The fast and the furious:
Living with ADHD.
Who tells the story?

A multi-methodological research on how journalists source and frame news about health and illness

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Voor Christ'l en Johny

*"Beyond the very extreme of fatigue and distress, we may find
amounts of ease and power we never dreamed ourselves to own;
sources of strength never taxed at all
because we never push through the obstruction "*
-William James

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Introduction

1. Health journalism

1.1 What is health news?

For the delineation of the concept of health, we started from the holistic definition of the World Health Organization (1946): "*Health is a condition of complete physical, mental and social well-being and not only the absence of illness, disease, discomfort or infirmity*". While dating back to the 1940s, this conceptualization of health remains important to this date, is adhered by many other health institutions and is at the basis of multiple studies regarding the conceptualization of health (Huber, van Vliet, Giezenberg, Winkens, Heerkens, Dagnelie, & Knottnerus, 2016; Moriarty, Zak, & Kobau, 2003; Ryan & Frederick, 1997; Sim, 1990; Simmons, 1989; Twaddle, 1974; Westerhof & Keyes, 2010). Although this utopian reflection on health and the rather static representation are often criticized, the definition of the World Health Organization (WHO) emphasizes positive qualities of health. It does not solely stress the absence of disease, but takes mental, physical and social factors into account as well, which was missing from previous conceptualizations and was considered groundbreaking (Huber et al., 2016; Simmons, 1989). In 2011, due to issues of adequacy, a new and more dynamic concept of health was introduced (Huber et al., 2016, p. 1): "*Health is the ability to adapt and to self-manage, in the face of social, physical and emotional challenges*". However, the new definition proved to be incomplete, since different health, lifestyle and illness-related elements are not included. The subjects that are distinguished in general when the literature delimits the concept of health, are: mental illnesses (psychological, mental or emotional disorders and disabilities, specifically depression, burn-out, schizophrenia, ADHD, autism, Tourette,…); conception and contraception (abortion, birth control, genetic cloning, IVF technology,…); regional health policy (disease prevention, inoculations,…); diseases, epidemics, outbreaks or infections (e.g. meningitis); new medicines, cures or technologies and tests; food safety and quality (bio labels, hormones, contaminated food,…); well-being and care services (nursing home care, facilities for the disabled, medical insurance,…); health insurance; and euthanasia (Briggs & Hallin, 2016; Cassels, 2005; Conrad, 2007; Gallagher & Updegraff, 2012; Turow, 2010). Considering applying a broad definition and including all possible health-related topics, news media add aspects of lifestyle to the definition. The health condition of an individual is strongly related to one's style of living. Sports, a healthy lifestyle and balanced food can make sure we feel better and can even prevent mental or physical discomforts. Therefore, lifestyle is not a synonym of health, but it is considered an important influencing factor (Briggs & Hallin, 2016; Conrad, 2007; Kim & Willis, 2007). Furthermore media often link celebrity-related issues to health subjects (O'Neill, 2012; Turow, 2010). In this dissertation, we apply this broad definition of health to be able to fully grasp its complexities.

1.2 The importance of accountable health journalism

The news media play a key role for information about health-related issues. Many authors confirm that the mainstream news media are the primary source of information about health news (Dorfman, 2003; O'Hara & Smith, 2007; Park & Reber, 2010; Wallington, Blake, Taylor-Clark, & Viswanath, 2010). News media transmit useful medical information about treatments and diagnostic matters (Cho, 2006; Seale,

2002), discuss new scientific research (Dunwoody, 2008), translate complex health information (Seale, 2002; Turow, 2010) and increase public awareness (Park & Reber, 2010). By doing so, news media possibly affect the audience's knowledge about health but also influence lifestyle changes and redirect prejudices about certain health problems (Briggs & Hallin, 2016; Finlay & Faulkner, 2005; Hodgetts, Chamberlain, Scammell, Karapu, & Waimarie Nikora, 2007; Viswanath, Blake, Meissner, Gottlieb Saiontz, Mull, Freeman, Hesse, & Croyle, 2008). Furthermore, by framing health issues and by using certain news sources, news media shape the public's social reality and its perspective on health issues (Camporesi, Vaccarella, & Davis, 2017; Hodgetts & Chamberlain, 2006; Nelkin, 1987; Wallington et al., 2010). Traditional news media regularly cover health-related issues due to their relevance, reflect on the personal wellbeing of the people and subsequently influence the national health policies and regulations of the pharmaceutical industry (Albaek, 2011; Allgaier, Dunwoody, Brossard, Lo, & Peters, 2013; Dunwoody, 2008; Fahy & Nisbet, 2011; Finlay & Faulkner, 2005; Secko, Amend, & Friday, 2013). Since the public lacks direct experience with several health issues and often does not have sufficient medical knowledge, many people consult the news media to gather information about health issues that matter to them (Dunwoody, 2008; Fahy & Nisbet, 2011; Picard & Yeo, 2011). Research of Holtzman, Bernhardt, Mountcastle-Shah, Roders, Tambor and Geller (2005) illustrates that 85% of the American population consults mainly newspapers and television broadcasts when searching for health-related information, while others point into the direction of magazines and online news media as sources, leaving those media with large responsibilities to fill (Andsager & Powers, 2001; Viswanath et al., 2008). Consequently, Hinnant, Len-Rios and Oh (2012) found that U.S. journalists find it important to provide not only credible but also accessible health information to enhance audience comprehension. Hinnant et al. (2012, p.241) reflect on accessibility and credibility of health news from the advocacy role perception of journalists: "*it seems that when journalists take on a strong advocate role, and when they find audience comprehension to be very important, they use both accessibility-oriented and credibility-focused strategies – throwing all their resources into communicating as effectively as possible to increase audience understanding*".

Because the public has a high degree of trust in the media when searching for health information, journalists have to monitor the quality and quantity of health news content (Picard & Yeo, 2011). The Kaiser Family Foundation (2009) and the Pew Research Center (2011) examined a broad range of American 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 newspaper articles focused on medicine and health-related topics. Journalistic decisions about what becomes health news and what not, are influenced by different routines. We will connect the findings of general research on journalistic news selection and production to the field of health journalism in order to demonstrate the complex ways health news is produced by looking at the journalistic sourcing and framing practices in this dissertation.

1.3 Health journalism under pressure?

Critics argue that health journalism is not all sunshine and roses and journalists tend to simplify health news and often report in an inaccurate way (Caulfield, 2004; Einsiedel, 2008; Haller, 2010; Hijmans, Pleijter, & Wester, 2003; Hiltgartner, 1990; Husemann & Fisher, 2015; Lazaroiu, 2015; Lengauer, Esser, & Berganza, 2012). First, journalists center certain disorders and illnesses (e.g. breast and lung cancer,

depression) more regularly in their coverage, while others do not receive that much media attention (Bubela, Nisbet, Morchelt, Burnger, Critchley, Einsiedel, Geller et al., 2009; Bubela & Caulfield, 2004; Clarke, 2011; Dentzer, 2009; Timmer, 2007). Furthermore, they also linger towards 'soft' health news, such as fitness, lifestyle and healthy food (Bubela et al., 2009; Clarke, 2011; Dentzer, 2009; Gunnarsson & Elam, 2012; Holton, Weberling, Clarke, & Smith, 2012). This kind of coverage often results in a too intensive focus on personal testimonies and human interest stories, that are regularly depicted as generalizable experiences applicable to every person coping with the same health problem (Dentzer, 2009; Frank, 2013; Russell, 2006). This implies the need for contextualization and the inclusion of the broader political and socioeconomic environment of health issues. Second, journalists cover scientific developments by omitting complex information and nuanced details (Einsiedel, 2008; Hijmans et al., 2003; Larsson, Oxman, Carling, & Herrin, 2003; Logan, 2001; Saari, Gibson, & Osler, 1998; Weigold, 2001). Yet, journalists often lack expertise to fully comprehend the technical and complex nature of health issues and are consequently quite dependent on their sources (Boyce, 2006; Camporesi et al., 2017; Clarke, 2011; Furlan, 2016; Holton et al., 2012; Kline, 2006; Peters, 2008; Russell, 2006). Furthermore, this critique is deepened since the news industry is less investing in journalistic expertise on specific topics and more in generalists. Research of Bubela and Caulfield (2004) illustrates that 20% of the health-related news items in newspapers are written by health journalists with a specialized education in medicine, science and life sciences. The Belgian journalist survey, however, is even more pessimistic, arguing that less than 10% of all journalists have medical expertise or possess health-related degrees (Raeymaeckers et al., 2013). This often leads to what Secko et al. (2013) label as the diffusionist conception/deficit model, which implies scientists and experts demand more specialized health journalists in order to avoid simplified and inaccurate health coverage (Bucchi, 2008; Husemann & Fisher, 2015; Lazaroiu, 2015; Robinson, Coutinho, Bryden, & McKee, 2013). Third, Caulfield (2004) adds to the discussion that journalists do not have sufficient attention for health risks when covering health-related issues. Health coverage is often inadequate and incomplete when risks and financial costs are discussed (Boyce, 2007; Cassels, 2005; Levi, 2001; Shuchman, 2002; Wilson, Smith, Peel, Robertson, & Kypros, 2016). A study of Nelkin (1987) proves that only 15% of all health issues covers risks of treatment or medical innovation and mention the financial costs for the patient coping with the health problem (Boyce, 2007; Goldacre, 2013; Nelkin, 1987; Ransohoff & Ransohoff, 2001). Another line of critique refers to the utopian character of health news. Advantages and medical progress are often responsible for media hypes and false optimism, and create certain expectations (Bubela & Caulfield, 2004; McGrath & Kapadia, 2009; Moynihan et al., 2000; Shuchman, 2002; Wilson et al., 2016). According to research of King and Watson (2005) and Briggs and Hallin (2016), almost one third of health news on television and more than one tenth of the health issues in newspapers discusses breakthroughs. By focusing on breakthroughs and innovation, health journalists often seem to sell science and react like cheerleaders (Caulfield, 2004; Conrad, 2001; Seale, 2002). Critical voices have doubts on the journalistic fascination for new treatments and drugs in health journalism and point into the direction of economic actors who tend to primarily stress innovation and commercial advantages in order to promote their company and to stress the novelty of their products (Bubela & Caulfield, 2004; Clarke, 2011; Goldacre, 2013; Hinnant, Jenkins, & Subramanian, 2015; Holton et al., 2012; Robinson et al., 2013; Shuchman, 2002).

