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The Human Face of Health News: A Multi-Method Analysis of Sourcing Practices in Health-Related News in Belgian Magazines

Rebeca De Dobbelaer , Sarah Van Leuven, and Karin Raeymaeckers

Department of Communication Studies, Ghent University

ABSTRACT

Health journalists are central gatekeepers who select, frame, and communicate health news to a broad audience, but the selection and content of health news are also influenced by the sources journalists, rely on (Hinnant, Len-Rios, & Oh, 2012). In this paper, we examine whether the traditional elitist sourcing practices (e.g., research institutions, government) are still important in a digitalized news environment where bottom-up non-elite actors (e.g., patients, civil society organizations) can act as producers (Bruns, 2003). Our main goal, therefore, is to detect whether sourcing practices in health journalism can be linked with strategies of empowerment. We use a multi-method approach combining quantitative and qualitative research methods. First, two content analyses are developed to examine health-related news in Belgian magazines (popular weeklies, health magazines, general interest magazines, and women's magazines). The analyses highlight sourcing practices as visible in the texts and give an overview of the different stakeholders represented as sources. In the first wave, the content analysis includes 1047 health-related news items in 19 different Belgian magazines (March–June 2013). In the second wave, a smaller sample of 202 health-related items in 10 magazines was studied for follow-up reasons (February 2015). Second, to contextualize the findings of the quantitative analysis, we interviewed 16 health journalists and editors-in-chief. The results illustrate that journalists consider patients and blogs as relevant sources for health news; nonetheless, elitist sourcing practices still prevail at the cost of bottom-up communication. However, the in-depth interviews demonstrate that journalists increasingly consult patients and civil society actors to give health issues a more “human” face. Importantly, the study reveals that this strategy is differently applied by the various types of magazines. While popular weeklies and women's magazines give a voice to ordinary citizens to translate complex issues and connect with their audiences, general interest magazines and health magazines prefer elite sources and use ordinary citizen stories as a way of “window dressing.”

The open gates of health journalism?

News media communicate scientific information to broad, non-expert audiences and thus play an important role in the popular representation of science, including health issues. This is not an easy task because scientific and health information usually elaborates on complex and technical matters. Consequently, Hinnant, Len-Rios, and Oh (2012) found that US journalists find it important to provide not only credible but also accessible information to enhance audience comprehension of health-related issues. Studies moreover find that news on health-related issues is gaining importance in traditional news media (Fahy & Nisbet, 2011; Picard & Yeo, 2011; Secko, Amend, & Friday, 2013). The Kaiser Family Foundation (2009) and the Pew Research Center (2011) examined a broad range of US media and calculated that, in 2008, 3.6% of all national news coverage was dedicated to health (eight biggest issue), in 2009, that percentage had already increased to 4.9%. Weitkamp (2003) focused on UK science reporting and found that 50% of the articles focused

on medicine and health-related topics. Yet despite its importance as a source of information for the understanding of health issues, the content and processes of health journalism remain largely underexplored, especially when it comes to sourcing practices (Bucchi & Mazzolini, 2003; Picard & Yeo, 2011; Secko et al., 2013).

Due to the technical and complex nature of health issues, journalists often lack the expertise to get a full grip on stories and are consequently very dependent on sources, maybe even more than in other news specialties. As a result, sources in health news can have a large impact on the selection and content of health news (Holton, Weberling, Clarke, & Smith, 2012; Len-Rios et al., 2009). It is, therefore, crucial to examine which stakeholders are represented in the news. For that reason, this paper sets out to examine by means of content analyses and in-depth interviews which sourcing practices characterize health-related issues in Belgian magazines. Before we will present our findings, we will first give an overview of what we know about sourcing practices in

journalism in general, followed by an overview of the literature on sourcing practices in health news.

