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# Obesity in Spanish online newspapers: from stigmatisation (of the obese) to social responsibility and structural solutions

## *La obesidad en los ciberdiarios españoles: de la estigmatización (del obeso) a la responsabilidad social y a las soluciones estructurales*

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### Abstract

Obesity has become a pandemic in developed countries. In Spain, more than 23 million people are classed as overweight and it is predicted that by 2030 some 3.1 million new cases will be categorised. This research seeks to reveal how the media cover this issue. To this end, the news from six online Spanish newspapers published in 2020 and 2021 has been collated based on three keywords: obesity, childhood obesity and overweight ( $n=2,760$ ). For a more detailed analysis, we selected the news in which obesity was the main topic in 2021 ( $n=385$ ). Content analysis was used to determine the media's issues (themes) and framing. The results reveal a change in strategy in these media: obesity is viewed more from a social perspective than an individual one. In other words, the stigmatisation of the obese has ceased; instead, governments, the educational system or the food industry are made responsible for the obesogenic. The coincidence of this study with the pandemic and the subsequent year made it possible to obtain genuine results; it could be argued that the confinement contributed to a social perspective of obesity in the media. Despite the fact that the references to women are rare and, when they do occur, they are related to an aesthetic vision, it can be concluded that online newspapers are assuming a role in proposing solutions against the problem of obesity.

### Keywords

Obesity; online media; agenda-setting; framing; stigmatisation; Covid

### Resumen

La obesidad se ha convertido en la pandemia de los países desarrollados. En España, hay más de 23 millones de personas con sobrepeso y la previsión apunta a 3,1 millones de casos nuevos hasta 2030. El objetivo de esta investigación es conocer cómo los medios tratan este tema. Para ello, se han recogido las noticias de seis ciberdiarios españoles publicadas en 2020 y 2021 a partir de tres palabras clave: obesidad, obesidad infantil y sobrepeso ( $n=2.760$ ). Para un posterior análisis más exhaustivo, se han seleccionado las noticias de 2021 en las que la obesidad es el tema principal ( $n=385$ ) y se ha recurrido al análisis de contenido para analizar la temática y el framing. Los resultados muestran que se ha producido un cambio de tendencia: la obesidad se enfoca más con una perspectiva social que individual, se ha dejado de estigmatizar al obeso y, en su lugar, se hace responsable del clima obesogénico a los gobiernos, al sistema educativo y la industria alimentaria. La coincidencia de este estudio con la pandemia y el año posterior han permitido obtener unos resultados genuinos. De hecho, se puede sostener que el confinamiento ha contribuido a generar en los medios esa perspectiva social de la obesidad. A pesar de que las referencias a las mujeres son escasas y, de que cuando se producen se relacionan con una visión estética, se puede concluir que los ciberdiarios están empezando a asumir su rol para proponer soluciones que afronten de raíz la problemática de la obesidad.

### Palabras clave

Obesidad; ciberdiarios; agenda-setting; framing; estigmatización; Covid

## 1. Introduction

Obesity is considered to be a serious and growing global public health problem, affecting both developed and developing countries (Arroyo-Johnson and Mincey, 2016; Saguy and Almeling, 2008). Defined by the World Health Organisation (WHO, 2013) as the excessive accumulation of fat that can impair health and contribute to chronic diseases, it was declared a chronic disease by the American Medical Association (AMA) (2013) and the Canadian Medical Association (CMA) (2015).

Between 1980 and 2015, the prevalence of obesity doubled in more than 70 countries and continued to increase in most other states (Kim and Willis, 2007). In Spain, the result was a prevalence of more than 23 million overweight people in 2018 and, based on the trend recorded up to that year, the forecast is that until 2030 there will be about 3.1 million new cases (Hernández et al., 2019).

The issue is that obesity directly influences the morbidity and mortality caused by non-communicable diseases (Gilbert, Raman and Sui, 2019). With the COVID-19 health emergency, people with obesity have been identified as potentially more vulnerable to this infection (Tartof et al., 2020). In Chinese newspapers, obesity has generally been described as a "self-regulated epidemic" (Sun et al., 2021).

In the case of Spain, despite the social and economic impact of this reality, at the start of the century there were still very few studies on the way in which obesity is reported. One of them, carried out by Ortiz-Barreda, Vives-Cases and Ortiz-Moncada (2012), was about the news reports published between 2002 and 2005 in the newspapers *El País*, *El Mundo* and *Abc*. They highlight that the press dedicated more articles to condemning the problem and describing its magnitude than to news stories about political strategies and measures to combat it.

The study conducted by Fúster et al. (2009) on 15 newspapers shows that throughout the year 2006, a total of 1,432 news stories related to food were published, of which more than half (56%) corresponded to the "Nutrition and Health" section. Other studies at the regional level obtain similar results. For example, the Catalan Food Safety Agency, in collaboration with the Scientific Communication Observatory of the Pompeu Fabra University of Barcelona, analysed five newspapers in 2007 and found 530 texts related to food. Of these, 211 items (39%) responded to the topic of "Diet and Nutrition" (Armentia-Vizuete et al., 2019).

Since the start of the 21st century, and with cases of obesity growing steadily, there has been a marked increase in news stories which report on obesity. Kim and Willis (2007) examined 10 years of US newspaper articles and television news reports. This increase suggests that the issue has moved up the news agenda (Hilton, Patterson and Teyhan, 2012).