2. AD(H)D

2.1 Definition and geographical spread of the disorder

AD(H)D, which is short for attention deficit (hyperactivity) disorder, is a behavioral disorder, classified under the label of mental illnesses, that is characterized by symptoms of impulsivity, inattention and hyperactivity that have an impact on performances and behavior at home, school and/or work. The effects of ADD/ADHD have an impact on an individual during his childhood but can persist during the adult life as well, often resulting in negative outcomes if not treated appropriately (Faraone, Sergeant, Gillberg, & Biederman, 2003). Over the years, the diagnostic characteristics and symptoms for the disorder have evolved as research has improved our understanding of the disorder. These developments were mapped in the publications of the American Psychiatric Association (APA), in the updates of several versions of the Diagnostic and Statistical Manual of Mental Disorders (DSM) and in reports by the World Health Organization (Conrad, 2001; Faraone, et al., 2003; Schwarz & Cohen, 2013). The roots of ADD/ADHD are situated in the 1950s, yet, the disorder was still named 'minimal brain dysfunction' or 'hyperactivity' with vividness, loss of concentration, impulsivity, inattention and hyperactivity as the main characteristics. Only children were considered to suffer from the disorder since symptoms were said to diminish at an older age (Conrad & Potter, 2000; Rafalovich, 2004). During the 1970s, the first steps towards the development of specific medication and treatment were made, highlighting the psychiatric and biogenetic nature of the health problem, renaming it Attention Deficit (Hyperactivity) Disorder (Conrad & Potter, 2000; Coveney, Nerlich, & Martin, 2009; Efron, Davies, & Sciberras, 2013; Hawkins & Linvill, 2010; Rafalovich, 2004). By recognizing the disorder as a problem for both children and teens, and adults, the pharmaceutical industry saw the opportunity to develop lifelong medical treatments, for example, Ritalin and Adderall (Amaral, 2007; Coveney et al., 2009; Zametkin & Ernst, 1999). Due to the DSM-IV and DSM-V, the highest prevalence rates are being noted, illustrating the increase of the disorder, especially with children and teens (ADHD Institute, 2017; Amaral, 2007; Faraone et al., 2003). At the same time, professional and scientific literature dedicated more attention towards the topic, which resulted in upcoming media coverage as well (Hawkins & Linvill, 2010; Kim & Willis, 2007; Klasen, 2000).

Over the past three decades, ADD/ADHD changed from a rather scarcely diagnosed issue, affecting solely 1% of all American children, to one of the most diagnosed behavioral disorders. According to Schwarz and Cohen (2013), nearly one in five high school boys in the United States and eleven percent of all school-age children have received the medical diagnosis of ADD/ADHD. Others concur, stating that between ten and twelve percent of schoolchildren were considered ADD/ADHD patients (ADHD Institute, 2017; Conrad & Potter, 2000; Klasen, 2000; Rafalovich, 2004; Schmitz, Filippone, & Edelman, 2003), especially in the Deep South of the United States (e.g. Alabama, Kentucky, Louisiana, Mississippi, Tennessee, West-Virginia) where the number of diagnosed children increased to 15 percent (Vissers, Danielson, Bitsko, Holbrook, Kogan, Ghandour, Perou, & Blumberg, 2014). These rates illustrate a rise over the last decade and could fuel the growing concern among many doctors that the diagnosis and its medication are overused (Coveney, et al., 2009; Harwood, 2006; Schwarz & Cohen, 2013; Whitely, 2012). The predominance of American research suggests that ADD/ADHD is largely an American issue, however, we note that international studies suggest a worldwide increase of the disorder and especially in Western Europe (Faraone et al., 2003; Prosser, 2008). In Europe, generally five to eight percent of

the school-age children and teens are diagnosed with ADD/ADHD and are taking medication (Madsen, Ersboll, Olsen, Parner, & Obel, 2015). Several authors (Conrad, 2001, 2007; Ellis, 2015; Haller, 2010; Klasen, 2000; Lakoff, 2000; Sieff, 2003; Wahl, 2000) confirm that, in the mid-nineties, ADD/ADHD was the most commonly diagnosed mental disorder among children in the United States and Europe. In the early 2000s, the diagnosis became widely accepted and ADD/ADHD characteristics in the fourth and fifth edition of the Diagnositic Statistical Manual of Mental Disorders became much more inclusive (Beel, 2016; Klasen, 2000; Prosser, 2008), turning it into a controversial topic to cover in the media (Amaral, 2007; Henson, Chapman, McLeod, Johnson, McGeechan, & Hickie, 2009). Recent numbers of the Belgian government on the sales of Ritalin and other behavior controlling medication indicate that children between the age of six and eleven are taking more Ritalin and Adderall than ever before. Within a time frame of ten years, the registered daily consumption of these pills augmented from 207, 895 in 2005 to 339, 350 in 2015 on a population of ten million people (RLA, 2016). Despite the fact that these meds are prescription medicines, the news media express their concern with regard to the growing consumption (Beel, 2016; Coveney et al., 2009; Schmitz et al., 2003; Whitely, 2012). While some doctors and patient associations have welcomed rising diagnosis rates as evidence that the disorder is being better recognized and accepted, others argue that thousands and even millions of children may be taking medication, without having the specific ADD/ADHD diagnosis. Experts cited several causes that could be at the basis of such an increase in the amount of diagnoses. Some doctors too hastily diagnose complaints of inattention as full-blown ADD/ADHD, while pharmaceutical companies at the same time emphasize how medication can significantly improve a child's daily life. Moreover, some parents and teachers are pressuring doctors and psychologists to help with their children's troublesome behavior and request the diagnosis and medical treatment (Graham, 2010; Norris & Lloyd, 2000; Schwarz & Cohen, 2013).

2.2 Impact and effects of ADD/ADHD coverage

As applied in a wide range of areas, the effect of media coverage has received much attention in the field of health journalism, since the news media are seen as one of the most popular, and sometimes even the only, source of information about mental illnesses like ADD/ADHD (Andsager & Powers, 1999, 2001; Cho, 2006; Dorfman, 2003; Freimuth, Stein & Kean, 1989; O'Hara & Smith, 2007; Park & Reber, 2010; Viswanath et al., 2008; Wallington et al., 2010). Therefore, the way ADD/ADHD issues are covered can affect how people understand the disorder and the possible solutions but can also impact the way they adjust their behavior (Holland, 2017a; Secko et al., 2013; Shih, Wijaya, & Brossard, 2008; Riddle, 2014). Since media coverage determines how we think and act, and affect the stereotypes and schemes we are familiar with, news can offer interesting information on health issues people do not have a direct experience with as for instance mental illnesses like ADD/ADHD (Foster, 2006; Holland, 2017a; Henson et al., 2009; Secko et al., 2013). Health journalists then can increase awareness about ADD/ADHD, discuss advantages and risks about treatment and promote behavioral and lifestyle changes (Andsager & Powers, 1999; Boyce, 2007; Cho, 2006; Henson et al., 2009; Ransohoff & Ransohoff, 2001; Park & Reber, 2010; Shuchman, 2002). Especially in the field of health journalism, media largely have two main effects: improving and stimulating health literacy as a desired effect, but unconsciously also causing stereotypes, stigma and distorted views by framing mental health in a particular way (Barry, Jarlenski, Grob, Schlesinger, & Gollust, 2011; Ellis, 2015; Foster, 2006; Haller, 2010; Hinnant et al., 2012). We will

shortly discuss the last one of these outcomes in light of the ADD/ADHD case, since it sheds light on the societal relevance of this dissertation.