Sourcing practices in the twenty-first century

Sourcing practices of professional journalists are widely studied in different specialty areas of news reporting (e.g., political news, foreign reporting, economic news). It turns out that, in general, news access is strongly determined by the distribution of power and resources in society. Studies repeatedly demonstrated how top-down or elite actors—such as politicians, government institutions, experts, and well-resourced companies—enjoy privileged news access compared to bottom-up or non-elite actors, including ordinary citizens and civil society organizations (Gans, 2011; Shoemaker & Vos, 2009). These news gathering routines have become established over decades and are ways for journalists to deal with time and resource limitations while ensuring credibility, objectivity, and productivity (Shoemaker & Vos, 2009; Sigal, 1999). For example, studies identified “prominence” as an important news value explaining why journalists often prioritize elite sources (Galtung & Ruge, 1965; Reich, 2011). In addition, some elite actors are considered particularly reliable because of their institutional power (e.g., government officials), representative status (e.g., elected politicians), or knowledge of a certain topic (experts) (Hall, Critcher, Jefferson, Clarke, & Roberts, 1999). Since journalists have to face stressing deadlines, they prefer sources that do not need to pass the extensive process of reliability and believability checks (Gans, 1979). As a result, “highly credible” (elite) actors are consulted more often than “less credible” non-elite actors whose information requires more verification and cross-checking. Other actors, such as large companies and lobby groups, are less credible but equally successful in gaining news access because they can offer journalists “information subsidies,” such as press releases or even more far-reaching page-ready “editorial subsidies” (Jackson & Moloney, 2016). They possess the necessary financial and social resources to produce PR material that is “diced, sliced, and packaged” for journalists (Phillips, 2011, p. 50). In a context of cost-cutting and increasing workloads for journalists who are tied to their desks, these “information” or “editorial subsidies” are a welcome resource to keep up with the news cycle (Lewis, Williams, & Franklin, 2008). Sallot and Johnson (2006) conducted a meta-analysis of more than 150 different studies that had tried to map the use of PR sources in the news since the 1960s and concluded that the observed amount of articles containing PR material varied between 25% and 80%. In the 10 years since their analysis, the number of studies has continued to grow, resulting in comparable findings (e.g., Jackson & Moloney, 2016; Kroon & Schaafraad, 2013; Reich, 2010) also in the Belgian context (Van Leuven & Joye, 2014). These practices and routines result in a world image in the news that is largely dominated by elites and powerful stakeholders.

Nonetheless, this approach to journalist–source relations is increasingly criticized in light of the advancements in digital technologies. The empowering capacities of social media applications may constitute a key element for more balanced news access in the “network society” (Castells, 2011; Heinrich,

2010). Social media channels allow users to spread information cheaply and instantaneously throughout their network. As a result, they can open the news gates for non-elite actors (Heinrich, 2010). Studies in different countries suggest that journalists are very optimistic about the added value of social media sourcing in terms of finding story ideas (Carrera Alvarez, De Baranda, Andujar, Herrero Curiel, & Limón Serrano, 2012; Heravi & Harrower, 2016; Larsson & Ihlebæk, 2016), broadening the source network (Carrera Alvarez et al., 2012; Larsson & Ihlebæk, 2016) and for sourcing content (Heravi & Harrower, 2016). Sixty-five percent of Dutch-speaking journalists in Belgium believe that social media can be an important information channel in the news-gathering process (Raeymaeckers et al., 2013). However, when it comes to the actual use of social media as information channels, the findings are mixed.

Some studies suggest that in the everyday news production process, social media are rarely used as information channels (Pew Research Center, 2011; Raeymaeckers et al., 2013). Many journalists admit that they struggle with information overload, language hurdles, and the doubted reliability and verification issues of online information (Carrera Alvarez et al., 2012; Hermida, 2010; Lariscy, Avery, Sweetser, & Howes, 2009). Moreover, studies point out that social media channels are “colonized” by elite actors, who understand the potential of social media to strengthen relations with journalists (Broersma & Graham, 2012). In addition, studies conclude that social media are sometimes used to contact non-elite actors, yet not to gather facts or background information but instead for “soft” news purposes, for example, to capture the public mood regarding an issue (Paulussen & Harder, 2014). In contrast, studies suggest that journalists covering specialty areas are more likely to explore new tools and experiment with new practices including social media sourcing such as political journalists (Broersma & Graham, 2012), regional or local journalists (Canter, 2015), or health journalists (Holton, 2013; Molyneux & Holton, 2015). Therefore, in the next section, we zoom in on the sourcing practices of the specific segment of health journalists.

Sourcing practices in health news

Most authors, including Levi (2001), agree that the journalistic preference for elite actors is even stronger in the domain of health journalism. A common assumption is that abstract topics as science and health demand a greater level of expertise while journalists usually do not have a background in life sciences (Holton et al., 2012; Len-Rios et al., 2009). The dependence on elite sources is strengthened in the current situation of financial cutbacks since specialized journalists are increasingly replaced with generalists and freelancers facing high work pressures (Dunwoody, 2008; Holton, 2013; Peters, 2008; Raeymaeckers et al., 2013; Rowe, Tilbury, & O’Ferrall, 2003). Yet it may also open opportunities for more informed health reporting when news media rely on specialized freelancers to fill news holes related to health.