The study whose results are presented in this article forms part of a project which aims to analyse the evolution of the news reports on obesity disseminated in the years 2020 and 2021 in the digital edition of six newspapers, two of which are digital natives (n=2,759). The specific objective of this study is to analyse the topics and the framing of the news stories which, throughout the year 2021, had obesity as the main topic (n=385).

These are the research hypotheses:

1. Obesity has a growing presence in the media's agenda.
2. Obesity is treated as a health problem.
3. The media presents obesity as an issue whose consequences, responsibility and solutions concern mainly the individual.
4. The information on obesity is usually treated without taking into account the gender perspective.
5. When obesity is addressed as an aesthetic issue, or when celebrities are involved, the information appeals, above all, to women.

### 1.1. Agenda-setting

The importance of the publication of information on obesity comes from the theory of agenda-setting, according to which cumulative exposure to the media eventually shapes the collective imagination. Numerous studies have demonstrated that the audience identifies the media as their main source of scientific and medical information (Hilton, Patterson and Teyhan, 2012; Parrot, 2004). Therefore, there is evidence of the media's potential to contribute to changing eating habits and other lifestyles in a favourable way, creating an impact on the population's health, but to do so, it would be essential to select the most appropriate message, channel and language for the target population in each case (Aranceta-Bartrina, 2016).

The 2021 Report on the State of Food Safety<sup>[1]</sup> saw the need for exceptional measures, including communication, to address the effects that COVID-19 has had on the increase in malnutrition.

Studies have found that there is little press coverage of policy initiatives/strategies, suggesting that the press tends to publish more news about strategies adopted by the government once the government takes a definite position (Ortiz-Barreda, Vives-Cases and Ortiz-Moncada, 2012). In other cases, more lenient information is provided on controversial products such as energy drinks (Argiñano, 2021).

As health increasingly becomes a hegemonic value and a device for creating meaning for society (Crawford, 2006), the media gain authority to make moral claims about healthy practices (Penkler, Felder and Felt, 2015).

## **1.2. Framing**

In addition to publicising or marginalising an issue, the influence of the media is asserted through news framing, i.e., the process by which the media selects certain aspects of reality and makes them more prominent, while marginalising other aspects. In this way, the media frameworks can "diagnose, evaluate and prescribe" modes of action (Entman, 1993: 52) and construct different meaning (Chong and Druckman, 2007; Entman, 1993). Obesity, for example, can be constructed as a chronic illness, a source of discrimination or the freedom to consume whatever one desires (Kwan, 2009).

The acceptance of framing theory is largely due to Entman's (1993) definition of the four functions (or elements) of a frame: defining a problem, suggesting its causes, proposing solutions and assigning moral evaluations, including responsibilities.

Fat acceptance activists argue that defining obesity as a health problem may have as much to do with social and cultural responses to particular body types as it does with health itself (Gard and Wright, 2005) and explain that associating (framing) weight with disease has resulted in the stigmatisation of people who do not reach a socially acceptable weight (Atanasova and Koteyko, 2017).

Attribution of responsibility is a form of social knowledge (Iyengar, 1989) or social attitude (Brownell et al., 2009) that shapes individuals' opinions, political attitudes and behaviours. Iyengar (1991) defines framing as a powerful social tool for shaping people's perceptions of who is responsible for a problem.

The debate about responsibility involves two opposing points of view (Wikler, 2002). One point of view argues that a social problem is caused mainly by the deficiencies of individuals. In these cases, the efforts of change are focused on modifying problematic behaviours, such as encouraging healthy eating habits and physical activity (Serdula et al., 1999), on medical treatments or weight-loss medication (Choban, Atkinson and Moore, 1996), focusing on the increase of physical well-being more than on weight loss (Clifford et al., 2015; Dugmore et al., 2020).

According to the second point of view, a social problem mainly results from certain defects in social and environmental conditions such as the unequal distribution of economic resources, unsafe environments or unethical business practices. The solutions to the problem require changes in governmental policies, in business practices and in other wider social efforts (Ryan, 1976).

How responsibility is defined is important because it can shape the overall policy approach, especially the area of society in which the effort for change should be applied (Salmon, 1989). The right approach can raise awareness of obesity as a social problem and motivate collective action to combat it (Sun et al., 2016).

The consequences of framing were tested by Su, Xiao and Su (2020) and by Couch et al. (2015), with in-depth interviews: defining obesity as a health risk, a burden on health services, an economic cost and placing individual responsibility on obese people leads to their stigmatisation by the public, while absolving food companies.

The reality is that the media's attribution of personal responsibility to obese people has been highlighted in numerous studies (L'Hôte, Fond andrmet, 2018; Boero, 2007; Sun et al., 2021) rather than proposing social or biological solutions (Nimegeer, Patterson y Hilton, 2019).

Some researchers analysed the messages sent from the food industry and found that they framed obesity as a consequence of poor lifestyle choices, such as lack of physical activity, rather than increased food consumption. As a solution, this industry put the emphasis on education (Jenkin Signal and Thomson, 2011).

This individualisation of responsibility hinders the changes that governments and the food industry (Atanasova, Koteyko and Gunter, 2012) could implement in their practices, restricting the promotion

of food (Ulijaszek and McLennan, 2016), while stressing the need for self-monitoring by those affected (Atanasova and Koteyko, 2017): 665).

Some studies have focused on the influence that parenting style as perceived by children can have on their eating habits (Mejía-Galván and Padrós-Blázquez, 2022; Losada, Germanos and Adrio, 2020). In Mexico, the possible consequences of parents' perceptions of their children's weight on feeding practices are even being discussed (Flores-Peña, et al., 2017).

