There is a lack of reviews regarding the journalistic coverage about topics of interest for the Brazilian Collective Health. This study aimed to analyze the profile of scientific publications between 2000 and 2015, about news reporting public health issues. It included 64 articles, organized in categories such as: subject, data production, methods of analysis and media investigated. The predominant theme was media coverage of diseases, with emphasis on infectious diseases. Qualitative studies, documentary research and both discourse and content analyses were prevalent. Newspapers were the most researched media. In conclusion, important challenges in this field emerge: the low diversity of themes and approaches adopted, as well as the media investigated, and the need to enlarge the scope of methodological strategies.

**Keywords:** Scoping review. Media. Journalistic coverage of health.
Introduction

Journalism shows a growing interest in the delivery of health content\(^1\)-\(^2\). Most of the newspapers with the largest circulation in the country (both printed and digital) have spaces dedicated to the theme. In the case of the Folha de São Paulo, there is the daily “Health + Science” and the weekly Equilíbrio and Saúde. Globo also publishes health, science and technology news in the Society section. The Estadão has a daily health magazine and the southern Zero Hour, the weekly supplement Caderno Vida\(^3\).

This theme may still be present in several daily newspaper editorials, such as in Cidade when addressing issues related to the emergency service units; in Police, when portraying the aggression to health professionals in public hospitals; in the section of Politics, when bringing the speech of authorities on the financing of the public health system, as well as in Sports, when it publishes some news on diets for runners\(^2\).

This subject also regularly receives the pages of magazines Veja, Isto É, Época and television programs\(^5\), in addition to its presence in news sites and social networks, expanding the possibilities of content delivery on health.

How is journalistic coverage when it comes to topics of interest to Brazilian collective health? In this paper it is understood as an interdisciplinary field, aimed to the understanding of health and the explanation of the social determinants of the health-disease process. Its aim is not only for the individual, but also for the community, with a priority focus on health promotion, contemplating likewise the prevention and care of diseases and diseases\(^4\).

Despite the relevance of this question, there are few review studies in health and communication that contribute to illuminate this issue. According to Terrón et al.\(^5\), analyzing the publications on communication in the public health journals available in the Scielo database, covering eleven countries including Brazil, the number of articles published on this subject for a period of ten years was inexpressive.

With the purpose of painting a broad outline, as well as identifying gaps, the present study sought to characterize the profile of scientific production in the health area - from 2000 to 2015 - that analyzed journalistic coverage on topics pertinent to this field.

Methodological strategy

The scoping review - methodological option of the present work - aims to map the main concepts on a given theme. It is characterized by avoiding starting from a specific question and, as it proposes to bring a general overview, it does not make a qualitative analysis of the material. It allows including studies with different designs and methodologies. It also has as main function to point the gaps in the knowledge of the object in question\(^6\). In North America, specifically Canada, the tradition of developing scoping review is strong; in Brazil however, the use of this method is still scarce.

A systematic search was carried out in the databases of the Virtual Health Library (VHL), which brings together national and international databases of articles in Portuguese, English and Spanish (Chart 1), with success on the bases described in Figure 1. The period investigated was from 2000 to 2015 because it is more representative of the scientific production of the field of communication and health in Brazil, due to its recent structuring, and the beginning of more significant initiatives.
date from the end of the 90s. The first scientific journal in Brazil and Latin America with this focus, the magazine Interface - Communication, Health, Education, for example, was released in 1997.

Chart 1. Keywords and cross-keyword strategy

<table>
<thead>
<tr>
<th>MEDIA</th>
<th>Media AND public health; Media AND Single Health System (SUS); Media AND health; Media AND disease; Press AND health; Press AND disease.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOURNALISM</td>
<td>News coverage AND Unique Health System; Journal coverage and public health; Newspapers AND public health; Newspapers AND Single Health System; Newspapers AND disease; News AND public health; News AND Single Health System (SUS); Journalism AND health; Journalism AND disease.</td>
</tr>
</tbody>
</table>

Figure 1. Search strategy and synthesis of the process of obtaining the selected articles

We understand journalistic coverage not only as the act of covering a series of facts, which result in the news being conveyed, but also as a “verification and angulation strategy” (p. 1), which includes the news production process. We still consider the public’s perspective regarding the coverage of the issue.
The following inclusion criteria were adopted: empirical studies whose objective was to investigate the Brazilian journalistic coverage on issues, problems or themes pertinent to Brazilian Collective Health; studies that analyzed the generalist media, except the studies that analyzed concomitantly generalist and specialized media.