In health journalism, source credibility and reliability are perceived as a mixture of expertise, competence, and trustworthiness (Hinnant et al., 2012). In this respect, experts such

as scientists but also health professionals such as physicians are often the primary source. They increase the credibility of the health story and make it more authoritative (Kruvand, 2009). “Journalists use expert actors in health stories to provide perspective, contribute balance to the story, discuss research implications, and legitimize other research” (Len-Rios et al., 2009, p.318). Nonetheless, Levi (2001) remains critical by linking the willingness of experts to help reporters to potential commercial rationales as a way of funding and advertising their own research. This relates to the mediatization of science, as scientists and scientific organizations have successfully intensified and professionalized their media efforts in response to the increasing pressure to legitimize research and maximize the acquisition of research funds (Sumner et al., 2014; Williams & Gajevic, 2013).

Taking into account the need for accurate and specialized information, journalists also routinely search medical and scientific journals and websites for information (Abelson & Collins, 2009; Len-Rios et al., 2009; Rowe et al., 2003). Health journalists often lack the scientific background to monitor the importance and quality of health news and therefore tend to redistribute news published in other media, thus relying on checks and balances of “peer media” (Trench, 2008). Journalists rate peer-reviewed journals more reliable, although Levi (2001) warns for myopic copying and/or omitting of crucial information or insufficient contextualization of the results in a broader range of academic publications. As mentioned earlier, the mediatization of science and the pressure to legitimize research sometimes can result in exaggeration of research results (Sumner et al., 2014). This intermedia agenda setting does not only concern academic journals but also mainstream (news) media who are routinely monitored for story ideas (Len-Rios et al., 2009).

In addition, not only credibility but also efficiency considerations reign today's production of health news. In this respect, the so-called fifth estate of PR practitioners is gaining more importance also in the field of health information (Reich, 2011) and the journalistic use of the large stream of ready-made content is opening up for providers that can act on a personal or activist agenda. Journalists use PR material with vigilance (Broersma, 2009) but attention is needed since the PR nature of the information subsidies is not always noticeable. Powerful actors as pharmaceutical companies invest in ready-made news, and storylines professionally outlined by their public relations and commercial departments. Although this type of information subsidies can be a trigger for journalists to start a journalistic query, they can also be copy pasted integrally in the news content (Reich, 2010). Research of Len-Rios et al. (2009) illustrates that specifically health journalists regularly use information subsidies because of their lack of scientific background, thus turning health journalists into “information brokers.” They nonetheless add that journalists also take into account the motives of sources when confronted with PR material as they found that journalists are more critical toward PR content originating from powerful organizations as pharmaceutical companies, while they are less suspicious toward PR content of universities and nonprofit organizations whom they expect more to serve the public interest (Hinnant & Len-Rios, 2009).

In contrast, ordinary citizens are rarely represented in health news “apart from occasional reference to add a personal dimension or to provide human interest” (Rowe et al., 2003, p.682). Nonetheless, although they are not thought to powerfully shape media agendas, Len-Rios et al. (2009) found that news audiences are important sources for health journalists for story ideas. In addition, the digitalized media reality and the powerful agents of social media have changed sourcing practices and daily routines in newsrooms (Mitchelstein & Boczkowski, 2009). The World Wide Web has given access to a broader range of information as provided also by civil society actors and citizens (Hermida & Thurman, 2008). This idea of bottom-up communication suggests that digitalization will broaden the diversity of sources in news gathering (Beckett & Mansell, 2008). More specifically for health journalism, Colson (2011) argues that health and science blogs can play an important role. Some authors (Deuze, Bruns, & Neuberger, 2007; Dimitrova & Strömback, 2009) even suggest that online platforms as social media are most convenient to find personal stories of ordinary citizens to illustrate health issues (Hinnant, Len-Rios, & Young, 2013). In a recurring critique on sourcing ordinary citizens in the news, some authors state that this approach does not add depth and new viewpoints to the message but rather dumbs down the information in the news article (Habermas, 1996). In contrast, Gans (2011) demands that journalists and news media should represent the general public and make their views and voices heard to foster public discourse. Other authors stress that this journalistic approach allows more ordinary people to understand the news from real-life experiences (McNair, 2009).