2.2.1. Stigmatization and negative stereotypes

The framing of health coverage can affect the publics' views, opinions and attitudes about mental health problems, patients suffering from a mental disorder and the most appropriate strategies for addressing the problem (Barry et al., 2011). The news media have a prominent role in cultivating perceptions, (negative) stereotypes and stigma (Ellis, 2015; Haller, 2010; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003; Wahl, Wood, & Richards, 2002; Wahl, 2004). Furthermore, media frames can evoke moral judgments about (mental) health issues (Barry et al., 2011; Briggs & Hallin, 2016; Foster, 2006; Read, Haslam, Sayce, & Davies, 2006). Portrayals of mental health issues like ADD/ADHD in the news media are rather warp and weft, depicting the mentally ill in a biased and sensationalized manner while focusing on their bizarre behavior and negative personal characteristics (Coverdale, Nairn, & Claasen, 2002; Sieff, 2003). These negative portrayals might contribute to stereotyping and creating stigma, but might also lead to misperceptions and myths associated with those coping with mental disorders like ADD/ADHD (Briggs & Hallin, 2016; Ellis, 2015; Foster, 2006; Klin & Lemish, 2008; Sieff, 2003).

According to Henson et al. (2009) both television and print media contribute to and reinforce negative stereotypes about mental health issues. Some scholars go even as far as to designate this as a form of an institutionalized stigma (Henson et al., 2009; Wahl et al., 2002). Especially when attributing individual blame and responsibility, applying a negative tone and terminology and referring to lifestyle or behavioral causes (and solutions), the news media negatively cover these health issues. This leads to stigmatization and stereotyping of mental health patients but can even increase negative health consequences (Dyer, 1993, Klin & Lemish, 2008; Ray & Hinnant, 2009; Read et al., 2006), since those suffering from a mental disorder fear negative stereotypes and stigma and therefore are afraid to seek (medical) help and assistance or are even scared of being diagnosed (Arboleda-Florez, 2002; Briggs & Hallin, 2016; Dyer, 1993; Jorm, 2000; Klin & Lemish, 2008; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999) .

Stereotypes act like self-perpetuating expectations and simplifications about mental health issues like ADD/ADHD, since attention is directed by the media to information that is in accordance with the existing stereotypes (Ellis, 2015; Foster, 2006; Haller, 2010; Klin & Lemish, 2008; Kline, 2006). Stereotypes encourage depersonalization, since they tar everyone with the same brush and ignore diversity and complexity due to a tendency towards simplification (Billig, 2002; Henson et al., 2009; Husemann & Fisher, 2015; Lasorsa, 2008). When scrutinizing the coverage of ADD/ADHD, scholars notice that, while efforts are being made towards a more neutral and alternative framing of the disorder, coverage remains quite negative and themes like danger and violence still remain the most common themes, which leaves its mark on social interactions and self-perception of those coping with the disorder (Coverdale et al., 2002; Kline, 2006; Henson et al., 2009; Wahl et al., 2002). Negative characteristics of patients as being anti-social, impulsive, dangerous to themselves and others, violent edgy, anxious, abusing medical treatment and connections to institutionalization are omnipresent and sometimes even exaggerated (Allen & Nairn, 1997; Auslander & Gold, 1999; Coverdale et al., 2002; Lawson & Fouts, 2004; Read et al., 2006; Sieff, 2003; Wahl, 1995, 2000; Wilson, Nairn, Coverdale, & Panapa, 2000). The terminology and frames stressing dangerousness and the practice of 'othering'

people with mental illness, complemented by the misuse of psychiatric terms and labels, adds to the dissemination of stigma and dehumanization of the patient but also increases fear for those who are considered different, reducing them to their disorder (Angermeyer & Schulze, 2001; Briggs & Hallin, 2016; Jorm, 2000; Klin & Lemish, 2008; Ray & Hinnant, 2009; Wahl, 2003a). Therefore, negatively framing (mental) health issues can contribute to misperceptions and myths about patients and can cause negative attitudes (Auslander & Gold, 1999; Briggs & Hallin, 2016; Foster, 2006; Kline, 2006; Sieff, 2003; Wahl et al., 2002). Yet, we must understand that positive coverage occurs as well and attempts to reduce stereotypes and stigma in order to create open minds and attitude changes (Klin & Lemish, 2008; Lasorsa, 2008; Sieff, 2003).

3. Scientific relevance

This dissertation stands on two pillars and mainly wants to contribute theoretically to the field of health journalism by focusing on sourcing practices and framing of (mental) health issues. We want to contribute to the rather scarce body of knowledge about sourcing practices and actor preferences of journalists working at different news media types in general, and health journalists in particular, by offering insight in the sourcing practices of newspaper and television journalists, but also by dedicating attention to less researched media outlets, such as radio, magazines and online news. Furthermore, we also aim at bridging the gap between research on sourcing practices and health journalism, a field that receives less attention in journalism studies, and unveiling the peculiar relationships between health journalists and their sources. These aspects will be addressed in the first three empirical chapters of this dissertation. Second, we aim to improve the understanding of the sourcing decisions made by journalists when covering mental health problems and the framing routines that go hand in hand with it, especially in respect of the ADD/ADHD case. The last two empirical chapters will look into these specific cases.

We consider both of these pillars as the common thread throughout this dissertation and they are reflected in the three research questions we put forward. The sourcing routines of professional journalists are widely studied in different news features. It turns out that those studies come to the same conclusions over the years, stating that news access is in general firmly dictated by two factors: the distribution of power and resources in society (Gans, 2011; Raeymaeckers, Deprez, De Vuyst, & De Dobbelaer, 2015; Shoemaker & Vos, 2009; Wolfsfeld, 2011). Several studies demonstrated that those traditional elite-oriented practices have become ingrained over decades and are routines that allow journalists to deal with the pressure of deadlines and resource limitations while at the same time still ensuring source and information credibility and objectivity (Gans, 1979; Shoemaker & Vos, 2009; Sigal, 1999). Yet, commercialization, digitalization, convergence, higher work pressure, financial cutbacks and cost-efficiency measures have thrown a spanner in the works and transformed news production and news access, especially for specific features such as health journalism (Broersma & Graham, 2012; Dunwoody, 2008; Len-Rios, Hinnant, & Park, 2009a; Secko et al., 2013; Van Leuven, Deprez, & Raeymaeckers, 2015; Vargas & Paulin, 2007). This induces the first research question: (1) *How are health-related news items sourced (cf. use of sources and actors) by journalists in a different range of news media*.

By acting as a source of information, the news media transmit knowledge about mental health problems like ADD/ADHD to the public. The news media do not only transmit information or act like a mouthpiece

voicing societal values, but they also shape mental health coverage in a certain way (Rafalovich, 2004; Wahl et al., 2002). The news media are a major source of public understanding of mental illnesses like ADD/ADHD and have a rather large impact on how this issue is addressed and constructed in the public's beliefs and attitudes towards those people coping with the disorder (Barry et al., 2011; Conrad & Leiter, 2004; Conrad & Potter, 2000; Henson et al., 2009). Since information about mental health is rather limitedly gathered by personal experience, the audience strongly relies on media coverage about mental health. The ways journalists decide to produce and frame mental health issues, such as ADD/ADHD, in the news is therefore of high importance and led to a second and third research question: (2) *How do journalists source (cf. use of sources and actors) news about mental health issues in a different range of news media* and (3) *How are mental health issues, ADD/ADHD in particular, framed by health journalists in the news media*.

Before continuing, we have to state that a few aspects need to be taken into account when reading this dissertation. First, most research treating the organizational context of the newsroom within the tradition of the sociology of journalism, focuses on the relationship between journalists and their sources and the types of actors journalists give a voice in their coverage. Before being able to discuss journalistic sourcing practices more in-depth, we need to distinguish these two key concepts. First, we distinguish 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 (Berkowitz, 2009; De Keyser, 2010; Hunter & Van Wassenhove, 2010; Sigal, 1999; Van Leuven, 2013; Van Leuven & Joye, 2014). They refer to "*people who reporters turn to for their information, often officials and experts connected to society's central institutions*" (Berkowitz, 2009, p.102) and can use different types of sources to reach the media and get journalists' attention (Hunter & Van Wassenhove, 2010). Based on the literature, we differentiate mainstream or elite actors from non-mainstream or non-elite actors (Berkowitz, 2009). Second, sources are defined as secondary sources or material resources containing relevant information for journalists (Van Leuven & Joye, 2014). They can have a journalistic origin and are labelled media sources (e.g. input from traditional media brands or news agencies) (Broersma, 2009; De Keyser, 2010; Phillips, 2011; Van Leuven & Joye, 2014) but they can also be delivered to journalists by actors who attempt to expand their news access (e.g. information subsidies like press releases, press conferences,…) (Broersma, 2009; Davies, 2008; McIntosh White, 2012; Reich, 2011; Van Leuven & Joye, 2014).

Second, our research on health journalism will address both legacy media as well as digital newcomers. News media represent a broad range of health stories for public consumption (cf. 3.2.1.2). Especially magazines, television news and newspapers (online and offline) seem to provide people with valuable health information, however, we notice online health sources are on the rise as well (Bucchi & Mazzolini, 2003; Clark & Illman, 2006; Dunwoody, 2008; Dutta-Bergman, 2004; Elmer, Badenschier, & Wormer, 2008; Hallin, Brandt, & Briggs, 2013; Hilton, Patterson, & Teyhan, 2012; Hodgetts et al., 2007; Picard & Yeo, 2011; Secko et al., 2013). News production, sourcing practices and framing in relation to health stories remain a largely underexplored facet of journalism studies since little is known about which sources deliver health information to the journalists, which sources are (un)explicitly consulted, which actors are quoted and which frames are used to cover (mental) health (Bucchi & Mazzolini, 2003; Dunwoody, 2008; Finlay & Faulkner, 2005; Hodgetts et al., 2007; Metcalfe & Gascoigne, 1995; O'Hara & Smith, 2007; Pettersen, 2005; Picard & Yeo, 2011; Secko et al., 2013). Due to practical constraints, we will narrow our focus on Belgian news media and specifically news media consumed in Flanders.

