are observed only at the extremes: adults who are aware of their fragility reinforce vigilance ($M = \Delta 5.3\%$) and increase

their habit notably as their age rises; on the contrary, those who exhibit full security in this group tend to lower their guard palpably ($M = \nabla 8.1\%$).

The level of social concern in Spain regarding misinformation about the COVID-19 pandemic was undoubtedly high 41.0% (value 5) and 35.9% (value 4) (RQ4) (Q23. “The existence of news or information about the COVID-19 pandemic that distorts reality is a problem for our country”). This unease is perceptible among those who followed the news very closely ($r = 0.135$) and is clearly linked to the perception that the news coverage generated or enhanced discrimination against certain vulnerable groups ($r = 0.220$) and, above all, points to the desirability and desire for external control in health information ($r = 0.318$). The profiles of uneasy respondents are not integrated in a pattern linked to age, gender, place of residence, educational level and ideology.

The mapping of citizen assessment of the ethical assumptions present or absent during media coverage of COVID-19 in Spain (RQ5) (Q18. “During the pandemic, journalists have covered COVID-19 following the ethical principles of truthfulness and impartiality”) shows a clear disaggregation. One of the questions in which the lowest degree of agreement was detected among the respondents was the evaluation of the ethical quality of the journalistic work disseminated. The percentage of people who were satisfied (ratings of 4–5) represented 44.4%, while 33.0% considered it mediocre (3) and 22.6% openly criticized it (1–2). Judgment appears strongly linked to three factors: eagerness to obtain information ($r = 0.301$), endeavoring to verify ($r = 0.276$), and a solid belief in the mission of journalism in the pursuit of truth ($r = 0.591$). The remaining variables have little or practically no impact, including ideology, with comparable response rates (left: 46.4%, right: 47.7%). The level of academic training or the branch of studies offer very similar results. Nevertheless, some specific data should be highlighted. For example, the majority approving judgment in the 25–34-year-old segment, located at 51.1%, compared to the disapproval of those over 74 years of age, with a minimum of 37.8% affirmative.

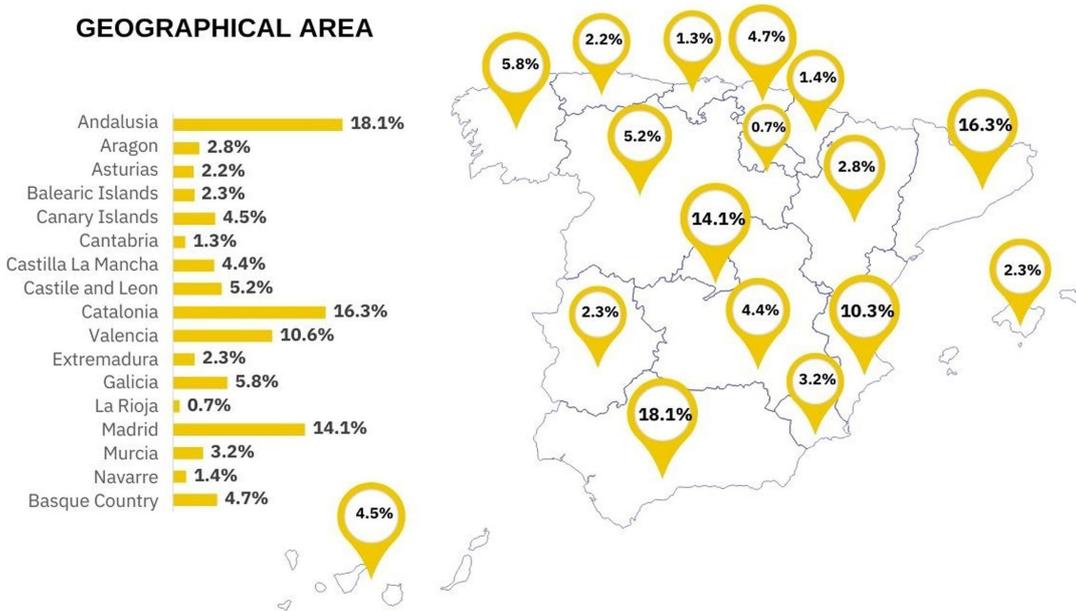
Finally, the profile of those who favor stricter control of health information and external regulation of the practice of journalism (RQ7) was investigated (Q19. “It is desirable that there be external control over journalistic work to supervise the quality of the content disseminated by the media on health issues”). The mean points to a majority agreement in favor of external control ($M = 3.96/5.00$).