Research questions and methodology

Most studies on health journalism are situated within the newspaper and television industry (Hinnant et al., 2012). We want to fill a gap in the literature by means of an empirical study examining the sources and actors in health news in the Belgian magazine market, which is severely challenged by digitalization tendencies, takeovers and reorganizations, layoffs, concentration and convergence, withdrawing advertisers, and dramatically declining circulation/sales (VRM, 2015). Two research questions are explored:

- RQ1: Which sourcing practices characterize health-related issues in Belgian magazines?
- RQ1a: Which source materials (traditional media brands, PR, social media UGC) are used?
- RQ1b: How is the prominence of elite/top-down actors versus non-elite/bottom-up actors?
- RQ2: Are there any differences in the sourcing practices of different types of magazines?

Our research uses quantitative and qualitative methodologies to gather results for a broad sample of magazines. Two content analyses of magazine health news are complemented with in-depth interviews with health journalists because sourcing routines are often invisible in the news output (e.g., Reich,

2010). A wide range of magazines coexists in the Belgian media landscape (CIM, 2015). We focus our attention on health-related issues in women's magazines (targeting a female audience with human interest stories, published on a weekly or monthly basis, e.g., Libelle, Flair), popular weeklies (targeting a broad audience with gossip and popular culture stories, published on a weekly basis, e.g., Dag Allemaal), general interest magazines (targeting a more intellectual audience with current affairs and news, published on a weekly basis, e.g., Knack), and health magazines (focusing on health news or current affairs and recently published scientific studies, e.g., Bodytalk). The first three types of magazines usually contain a separate health section, which is also a proof of the importance of health as a news topic. We analyzed the print versions because in Belgium, digital sales are as good as non-existing in the field of magazines (CIM, 2015).

For the first content analysis, we composed a sample of 19 magazines in all four categories representative of the Belgian market, from March to June 2013, to gain an understanding of their sourcing practices. A follow-up study was conducted in February 2015 in 10 magazines that were also part of the first research wave.¹ We selected all items that were labeled as a health-related issue by the magazine (e.g., in the header of the page), resulting in a total sample of 1047 items in 2013 and 202 items in 2015. Most health items in our sample are substantial coverage (larger than one page (35.0% in 2013, 32.2% in 2015) or between half a page and one page (21.8% in 2013, 29.7% in 2015)). Less than half of the items (43.1% in 2013, 37.1% in 2015) were shorter than half a page including quick health blurbs. Most items are factual news pieces and interviews (over 90% in both samples). In addition, the sample also includes a few graphic articles, opinion pieces, letters to the editor, and Q&A's. To answer RQ1a, sources are defined as secondary sources or source materials that contain relevant information for journalists (Van Leuven & Joye, 2014). They can have a journalistic origin (input from traditional media brands), but they can also be delivered to journalists by actors who attempt to expand their news access. More specifically, we discern between information or editorial subsidies and social media sources. The first category is defined as PR material originating from the pharmaceutical industry, policy actors, the nonprofit sector (by which we imply patient organizations, sickness funds, and professional unions), health institutions, or academic actors. Social media sources are defined as information from ordinary citizens (user-generated content, UGC) received through social network sites.

To answer RQ1b, we define actors as primary sources, or the people or institutions who compete with each other for news access and whose words are cited or paraphrased in the news (Van Leuven & Joye, 2014). We distinguish thirteen different types of actors, in which we can divide into two

large groups. At the one hand, we consider elite actors: (1) general practitioners or doctors; (2) medical specialists (e.g., surgeons); (3) alternative medicine (e.g., homeopathy); (4) paramedics (e.g., nurses, physiotherapists, dieticians); (5) associations of medical professionals; (6) healthcare organizations; (7) the pharmaceutical industry; (8) academics (universities and journals); and (9) policy/government institutions. At the other hand, non-elite actors are as follows: (10) patients as ordinary citizens; (11) patients as celebrities; (12) patient associations and organizations; and (13) close relatives/friends of the patient.

For each item, we checked for each type of source and actor whether it was represented (one item can contain several types of sources and actors). We did not check for their importance (i.e., order of appearance) or their quantity (i.e., number of sources/actors per source category), but solely on their appearance in the news (dichotomous variable for each source/actor category: present or absent). This coding decision is instigated by our purpose to get an overview of sourcing practices on the level of the article instead of the source/actor level. In the results section, we only present results for the news items (425 in 2013, 96 in 2015) containing at least one source material to answer RQ1a and the news items (780 in 2013, 120 in 2015) containing at least one cited or paraphrased actor to answer RQ1b. A coding guide and registration form were developed to ensure uniformity in the selection and analytical choices. Uniformity between the three coders (researchers at the same university) was ensured by an intensive coding training, multiple pretests of the coding guide and registration form, and an intercoder reliability test.² Furthermore, coding decisions were discussed with each other whenever necessary.