A third necessary demarcation concerns the role of the public. This dissertation solely addresses the audience as a possible source of information when journalists construct health news. We will not discuss possible effects of health messages or the impact of mental health frames on the audience and public opinion. While audience research is definitely relevant and could be a train of thought for future research, we argued it is especially important to study the quality of health news in order to determine which sources and actors receive access to the news agenda and how certain issues, such as ADD/ADHD, are framed.

4. Structure of the dissertation

This dissertation has eight chapters that are divided into two main parts. The first part contains two chapters that describe the theoretical framework. The dissertation will direct its attention towards two central concepts: (health) journalists' sourcing practices at the one hand and framing of (mental) health on the other hand. In chapter one, we will discuss journalistic sourcing practices in general and how these are compatible with the societal evolutions that characterized the 1980s such as digitalization, globalization, commercialization and convergence. Furthermore, we will look at the specific impact of those transformations on health journalists' sourcing practices in particular, describing the sourcing routines and actor preferences of professional journalists and unveiling which actors are considered more powerful and successful in influencing the media agenda than others. In chapter two, we will look into how journalists portray health issues in general and mental health problems, such as ADD/ADHD, more specifically. We will discuss generic and issue-specific frames of (mental) health and which aspects of health problems they illuminate. The case of ADD/ADHD will receive more specific attention due to the high diagnosis rate and the fact the disorder is highly medicalized (Amaral, 2007; Conrad, 2001, 2007; Conrad & Potter, 2000; Coveney et al., 2009; Schwarz & Cohen, 2013). Since framing the disorder in a particular way might have an impact on how the audience sees patients and how those patients see themselves, we will address this case more in-depth.

Subsequently, the second part of this dissertation presents the empirical inquiry. It starts with chapter three which will bridge the gap between the theoretical framework of this dissertation and the empirical studies. By using our three main research questions as a common thread, this chapters gives an overview of the different empirical studies that were conducted, how these are connected to the literature review and research questions and clarifies the methodological choices we made. Chapters four, five, six and seven formulate answers to different aspects of the central research questions. In chapters four and five we look into the sourcing practices of magazine journalists (cf. 3.2.1.1), since this medium is more dependent on advertisers and provides the main share of health news in Belgium (De Bens & Raeymaeckers, 2013; Dorfman, 2003; Park & Reber, 2010). By applying a multi-method approach, combining two waves of content analyses and qualitative interviews (cf. 3.3.1), we looked into their sourcing practices and actor preferences (chapter four) and the delicate relationship between health journalists and the pharmaceutical industry (chapter five). In chapter six, we tried to paint a general picture of the sourcing practices and actor preferences of health journalists working at a broad range of news media (e.g. newspapers, magazines, television, radio, online news) by conducting a large-scale content analysis of the Belgian news media (cf. 3.2.1.2). Additionally, we discuss sourcing practices and actor preferences of mental health coverage as a case study in order to answer our second research

question. Chapter seven centralizes the third research question and focuses on a qualitative, inductive framing study (cf. 3.4.1) of the case of ADD/ADHD in order to pinpoint health journalists' framing practices. Finally, we will draw some general conclusions and offer limitations, give attention to the contributions we made to the field of health journalism and formulate suggestions for further research.

THEORETICAL INQUIRY

Chapter 1: Sourcing health news

1.1 Introduction to the sociology of journalism and sourcing practices

Journalists have final call in which sources they contact when they report on health issues and which ones they are more likely to avoid, raising the question why some sources are more easily relied upon than others and why some translate their information more successfully towards the press compared to others (Holton et al., 2012; Zoch & Molleda, 2006). Len-Rios et al. (2009a) follow in the footsteps of Gandy (1982) and Gans (1979, 2011) and are convinced that health journalists mainly trust upon elite sources, more specifically experts, like for instance medical specialists, academic researchers, general practitioners, medical doctors or politicians involved with health policy. According to Bell and Figert (2012) journalists also regard pharmaceutical companies as elite sources. Yet, due to cost-cutting measures, digitalization, convergence and globalization, we notice changes in the current news ecology and recognize that those forces also reshape health journalists' routines (Len-Rios et al., 2009a; Maier, 2010). Especially the internet, mobile media and new digital technologies are affecting news gathering and sourcing processes, causing opportunities for empowered and inclusive journalism with a bigger role for ordinary citizens (Coleman, Thorson, & Wilkins, 2011; Deprez & Van Leuven, 2017; Hodgetts et al., 2007; Tiffen, Jones, Rowe, Aalberg et al., 2014). However, while citizens play an important role in political (Beckers, Walgrave, & Van den Bulck, 2016; De Swert, 2013; Reich, 2011, 2015) and foreign news (De Dobbelaer, Paulussen, & Maeseele, 2013; Heinrich, 2011; Van Leuven, Deprez & Raeymaeckers, 2013), the use of citizens as actor or source in health news, is a rather scarcely researched topic. It is, therefore, crucial to examine which sources and actors are represented in the news to understand their influence on health information. To do so, we will give an overview of the literature on the sociology of journalism and apply this to the context of health journalism and sourcing practices more particular.

1.1.1 Levels of influence on the news selection

Since the lack of a broad range of studies on sourcing practices in the field of health journalism, we start from an overview of generally conducted research. A rich body of work has proven that the production and selection of news is determined by several influences at different levels. Shoemaker and Reese (1996) listed five successive levels that are responsible for the news selection and production and determined that not only the individual journalist has to be taken into account, yet, the broader structural and organizational context should be included as well (Gans, 2003; Ransohoff & Ransohoff, 2001; Wallington et al., 2010).

Starting with the first level and the famous tradition of gatekeeping studies, White (1950), Breed (1955) and Galtung and Ruge (1965) focused on the personal interests of individual journalists and the impact of those interests on the news they select, the stories they report and the sources they choose. The first level demonstrates that journalists remain first and foremost people with personal interests and preferences, defined by their education, social background, age, mood, specialization, character etc. (Breed, 1955; Gieber, 1956; McNelly, 1959; McQuail, 1994; Shoemaker, Vos, & Reese, 2008; White, 1950). The second level focuses on the unwritten laws and efficiency-oriented routines (e.g. news

values) within the news organization, affecting news selection and production and accelerating the collection and fine-grained filtering of news (Boczkowski, 2004, 2010; Davies, 2008; Davis, 2000a; Gans, 2003; Knight, 2011; Lewis, Williams, Franklin, Thomas, & Mosdell, 2006; Shoemaker & Reese, 1996, 2014; Tumber, 1999). These routines reveal that news access differs according to the type of news source and the type of interaction the journalist has with the source (Gandy, 1982; Gans, 1979; Sigal, 1999; Tuchman, 1978). Third, beside those personal aspects, the selection and production of news can indirectly be influenced by the media organization (e.g. its structure, ownership, dependency on advertisers). Media organizations are commercial companies with their own policy and structure, which leaves its mark on the selection and production of news. According to Wallington et al. (2010) structural characteristics of the newsroom impact the relationship between journalists and their sources, the actors they give a voice and the perspectives they represent (Bennett, 2003; Fishman, [1980] 1999; Herman & Chomsky, 2012; Shoemaker & Reese, 2014; Sigal, 1999; Singer, 2003; Zelizer, 2004). A large amount of research studying the third level, directs it attention towards the news access of sources, aspects that will be discussed in the next subsection. Fourth, extra-media influences that dominate the media landscape since the 1980s, such as globalization, convergence, privatization, digitalization and concentration force news content to evolve as well (Berkowitz, 2009; Broersma & Graham, 2012; Davis, 2000b; McChesney, 2013; McManus, 2009; Ross, 2003; Schudson, 2005; Shoemaker & Reese, 2014; Van Leuven et al., 2015; Waisbord, 2011). A fifth and last level recognizes the importance of cultural values and ideology on the news selection and production (Shoemaker & Reese, 1996, 2014).

1.1.2 From the journalist's perspective: the gatekeeping paradigm and news values

Since the arrival of the field of journalism studies in the second half of the previous century, the discipline consisted of a wide variety of approaches towards journalism (Wahl-Jorgensen & Hanitzsch, 2009; Zelizer, 2004). From its start, the field was supported by two pillars. A first research tradition dedicated its attention towards news content and the journalistic end product (Entman, 1993; Scheufele, 1999; Sementko & Valkenburg, 2000), while a second approach, also known as the sociology of journalism, tried to reveal the contextual factors responsible for the selection and production of news (Gans, 1979, 2011; Shoemaker & Reese, 1996, 2014; Tuchman, 1973, 1978; White, 1950; Zelizer, 2004).