Were excluded: articles in which the focus of journalistic coverage on individual health did not establish any connection with a collective perspective; empirical studies that referred to the media without presenting data related to the media; studies that analyzed the specialized media.

The steps of the process of obtaining the selected articles were guided by the “Guidance for conducting systematic scoping reviews”10. In this proposal, the first author and the third author made the initial selection of articles and the fourth author made the final review, expressing any doubts. In order to expand the search, the articles obtained from the cross-references were included. Those articles are the references captured from articles included in the review (Figure 1).

Results and discussion

A total of 64 articles were selected for analysis (Figure 1). These manuscripts were organized in the following categories: themes, data production, methods of analysis and media investigated. Some subcategories were created from these, taking as reference the frequency of appearance within the investigated studies. They also fulfilled the function of grouping elements that were repeated infrequently among the included articles.

We categorized 11 themes in which the scientific production focused mainly on the journalistic coverage of “physical and mental diseases”, as specified in Chart 2. It is important to note however, that no databases of the field of communication were included, and that that inclusion may have resulted in another configuration to these results, as warned by Terrón et al.5

Chart 2. Diseases as the main theme of scientific production

<table>
<thead>
<tr>
<th>Themes</th>
<th>Authors</th>
<th>N.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical and mental illnesses</strong></td>
<td>Diniz and Guedes15; Castro15; Jurberg and Macchiute15; Jurberg and Verjovsky14; Jurberg et al.15; Jurberg, Gouveia e Belisário15; Jurberg and Macchiute15; Bertol15; Silva, Bousfield and Cardoso15; França, Abreu and Siqueira15; Ferraz and Gomes15; Villela and Natal15; Malinverni, Cuenca and Brígagão15; Lócola and Góis Júnior15; Maciel-Lima et al.15; Medeiros and Massanari15; Medeiros and Massanari15; Ferraz and Gomes15; Silva and Carmargo15; Spink et al.15; Rangel-S15; Bevilacqua et al.15; Villela and Natal15; Schneider, Tavares and Musso15; Rangel-S15; Tomita e Padula15; Guarniero, Bellinghini and Gattazzo15; Soares and Caponi15; Rios et al.15; Santos and Cardoso15.</td>
<td>30</td>
<td>46,88</td>
</tr>
<tr>
<td><strong>Brazilian National Health System -SUS</strong></td>
<td>Machado16; Menegon16; Silva and Rasera16; Morais et al.16; Scremin e Javorski16; Luz, Cambraia and Gontijo16; Ortona and Fortes16; Silva, Pereira and Lopes Filho16.</td>
<td>9</td>
<td>14,06</td>
</tr>
<tr>
<td><strong>Drugs</strong></td>
<td>Lacerda, Mastroianni and Noto16; Romanini and Roso16; Conceição et al.16; Macedo, Roso and Lara16; Noto et al.16; Ronzani et al.16.</td>
<td>6</td>
<td>9,38</td>
</tr>
<tr>
<td><strong>Medication</strong></td>
<td>Ortega et al.16; Nascimento16; Diniz and Castro16; Leandro and Santos16; Saraiva et al.16.</td>
<td>5</td>
<td>7,80</td>
</tr>
<tr>
<td><strong>Violence</strong></td>
<td>Njaine16; Garbin and Fischer16; Campos, Vieira and Mota16; Saraiva and Coutinho16.</td>
<td>4</td>
<td>6,25</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>Di Giulio et al.16; Spink, Medrado and Mello16; Di Giulio, Pereira e Figueiredo16.</td>
<td>3</td>
<td>4,69</td>
</tr>
<tr>
<td><strong>Oral Health</strong></td>
<td>Cavaca et al.17; Cavaca, Gentilli and Marcolino17.</td>
<td>2</td>
<td>3,13</td>
</tr>
<tr>
<td><strong>Abortion</strong></td>
<td>Fontes17; Souza and Brandão17.</td>
<td>2</td>
<td>3,13</td>
</tr>
<tr>
<td><strong>Elderly</strong></td>
<td>Stacheski and Massi17.</td>
<td>1</td>
<td>1,56</td>
</tr>
<tr>
<td><strong>Women's Health</strong></td>
<td>Oliveira et al.17.</td>
<td>1</td>
<td>1,56</td>
</tr>
<tr>
<td><strong>Suicide</strong></td>
<td>Côrtea, Khoury and Mussi17.</td>
<td>1</td>
<td>1,56</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>64</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Among those of physical origin, research on infectious diseases (Chart 3), such as: H1N1 influenza (28.57%), dengue (21.43%), AIDS (14.28%), yellow fever (14.28%), encephalitis (7.14%), meningitis (7.14%) and visceral leishmaniasis (7.14%). Of the most investigated, the studies found that the focus of coverage on the H1N1 flu epidemic was centered on panic, risk, and fear related to the disease. In the case of dengue, the research pointed to accountability and culpability of the population on its occurrence.