The content analysis allowed to record the published version of the articles without access to the metadata of the texts; therefore, we can only get insight into explicit references to sourcing practices. For that reason, we contacted all health journalists that provided health items in our sample and conducted 16 in-depth interviewing sessions with 13 journalists (freelancers (4) as well as journalists under wage labor (9) and three of their editors-in-chief (see Table 1). These data will provide valuable extra information on their sourcing practices and attitudes toward certain actors and sources. We presented our respondents a sample of the news stories

Table 1. Overview of respondents in the interview sample (N = 16).

Type of magazine	Number of journalists	Number of editors-in-chief
Popular weeklies	2	1
Women's magazines	7	1
General interest magazines	3	1
Health magazines	1	/

¹The 2013 sample entails 19 different magazines, divided in four groups: women's magazines (Goed Gevoel, Goed Gevoel Plus, Think Pink Magazine, Vitaya Magazine, Libelle, Flair, GDL Magazine, Nina and their supplements), popular weeklies (Dag Allemaal, Humo, Story, P Magazine and Joepie), general interest magazines (De Standaard Magazine, ds Weekblad, DM Magazine and Knack), and health magazines (Oxytime and Plus Magazine). In the 2015 sample, 10 titles were selected: popular weeklies (Dag Allemaal, P Magazine and Humo), women's magazines (Flair, Libelle and Vitaya Magazine), general interest magazines (Knack and Eos), and health magazines (Plus Magazine and Bodytalk).

²A critically composed sample of 20% of the items was tested for intercoder reliability with an outcome of Krippendorff's alpha and Cohen's kappa values ranging from 0.80 to 1.00. Analysis was carried out using PASW Statistics 22.

they wrote and asked them to reconstruct the writing and sourcing processes to retrieve the indirect role of information supplied by PR (Reich, 2010). All interviews were either digitally recorded or transcribed, except for one that was obtained by e-interview in which the interviewee wrote comments and responses directly. Most interviews were conducted face-to-face or by Skype conversation. The interviews were analyzed using the qualitative software program NVivo along the method of thematic coding (Jensen, 2002).

Results

In what follows, we present the results of our multi-method study of sourcing practices in Belgian magazines. In terms of the content analyses, we will focus on the 2013 study and use the 2015 follow-up study mainly to confirm tendencies or mitigate certain findings in the 2013 sample. In addition, for each research question, we first present the findings for the total sample of magazines in the content analysis, followed by a comparison between the four types of magazines (only meaningful differences are addressed) and further contextualization based on the interviews.

Source materials in health news (RQ1a and RQ2)

Our findings confirm the dominant role of information subsidies provided by academic actors (present in 49.1% of the 425 articles in 2013, 45.8% of the 96 articles in 2015). Traditional media brands are not very important in 2013 (6.9%), but this finding is contradicted by the data from 2015 (26.0%). It is remarkable that PR originated from non-profit organizations (14.6% in 2013, 10.9% in 2015) and social media (14.1% in 2013, yet only 8.3% in 2015) are the second

and third most mentioned sources, indicating that non-elite actors are important information providers in health-related news. In contrast, PR from policy actors (9.8% in 2013, 8.3% in 2015), PR from the health industry (3.6% in 2013, 3.2% in 2015), and PR from the pharmaceutical industry (1.9%, in 2013, 0.4% in 2015) are less popular sources suggesting that journalists are indeed more critical toward PR content originating from powerful organizations (Len-Rios et al., 2009).

Figure 1 shows for the 2013 sample that the sourcing practices of popular weeklies differ quite a bit from the other magazines in our sample. They rely most upon traditional media brands (41.5% of the items). A possible reason is that popular magazines build further on news updates published in other media brands. Women's magazines, general interest magazines, and health magazines rely less prominently on traditional media brands as a source of information (9.1%, 18.2%, and 13.3%, respectively). Another striking difference relates to the use of UGC. While we see that popular weeklies have embraced social media UGC as a source (36.8%), health magazines never make use of tweets, Facebook posts or blogs to source their editorial content, and general interest magazines (9.0%) and women's magazines (6.1%) only sometimes search for information on social media. An explanation for this affinity toward social media can be found in the focus on ordinary citizens in popular magazines. This is contrasted with the higher use of PR by academic actors in the specialized magazines. We will come back to this point later.