The first wave of research within the sociology of journalism tradition presumes that the selection and production of news are individual activities that are subject to social-psychological characteristics of news professionals such as gender, personal background, education, religion, political conviction and individual values (Breed, 1955; Gieber, 1964; Linvingston & Bennett, 2003; Shoemaker & Reese, 1996; Wouters, De Swert, & Walgrave, 2009; White, 1950). McQuail (1994, p.213) defines gatekeeping as "*the process by which selections are made in media work, especially decisions whether or not to admit a particular news story to pass through the 'gates' of a news medium into the news channels*". Many years later, Shoemaker, Vos and Reese (2008, p.73) described the process more broadly as "*selecting, writing, editing, positioning, scheduling, repeating and otherwise messaging information*". The most important representative of the research tradition is White (1950), who studied the gatekeeping behavior of Mr. Gates, a male newspaper editor, in the context of journalism studies for the very first time and can be considered the founding father of gatekeeping studies. According to White (1950) news items need to pass different gates before being print or broadcasted. These gates are individual journalists, deciding what is news and what not from the mass of information they receive on a daily basis. The results of White's (1950) study illustrate that subjective criteria, such as personal interests and social background

were at the basis of the news selection. By conducting in-depth interviews with journalists, Breed (1955) examined the social control in the newsroom and stated that the policy of the news medium a journalist works for has a severe impact on the issues he selects. Furthermore, Gieber (1956) added that the social environment of the gatekeeper is equally important. Results of the scholar's study conclude that not only individual characteristics have an impact on what type of news the gatekeeper selects. Organizational factors leave their mark as well (Gieber, 1956; Roberts, 2005). Finally, McNelly (1959) concluded that multiple gatekeepers are at work at the newsroom and perform their own news selection processes at different stages of the news production.

A second group of researchers focused on how gatekeepers implement a set of shared traditional news values into their news selection routines. Those values represent a collective judgement of what and who is considered newsworthy (Chang & Lee, 2010; Galtung & Ruge, 1965; Gans, 1979; Golan, 2008; Golding & Elliot, 1999; Harcup & O'Neill, 2011; Kroon & Schafraad, 2013; Schwarz, 2006; Tumber, 1999; Welbers, Van Atteveldt, Kleinnijenhuis, Ruigrok, & Schaper, 2015). Due to these news values, scholars positioned under this umbrella are convinced that the news selection process follows a standardized pattern besides the individual selection mechanisms of the gatekeeper and supplies rather predictable news output since journalists typically prioritize issues that focus on human interest, conflict, proximity and novelty (Badenschier & Wormer, 2012; Brighton & Foy, 2007; Gans, 1979; Eilders, 2006; Reese, 2001; Schultz, 2007). The key of this approach towards news selection argues that events possess certain characteristics that determine their newsworthiness (Brighton & Foy, 2007; Cooper & Roter, 2000; Czarniawska, 2011; Eilders, 2006; Galtung & Ruge, 1965; Harcup & O'Neill, 2011; Shoemaker & Reese, 1996; Wu, 2000). Just as any type of journalist, health journalists use news values to decide which stories to tell. Gregory and Miller (1998) applied the idea of news values to the context of health journalism, which highlighted the importance of especially consonance, unexpectedness, negativity, personalization, elitism, continuity and frequency. Furthermore, the scholars added conflict and controversy as values to the list (Cooper & Roter, 2000; Hinnant, Oh, Caburnay, & Kreuter, 2011). Additionally, others (Briggs & Hallin, 2016; Galtung & Ruge, 1965; Harcup & O'Neill, 2011; King & Watson, 2005; Welbers et al., 2015) are persuaded that dangerousness, bad news, negativity and issues stimulating fear are especially in health journalism preferable values that make the issue worth covering. Focusing on progress is only desired when there is question of an overly positive medical breakthrough and goes hand in hand with a strive towards sensationalism (Allen & Nairn, 1997; King & Watson, 2005; Lengauer et al., 2012; Marinescu & Silistraru, 2017; Moynihan et al., 2000; Nabi & Prestin, 2016; Saguy & Almeling, 2008; Strömbäck, Karlsson, & Hopmann, 2012; Turow, 2010). Breaking the negative cycle is considered rather difficult. Furthermore, Viswanath et al. (2008) notice that stories are also considered more relevant when health issues are personalized and cause identification through a human interest angle or focus on local aspect of health issues instead of global ones.

1.1.3 Agenda-setting and agenda-building

Research on gatekeeping practices and newsworthiness opened the academic floor for discussion about how journalists are able to set the (media) agenda and which sources and information providers are able to build it (McCombs, 2014; Scheufele, 2000; Scheufele & Tewksbury, 2007; Sheafer, 2007; Weaver, 2007). Agenda-setting theory was developed by McCombs and Shaw (1972) and involves the skill of news media to influence the salience of issues and put them on the public agenda. In other words, by covering issues on a regular basis and putting them consistently on the media agenda, journalists attend

to putting these issues on the public agenda as well, guaranteeing the audience will value these issues. Cohen (1963, p.13) defines it as "*the press is significantly more than a purveyor of information and opinion. It may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about*". Cohen (1963), McCombs, Llamas, Lopez-Escobar, and Rey (1997), Scheufele (1999) and Balmas and Sheafer (2010), distinguished this type of agenda-setting, the so-called first level agenda-setting, from second-level agenda-setting. Agenda-setting research at the second level emphasizes the influence of 'attribute' salience (e.g. how to think about an issue), whereas the first level agenda-setting stress the influence of 'issue' salience (e.g. what to think about), stating that the media "*do not only tell us what to think about, they also tell us how to think about some objects*" (McCombs, 2014, p.71). Furthermore, sources also affect the content of news items when they are contacted by journalists (Broersma & Graham 2012; Franklin 2011; Nielsen & Nordestgaard 2015; O'Neill & O'Connor, 2008; Tiffen et al., 2014). This results in a journalistic environment where sources influence both what and how the audience thinks about certain issues, linking agenda-setting and sourcing practices and combining them into a new concept of agenda-building (Denham, 2010; Kiousis & Wu, 2008; Kroon, 2013; Kroon & Schafraad, 2013; McCombs, 2014; Tanner, 2004). Agenda-building entails that there is a competition between sources and actors in order to put their ideas on the media agenda. Certain sources more easily dominate the news, while others are left in the shadows and experience reaching the media agenda as a more challenging task (Broersma & Graham, 2012; Denham, 2010; Kiousis & Wu, 2008; Tanner, 2004; Weaver, McCombs, & Shaw, 2004; Zoch & Molleda, 2006).

1.1.4 Traditionalist sourcing practices and actor preferences: power to the elite

The lion share of research in the tradition of the sociology of journalism paid attention to the organizational context of news production during the 1970s and 1980s and suggested that the relationship between journalists and their sources constitutes the core of journalistic practices. Yet, the journalist-source bond varies according to the stage in the news production process (Broersma & Graham, 2012; Franklin, 2011; Gans, 2011; Hallahan, 2015; Hänggli & Kriesi, 2012; Manning, 2001; Nielsen & Nordestgaard, 2015; O'Neill & O'Connor, 2008; Reich, 2010). A symbiotic relationship exists between journalists and their sources: sources need journalists to tell a story to their advantage and journalists need sources to shape their news output (Bruno, Miranda, & Vercellesi, 2004; Gasher, Hayes, Hackett, Gutstein, Ross, & Dunn, 2007; Holton et al., 2012; Nielsen & Nordestgaard, 2015; Tanner, Friedman, & Zheng, 2015). Especially the work of several key scholars (Fishman, [1980] 1999; Gandy, 1982; Gans, 1979; Tuchman, 1978) was able to shed light on the journalist-source relationship and encourages increased interest in how journalists decide what is news and which sources construct that news. Tuchman (1978), for example, illustrates the importance of routinized practices in the newsroom in order to provide a consistent daily news output. In order to comply with this constraint, journalist depend on their network of sources, which consists of official or institutional sources, commercial sources, lobby groups, NGOs, ordinary citizens etc. and are divided in elite and non-elite sources (Beckers et al., 2016; Boumans, Vliegenthart, & Boomgaarden, 2014; Cottle, 2003; Gans, 2011; Herman & Chomsky, 2012; Lewis, Wiliams, & Franklin, 2008; Rahmanzadeh & Harrower, 2016; Tuchman, 1973, 1978; Van Hout & Jacobs, 2008). In his book *Deciding What's News,* Gans (1979) lies the foundation for the sociology of sources and developed one of the most dominant models to clarify how journalists are determined by the sources they use and how these sources have an impact on the news content. Gans

(1979) argues that sourcing practices in the newsroom are defined by a combination of efficiency and power considerations. Efficiency can be reached by an optimal spending of means (e.g. people), space (e.g. pages, broadcasting time) and time (e.g. time needed to gather news, contact sources and cover the issue). Journalists are under the constant pressure to perform and produce news output with a deadline in mind. These deadlines combined with the daily need for newsgathering and offering something new to the table, turns journalists into dependent producers of news since they rely heavily on sources for their coverage (Curtin, 1999; Fishman, [1980] 1999; Gans, 1979, 2011; Tuchman, 1997). Power considerations on the other hand are related to the authority journalists assign to a source (Gans, 1979, 2003, 2011). Studies show that especially political authority and economic power decide whether or not journalists use a source (Becker & Vlad, 2009; Gans, 2011; Tumber, 1999; Van Leuven, 2013). According to Gans (1979) the authority and appropriateness of a source are connected to the extent to which the source provides ready-made information, creates media events, foresees geographical and social proximity, and is part of the little black book of trusted sources of the journalist, which leads to a strong and close relationship between journalists and their sources (Albaek, 2011; Allgaier et al., 2013; Avraham, 2002; Gandy, 1982; Gans, 1979; Hodgetts et al., 2007).