The data reflecting the feelings of respondents who favor greater information control (values 4–5) do not reflect the existence of a specific citizen profile (Figure 2). Thus, there is no imbalance in the gender variable (percentages 70.3 and 73.6%), nor in age (figures that meet in the age ranges between 70 and 75%, approximately). Regarding the geographical areas of residence, the values are similar. In the main information nuclei, –by population, by information consumption and by being poles which group together the headquarters of information companies– they range between 70.3% in the Valencian Community and 75.3% in Andalusia. In the rest of the country as a whole it reaches 70.5%. Political identification does not show any disparity either, between the left (73.4%), the center (70.7%) and the right (71.5%). In the same way, proximity can be seen in the values related to educational level: basic education (76.4%), intermediate studies (72.4%) and university graduates (70.4%).

However, there are two averages that deviate significantly, in opposite directions: people over 74 years of age (65.1%) and young people between 25 and 34 years of age (82.0%). Another striking feature

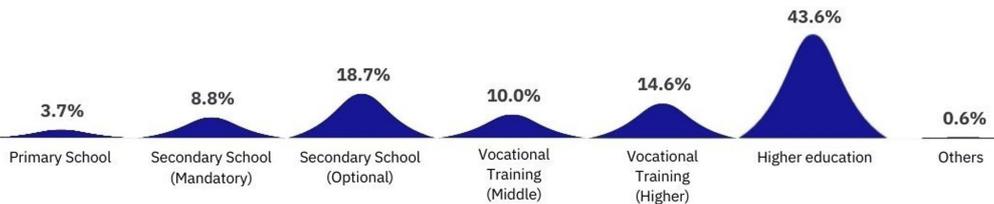
A

GEOGRAPHICAL AREA

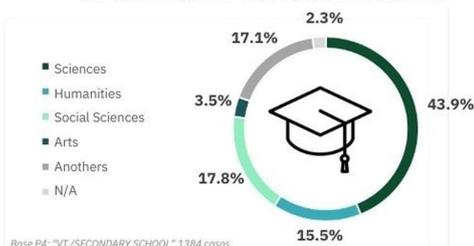


B

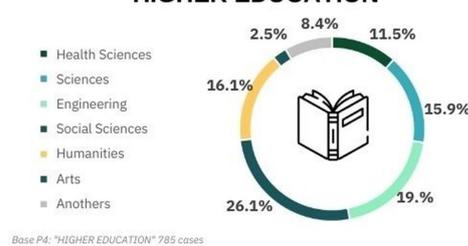
EDUCATIONAL LEVEL



SECONDARY SCHOOL MAJOR



HIGHER EDUCATION



C

IDEOLOGY

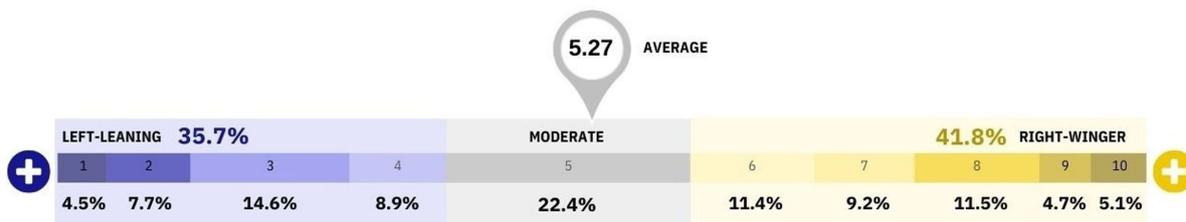


FIGURE 1 Sample profiles: geographic area (A), educational background (B) and political ideology adherence (C).

is detected in the average level of education between science (67.2%) and the arts (77.6%). This ten-point gap is halved at the university level.