To Waisbord[75], these two diseases have priority in the Latin American media agenda, composing what are known as “epidemic media” cycles (related to the dynamics of topics in the journalistic agenda). Some factors that, according to the author[75], contribute putting the H1N1 flu and dengue fever in the information cycle are, among others, oriented: because the speed and expansion of cases fit the journalistic requirement to convey updated information daily; and the two diseases extrapolate the social and geographical divisions of other diseases by being transmitted with high effectiveness between different groups. As they do not focus only on low-resource populations, as they do with other diseases, they impact where the media and its audiences live and work, thus counting on greater journalistic value.

Chart 3. Characterization of the profile of physical diseases analyzed

<table>
<thead>
<tr>
<th>Illnesses</th>
<th>Authors</th>
<th>N.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious</td>
<td>França, Abreu and Siqueira[20]; Ferraz and Gomes[21]; Villela and Natal[22,23]; Malinverni, Cuenga and Brigagão[24]; Lódola and Góis Júnior[25]; Maciel-Lima et al.26; Medeiros and Massaram[27,28]; Ferraz and Gomes[29]; Silva and Camargo[30]; Spink et al.31; Bevilacqua et al.32; Schneider, Tavares and Musse[33].</td>
<td>14</td>
<td>53,85</td>
</tr>
<tr>
<td>Chronic</td>
<td>Castro[34]; Jurberg and Macchiute[35,36]; Jurberg and Verjovsky[37]; Jurberg et al.[38]; Jurberg, Gouveia and Belisário[39]; Bertol[40]; Silva, Bousfield and Cardoso[41].</td>
<td>8</td>
<td>30,77</td>
</tr>
<tr>
<td>Intoxication</td>
<td>Rangel-S[42,43]; Tomita and Padula[44].</td>
<td>3</td>
<td>11,54</td>
</tr>
<tr>
<td>Genetic</td>
<td>Diniz and Guedes[45].</td>
<td>1</td>
<td>3,84</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>26</td>
<td>100</td>
</tr>
</tbody>
</table>

These findings make us reflect how diseases tend to be shown by the media in isolation, without considering the social determinants, and can change the focus of the population’s perception of the origin of the problem, as well as legitimize the State’s lack of responsibility in this regard[75]. It is not in question the perspective of adopting a paternalistic attitude towards the population and a criminalist towards the State, but rather of offering an opportunity for a more comprehensive critique to be made through what is published by the press.

Non-communicable chronic diseases (NCDs) - which significantly impact the population and the health system itself - accounted for about 70% of deaths in 2007, becoming a priority health demand in the country[7]. Part of this group are those related to the circulatory system, the number one cause of death, followed by cancer, which occupies second place in the ranking. In this review, we did not find studies on journalistic coverage for circulatory diseases.

Regarding cancer, the most investigated chronic disease, we found seven studies[12-18], whose majority was conducted by the same researcher[15-17]. Part of them showed that the media gave more space to news about prevention[12,14,16], although the focus on
the coverage of scientific research was also present. We found only one study on hypertension. However, no studies on diabetes have been found, despite the increase in the prevalence of this disease in the country.

There was a low number of researches that looked at mental illnesses and disorders, despite its expressive prevalence, reaching between 20% and 56% of the Brazilian adult population, mainly women and workers. The impact on the quality of life of these people and the repercussions they have on the world of work put mental disorders as a serious public health problem.

The visibility of news about diseases and mental disorders can be central to the understanding and perception of them. However, the low scientific production does not give us many elements to establish a panorama regarding journalistic coverage, considering the diversity of existing disorders. Of the four manuscripts, we can point out a study, related to schizophrenia that found that the media investigated reinforced the stigma in relation to the disease. This study also highlighted that the news did not give voice to the patient suffering schizophrenia. This finding is in line with a trend already demonstrated by several studies of the sociology of journalism: the media prioritize official sources to the detriment of the voices of society. By using this strategy, the media tends to symbolically reproduce the existing power structure in the institutional order of society. Regarding depression, there was a study that highlighted that the media investigated emphasized medicalization as the priority treatment, demonstrating that the conception of news coverage in relation to the disease was biomedical.