Becker (1967) suggests in his research the concepts of source hierarchy and source credibility. The more (political or economic) power a source has, the greater the credibility attributed to it and the bigger the possibility the communicated information will be translated by a journalist into news content (Allan, 2011; Becker, 1967; Curtin, 1999; Davies, 2008; Davis, 2000a, 2000b; Lewis et al., 2008; Wolfsfeld, 2011). Since journalists cope with deadlines and time pressure, they prefer sources that are assumed to be reliable and do not need to pass the extensive process of reliability and believability checks (Diekerhof & Bakker, 2012; Gans, 1979; Herman & Chomsky, 2012). Becker (1967) argues there exists a hierarchy within the credibility of sources, and hereby links his concepts to the theory of Gans (1979). If a certain stakeholder has a powerful position in society, this results inextricably in a higher level of credibility because of the status and hierarchy (e.g. news agencies, governmental sources etc.) (Davies, 2008; Lewis et al., 2006; Wolfsfeld, 2011). Furthermore, source credibility and reliability are perceived as a mixture of expertise, competence and trustworthiness (e.g. expert sources) (Allan, 2011; Boyce, 2006; Forsyth, Morrell, Lipworth, Kerridge, Christopher, Jordens, & Chapman, 2012; Golding & Elliot, 1999; Hall, Critcher, Jefferson, Clarke, & Roberts, 1999; Hinnant et al., 2012; O'Keefe, 2002; Raeymaeckers et al., 2015; Schudson, 2006; Sigal, 1999). Governmental institutions and commercial companies possess the power and means to put pressure on journalists and to surcharge them with information, turning these sources automatically into primary definers with much valued authority and credibility (Hall et al., 1999; Van Leuven et al., 2015; Vargas & Paulin, 2007). In this light, Reich (2011) talks about a 'hierarchy of credibility', while Gandy (1982) introduces the idea of 'information subsidies', which indicates that the more power a source attains, the bigger the chances that it is considered believable, relevant and important. Source information can be considered as a subsidy influencing what journalists write about and how they cover issues. Therefore, Gans (1979) described the delicate relationship between journalists and their sources as a dance, where often sources take the lead. Tiffen et al., (2014), however, describe the aforementioned relationship rather as a snake pit where journalists and sources "*slither all over each other, hissing with hatred but hopelessly knotted together*" (Savage & Tiffen, 2007, p.79). The displayed source dominance can be linked to the idea of social capital, proclaimed by Bourdieu (1993, 2005), which implies that the most powerful and dominant actors in society are perceived as the most relevant, valuable and trustworthy ones. Therefore, news media are seen as an environment where authority can be expressed and social capital can be gained (Benson,

2006; Dimitrova & Strömbäck, 2009; Hellmueller, Vos, & Poepsel, 2012). This indication of power, furthermore, shifts the attention of scholars away from solely institutional elite sources to companies possessing economic power and financial means to develop specialized public relations in order to transmit their information to the press (Burton, 2007; Davies, 2008; Davis, 2000b; Erjavec, 2015; Kiousis, Popescu, & Mitrook, 2007; McNair, 2009; Herman & Chomsky, 2012; Macnamara, 2014; McChesney & Nichols, 2010; Park & Reber, 2010).

Multiple studies on news sourcing illustrate that traditional practices of newsgathering and sourcing are dominant in newsrooms due to a pattern of cumulative inequality (Boyd-Barrett & Rantanen, 1998; Broersma & Graham, 2012; Gans, 1979, 2011; Hodgetts et al., 2007; Van Leuven, 2013; Vargas & Paulin, 2007; Wolfsfeld, 2011). A limited group of elite sources prevails and mainly source the news, leaving journalists with a little black book of steady contacts they can rely on (Gans, 2011; Hodgetts et al., 2007; Tiffen et al., 2014). These source preferences, however, generally focus on efficiency in information processing and result in limited source diversity. Yet, different scholars are convinced the news media do offer room for diversity (Heinrich, 2011; Hodgetts et al., 2007; Matthews, 2013; Rahmanzadeh & Harrower, 2016; Thurman, 2008). Non-elite or non-mainstream sources and alternative actors, such as civil society actors and ordinary citizens less regularly source the news, yet, they are part of the panoply of sources applied by journalists (Beckers et al., 2016; De Swert, 2013; Tiffen et al., 2014; Van Leuven et al., 2015). Since they often possess less financial means and are less visible than elite sources, non-mainstream or non-elite sources and actors have more difficulties drawing journalists' attention. However, these sources can offer a counterbalance to traditional sources and can provide alternative points of view (De Keyser, Raeymaeckers, & Paulussen, 2011; Hodgetts et al., 2007; Lewis et al., 2008; Tiffen et al., 2014).

1.2 The changing media landscape

Contemporary news media are confronted with developments, on the social and industrial level, having repercussions on the different ways news is made. Large scale economic and social changes striking journalism since the Second World War and especially since the 1980s, have left their mark on the news selection and production procedures and the organization of media companies (Beam, Brownlee, Weaver, & Di Cicco, 2009; Deuze, 2002, 2005; Hanitzsch, 2007; Shoemaker, Eichholz, Kim, & Wrigley, 2001; Shoemaker & Reese, 2014; Singer, 2003, 2007; Sissons, 2012). First, globalization and privatization of the news media gave rise to globally operating media conglomerates, initiated media concentration and eventually led to commercialization of the news production (Davies, 2008; Franklin, 2011; McChesney, 2013; McManus, 2009; Raeymaeckers et al., 2015; Sissons, 2012). It is the tendency towards commercialization in particular which changed how news is produced and affected daily newsroom routines (Albaek, 2011; Davies, 2008; Davis, 2000a, 2000b; Herman & Chomsky, 2012; Macnamara, 2014; McChesney, 2013; Murdock & Golding, 2005; Prenger van der Valk, Van Vree, & van der Wal, 2011; Van den Bulck & Tambuyzer, 2013). A second factor impacting the news production, is the process of digitalization. The introduction of new technologies and the arrival of innovation in the newsroom increased the pressure on journalists and raised the speed of news (Broersma & Graham, 2012; Carlson, 2009; Franklin & Carlson, 2011; Heinrich, 2011; Hermida, 2012; Lewis et al., 2008; McIntosh White, 2012; Pavlik, 2013; Van der Haak, Parks, & Castells, 2012). The aim of this subchapter

is to gain insight into these challenges as well as the related consequences for journalistic sourcing practices.

1.2.1 The impact of commercialization and convergence on the news production process and journalistic sourcing practices

The contemporary media landscape is becoming increasingly concentrated with a handful of moguls possessing the majority of media companies and organizations. This process of concentration, partially energized by new technologies and digitalization, created a context with selective ownership, tendencies towards convergence and thus global companies putting their commercial interests and profit maximization first (Bakker, Broertjes, Van Liempt, & Smit, 2011; Compton, 2010; Davis, 2000b; De Vuyst, 2016; Macnamara, 2014, 2016; McChesney, 2013; Van Leuven & Raeymaeckers, 2012; Webster, 2011). Furthermore, the fast growth of the media industry and the heightened competitiveness on the media market force media companies to invest in different platforms and media outlets instead of keeping up with traditional media (Davies, 2008; Davis, 2000b; Deuze, 2007, 2008; De Vuyst, 2016; Franklin, 2011; Herman & Chomsky, 2012; Macnamara, 2016; McChesney & Nichols, 2010; McManus, 2009; Van Leuven, 2013; Webster, 2011). This evolution also boosted commercialization of news production by applying radical cost-cutting measures and efficient practices with a downsized staff, and benefiting the most prevalent economic actors (Davies, 2008; McChesney, 2013; McNair, 2000; Paulussen & Ugille, 2010; Quandt, Löfferholz, Weaver, Hanitzsch, & Altmeppen, 2006; Raeymaeckers et al., 2015; Sambrook, 2010). Digitalization and many technological innovations added further economic pressure on editors, giving birth to new digital and online media formats, yet also established a further fragmentation of the audience and discouraged advertisers to invest (Cottle, 2009; Edström, 2014; Picard, 2006; Raeymaeckers et al., 2015; Sambrook, 2010; Schudson, 2010; Van den Bulck & Tambuyzer, 2013).

Media organizations develop strategies to cope with this convergence process and accompanying changes, yet they still face many challenges (Jenkins & Deuze, 2008; Manning, 2001; Murdock & Golding, 2005; Van den Bulck & Tambuyzer, 2013). For one, budgetary cuts, dwindling resources, raised production pressure, audience drops, severe cutbacks in the journalistic staff (e.g. less technically educated journalists) and lower advertising incomes demand a rationalization of the news production (Kroon, 2013; Lewis et al., 2006, 2008; Picard, 2011; Prenger et al., 2011; Raeymaeckers et al., 2015; Sambrook, 2010; Sissons, 2012; Usher, 2014). This form of market driven journalism (McManus, 2009) goes hand in hand with more efficient routines, such as journalists who need to produce more content on multiple media outlets, multiple times a day with fewer resources and need to act like multi-skilled generalists rather than specialists in their own beat (Aldridge & Evetts, 2003; Broersma & Graham, 2012; Davies, 2008; Davis, 2000a; Keith, 2005; McNair, 2013; Prenger et al., 2011; Reich, 2015, 2016; Schudson, 2010; Singer, 2007; Usher, 2014; Van Leuven et al., 2015).