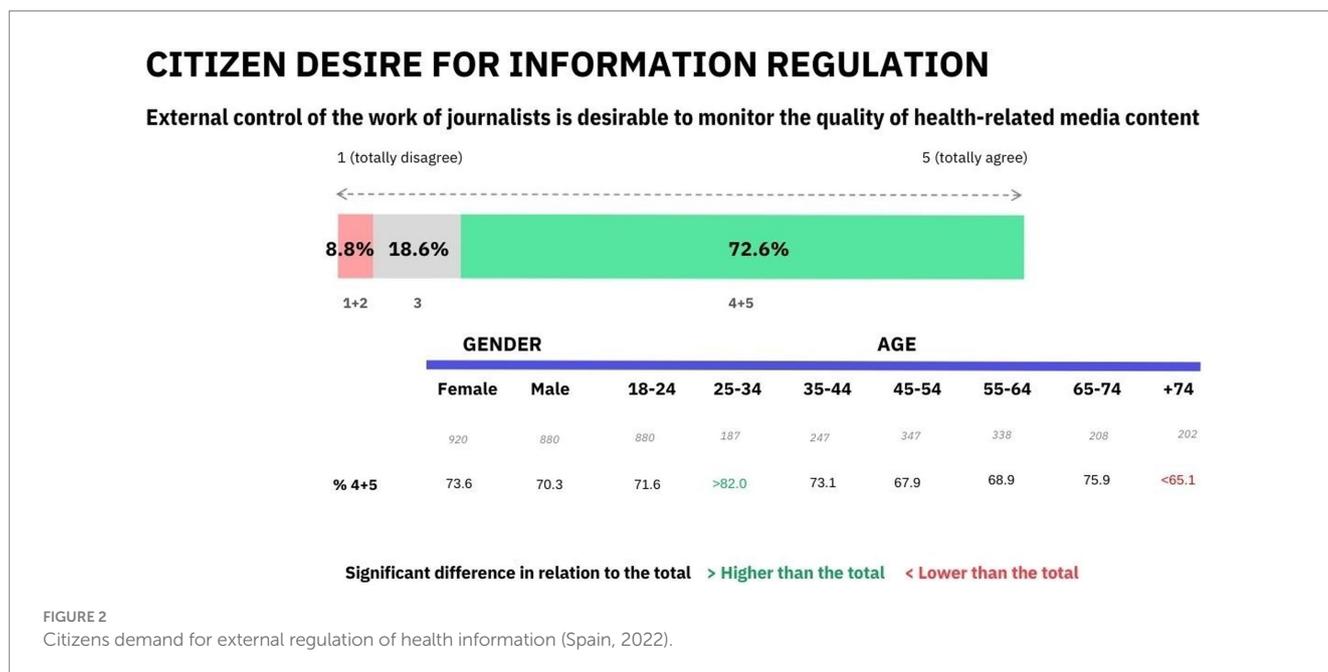
There is a parallelism between the people most exposed to social networks (both in number and hours of consumption) with the audience

that resorted to alternative sources to traditional media (legacy media) to learn about the COVID-19 pandemic (for example, programs such as Cuarto Milenio, Milenio Live, La Estirpe de los Libres...). These people: (a) consider disinformation to be a serious problem; (b) have a high

TABLE 1 Self-perception of media literacy (RQ2) and verification habit during the COVID-19 pandemic (RQ3), by age (percentage).