The second most researched topic was the Brazilian National Health System (SUS) with nine articles (Chart 2). Result of long social struggles, the SUS was implemented during more than 20 years, through the Organic Law of Health, 1990, with the purpose of being a universal, free, decentralized and democratic public health system. Despite this trajectory, according to Paim, politicians, health professionals, the media and the population know little about their health system and have different and distorted conceptions about it.

When analyzing the SUS category, we identified five subtopics, with the journalistic coverage of the Mais Médicos Program leading this role. Its implementation took place in 2013 and is presented by the federal government as a strategy for the strengthening of Primary Care in the country.
physicians and in the acceptance of them by the public\textsuperscript{45}, identifying a gap from the
coverage in relation to the objectives of the law that created the program\textsuperscript{47}.

Regarding sub-themes 2 and 3 (Chart 4), the studies identified that journalistic
coverage focused on crisis periods in the health services\textsuperscript{42,43}, creating discredit of SUS
managers and users\textsuperscript{44}. These findings dialog with Oliveira\textsuperscript{83} considering that the main
images and information divulged about the system use as a starting point a supposed
inefficiency of the State, incompetence of the authorities or the professionals of
the area, leading to the construction of a symbolic order that is scarcely reflexive
regarding the field of health policy represented by SUS.

To Araújo\textsuperscript{84}, however, it is important to take into account the different interests
that are at stake, considering that both SUS and the media are not homogeneous:
“society against the media”, “SUS against the media”, and that this polarization “harms
a real understanding of the process of social production of the meanings [...]”\textsuperscript{84} (p. 69).

Methodological approach: the predominance of qualitative studies

The methodological approach used in most studies was qualitative. There was
only one quantitative study, as specified in Chart 5. Most of the studies were based on
only one technique of data production: documentary research (texts, 93.85%, images,
6.15%). There were few who combined it with other techniques, such as interviews,
focus groups and application of questionnaires (Chart 6). For Minayo\textsuperscript{85}, the
triangulation of the data collection technique is an important resource to give greater
validity to the study, however the use or not of various techniques, or even of research
methods, will depend on the objective of the investigation and the object investigated.
These factors have the last word regarding choices to make.

<table>
<thead>
<tr>
<th>Qualitative approach</th>
<th>Authors</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative</td>
<td>Diniz and Guedes\textsuperscript{11}; Castro\textsuperscript{12}; Jurberg e Macchiute\textsuperscript{15}; Jurberg et al.\textsuperscript{15}; Jurberg, Gouveia and Belisário\textsuperscript{16}; Jurberg and Macchiute\textsuperscript{17}; Bertol\textsuperscript{18}; Silva, Bousfield and Cardoso\textsuperscript{10}; França, Abreu e Siqueira\textsuperscript{20}; Ferraz and Gomes\textsuperscript{7}; Villela e Natal\textsuperscript{12}; Malinverni, Cuenca and Brigagão\textsuperscript{20}; Lódola and Góis Júnior\textsuperscript{29}; Maciel-Lima et al.\textsuperscript{21}; Medeiros and Massaran\textsuperscript{22}; Medeiros and Massaram\textsuperscript{23}; Ferraz and Gomes\textsuperscript{24}; Silva and Cariporto\textsuperscript{25}; Rangel-S\textsuperscript{26}; Bevilacqua et al.\textsuperscript{27}; Villela and Natal\textsuperscript{28}; Schneider, Tavares and Musse\textsuperscript{29}; Rangel-S\textsuperscript{30}; Tornita and Padula\textsuperscript{31}; Guarniero, Bellinghini and Gattaz\textsuperscript{32}; Soares and Caponi\textsuperscript{33}; Rios et al.\textsuperscript{34}; Santos and Cardoso\textsuperscript{35}; Machado\textsuperscript{36}; Silva e Rasera\textsuperscript{37,38}; Scremin and Javorski\textsuperscript{39}; Luz, Cambria and Gontijo\textsuperscript{40}; Ortona and Fortes\textsuperscript{41}; Silva, Pereira and Lopes Filho\textsuperscript{42}; Romani and Roso\textsuperscript{43}; Conceição et al.\textsuperscript{44}; Macedo, Roso and Lara\textsuperscript{45}; Noto et al.\textsuperscript{46}; Ronzani et al.\textsuperscript{47}; Ortega et al.\textsuperscript{48}; Nascimento\textsuperscript{49}; Leandro and Santos\textsuperscript{50}; Saraiva et al.\textsuperscript{51}; Njaine\textsuperscript{52}; Garbin e Fischer\textsuperscript{53}; Campos, Vieira e Mota\textsuperscript{54}; Saraiva e Coutinho\textsuperscript{55}; Di Giulio et al.\textsuperscript{56}; Di Giulio, Pereira e Figueiredo\textsuperscript{57}; Cavaca, Gentilli and Marcolino\textsuperscript{58}; Fontes\textsuperscript{59}; Souza e Brandão\textsuperscript{60}; Stacheski e Massi\textsuperscript{61}; Oliveira et al.\textsuperscript{62}; Côrteia, Khoury and Mussi\textsuperscript{63}.</td>
<td>57</td>
<td>89,06</td>
</tr>
<tr>
<td>Qualitative-quantitative</td>
<td>Cavaca et al.\textsuperscript{64}; Menegon\textsuperscript{65}; Morais et al.\textsuperscript{66}; Lacerda, Mastroianni and Noto\textsuperscript{67}; Diniz and Castro\textsuperscript{68}; Spinke, Medrado e Mello\textsuperscript{69}.</td>
<td>6</td>
<td>9,38</td>
</tr>
<tr>
<td>Qualitative</td>
<td>Jurberg e Verjovsky\textsuperscript{70}.</td>
<td>1</td>
<td>1,56</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>64</td>
<td>100</td>
</tr>
</tbody>
</table>
The observation was not used in any study, despite being a possible resource for analyzing journalistic routines and news production. In the field of journalism, the interactionist theory starts from the premise that news is a construction, resulting from complex processes of social interaction between social agents: journalists and sources of information; journalists and society; members of the professional community, inside and outside their organization. It is aimed at the production and the producers of the news, when studying the influence of the journalistic routine in the representation of the events. News production is thought as an industrial routine, and news is seen as the result of the various factors, i.e. personal, social, ideological, cultural, physical and historical.