In this context, active newsgathering seems less likely and too time-consuming and is therefore replaced by deskbound journalism (Boczkowski, 2010; Deuze, 2008; Lewis et al., 2008; McIntosh White, 2012; Prenger et al., 2011). Desk journalism, however, might have a rather negative impact on the quality of the news output and the journalistic autonomy (Davies, 2008; Franklin, 2011; Lewis et al., 2008; Prenger et al., 2011; Van Leuven, 2013). In addition, new technologies facilitate copy-pasting techniques, which

are considered more efficient practices compared to the old newsgathering routines (Davies, 2008; Davis, 2000a; Kroon & Schafraad, 2013; McIntosh White, 2012; Van Hout, 2010; Van Leuven et al., 2015) and which give rise so-called 'cheap stories' (Allern, 2002, p.137) based on public relations input. Due to these circumstances, critics reproach that journalists have abandoned their position as the fourth estate and transformed into information brokers that passively copy the information produced by PR practitioners in order to meet the new production standards (Beam et al., 2009; Manning, 2001; McIntosh White, 2012; McManus, 2009; Shoemaker et al., 2001; Van Hout, 2010; Van Leuven & Joye, 2014). This results in integrating more PR input and ready-made press releases directly into the news output. By doing so, journalism strayed from its original purposes and altered into churnalism (Anderson & Lowrey, 2007; Boczowski, 2004; Broersma & Graham, 2012; Davies, 2008; Davis, 2000a; De Keyser, 2010; Lloyd & Toogood, 2014; Macnamara, 2014; Morrell et al., 2015; Raeymaeckers et al., 2015; Reich, 2011, 2016).

These evolutions have cleared the way for a more market driven version of journalism where content comes second, after economic profits and interests (Macnamara, 2014; McChesney & Nichols, 2010; Picard, 2011; Prenger et al., 2011; Raeymaeckers et al., 2015; Vargas & Paulin, 2007). Unfortunately, profit maximizations also lead to the coverage of more soft topics and sensationalized news since media companies no longer need to sell their content to an audience but to advertisers as well and therefore experience pressure from the latter to cover certain issues and omit others (Cottle, 2000; Davies, 2008; Hauttekeete, 2004; Herman & Chomsky, 2012; Herscovitz, 2004; McChesney Stole, Foster, & Holleman, 2011; McDevitt, 2003; Nabi & Prestin, 2016; Singer, 2003, 2007; Zelizer, 2004).

1.2.2 Digitalization and technology in the newsroom

Globalization and digitalization have laid the foundation of the network society and caused many significant evolutions in journalistic practices and routines that have a resonance up until today (Curran, 2010; Franklin, 2011; Heinrich, 2011; Hermida, 2010; Pavlik, 2013; Singer, 2011; Van Leuven et al., 2015). With the introduction of the internet in the early 1990s and the arrival of social media two decades later, news media transformed into large multimedia corporations, able to exchange digital content besides the traditional one, blurring the lines between media (Bardoel & Deuze, 2001; Beckett & Mansell, 2008; Deuze, 2007; Singer, 2007; Pavlik, 2013; Sandberg & Norman, 2007). Media companies started to explore online possibilities, invested in digital skills and opened up towards the strengths and benefits of social media, evolving in even larger corporations than ever before (De Keyser, 2012; McChesney, 2013; Murdock & Golding, 2005; Raeymaeckers et al., 2015). While some scholars saw the advantages in digitalization, others were less enthusiastic about the implications of social media and the internet on the journalistic routines.

Digitalization guided journalists towards an increasing workload since they no longer need to produce content for one medium, but are expected to be multi-skilled jacks-of-all-trades, publishing content on- and offline for multimedia companies (Cottle, 2003; Deuze, 2007; Robinson, 2011). This demand for flexibility is also shown in the need for editorial and technical skills (Franklin, 2011; Lewis et al., 2008; Quinn, 2007; Robinson, 2011). Subsequently, media companies decided to slim down the staff and ante up the news coverage in order to save money and to be able to compete with peer media (Boczkowski, 2010; Broersma & Graham, 2012; Castells, 2008; Deuze, 2007; Franklin & Carlson, 2011; Lewis et al., 2008; Maier, 2010; McIntosh White, 2012; Quinn, 2007; Van Leuven et al., 2015). Middleberg and Ross

(2002) cite the importance of the internet as a mean through which print journalists finally can beat the speed of television and radio news. The shortened news cycle, creating continuous deadlines, is the principal example of adjustment to new technologies (Boczkowksi, 2004, 2010; Broersma & Graham, 2012; Deuze, 2008; Forde & Johnston, 2013; Sambrook, 2010; Van der Haak et al., 2012). Furthermore, the speed of news challenges the exclusivity of editorial content and facilitates copy-pasting of information, which practically glues journalists to their desks. On the other hand, a large range of new and previously inaccessible information is now at the journalists' fingertips and permits journalists to gather background information, contextualize issues more clearly and even find new story ideas (Beckers et al., 2016; Boczkowski, 2010; Gasher et al., 2007; Maier, 2010; McIntosh White, 2012). Additionally, traditional business models are questioned. Online news media do not yet receive similar revenues compared to traditional media outlets, therefore, a more lucrative business model with the audience and advertisers in mind, needs to be developed (Boczkowski, 2010; Deuze, 2007; McNair, 2000; Picard, 2006; Raeymaeckers et al., 2015).

The internet, social and mobile media, globalization and new interactive technologies have rocked the news gathering practices in the newsroom, and journalistic sourcing practices in particular (Castells, 2008; Heinrich, 2011, 2013; Hermida, Lewis, & Zamith, 2014; Kroon & Schafraad, 2013; Mitchelstein & Boczkowski, 2009). According to optimists with a strong belief in the advantages and capacities of social media, these innovations might open up the newsroom for a more diverse panoply of non-elite sources who previously hit the wall of traditional sourcing practices. Social media in particular might lead towards a more interactive and inclusive form of journalism by empowering non-elite bottom-up sources such as civil society actors and ordinary citizens (Abdenour, 2016; Broersma & Graham, 2012, 2016; Franklin, 2011; Hedman & Djerf-Pierre, 2013; Heinrich, 2011, 2013; Hermida, 2010; Hermida et al., 2014; Pavlik, 2013). The empowering capacities of social media applications (e.g. Facebook, Twitter, Instagram, blogs) may constitute a key element for more balanced news access in the 'network society' (Beckers et al., 2016; Hedman & Djerf-Pierre, 2013; Heinrich, 2011; Rahmanzadeh & Harrower, 2016), where journalists have the opportunity to enlarge their existing networks, give a voice to new actors and sources and facilitate the access to the newsroom. These non-elite, bottom-up sources and actors evolved from a passive audience into a more engaged one, acting as 'produsers' (Bruns, 2003; Heinrich, 2013; Opgenhaffen & Van Belle, 2012; Rahmanzadeh & Harrower, 2016). However, pessimists question the reliability, credibility and objectivity of these new sources (Barthel, Shearer, Goettfried, & Mitchell, 2015; Chadha & Wells, 2016; Wolfsfeld, 2011) and argue that journalists still stick to their traditional sourcing routines. The long-standing traditional practices have proven to be successful in identifying reliable sources in the past, therefore, journalists are not likely to adjust all of their practices head over heels to new technologies (Gans, 2011; Hermida et al., 2014; Maier, 2007; Raeymaeckers et al., 2015; Rahmanzadeh & Harrower, 2016; Wolfsfeld, 2011).

1.3 Health journalists' sourcing practices and actor preferences

The sourcing routines of professional journalists is a topic widely studied in different specialty areas of news reporting. It turns out that the aforementioned national and international studies have come to the same conclusions over the years, stating that news access is in general firmly dictated by two factors: the distribution of power and resources in society (Gans, 2011; Raeymaeckers et al., 2015; Wolfsfeld, 2011). In addition these professional standards are closely intertwined with efficiency considerations