Value	18–24 yrs		25–34 yrs		35–44 yrs		45–54 yrs		55–64 yrs		65–74 yrs		+74 yrs		M	M
	RQ2	RQ3														
1	6.5	5.0	5.1	4.8	7.7	8.7	6.2	11.7	6.1	12.2	5.7	17.6	3.9	18.2	5.9	11.3
2	13.5	17.0	10.9	7.2	8.2	8.7	9.8	12.5	5.0	8.2	6.2	8.8	7.7	14.3	8.8	10.9
3	34.0	25.0	29.0	20.8	27.9	24.3	21.7	24.4	24.0	26.2	23.8	26.3	22.1	28.6	26.1	25.1
4	27.0	32.0	33.4	41.3	33.6	37.4	35.7	34.8	29.4	35.1	29.0	25.5	31.2	24.6	31.3	32.9
5	19.0	21.0	21.6	25.9	22.6	20.9	26.6	16.6	35.5	18.3	35.3	21.8	35.1	14.3	27.9	19.8

The data highlighted in bold indicates the highest percentage value in each of the sequences.



perception of their personal capacity to discern manipulations; (c) their proactivity in informative contrast is low; and (d) support greater external control and supervision of journalistic work. The range of media being offered, whether on television or via the Internet, traditionally included in themes of mystery and esotericism, was estimated for its notable audience impact during the pandemic and for its eminent monographic character around COVID-19 between February and June 2020. It allowed for the exposure to official or expert sources and the monitoring of interpretative versions or stories to be situated face to face, if not in confrontation, at least in a complementary or critical way.

Regarding the hypotheses to be confirmed or refuted, the estimation on whether media coverage during the pandemic generated or increased discrimination against certain social groups (RQ6) (H1) (Q20. “Media coverage during the COVID-19 pandemic has generated or increased the stigma and discrimination against certain groups (obese people, the elderly, migrants, smokers)”) yields descriptive figures similar to those of other fields ($M = 3.35/5.00$ and $\sigma = 1.170$). Assent is established in mean figures with an upward trend (3 = 29.5%; 4 = 31.8%). The correlation (r) is seen at a weak level, in similar figures and in variables such as age (-0.110), the degree of self-defense against misinformation and the verification effort (in both, 0.168), the demand for external control (0.212) and the perception of the problem posed by pandemic falsehoods (0.220). The figures on whether society

considers it advisable to have external control over journalistic work (H2) are conclusive, as previously indicated.

Consequently, both hypotheses are confirmed, although the results obtained suggest that the overall descriptive statistics of the estimates are close - the increase in discrimination ($M = 3.35/5.00$) and the desirability of control ($M = 3.96/5.00$) - and there is sufficient correlation ($r = 0.212$).

4 Conclusions and discussion

Most of the Spanish population (59.5%) is convinced that journalism seeks the truth in order to disseminate it to society. However, a significant percentage (25.9%) remains uncertain in this regard. Among citizens, there is a polarization with respect to their perception to detect and discover disinformation, since most of them confess doubts about their real ability to perceive falsehoods in the media and social networks ($M = 3.57/5.00$), a recognition that is more common among young people than among adults, with a high level of self-perception. Young people, aware of the risk, tend to verify; on the contrary, those over 45 years of age especially are fully confident of their ability to detect misinformation and neglect verification. In this sense, this study contributes to provide field data that contribute to delve deeper into the study of the “nobody-fools-me perception”

concept, a cognitive bias consisting of overconfidence in one's own ability to detect disinformation, associated with the belief that one is more immune to false content than almost everyone else," previously studied in focus groups (Martínez-Costa et al., 2022).

From the beginning of the pandemic, the crucial role of the media in providing reliable information to facilitate the understanding of the reality and to collaborate in the demand for transparency and accountability of those in power was detected (Kleis et al., 2020). But this zeal in the search for truth was not followed unanimously by the citizenry, nor accepted without opposition. The first mention in the respondents' answers when asked about their information channels, 9.2% pointed to family and friends they followed through social networks as sources, and 4.8% pointed to other alternative sources (programs broadcast on television or over the internet), linked to a proposal related to the esoteric, with the presence of characters close to conspiracy theories. The profiles were focused on a 25–44 age group (7.2% or more), ideologically leaning to the right (5.9% vs. 3.5% left and 4.9% center) and reluctant to be vaccinated to a greater extent than the average (>9.1%). This dual disjunctive sector considers disinformation to be a serious problem; they have a high perception of their personal capacity to decipher manipulations; their proactivity in contrasting information is low; and they support greater external control and supervision of journalistic work.