Studies known as newsmaking fit into this perspective and draw on participant observation. With tradition in American studies, it is potent, especially if aligned with other data production techniques, to understand the internal processes of news production (meeting follow-up and discussion of schedules, monitoring of coverage and interviews with reporters and editors).

However, we can consider that there are difficulties and limitations to include observation in research in the field of communication and health, both for the feasibility of this type of study - which demands time and availability of the researcher - and for the difficulty of access to the media.

On the studies of newsworthiness, Ponte emphasizes the importance of articulating various data production strategies, including in the writing studies the participant observation and the analysis of the journalistic coverage for longer periods to give more attention to the routines than to specific events.

Another aspect verified is that the investigated studies focused on the analysis of the journalistic product (82.82%), meeting a trend already identified in research in the area of communication. There were few investigations that included any dimension related to the journalistic production process (10.93%); or analyzing the public’s

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**Chart 6. Identification and frequency of data production**

<table>
<thead>
<tr>
<th>Production of data</th>
<th>Authors</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentary research</td>
<td>Diniz and Guedes; Jurberg et al.; Jurberg, Gouveia and Belisário; Jurberg and Macchiucite; Bertol; Silva, Bousfield and Cardoso; França, Abreu and Siqueira; Ferraz and Gomes; Villela and Natal; Malinvern, Cuenca and Bragaço; Lódo and Góis Junior; Maciel-Lima et al.; Medeiros and Massari; Ferraz and Gomes; Leandro and Santos; Silva and Carmona; Bevilacqua et al.; Schneider, Tavares and Musse; Rangel et al.; Tomita and Padula; Guarniero, Bellini and Gattaz; Machado; Soares and Caponi; Rios et al.; Menegon; Silva and Raseira; Morais et al.; Scremin e Javorski; Luz, Cambraia and Gontijo; Lacerda, Mastroianii and Noto; Romanini and Roso; Conceição et al.; Macedo, Roso and Lara; Noto et al.; Ronzani et al.; Nascimento; Diniz and Castro; Leandro and Santos; Saraiva et al.; Garbin and Fischer; Saraiva and Coutinho; Spink, Medrado and Mello; Cavaca et al.; Cavaca, Gentilli and Marcolino; Fontes; Souza and Brandão; Cortes, Khoury and Mussi; Oliveira et al.; Stacheski and Massi.</td>
<td>51</td>
<td>79.69</td>
</tr>
<tr>
<td>Documentary research and other techniques</td>
<td>Castro; Jurberg and Macchiucite; Jurberg and Verjovsky; Spink et al.; Rangel-S; Silva, Pereira and Lopes Filho; Ortega et al.; Campos, Vieira and Mota; Di Giulio et al.; Di Giulio, Pereira and Figueiredo.</td>
<td>10</td>
<td>15.63</td>
</tr>
<tr>
<td>Interviews</td>
<td>Santos and Cardoso; Ortona and Fortes.</td>
<td>2</td>
<td>3.12</td>
</tr>
<tr>
<td>Focus groups</td>
<td>Njaine</td>
<td>1</td>
<td>1.56</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>64</td>
<td>100%</td>
</tr>
</tbody>
</table>
perception of the news stories, the so-called reception studies, “a receiving subject that re-signifies the media messages, identifying their negotiations and resistance to the logic of the media”90 (p. 22), representing 6.25% of the investigated studies. In a brief mapping on the publication of articles in scientific journals of communication and health, Lerner and Sacramento90 also arrived at the same finding about the timid presence of studies aimed at reception.