In some cases, the responsibility is focused on the mothers (Maher, Fraser and Wright, 2010), from the perspective of breastfeeding, according to the Spanish Agency for Food Safety and Nutrition (ALADINO, 2019). (ALADINO, 2019). This feminisation of the news is related to the conflict's newsworthiness criterion (Oliveira-Araujo and Argiñano, 2021) and, in the case of information on obesity or nutrition, it is intensified because women have always been the main target of the slimming industry (Boero, 2007).

### 1.3. Social responsibility

While academic research agrees that in most cases the media attribute responsibility for obesity to individuals, Kim and Willis noted as early as 2007 that mentions of societal responsibilities had been increasing. This was found (Jeong et al., 2014) following an institutional campaign in the United States to reduce the consumption of energy drinks.

One way of underlining the social perspective is by putting emphasis on the economic and structural causal factors and the economic and social consequences (Armentia and Marín, 2018). In other words, avoid blaming individuals for obesity and avoid framing it as a simple lifestyle choice (L'Hôte, Fond and Vermet, 2018). Instead, we should explain how psychological, biological, social and environmental factors influence obesity (Busam and Solomon-Moore, 2021) and underline the socioeconomic and educational differences (Shekar and Popking, 2020; Mathieu-Bolh, 2021).

The WHO points to the international food system as a main cause (WHO, 2016). Among the social consequences, the economic costs for the public health system are also cited. Studies show that the total extra costs of overweight in Spain have been increasing since records began, and in 2016 it accounted for a direct excess cost of 2% of the annual health budget. With this trend, by 2030 it will have increased to 3% (3 billion euros) (Hernández et al., 2019).

A change in the public discourse could push the politicians responsible to make changes to guidelines in order to address the obesogenic environment (Hilton, Patterson and Teyhan, 2012). The solutions could include multi-level interventions, for example, taxing unhealthy foods, promoting the creation of non-obesogenic environments, initiating educational policies that support healthy lifestyles, organising better prevention systems, activating policies which address social inequalities (Hernández et al., 2019; Jenkin, Signal and Thomson, 2011), controlling messages sent through audiovisual media (Castelló-Martínez and Tur-Viñes, 2020) or creating healthy eating environments (Royo-Bordonada et al., 2020).

The approach is also conditioned by the ideological bias of the media. Centre-left publications focus more than right-wing publications on the social perspectives of the causes, consequences and solutions to obesity (Nimegeer, Patterson and Hilton, 2019).

## 2. Methodology

A triangular methodology was chosen in order to meet the above-mentioned objectives: content analysis, defined as "a research technique designed to formulate, from certain data, reproducible and valid inferences that can be applied to their context" (Krippendorff, 2004), agenda-setting theory (McCombs and Evatt, 1995) to quantify the presence and relevance of obesity in online newspapers and, thirdly, framing theory (Reese, 2001; Goffman, 2006).

### 2.1. Sample

The sample has been extracted from six national digital newspapers: *abc.es*, *elpais.es*, *lavanguardia.com*, *elmundo.es*, *elconfidencial.com* and *eldiario.es*. The first four remain in print and the last two are digital natives. On the one hand, data on Spanish web traffic collected by Comscore in September 2020 has been considered. On the other hand, we have included *eldiario.es* and *elconfidencial.com*, the two digital natives with the highest audience credibility according to a study carried out by the University of Valencia (Pavía et al., 2017). The period analysed covers the years 2020 and 2021.

In order to obtain this corpus, we used the search tools of the online newspapers themselves, using three key words: obesity, childhood obesity and overweight. As a result, 2,760 new stories were found. For a more detailed analysis, a sample was obtained by selecting only those reports in which obesity was the main topic and restricting the time scope to the most recent year, 2021. As a result, 385 news stories were found.

## 2.2. Instruments

For the whole sample (n=2,760), two variables have been coded: whether in each of the news items (unit of analysis) obesity is the main topic and the year of publication.

For the sample restricted to news stories from 2021 in which obesity is the main topic (n=385), four variables were analysed: topic, framing, celebrities and women. In the codebook, the criteria for coding the following five variables are explained:

A. Topic. With "the intuition that knowledge must be organised in blocks" (Van Dijk and Kintsch, 1983), nine mutually exclusive sub-variables have been differentiated:

1. Food: The news item focuses on one specific food.
2. Covid: The pandemic is the subject of the information.
3. Physical exercise: Sport or simply regular exercise such as walking is highlighted.
4. Aesthetics: The focus is on people's physical appearance, figure or fashion sense.
5. Genetic factors: The text focuses on the constitutional biological circumstances of the person.
6. Research: The results of scientific or academic research are reported.
7. Health: The focus is on the effects of obesity on people's health.
8. Government measures: The focus is on the decisions of different governmental bodies, at any geographical level, that affect the marketing, distribution or advertising of food.
9. Other: The news stories which haven't been coded in the previous items.

B. Framing. Research on obesity in the media has been taken into account from the perspective of the framing theory (Miralles, Chilet-Rosell and Hernández-Aguado, 2021; Nimegeer, Patterson and Hilton, 2019; Van Hooft, et.al., 2017) and four non-mutually-exclusive frames, or sub-variables, have been considered using a deductive methodology from the general frames established by Eilders and Lüter (2000) and by Semetko and Valkenburg (2000): causes, consequences, responsibility and solutions. Subsequently, for each of these four general frames, coders have assessed whether they respond to a social or individual approach, i.e., to distinguish whether obesity is treated by the media as a disease or as a social problem (García-Arnaiz, 2011):

Causes:

Social: economic, environmental, exposition to advertising, sociocultural, the pandemic.