Although the predominant feeling was to applaud the quality of coverage (44.4%), the majority showed dissatisfaction to varying degrees. In fact, although it was not a forceful position, there was dissatisfaction with the negative consequences for groups that are susceptible to being victims of discrimination by attributing to them responsibility for the spread of the pandemic, such as obese people, smokers, and migrants. Beyond constituting a population at risk, there is no evidence that their participation was the cause of the spread of the virus, but their direct or indirect stigmatization by their representation in the media exists (Flint, 2020). Previous studies have revealed a clear duality in relation to this informative disorder in the Spanish press during the pandemic (Camacho Markina et al., 2023): in the contents that focus on obesity, the framing of individual responsibility prevails, which attributes the cause of obesity to the person who suffers from it, spreading the idea that being overweight is a personal choice. On the contrary, in those messages focused on COVID-19, the collective responsibility frame predominates. Future studies should be designed to corroborate whether journalistic coverage in the field of health reproduces identical patterns in other human groups (smokers, drinkers, gambling addicts, etc.). And, since it is essential to have a specialized vision and interpretation, it is proposed to follow the path that leads to the integration of specialists in newsrooms that deal with environmental and health news coverage (One Health²), a majority feeling in Spain and Portugal (García-Avilés et al., 2023).

Perhaps the least consistent outcome, according to the results, is the evaluation of the ethicality of journalistic work in the coverage of COVID-19. The disagreement is significant. The results do not unequivocally confirm that the perception of an increase in discriminatory treatment of vulnerable groups (H1) derives from the violation of the principles of journalistic ethics, the knowledge of which

on the part of the audience is not contrasted. The study was not aimed at determining the degree of citizen knowledge on aspects related to media literacy, a limitation of the study to be taken into account. The main interest consisted in estimating the subjective perception of the population regarding the quality of the work carried out by journalism professionals. In Spain, there is no educational program on the media in primary and compulsory secondary education, so the degree of media literacy is deficient, as attested by teachers (Cucarella and Fuster, 2022). The adult population suffers from the same deficiency. We highlight the need for media literacy as a weapon to educate citizens and fight disinformation: the key is to have a citizenry that understands the importance of obtaining quality information from reliable sources, that is capable of identifying potentially false content and that values the truth (Sádaba and Salaverría, 2023). There is consensus on the need to empower society, regardless of political ideologies (Correyero-Ruiz and Baladrón-Pazos, 2023), as can be seen in the fact that the European Parliament has long urged the inclusion of media literacy as an integral part of education at all levels (European Parliament, 2008).

On the contrary, it is striking to note the clear majority feeling of the public regarding the desirability of establishing some form of external control to ensure the quality of health care coverage in the media. This would confirm the second hypothesis proposed (H2), although there is uncertainty as to whether the only cause is the perception of discriminatory information treatment as postulated (H1). It is possible that the crisis context derived from the pandemic caused a certain exacerbation in the face of the scarce or erroneous information circulating in networks and the media. Perhaps this demand responds to the specific fear and concern that plagued society. Three years after the crisis, the population relegated 10 years from now this concern of information problems, disinformation, false news and hoaxes without a margin of doubt (1.7%); the first was wars (33.6%) (Centro de Investigaciones Sociológicas, 2023).

There are no absolute rights. Some restrictions on freedoms are aimed precisely at ensuring that certain rights are not violated in favor of others. A fair and reasonable balance is sought. The study did not specifically inquire into regulatory systems (external control, co-regulation), a feature to be considered. It was felt that the public lacks sufficient knowledge of the industry and the profession to give value to possible unfounded answers. Hence, the reflection on regulatory measures is exploratory in this case. Previous studies have shown that the Spanish population has a balanced commitment to mechanisms to combat disinformation, considering legislation to be a reliable formula (Casero-Ripollés et al., 2023).