These findings refer to the repetition of methodological formulas commonly used in studies on the media and show us some difficulty in incorporating these approaches, considering the various processes that comprise journalistic coverage - in order to surround this phenomenon so complex by several prisms.

Absence of information on the methods of analysis employed

The most frequent methods of analysis - considering those that specified this information - were discourse and content analysis, a tendency also present in media studies89. In the first case, some studies were based on authors like Foucault, Orlandi, Charaudeau and Maingueneau (Chart 6). However, in some manuscripts, there was no direct reference to a certain school of discourse analysis or even which authors had based the theoretical-methodological choice. This information, however, is relevant if we consider that there are specificities and nuances between the various schools, such as the analysis of discourse, a French line, and critical analysis of the discourse, an Anglo-Saxon line.

In an article, the authors combined several methods of analysis: speech with agenda “setting and framing analysis”. Regarding content analysis, the main reference was that of Bardin. Other theoretical-methodological references used were “framing analysis” and Social Representations (SR). In the first case, not all articles made a reference to authors supporting this option, and those who did, resorted to Erving Goffman. However, there is a diversity of conceptual interpretations about framing analysis as well as its applicability91,92. Regarding the representations, the reference author was Serge Moscovici. In three cases, SRs were combined with other methods, such as content analysis and Collective Subject Discourse93. There was considerable number of articles where information on the method of analysis was not available. This information however, is important so that readers can evaluate the results presented in the publications. Methods that appeared only in one manuscript or were not combined with other methodologies were grouped into ‘Other’ (Chart 7).
Chart 7. Methods of analysis used

<table>
<thead>
<tr>
<th>Methods of analysis (DA)</th>
<th>Authors</th>
<th>Articles</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discourse analysis (DA)</td>
<td>Ferraz e Gomes[23,28]; Rangel-S[31]; Bevilacqua et al.[32]; Villela e Natal[33]; Schneider, Tavares e Musse[34]; Tomita e Padula[26]; Silva e Rasera[44]; Côrtea, Khoury e Mussi[45]; Macedo, Roso e Lara[23]; Nascimento[37]; Spink, Medrado e Mello[46]; Saraiva et al.[40]; Garbin e Fischer[42]; Stacheski e Massi[47]</td>
<td>15</td>
<td>23,43</td>
</tr>
<tr>
<td>Content analysis</td>
<td>Jurberg e Verjovsky[14]; Jurberg e Macchiute[17]; Maciel-Lima et al.[21]; Soares e Caponi[29]; Morais et al.[43]; Ortona e Fortes[46]; Lacerda, Mastroianni e Noto[27]; Romanini e Roso[23]; Conceição et al.[25]; Noto et al.[44]; Rondani et al.[45]; Di Giulio et al.[46]; Di Giulio, Pereira e Figueiredo[47]; Cavaca et al.[48]; Cavaca, Gentilli e Marcolino[49]</td>
<td>15</td>
<td>23,43</td>
</tr>
<tr>
<td>Information not available</td>
<td>Diniz e Guedes[11]; Castro[12]; Jurberg e Macchiute[16]; Jurberg et al.[16]; Jurberg, Gouveia e Belisário[17]; França, Abreu e Siqueira[20]; Spink e al.[26]; Rios et al.[23]; Menegon[41]; Leandro e Santos[42]; Souza e Brandão[43]; Côrtea, Khoury e Mussi[44]; Oliveira et al.[45]</td>
<td>13</td>
<td>20,31</td>
</tr>
<tr>
<td>Others</td>
<td>Lódola e Góis Júnior[18]; Rangel-S[23]; Guarniero, Bellinghini e Gattaz[27]; Santos e Cardoso[21]; Luz, Cambria e Gontijo[27]; Silva, Pereira e Lopes Filho[29]; Njaine[30]; Campos, Vieira e Mota[31]</td>
<td>8</td>
<td>12,53</td>
</tr>
<tr>
<td>Framing analysis</td>
<td>Bertol[19]; Medeiros e Massaran[28,29]; Scremin e Javorski[30]; Diniz e Castro[32,33]; Fontes[34]</td>
<td>6</td>
<td>9,37</td>
</tr>
<tr>
<td>Social Representations (SR)</td>
<td>Silva, Bousfield e Cardoso[35,36]; Silva e Camargo[37]; Saraiva e Coutinho[38]; Ortega et al.[39]</td>
<td>4</td>
<td>6,25</td>
</tr>
<tr>
<td>SR and other methods</td>
<td>Villela and Natal[23]; Machado[41]</td>
<td>2</td>
<td>3,12</td>
</tr>
<tr>
<td>DA and other methods</td>
<td>Malinverni, Cuenc a and Brigagão[24]</td>
<td>1</td>
<td>1,56</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>64</td>
<td>100%</td>
</tr>
</tbody>
</table>