Individual: inadequate nutritional habits, a sedentary lifestyle, bad example from parents, genetic factors.

Consequences:

Social: economic (health service costs, etc.), marginalisation, etc.

Individual: health effects (physical or psychological).

Responsibility:

Social: concerns governments, food industries.

Individual: concerns the individual or their family.

Solutions:

Social: legislative, administrative and educational measures, non-governmental initiatives.

Individual: healthy diet, doing physical exercise.

In the social/individual dichotomy, the news item will be coded in the first group when the causes of obesity are identified as a social problem, i.e., with cultural, environmental or socioeconomic aspects. The consequences will allude to economic and/or social issues. Responsibility will be attributed to the collective or to governments or food companies. Fourthly, the measures or recommendations will be legislative, administrative or educational initiatives, as well as actions in the agri-food sector.

In terms of the individual focus, the codes will include news stories in this group when the causes of obesity are mainly related to lifestyle (eating habits, sedentary lifestyle) or genetic factors (Breilh, 2008);

its consequences are the individuals' illnesses (physical or mental); the responsibility falls on the obese people themselves or their environment (family etc.); and the solutions are limited to changes in diet or sporting practices.

Therefore, in one same news item, for each of the four general frameworks (Causes, Consequences, Responsibility and Solution), when present, it will be coded independently, whether the approach is individual or social. For example, in one same news story there could be an Individual causes frame and a Social solutions frame.

C. Celebrities. If they include personalities known to the general public for their relationship with the arts, television, etc. Personalities from politics, economics, science, etc. are excluded.

D. Women. Reference is made to the female collective or to women specifically. Cases when a woman is the source of information have not been included.

### 2.3. Procedure

Once the sample was obtained, we proceeded with the codification. This process was carried out by two coders, who were trained on 15% of the sample. To ensure the reliability of the results, an intercoder reliability test was performed with another 7% of the sample, obtaining, on average, a 0.82 (SD = 0.11) Kappa coefficient. SPSS software was used for basic descriptive statistics applicable to qualitative variables.

## 3. Results

In the two years studied, from 2020 to 2021, a total of 2,760 texts were published across the six digital newspapers. The two with the highest number of articles were *abc.es* (920) and *eldiario.es* (847). With approximately half the amount of the previous two is *lavanguardia.es* (451), followed by *elmundo.es* (302). In last place we find *elpais.es* with 192 and *elconfidencial.com* (48).

If the sample is limited to news items in which obesity is the main topic, and not just merely mentioned in passing, then 824 news items were found during the 24 months analysed.

With the objective of carrying out an exhaustive analysis of the topics, of framing and the presence of women and celebrities, a new sample was generated exclusively using news items published in 2021 in which obesity was the main topic. A total of 385 news items were found.

### 3.1. Topics

Of the nine topics defined in the theoretical framework, Health (see Table 1.) is by far the most common. It appears in 28.83% of the news items ("*Con la diabetes como compañera de viaje*" [With diabetes as a travel companion"], *elmundo.es*, 21st July). The presence of the second and third most common topics is much more limited: Government measures (13%) ("*Garzón regulará también la publicidad de la comida basura en las redes sociales*" ["Garzón will also regulate junk food advertising on social media"], *elmundo.es*, 19th October) and Research (12.9%) ("*Descubren un tratamiento que consigue adelgazar "sudando" la grasa*" ["A treatment has been discovered that makes you lose weight by "sweating" the fat away"], *abc.es*, 29th July).

The rest of the topics don't reach 10%. They are Food, Covid, Aesthetics, Physical exercise and Genetic factors, from most to least. An example of each one of these topics is, respectively: "*Nutriplato: la clave para 'comer bien' en el colegio está en las proporciones*" ["Nutriplato: the key to 'eating well' at school lies in proportions"], *abc.es*, 16th October; "*Dieta mediterránea en tiempos de pandemia*" ["Mediterranean diet in pandemic times"], *lavanguardia.com*, 27th May; "*Mauritania, donde la obesidad es el ideal de belleza*" ["Mauritania, where obesity is the beauty ideal"], *elpais.es*, 3rd June; "*Mejorar el rendimiento escolar de tu hijo y otros beneficios de caminar al cole*" ["Improving your child's school performance and other benefits of walking to school"], *elpais.es*, 20th September; and "*Obesidad: esto es lo que pasa cuando las células grasas toman el control del cuerpo*" ["Obesity: here's what happens when fat cells take over the body"]; *elmundo.es*, 6th November).

A total of 11.4% of the sample (n=385) could not be classified in any of these topics and were included in Other.