We live in an ever-changing information environment that seeks a sustainable business model both economically and ethically. As Carratalá (2022) points out, the attempts at regulation carried out in recent years in various European countries show that legislating or establishing control tools over a digital reality that is constantly changing, and whose new disinformation strategies are unknown or impossible to foresee, poses continuous difficulties and, on the other hand, opens the door to the restriction of fundamental rights such as freedom of expression or privacy (Seijas, 2020). It could be interpreted that this citizen request was aimed at possible co-regulation, if not on a global scale, perhaps in certain sensitive thematic areas that affect fundamental rights, such as health information. This middle way between legislators (direct regulatory authorities) and media self-regulation is a possibility that has been explored and debated, and which is defended by professional unions (Yanel, 2023) and demanded

² One Health is an integrating and unifying approach that aims to balance and optimize the health of people, animals and ecosystems in a sustainable way, according to the World Health Organization.

by consumer associations (Perales, 2023). Even though there is currently no network that supports this option in Spain, there are previous experiences such as the Code of Regulation for the quality of audiovisual content (2009), of the now defunct Audiovisual Council of Navarra (COAN) (2001–2011). The main challenge is to overcome the deep-rooted suspicion that regulatory bodies are not free and independent from political and governmental powers, or that they escape commercial pressures, a belief that prevails in Spain: 61.0% compared to 46.0% in the EU28 as a whole (European Commission, 2016). The other challenge is how to structure the sanctioning institution in a country where the profession of journalism is not regulated by law and where there is no obligation to belong to a professional association to perform this decisive task.

The debate on the possible implementation of co-regulatory systems in the field of journalism is a long-standing one (Marsden, 2004). And, from the outset, an unresolved issue is addressed: the existence of a commonly accepted concept for this mixture of internal and external control: “This term is particularly ambiguous. The concept is not clearly defined and does not refer to any one particular regulatory model. “Co-regulation” is normally used as a generic term for co-operative forms of regulation that are designed to achieve public authority objectives. It contains elements of self-regulation as well as of traditional public authority regulation” (Closs and Nikoltchev, 2003: 4). This option is presented as a possible, desirable, but autonomous complementary regulatory alternative (Council of Europe, 2015b: paragraph 12). The main threat derives from the difficulty of reaching agreements on the matter by the governments of the States, given the current political polarization; and, even more, of those with the media, especially because the basic mission of journalism is the criticism and control of political power. Moreover, the media are often disunited due to the virulent business competition, especially among the large media groups.

The results of this study cannot simply be extended to other countries. Legislative systems vary significantly despite the legislative umbrella of the European Union, which covers most of the continent’s nations. Added to this is the diverse structure and diversity of media systems (concentrated, to a greater or lesser extent; more regional or local, etc.). It is also necessary to consider the nuances that make up the various journalistic cultures that mark the ways in which journalism is understood and practiced (Hallin and Mancini, 2012). Finally, to verify this possibility and extrapolate it would require reproducing the study in other national populations, but with the bias that the social and informative context experienced during the post-pandemic period no longer exists.

However, an opportunity to set up co-regulatory bodies lies in the higher interest of protecting the most vulnerable social groups (minors, migrants, the elderly...), which can facilitate global agreements between the democratic powers -Executive, Legislative, Judiciary- and the collective of information companies. Of course, an agreement in the field of health information would be of interest in Spain, as in any other nation, being a priority issue because it affects the entire population and because of how harmful disinformation in this area is.

Addressing the coregulation in depth, from an interdisciplinary approach, extending it to other controversial areas of information (gender, migration, ageism, minors, racism...) that require a scrupulous deontological treatment, constitutes a future priority line of research.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Ethics Committee of the Carlos III University of Madrid. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

CM-B: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Validation, Writing – original draft, Writing – review & editing, Visualization.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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