Newspaper: the means of communication most investigated

Regarding the means investigated, according to Chart 8, the predominance was the newspapers as also identified by Catalan-Matamoros and Peñafiel-Saiz[24] and Terrón et al.[9]. There were only three that investigated television programs, all broadcasted by Rede Globo; one study analyzed the content published in a radio program and another investigated news sites, however, this manuscript did not specify in the methodology section, which were the sites investigated, being possible to detect such information during the presentation of the results.

It is also possible to infer that this tendency to choose the analysis of newspapers may be related to the ease of making this kind of study feasible: having access to the object (newspaper) is easier because in general and especially in national newspapers, content is available on the internet.

For analysis of other media, such as radio and television, it is necessary to record the content, regarding the current situation, or to use the database of the broadcasters, when referring to the previous periods, which in both cases may represent a hindrance. Another aspect is the short duration of studies that can restrict the researchers, limiting them to study media that require less availability and time[89].
### Chart 8. List of the most investigated media

<table>
<thead>
<tr>
<th>Means</th>
<th>Authors</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>Diniz e Guedes(^1)(^1), Jurberg et al.(^1)(^5); Jurberg, Gouveia e Belisário(^1)(^6); Bertol(^1)(^6); França, Abreu e Siqueira(^2); Ferraz e Gomes(^3); Malinverni, Cuenca e Brigagão(^4); Lóbdola e Góis Júnior(^5); Maciel-Lima et al.(^5); Spinck et al.(^5); Rangel(^5)(^5)(^5); Bevilacqua et al.(^5); Villela e Natal(^5); Schneider, Tavares e Musse(^5); Tornita e Padula(^6); Machado(^7); Menegon(^7); Silva e Rasera(^8)(^9); Morais et al.(^9); Luz, Cambaraia e Gontijo(^10); Silva, Pereira e Lopes Filho(^10); Romanini e Roso(^11); Leandro e Santos(^11); Garbin e Fischer(^11); Campos, Vieira e Mota(^11); Saraiva e Coutinho(^12); Di Giulio et al.(^12); Spinik, Medrado e Mello(^12); Cavaca et al.(^12); Cavaca, Gentili e Marcolino(^12); Souza e Brandão(^12); Stacheski e Massi(^12);</td>
<td>37</td>
<td>52.3%</td>
</tr>
<tr>
<td>Newspapers and magazines</td>
<td>Castro(^12); Villela e Natal(^12); Guarniero, Bellinghini e Gattazz(^22); Soares e Caponi(^23); Rios et al.(^23); Lacerda, Mastroianni e Noto(^23); Noto et al.(^23); Ortega et al.(^23); Nascimento(^23); Diniz e Castro(^23); Fontes(^23);</td>
<td>11</td>
<td>16.92%</td>
</tr>
<tr>
<td>Magazines</td>
<td>Jurberg e Macchiute(^13); Silva, Bousfield and Cardoso(^24); Ferraz e Gomes(^24); Silva e Camargo(^24); Conceição et al.(^24); Ronzani et al.(^24); Saraiva et al.(^24); Oliveira et al.(^24);</td>
<td>8</td>
<td>12.30%</td>
</tr>
<tr>
<td>Television</td>
<td>Jurberg and Verjovsky(^24); Medeiros and Massarani(^25)(^26); Scremin e Javorski(^26); Macedo, Roso and Lara(^26);</td>
<td>5</td>
<td>7.69%</td>
</tr>
<tr>
<td>Radio</td>
<td>Jurberg and Macchiute(^13);</td>
<td>1</td>
<td>1.53%</td>
</tr>
<tr>
<td>Magazine and news websites</td>
<td>Côrtea, Khoury and Mussi(^27);</td>
<td>1</td>
<td>1.53%</td>
</tr>
<tr>
<td>TV and newspapers</td>
<td>Di Giulio, Pereira and Figueiredo(^27);</td>
<td>1</td>
<td>1.53%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>64</td>
<td>100%</td>
</tr>
</tbody>
</table>