**Table 1: Topics by the digital newspaper analysed**

Topic	abc	elconfidencial	elmundo	elpaís	eldiario	lavanguardia	Total
Food	15	1	9	2	2	13	<b>42</b>
Covid	10	1	3	3	7	8	<b>32</b>
Physical exercise	8	0	2	4	1	5	<b>20</b>
Aesthetics	13	0	3	2	4	4	<b>26</b>
Genetic factors	4	0	3	2	0	0	<b>9</b>
Research	15	9	6	2	14	4	<b>50</b>
Government measures	6	0	4	9	22	10	<b>51</b>
Health	38	5	3	1	20	44	<b>111</b>
Other	25	0	4	10	3	2	<b>44</b>
Total per digital newspaper	<b>134</b>	<b>16</b>	<b>37</b>	<b>35</b>	<b>73</b>	<b>90</b>	<b>385</b>

Source: Own elaboration

Among the six newspapers selected for this research, there are significant differences in the topics addressed by each one of them. *La Vanguardia* mainly approaches it from the Health perspective in almost half of its 90 news stories. In *abc.es* this is also the most recurrent topic, as it appears in 28.3% of its 134 news items, as it does in *eldiario.es* (27.3%). In contrast, the most common topic in *elmundo.es* is Food (24.3%), a percentage which shows greater diversity than in *elconfidencial.es* where Research makes up 56.2%. In *elpais.com*, only Government Measures stands out for its high representativeness (25.7%), and a large part of its news items, in line with the topic dispersion, have had to be classified in Other: ("*Michelle Obama continúa su trabajo de primera dama lejos de la Casa Blanca*" [*Michelle Obama continues her work as first lady far from the White House*"], *elpais.com*, 9th February).

### 3.2. Framing

The most common frame is Solutions (70.6% of the news stories), followed by Causes (67.7%), Responsibilities (64.6%) and Consequences (61.5%). It is only in this last framework, Consequences, that the information points mostly, albeit slightly, to an individual dimension (56.5%), while in the other three frameworks, the social perspective prevails (Table 2). It should be remembered, as explained in the methodology, that the frameworks are not mutually exclusive. In a news item, there may be no frame at all or all four. And the perspective (social or individual) in each of them is independent of the rest. There are news stories, for example, in which individual causes of obesity are presented in the news, but in contrast, solutions refer to the social dimension. ("*Un estudio detecta alteraciones en el cerebro de los niños obesos*" [*A study detects alterations in the brain of obese children*"]; *eldiario.es*, 9th June). In other cases, the consequences affect the health of the individual, but the responsibility is attributed to supra-individual entities, such as socioeconomic status ("*Obesidad infantil: la pandemia silenciosa que afecta más a los niños menos favorecidos*" [*Childhood obesity: the silent pandemic that affects the most disadvantaged children*"]; *elpais.es*, 5th April).

**Table 2: Individual or social perspective according to type of framing**

Framing	Individual	Social	Total
Consequences	134	103	<b>237</b>
Causes	115	146	<b>261</b>
Responsability	102	137	<b>239</b>
Solutions	122	150	<b>272</b>

Source: Own elaboration

Regarding the Causes framing of obesity, 55.9% of the news items point to the social dimension ("*El riesgo de tener obesidad o diabetes depende de cuántos gimnasios tengas cerca de casa*" ["The risk of obesity or diabetes depends on how many gyms you have near your home"], *elpais.es*, 20th November).

In terms of media, only in *elmundo.es* (81.2%) and *abc.es* (53.2%) is there a greater framing of individual causes ("*Plato de Harvard*", *el sistema para adelgazar sin hacer dieta*) ["Harvard Plate", the system for losing weight without dieting"]; *elmundo.es*, 11th April). In *lavanguardia.com*, the social causes (52%) outweigh the individual ones, although there is an almost equal relationship. In *eldiario.es*, 46 of its 63 news items (63%) address the causes as something collective; in *elpais.com*, 16 out of 25 (64%) and, lastly, in *elconfidencial.com*, 11 out of 15 (73.3%).

Regarding Responsibility, in more than half of the news stories (57.3%), it is said to depend more on society as a whole than on purely individual guilt. Only in *elmundo.com* (66.7%) and, to a lesser extent, in *abc.es* (56.7%) do the latter predominate. ("*¿Tú también crees que no comes tanto para lo gordo que estás?*" ["Do you also think you don't eat that much for how fat you are?"] *elmundo.es*, 30th October). On the other hand, they are slightly in favour of collective responsibilities in *lavanguardia.es* (51.3%) and *elconfidencial.com* (53.3%). This inclination is more pronounced in *eldiario.es* (78.5%) and *elpais.com* (83.3%) ("*Tus hijos podrían estar tomando el triple de azúcar en el desayuno que tú por culpa de los anuncios que ven en la televisión*" ["Your children could be eating three times as much sugar as you for breakfast because of the ads they see on TV"]; *elpais.com*, 11th February).

In the framework of Solutions, the predominance of the collective dimension (63.2%) is higher than in Causes and Responsibility. Even so, the prevalence of the individual perspective is maintained in those newspapers (*elmundo.com* and *abc.es*) where it predominated when referring to possible responsibilities. ("*Diez pautas para cuidar la alimentación de tus hijos en Navidad*" ["Ten tips to take care of your children's diet at Christmas"]; *abc.es*, 22nd November). And vice versa: in the newspapers where social responsibility dominated (*lavanguardia.es*, *eldiario.es* and *elpais.com*), it also appears more when it comes to mentioning how to fight against overweight. ("*Garzón alega 'criterios científicos' para prohibir publicitar dulces en 2022*" ["Garzón cites 'scientific criteria' for ban on advertising sweets in 2022"]; *eldiario.es*, 29th October). The exception is in the case of *elconfidencial.com*, where the proportion of individual solutions is now in the majority, albeit barely (53.3%).

Fourthly, in contrast to the Causes, Responsibility and Solutions frameworks, the Consequences framing, as noted above, is dominated by the identification of obesity as something whose afflictions are suffered on an individual basis. This occurs in all the online newspapers, except for *elconfidencial.es*. ("*La obesidad recorta hasta en 16 años la vida y te comentamos cómo evitarla*" ["Obesity shortens lifespan by up to 16 years and we tell you how to avoid it"]; *lavanguardia.es*, 4th March).