The interviews help to gain a better understanding of these sourcing practices. In contrast with the findings of the content analysis, all journalists refer to traditional media brands as their most important sources. It turns out that (international) media brands often offer the spark of an idea journalists,

Figure 1. Sources used in health news in 2013 (% of articles, N = 425), per magazine category.

apply to the Belgian context and readership (rather than that articles are copy pasted), and are therefore not mentioned as a source. Health magazines and general interest magazines mainly refer to the BBC and quality newspapers as important media sources due to their strong reputation of credible and authoritative news outlets. Popular weeklies and women's magazines for their part are more interested in what international magazines as Time Magazine, Top Santé, Gezond Nu, Margriet, or Natural Health are writing about.

The interviews confirm that information stemming from academic actors is considered authoritative and therefore listed as the number one source of information in specialized magazines. Established publication outlets such as The Lancet, The British Medical Journal, and The New England Journal of Medicine and universities such as John Hopkins and Harvard are described as lead sources. Yet the journalists explain that they often use general terms to address these sources as so-called scientific studies instead of naming the institution. Importantly, they admit that this practice is most used when the trustful nature of the institution is in question. Popular weeklies find academic information less important because they have a more personal than factual and scientific approach to health coverage.

Despite the findings of the content analyses, most journalists mention in the interviews that they prudently tap into social media as well. Health blogs and websites, tweets and Facebook posts originating from patients, people with an interest in a healthy lifestyle, and self-declared health specialists are read on a daily basis. When interesting topics are detected, the information is researched and checked offline by contacting the original authors and additional sources. As such, social media are frequently relied upon as an inspiration for articles, yet their impact as a news source is more limited since more authoritative sources are contacted to check and enrich information stemming from social media.

"Social media are great way to keep track of things. Currently I find a lot of information on Twitter. It shows me which topics are discussed among the ordinary Joes. It gives me inspiration. But if I do pick up something from Twitter, I always check it first with an expert. You never know if it is really true." (journalist II)

Social media are considered as an interesting tool for capturing the public mood on an issue, but—even more important—they are the key to patient testimonies, and personal stories journalists can use in their own news output (Hinnant et al., 2013) and occasionally offer scoops or original perspectives on current health affairs. In contrast, the interviews also confirm that social media are "colonized" by elite actors (Broersma & Graham, 2012) as they are not only used to gather UGC but also to monitor the activities and viewpoints of experts and academics.

Most remarkably, the interviews contradict the findings of the content analysis with respect to the use of PR material as a source. All journalists admit to use PR material as a time-saving measure in a demanding work environment where less journalists produce more output. Importantly, they claim that PR content is never literally copy pasted. A more accepted practice is to utilize it as a starting point to produce original news stories containing a different angle and additional

information or quotes. In addition, journalists describe how companies no longer focus on the mere transmission of press releases, but instead try to nudge journalists more indirectly to write beneficial news articles. On top of subsidized PR content, more time-saving services are offered by PR professionals to make journalists' lives as easy as possible and in return increase news access. PR departments render far-reaching assistance to journalists by helping them to get in touch with experts or patients, clarifying statistics, offering illustrations and graphs, etcetera. By directing journalists toward information stemming from scientific publications and studies from universities or research centers, pharmaceutical companies try to increase the authoritativeness of their PR messages. The existence of such practices suggests that at least a part of the many academic sources or patient stories in the quantitative content, analyses are in fact instigated by pharmaceutical PR efforts.

Patients taking the lead? (RQ1b and RQ2)

Interestingly, the patient as an ordinary citizen is the most prominent actor in the content analyses. In 29.3% of the 780 articles in 2013 and 25.8% of the 120 articles in 2015, patients as ordinary citizens are given a voice, often in the format of a personal testimony. About 15.4% (2013) and 12.5% (2015) of the items present celebrity patients. A comparison between the four types of magazines (see Table 2) reveals that this finding is mainly attributed to popular weeklies as almost half of the items in 2013 (44.0%) contain celebrity patients, which corresponds with the interest in all aspects of celebrity lives in this type of magazines. Some criticize this non-scientific and personalized approach, nonetheless others applaud, for example, the fact that Angelina Jolie's story about breast cancer created more public awareness about the disease and encouraged much more women to get screened. Friends and family of patients also appear in 23.9% (2013) and 30.8% (2015) of

Table 2. Actors in health news in 2013 (% of articles, N = 780). The 2015 data are in line with these results.