There was no analysis of social media networks, such as Facebook or Twitter, something that may have been interesting in order to reflect on the important role that these media are playing in today’s society, besides showing a possibility to access the various audiences in an investigation about their public.

An analysis that contemplates the diversity of the media could still offer us more elements to deepen our understanding related to journalistic coverage on Brazilian public health. The different media types can not be confused because they do not follow the same rules of operation: “No trabajan con el mismo material y no producen los mismos tipos de efecto sobre un público que además no es el mismo”\(^95\) (They do not work with the same material and do not produce the same kind of effect on an audience that is not the same) (p. 321).

Among the most investigated newspapers were those related to the major press, such as Folha de São Paulo, Globo and Estado de São Paulo. There were, however, studies from regional journals, mainly those that included a larger number of publications in their sample. The reviews of magazines were less frequent, and the studies focused on the more traditional and national ones such as Veja, Isto É e Época. Most of the studies - which reviewed journals and journals concurrently - did not consider some of these differences during their analysis: newspapers are daily, tend to focus on factual news, and weekly magazines tend to bring in more in-depth reporting, elements that could have implications during the analysis of the results.

Regarding comparative studies, there were few who used this feature; even those who analyzed more than one vehicle did not analyzed them in most cases in a comparative perspective. There were two studies, for example, that compared coverage in Brazilian and American newspapers, both related to cancer\(^15\)\(^18\). This methodology has been used in other areas of knowledge, but in the Communication, although the
volume of research is high in relation to the news, few are comparative, showing that the number of journalism studies with this profile is low. In Collective Health, its use is relatively new. According to Conill, “Comparing is looking for similarities, differences or relationships between phenomena that may be contemporary or not, occurring in distinct spaces or not to better understand them” (p.564). For this reason, the use of this methodology is potent to identify differences or similarities in journalistic coverage considering the different social contexts of news production.

Final considerations

This review brought a broad landscape of the scientific production on issues of Brazilian collective health. However, it indicated several shortcomings: there were few studies on chronic diseases and neglected diseases, which have a significant impact on the health of the population. New studies could provide an overview of the frequency of these contents, the kind of approach used, if they bring some perspective on health promotion, if they focus on the discovery of new medicines, the quality of the information or even another theoretical-methodological approach, such as senses and discourses produced on these NCD in the media.

It is also possible to reflect on whether the media agenda itself may have guided the scientific production in the area, considering that epidemic diseases were one of the most investigated themes. Regarding the SUS category, the ‘More Doctors’ program - which received wide coverage of journalism - was also one of the topics that most aroused interest on the part of researchers.

Regarding the methodology, there was a low diversity of data production techniques, and observation was not observed in any study. Few works have contemplated other aspects that are also related to journalistic coverage, such as the production of news and the perception of the users about its contents. These findings lead us to reflect on the importance of further investigations that may encompass these other processes. Regarding the method of analysis, there were a considerable number of articles that did not specify this information. This methodological issue is a challenge to be faced by researchers in new studies in this field. It is also important to highlight the low diversity of media investigated.

Authors’ contributions

Andrea Langbecker, Marcelo Eduardo Pfeiffer Castellanos, Robson da Fonseca Neves and Daniel Catalan-Matamoros participated equally in the preparation of the article and approved the final version presented.

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References


69. Cavaca AG, Gentilli V, Marcolino EM, Emmerich A. As representações da saúde bucal na mídia impressa. Interface (Botucatu). 2012; 16(43):1055-68.


82. Paim JS. O que é o SUS. Rio de Janeiro: Fiocruz; 2009.


Translator: Félix Héctor Rigoli

Submitted on 03/02/18.
Approved on 09/18/18.