### 3.3. Framing, topics and social or individual perspective

Looking at the different topics, and considering the four main frames (Causes, Consequences, Responsibility and Solutions) as a whole, of the eight specific topics, only in two, Covid and Government measures, is the social perspective in the majority; in the remaining six, the individual vision prevails: Food, Physical exercise, Aesthetics, Genetic factors, Research and Health, although in the latter there is practically a technical tie (See Table 3).

It should be remembered that in the sample as a whole, the social perspective is more common. The explanation lies in the fact that the topics of Covid and Government measures, together with Health, are the ones that account for the greatest number of news items. In addition, the social perspective also prevails in Other.

Specifically in the information on Covid (Table 3), 57 frames (64.7%) refer to the collective as opposed to 29 which refer to individual frames (35.3%). The social dimension also prevails in the news on Government Measures, as it appears in 153 (90.5%) of the 169 occasions in which there is some kind of framing.

In contrast, in the topic of Food, the individual approach (61 frames; 66.4%) prevails over the social approach (48). The same happens when the topic is Physical Exercise: in 69.7% of its framing (30 occasions), its individual implications prevail over its social implications (13).

In the articles framed under Aesthetics, the individual perspective (24 frames; 68.5%) is much more common than the social perspective (11; 31.5%).

This strong trend is repeated in the articles focusing on obesity research: 69.4% of the framing (75 in total) focuses on its impact on the individual as opposed to the collective (43 frames).



And in the 19 frames that make up the Genetic Factors of obesity, the focus on the individual implications is absolute: it occurs on all occasions, which seems coherent with the very nature of the subject, which involves the congenital inheritance of the person, as defined in the methodology.

In the news items classified under the Health topic, there is almost an equal balance between news items where the predominant perspective is the individual (165 frames), as opposed to the social (163).

Finally, apart from the specific topics, there are 44 news pieces whose subject matter could not be included in the previous ones, which is why they have been included under the generic heading of "Other". Here, too, the social view prevails (58 frames; 54.2%), rather than the individual approach (49 frames; 45.8%).

**Table 3: Topic and frames**

	Causes		Consequences		Responsibility		Solutions	
	Individual	Social	Indiv.	Soc.	Indiv.	Soc.	Indiv.	Soc.
Food	15	13	10	10	16	13	20	12
Covid	5	17	11	14	6	13	7	13
Physical exercise	6	4	8	3	9	3	12	3
Aesthetics	6	3	8	2	5	4	5	2
Genetic factors	7		5		2		5	
Research	24	8	20	10	13	10	18	15
Government measures	3	44	10	25	3	41		43
Health	40	44	45	34	37	43	43	42
Other	9	13	17	5	11	10	12	20
<b>Total</b>	<b>115</b>	<b>146</b>	<b>134</b>	<b>103</b>	<b>102</b>	<b>137</b>	<b>122</b>	<b>150</b>

Source: Own elaboration

### 3.4. Gender perspective

In the news stories about obesity there is no determining gender perspective. Reference is made to the female collective in only 51 of the 385 articles (13.3%) which make up the sample (Table 4). It is *abc.es* that does this to the greatest extent, in 26 (24%) of its 108 news items. It is followed at a distance, both in absolute and relative terms, by *elmundo.es* (6 out of 36; 16.2%), *elpais.com* (4 out of 31; 12.9%), *elconfidencial.com* (2 out of 16; 12.5%), *eldiario.es*, with (7 out of 66 news items; 10.6%), and *lavanguardia.com* (7.14%). Only in one of the topics are news stories referring to women in the majority: Aesthetics. Of the 26 articles framed in this topic, women are mentioned in 15 (57.26%). This is the case of "El estigma de la gordura hace renunciar al bienestar físico, según un estudio" ["Fat stigma makes people give up on fitness, study finds"] (*eldiario.es*, 18th February) or "Gente gorda haciendo cosas", la 'línea de ayuda' a la que muchos deberían acudir antes de opinar" ["Fat people doing things", the 'helpline' many should turn to before speaking out"], (*lavanguardia.com*, 3rd February).

**Table 4: Topic and allusion to women**

Topic	No	Yes	Total
Food	40	2	42
Covid	30	2	32
Physical exercise	19	1	20
Aesthetics	11	15	26
Genetic factors	8	1	9

Topic	No	Yes	Total
Research	45	5	50
Government measures	49	2	51
Health	94	17	111
Other	38	6	44
<b>Total</b>	<b>334</b>	<b>51</b>	<b>385</b>

Source: Own elaboration

On the other hand, in 27.4% of the reports in which women are specifically mentioned, celebrities are present, while in the sample as a whole this only occurs in 7.27% of the cases. An example of this: "Lizzo: 'Gorda es lo peor que la gente puede decir de mí en estos momentos'" ["Lizzo: 'Fat is the worst thing people can say about me right now'"] (*elmundo.es*, 22nd August); "Rosa López se confiesa sobre su problema de sobrepeso" ["Rosa López confesses about her weight problem"] (*abc.es*, 17th December) or "¿Qué es la bulimia? La enfermedad que han sufrido famosas como María Patiño, Angelina Jolie, Victoria Beckham o Jane Fonda" ["What is bulimia? The illness that celebrities such as María Patiño, Angelina Jolie, Victoria Beckham and Jane Fonda have suffered from"] (*lavanguardia.com*, 1st December).