	Women's magazines	Popular weeklies	General interest magazines	Health magazines
Patient (ordinary citizen)	50.4%	31.6%	37%	40.7%
Patient (celebrity)	2.2%	44.0%	12%	0.0%
Patient's association	6.6%	4.9%	7.0%	11.9%
Family and friends of patient	26.1%	52.3%	26%	1.7%
General practitioner	12.9%	13.8%	14.0%	8.5%
Specialized practitioner	24.3%	12.6%	18.0%	20.3%
Alternative practitioner	2.2%	1.1%	2.0%	1.7%
Paramedic	23.9%	8.0%	21.0%	6.8%
Occupational association	3.7%	0.6%	6.0%	1.7%
Policy/government	1.8%	4.9%	20.0%	5.1%
Sickness funds	0.4%	0.6%	2.0%	3.4%
Pharmaceutical industry	2.6%	0.6%	3.0%	1.7%
Academics	14.3%	4.6%	50.0%	32.2%
TOTAL	N = 272	N = 348	N = 100	N = 60

the items. The large gap between popular weeklies (52.3%) and health magazines (1.7%) reflects their choice for a human interest versus scientific approach. Patient organizations are also part of this bottom-up field of stakeholders, but their presence as an actor is limited (4.8% in 2013 and 6.7% in 2015) with minimal differences between the four types of magazines.

In terms of top-down elite actors, the content analyses confirm the important role of experts. Medical stakeholders are well represented as general practitioners (9.8% in 2013, 8.3% in 2015), specialized practitioners (13.4% in 2013 and 18.3% in 2015), and paramedics (10.8% in 2013 and 4.2% in 2015). Practitioners of alternative forms of medicine seldom appear (1.3% in 2013 and 0.8% in 2015), even when the topic of the item is alternative medicine, confirming their controversial status in the Belgian health sector. A second group of experts is also well represented: 12.1% (2013) and 11.7% (2015) of the items contain viewpoints of academics, which corresponds with the journalists' preferences for scientific publications as news sources. Contrary to our expectations, other elite actors including sickness funds (0.8% in 2013 and 2015), policy/government institutions (4.3% in 2013, 5.0% in 2015), the pharmaceutical industry (1.3% in 2013, 0.0% in 2015), and associations of medical professionals (1.9% in 2013, 5.0% in 2015) receive little attention.

A comparison between the different types of magazines (see Table 2) reveals three remarkable differences. The first difference focuses on the use of paramedics as actors. While popular weeklies (8.0%) and health magazines (6.8%) do not often let this type of actor take the lead, women's magazines (23.9%) and general interest magazines (21.0%) do the opposite. A second remarkable difference is that general interest magazines much more than the other types of magazines give the floor to government actors who reflect their general focus on political and institutional news. Finally, academics do not often appear in women's magazines (14.3%) and popular weeklies (4.6%), while they are frequently quoted or paraphrased in general interest magazines (50.0%) and health magazines (32.2%).

The interviews largely confirm these findings. Journalists prefer to give a voice to patients and experts. Other stakeholders are not considered as relevant primary partners. This stakeholder preference is reflected in the format of the articles: factual coverage is based on expert information, while personal or human interest stories are based on the experiences of patients and their entourage. All journalists stress that experts in the medical and academic world is the most important actors, even more so than patients. Journalists invest in a personal network of reliable GPs, specialists, dermatologists, dieticians, and academics because of their expertise in health issues and perceived credibility. They prefer "independent" experts affiliated with universities or university hospitals whose contributions are considered most objective and qualitative and who are also seen as "watchdogs" of health information from other organizations (e.g., government, pharmaceutical companies). When informal actors as ordinary citizens or self-declared experts provide information to journalists, the latter tend to do their checks and balances relying on official experts.

"When we consult experts, we try to look for the best qualitative specialist in the field. The higher you aim, the better your information and the quality of it. It makes your article more correct and credible when you look for someone with great credentials." (journalist XI)

Although patients are the most important actors according to the content analysis, the in-depth interviews reveal that this dominance is often so-called window dressing. The journalists describe how their aim is to usually start from expert input, whose information can then be illustrated by means of patient stories related to the respective health conditions, thereby our findings confirm the work of Rowe et al. (2003). Because of the delicate nature of health news, the complexity of the information, and the fact that journalists try to offer practical tips and tricks, patient information is considered only second best, as exemplified by the quote below. If patients are quoted, it is often within the context of an emotional report and human interest frame. Not surprisingly, especially women's magazines and popular weeklies give patients most often a forum and stress the importance of these kinds of stories to connect with their audiences or help audiences understand complex health issues from real-life experiences. In other cases, journalists learn about health issues from patients and are as such inspired to cover the issue, which is then further examined through expert information.