#### 4. Discussion

In the two years comprising the sample for this research, from 2020 to 2021, the six selected digital newspapers published 2,760 reports on obesity. The volume is much higher than previous research (Ortiz-Barreda, Vives-Cases and Ortiz-Moncada, 2012). It is even higher when compared with the number of news items published on food in 16 Spanish news media (Fuster et al., 2009) and with another study by the Catalan Food Safety Agency that considered the news reports in five newspapers, also in Spain (Armentia and Marín, 2019).

If we analyse only the news items in 2021 in which obesity is the central topic (385), 13.6% (51 news items) refer to women and 7.3% (28) to celebrities.

Overall, media attention towards obesity was more prominent in 2020, with 1,477 stories, than in 2021, with 1,283 stories. The pandemic, and especially the confinement, marked that period of 2020. The exceptional circumstances provoked a lack of physical activity and changes in eating habits which put nutritionists on alert. The food market regulation measures promoted by the Spanish government, particularly by the Minister of Consumer Affairs, Alberto Garzón, of *Unidas Podemos* and a member of *Izquierda Unida* (both democratic, left-wing political parties), also encouraged the media to report on obesity-related content.

Thus, it can be concluded that the first hypothesis is fulfilled and, therefore, it can be argued that obesity is gaining ground on the agenda of the Spanish digital newspapers.

The interest of the press in obesity can also be explained by the topics in which the news is framed. The main one is Health, a reflection of the direct interrelation that media establishes between excess weight and the healthy conditions of the individual. It can be understood that this is a long-established topic. On the other hand, the second most common topic, Government Measures, is somewhat episodic in nature since, as mentioned above, much of the information is linked to the measures announced by the Minister for Consumer Affairs, Alberto Garzón, to impose restrictive measures on food companies in order to reduce the consumption of products such as sugary drinks or ultra-processed foods. These results allow us to establish an interaction between the political and media agenda, and links to the idea planted by Ortiz-Barreda, Vives-Cases and Ortiz-Moncada (2012) that the press tends to publish more news about the strategies adopted by the government only when the government adopts a definite position.

Research, scientific or academic, is also a pre-eminent topic, reflecting journalists' interest in non-commercial reporting, a positive practice, contrary to the pernicious tendency found by Penkler, Felder and Felt (2015) that the press is heavily sourced from private media houses.

Food is the fourth most common topic and refers to the cause-effect relationship that the media establishes between obesity and the ingestion of certain food that is considered to be especially harmful. Such as sugar (Marín-Murillo et al., 2020), ultraprocessed foods (Marauri-Castillo et al., 2021) or energy drinks, although in this last case, the treatment is lenient (Argiñano, 2021).

Covid is, of course, an episodic topic, which has attracted media interest and forces journalists to consider the relationship between overweight and symptoms associated with depression (Penkler, Felder and Felt, 2015).

The rest of the topics, Aesthetics, Physical exercise and Genetic factors, are less common and illustrate the variety of issues surrounding the information about obesity. So much so that a significant group of news stories couldn't be coded in any of the defined topics in the theoretical framework and so they have been grouped in Other.

The second hypothesis is fulfilled: the relationship between health and obesity arouses the interest of the media, although it should be noted that there is a disparity of topics on this issue.

#### **4.1. Changing media trends**

The most prevalent framing according to the results of this research is Solutions. This coincides with the results of previous studies (Armentia and Marín, 2018).

With regard to the type of approach, it was observed that the framework of Consequences is the one in which the most individualised approach has been found. This contrasts with other studies in which the consequences of obesity pointed mainly to economic damage (Armentia and Marín, 2018) and hardly to the health of individuals. However, in this current study, the focus is on individualised harm to health.

Yet, in the rest of the frames, i.e., Causes, Responsibility and Solutions, the social focus is on the majority. So much so that it is arguably a turning point in the way the online press deals with obesity. More specifically, regarding Responsibility, the most common historical trend has been individual attribution (Sun et al., 2021; Nimegeer, Patterson and Hilton, 2019; L'Hôte, Fond and Vermet, 2018; Bastian, 2011; Boero, 2007), in some cases focusing on parents (Mejía-Galván and Padrós-Blázquez, 2022; Losada, Germanos and Adrio, 2020; De Brún et al., 2012; Flores-Peña et al., 2017) and even pointing directly to the guilt of mothers (Maher et al., 2010). However, since the first decade of the century, researchers had already observed a gradual increase in social responsibility attributions (L'Hôte, Fond and Vermet, 2018; Jeong et al., 2004; Kim and Willis, 2007), for example, by influencing the socioeconomic factors of obese people (Armentia and Marín, 2018), or the level of education (Bolh, 2021; Shekar and Popking, 2020).

The results of the present research therefore certify a change of trend in the way obesity is portrayed in the media. This tendency is even more pronounced if one notes that in this study genetic factors have been included in the individual perspective, in contrast to other research where three options have been distinguished: genetic, individual and social.

The proliferation of news stories on the subject of government measures taken, especially by the Spanish Minister of Economy, Alberto Garzón, is presented as one of the reasons why the press pays special attention to the social dimension of obesity. The recommendation of Ortiz-Barreda, Vives-Cases and Ortiz-Moncada (2012) about the need to establish partnerships that allow the population constant access to information on government actions and strategies seems to be fulfilled.

The impact of Covid on the online newspapers' way of doing things can also be sensed. The epidemic and, in particular, the confinement, pushed the public to stop physical activity and alter eating habits, and in these cases, the press presents this stage as a supervening situation in which the public is a victim of the pandemic situation.