"A civil society actor is a different kind of stakeholder. It's an addition to a story that already has a scientific foundation because we use experts and doctors." (journalist XIII)

Discussion

The aim of this multi-method study was to examine sourcing practices in health-related news in Belgian magazines by means of content analyses and in-depth interviews. Our findings are to a large extent in line with previous (inter)national studies, but they also point toward a few remarkable contradictions and toward differences between types of magazines.

First, the findings of the study indicate that health news in Belgian magazines is predominantly a process of top-down communication and a result of long-established sourcing routines in line with the traditional "hierarchy of credibility" (Hall et al., 1999). Academic sources and actors are the starting point for most articles and are highly visible in the news output as they credit authoritativeness and reliability to the journalistic content, which is in line with previous studies (e.g., Holton et al., 2012; Len-Rios et al., 2009). In addition, national and international media brands play an important intermedia agenda setting role, but this is often not visible in the news output. Importantly, the interviews reveal that PR material, even though this is not observable by means of quantitative content analysis, is an important source for Belgian magazine journalists who face demanding work conditions. The pharmaceutical industry anticipates distrust among journalists by offering "editorial subsidies" such as contacts with experts and patients (Jackson & Moloney, 2016).

Secondly, our study contradicts the findings of many studies of health and other coverage in newspapers (e.g., Holton et al., 2012; Len-Rios et al., 2009) in that ordinary citizens and especially patients are also highly visible in the news output.

Nonetheless, the interviews reveal that this is partly a process of “window dressing” as many journalists in our interview sample were not completely persuaded by the informative value of civil society actors. They mainly describe it as a technique to give health journalism a more “human” face, offering a more personal approach to health issues and complementing scientific evidence and facts. By doing so, they succeed at holding up a mirror for readers, who can identify with the health stories (Rowe et al., 2003). These findings also relate to international studies (Bubela & Caulfield, 2004) that classify personalization and identification as news values that make news more relevant and interesting for the readership. In other cases, patients do set the agenda by bringing stories under the attention of journalists. The research indicates that social media add a new dimension to this relationship as they are a useful tool for journalists to find patient testimonies (Hinnant et al., 2013). In contrast, the interviews reveal that social media in many cases are also used by journalists to extend offline top-down sourcing practices and monitor elite sources (Broersma & Graham, 2012).

The content analyses also point out important differences between magazines. In essence, the findings reveal a gap between on the one hand women’s magazines and popular weeklies and on the other hand general interest magazines and health magazines. The main difference lies in the approach to communicate health news, which is more human interest oriented in the first and more scientifically oriented in the latter. This can, furthermore, be linked to what Coleman, Thorson, and Wilkins (2011) and Holton et al. (2012) call at the one hand episodic framing and at the other thematic framing. While general interest magazines and health magazines focus, for example, on innovative research, research breakthroughs, development of remedies, or healthcare policy and tend toward a thematic approach (e.g., number crunching and more factual coverage), they linger more toward academic sources as journals, research reports, and expert actors and consider citizen sources only second best to illustrate factual health news. This focus on expert sources, however, might cause journalists to lose track of citizens’ opinions, complicate health issues for readers or even evoke fear among readers. In contrast, women’s magazines and popular weeklies are much more the “human face” of the Belgian magazine market and are relying much more on patient stories and social media sources to cover health-related issues, thus lingering more toward an episodic approach of health. They consider it as a means to translate complex expert information and to connect with their audience. Nonetheless, those personal stories are just a fraction of the reality and a very personal interpretation or experience of a certain health issue, maybe misleading readers, dramatizing reality, offering personal behavior changes instead of looking at the impact of society, or creating a too optimistic view on the reader’s own situation. In other words, the magazines reflect opposite perspectives on the value of sourcing citizens in the news as a means to advance the understanding of health information that are also present in academic research (cf. Gans, 2011; McNair, 2009). Considering the fact that health news is an important source for citizens to manage their own health

(Dunwoody, 2008; Picard & Yeo, 2011), it would be interesting for further studies to adopt an audience perspective, examine how readers process different approaches to health journalism (which sources are valued most in terms of understandability, credibility etc.), and monitor elements of health literacy and media literacy.

To conclude, we are aware that Belgian magazine media represent a specific niche. Nonetheless, the findings are to a large extent consistent with the findings of similar studies in different countries (e.g., Jackson & Moloney, 2016; Len-Rios et al., 2009) and fill an important gap in studying health journalism. For future research, our study demonstrates that “the” magazine market does not exist but is instead very diverse, which needs to be taken into account when developing research designs to examine health communication.

ORCID

Rebeca De Dobbelaer <http://orcid.org/0000-0001-6349-216X>

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