Health is the third area where the social responsibility approach outweighs the individual. These are by no means episodic issues that reinforce the idea that journalists have embraced the necessity of highlighting moral issues and using them to create broader narratives about today's society (Penkler, Felder and Felt, 2015).

In contrast, the attention given to scientific studies tips the balance towards individual responsibility, although this is so slight that it can be argued that it partly neutralises the media's tendency to rely on the press releases of food companies, which are keen to attribute responsibility for excess weight directly to people's inappropriate lifestyles (Jenkin, Signal and Thomson, 2011).

The remaining topics, Food, Aesthetics, Physical exercise and Genetic factors, also tilt the balance towards individual perspectives, but because their overall presence is smaller, they do not prevent the overall media focus from shifting towards social responsibilities.

Regarding the causes, the social perspective confirmed in this research is based on socioeconomic, environmental, psychological or international food system factors, in line with other research (Chan, 2016; Busam and Solomon-Moore, 2011), although, as previously mentioned, biological factors have been included in the individual approach.

Based on the aforementioned causes and social responsibilities, the solutions put forward in the media point to multilevel interventions, from school campaigns to taxing unhealthy food (Hernández et al., 2019) and, to a lesser extent, to individual remedies such as healthy habits, physical exercise, medicine consumption and even surgery (Choban, Atkinson and Moore, 1996).

Consequences, therefore, and as already noted, is the only frame in which the individual perspective prevails. Those most frequently mentioned are the physical health consequences. It could be argued that, with this trend, the media actually victimises the obese, as they are merely paying for the consequences of an obesogenic environment (Jenkin, Signal and Thomson, 2011) for which they are not responsible.

The four types of frames, in any case, are conditioned by the editorial line of the media. In particular, centre-left publications focus more on social perspectives, while the mainstream press focuses on individualising views, in line with previous studies (Nimegeer, Patterson and Hilton, 2019).

Therefore, the third hypothesis is confirmed in terms of consequences, but not at all in terms of responsibilities and solutions, nor in terms of causes, since the media present obesity as an issue whose responsibilities and solutions, in addition to causes, are mainly society's responsibility, and not the individual's.

Furthermore, most of the news stories do not take into account the gender perspective. Paradoxically, in the cases in which women are quoted in the news, there is a very clear gender bias, since Aesthetics is, by far, the subject with the highest prevalence of women in relation to the rest of the subjects. Women, as bodies and as mothers, are targeted by aesthetics and food companies, who make them responsible for obesity (Boero, 2007).

Celebrities also appear frequently in the news about aesthetics. However, there is also feedback between the feminisation of the news and the references to celebrities, especially when the subject matter is Aesthetics. This information has the characteristics of the tabloid press, including yellow journalism, or the journalistic tendency to attract attention by using morbidity and the trivialisation of social life (Almuña-Fernández, Martín-de-la-Guardia and Pelaz-López, 2016).

The presence of celebrities suggests that the press resorts to celebrities to highlight the more playful aspects of obesity, making it a trivial issue, or for dramatic stories.

The fourth and fifth hypotheses are fulfilled insofar as women are not a primary concern of the media, although there is a bias in the reduced volume of news with the female collective as the protagonist, which is perfectly visualised in the Aesthetics topic and in the presence of celebrities.

## **5. Conclusions**

The presence of obesity in the agenda-setting is growing. The coronavirus has been one of the reasons for the media to focus on overweight, which affects millions of people in Spain and around the world. A more cross-cutting approach is needed, in which women are more present, but not as a lure for companies distributing beauty products or to address celebrity-related issues. Indeed, there is a need to consider the specificities of the female population in terms of the different social conditions they face, as well as the specificities of their biology in terms of the need for research into obesity treatments and preventive measures for women. In any case, this research has found a turning point: the media frame obesity as a social problem, rather than an individual issue, contrary to what has historically been the case. It can be argued that a new trend in news reporting has emerged. The pandemic's obligation to stay at home prompted dietary changes that have helped to strengthen this social perspective, as has the government's legislative agenda, which includes restrictive measures on the marketing of unhealthy foodstuffs. This has led to changes in the way obesity is presented in the media: instead of stigmatising the obese, they are increasingly seen as victims of an obesogenic society in which responsibility is attributed not so much to the individual as to the administrations, education or the food companies themselves. It can be concluded that the media claim to have the authority to set the public agenda, to make moral judgements about the causes and responsibilities of obesity and to propose solutions that address the root causes of the problem.

## **6. Strengths, weaknesses and future research**

Six newspapers were analysed over a period of two years, resulting in a very remarkable volume of 2,760 news items. The methodology used has allowed us to establish comparisons with other studies. The coincidence with Covid in 2020 and the study in the year immediately following the pandemic in 2021 has led to genuine results.

As a weakness, it can be said that searching for news articles for the sample by using keywords marginalises information that could also be directly related to obesity.

For future research it would be interesting to carry out comparative content analysis in other countries, and to delve deeper into news making, with qualitative methodologies, in order to provide a better explanation of the new trend in newsrooms that has led to the social focus of news on obesity becoming the majority.

## 7. Contributions

Contributions	Authors
Study conception and design	Author 1, Author 2
Document search	Author 1, Author 2
Data collection	Author 1, Author 2
Critical analysis and interpretation of the data	Author 1, Author 2
Revision and approval of versions	Author 1, Author 2

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The authors declare that there is no conflict of interest.

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## 12. Notes

[1] <https://www.fao.org/3/cb4474es/online/cb4474es.html>