(Gans, 2011; Reich, 2011). Several studies demonstrated that those traditional elite-oriented practices of newsgathering and sourcing remain dominant in newsrooms up until today (Boyd-Barrett & Rantanen, 1998; Briggs & Hallin, 2010; Len-Rios, Hinnant, Sun, Cameron, Frisby, & Young, 2009b; Raeymaeckers, Paulussen, & De Keyser, 2012; Vargas & Paulin, 2007). The literature on health journalism confirms previous research on sourcing practices and states that the tendency of elite dominance is carried forward in health coverage (Albaek, 2011; Allgaier et al., 2013; Deprez & Van Leuven, 2017; Kroon & Schafraad, 2013; Len-Rios et al., 2009a, 2009b; Tanner et al., 2015; Tiffen et al., 2014). Especially health experts such as academic researchers are considered reliable, authoritative sources. Therefore, health journalism is possibly even more elite-oriented in its sourcing practices and actor preferences than any other specialty beat. A common assumption is that complex, highly nuanced and abstract topics like life sciences, medicine and health demand a greater level of expertise, which journalists generally lack due to their educational shortcomings in life sciences (Len-Rios et al., 2009a). Combined with the fact that specialized journalists are increasingly replaced with generalists, it is not a big surprise that journalists, to a large extent, rely on sources who have access to accurate and specialized information (Berkowitz, 1990; Briggs & Hallin, 2010; Dunwoody, 2008; Gans, 1979; Holton, 2013; Peters, 2008; Rowe, Tilbury, & O'Ferrall, 2003). Furthermore, due to the stressing deadlines, journalists prefer sources that do not need to pass intensive processes of checking reliability and believability (Allgaier et al., 2013; Bruno et al., 2004; Diekerhof & Bakker, 2012; Dunwoody, 2008; Herman & Chomsky, 2012; Stryker, 2002; Wallington et al., 2010). As a result, highly credible elite actors are consulted more frequently than less credible non-elite actors such as ordinary citizens, activists, patient associations or volunteer organizations whose information requires more verification (Shapiro, Brin, Bédard-Brûlé, & Mychajlowycz, 2013). Other actors, such as large companies (e.g. the food and pharmaceutical industry) and lobby groups, are perceived as less credible due to their commercial interests. Yet, they are equally successful in gaining news access because they can offer journalists information subsidies (Cottle, 2000; Davis, 2000a, 2000b; Hodgetts et al., 2007; Matthews, 2013; O'Keefe, 2002) or even more far-reaching page-ready editorial subsidies (Jackson & Moloney, 2016; Kroon & Schafraad, 2013; Sweet, 2001). Yet, the current news ecology is characterized by desperate cost-cutting measures, globalization and digitalization, which is especially noticeable in specialty beats like health, and forces journalists change up their routines (Coleman et al., 2011; Hodgetts et al., 2007; Hodgetts, 2012; Neuberger, vom Hofe, & Nuernbergk, 2014; Tiffen, et al., 2014).

1.3.1 The rise of information subsidies in health journalism

As the media landscape becomes more complex in the 1980s, public relations become more important and sophisticated as well, offering even more advantages to journalists and choosing more subtle ways to get on the media agenda and influence news content (Broersma & Graham, 2012; Cottle, 2003; Erjavec, 2015; Grünberg & Pallas, 2013; Kroon & Schafraad, 2013; Lewis et al., 2008; Macnamara, 2016; McChesney, 2013; Rupar, 2015). PR departments stepped up their professionalization and were severely characterized by expansion and the development of crafty spin doctors. This resulted into a journalistic interest in ready-made news and information subsidies (Atkinson, 2005; Boumans et al., 2014; Broersma & Graham, 2012; Davies, 2008; Delorme & Fedler, 2005; Dimitrova & Strömbäck, 2009; Franklin, 2011; Grünberg & Pallas, 2013; Knight, 2011; Lloyd & Toogood, 2014; McNair, 2013; Sambrook, 2010). Step by step, journalism partially adapted to churnalism and to recycling ready-to-use bits of information, usually stemming from news agencies or public relations practitioners (Boumans et al.,

2014; Davies, 2008; Gans, 2011; Grünberg & Pallas, 2013; Kiousis et al., 2007; Lewis et al., 2008; Reich, 2010). Information subsidies can have very different origins. While media sources entail content that is borrowed from other media brands or news agencies and is copy-pasted into the own editorial content, PR input originates from a non-journalistic background, is produced by well-educated PR practitioners and motivated by profit maximization and commercial interests (Davies, 2008; Davis, 2000b; McIntosh White, 2012; McManus, 2009; Merill et al., 2015; Salter, 2005; Sweet, 2001; Van Hout & Jacobs, 2008).

Ample studies have proven advantages of the tendency towards churnalism (Curran, 2010; Delorme & Fedler, 2005; Jones, 2011; Reich, 2011, 2015; Siapera, 2012). Macnamara (2014) offers a few reasons why journalists might be inclined to use PR input into the news coverage. First, journalists have to use press releases due to time constraints, efficiency, the media management and/or editors-in-chief. The ticking clock of deadlines, working for multiple platforms and media outlets, a generalist education and a decrease in sales, lead to more (invisible) PR in the news (Lewis et al., 2006, 2008; Lloyd & Toogood, 2014). These factors turn information subsidies into a routine source (Boumans, et al., 2014; Dimitrova & Strömbäck, 2009; Gandy, 1982; Gans, 2011). Second, journalists generally lack knowledge about certain topics and are unable to rely on their background and education to cover each and every single story. PR practitioners often fill in their knowledge gap, which is for instance the case in health journalism where journalists mainly do not have a background in medicine or life sciences (Albaek, 2011; Allgaier et al., 2013; Furlan, 2016; Gasher et al., 2007; Park & Reber, 2010). Third, when unexpected events occur, PR practitioners often stay in control of the situation and can deliver to the point information to the news media by applying efficient crisis communication (Macnamara, 2014; Viswanath et al., 2008). Furthermore, the use of press releases is advantageous since they subsidize journalists and offer unique information, interesting contacts and private data, offer quotes from witnesses, are written in a journalistic style and are therefore ready to print (Boumans et al., 2014; Fishman, [1980] 1999; Gandy, 1982; Jackson & Moloney, 2016; Kroon, 2013; Lloyd & Toogood, 2014; Macnamara, 2016; Reich, 2010, 2015, 2016; Van Hout & Jacobs, 2008).

A large amount of studies illustrate the importance and growing influence of publicity and public relations on the news content. A study from Bent (1927) illustrated that news in the New York Times already constituted for almost 60% of content supplied by PR practitioners. These data were later confirmed by research of Bixler (1930) and Walker (1934). But it was not until the late 1960s and 1970s that scholars expressed their concerns about information subsidies and PR in particular (Fishman, [1980] 1999; Gandy, 1982; Gans, 1979; Sigal, 1973). Especially Sigal (1973) questioned the impact of PR input, since research results indicated that almost 70% of editorial content was one way or another connected to public relations content such as press releases. Studies on the impact of PR on journalistic content did not stop at the end of the twentieth century. A large wave of research inaugurated the early 21st century. In the past, researchers never completely agreed on the amount of information supplied by PR practitioners incorporated in editorial content, nor about, at the one hand, integral copy-pasting, or at the other hand, partial incorporation of PR input, added with supplementary content by the journalists themselves (Boumans et al., 2014; Burton, 2007; Kroon & Schafraad, 2013; Macnamara, 2014; Scholten & Ruigrok, 2009; Reich, 2010; Van Leuven & Raeymaeckers, 2012). In general, we conclude from past research that the percentages of PR-originated input varies between 40% and 60% (Curtin, 1999; Davies, 2008; De Vuyst, 2016; Knight, 2011; Kroon & Schafraad, 2013; Lewis et al., 2008; Machill, Beiler, & Schmutz, 2006; Macnamara, 2016; Prenger et al., 2011; Raeymaeckers et al., 2015; Reich, 2016; Sallot & Johnson, 2006; Van Leuven & Joye, 2014). Studies prove that verbatim copy-pasting rarely occurs,

however, in the large majority of the news issues, we notice journalists search for additional information and in-depth analysis, contact the organization sending PR input, contextualize the content, paraphrase part of press releases and reflect opinions of the parties involved (Broersma, 2009; Dunwoody, 2008; Erjavec, 2015; Herman & Chomsky, 2012; Kroon & Schafraad, 2013; Macnamara, 2016; McChesney, 2013; Reich, 2010, 2015; Van Leuven & Joye, 2014). By consulting a broad panoply of sources and contacting experts in addition to pre-packaged content, journalists are able to create yet a unique story (Hijmans et al, 2003; Scholten & Ruigrok, 2009). Consequently news seems to be a co-production of fourth and fifth estate according to Reich (2010), where journalists complete and correct information supplied by PR practitioners instead of blindly and routinely copying them (Knight, 2011). Furthermore, it seems that especially in short news items, public relations are the go-to source for journalists. By copying information directly into the shorter (and less relevant) news output, journalists can dedicate their time to investigative journalism (Broersma, 2009; Kiousis et al., 2007; Knight, 2011; Prenger et al., 2011; Van Leuven, 2013). Nevertheless it remains a challenge to determine precisely to which extent ready-made news and PR content are integrated in editorial content, which is often referred to as the smokescreen of anonymity (Reich, 2010). Journalists mainly leave their audience in the dark about the exact amount of information retrieved from press releases and pre-packaged news (Dimitrova & Strömbäck, 2009; Rupar, 2015; Sweet, 2001; Van Hout & Jacobs, 2008). Often, information is more implicitly copy-pasted from press releases or there is no room or time to express which sources eventually served the news content (Cottle, 2003; Reich, 2011; Rupar, 2015; Salter, 2005; Van Leuven & Joye, 2014; Zelizer, 2004). Furthermore, informal contacts between journalists and practitioners also raise the opportunity to facilitate the flow of PR information (Davis, 2000b; Reich, 2010, 2016; Van Hout, 2010). Secondly, many press releases and PR content sneak into the newsroom via news agencies who already check the reliability of the sources (Allgaier et al., 2013; Carlson, 2009; Diekerhof & Bakker, 2012; Franklin & Carlson, 2011; Jackson & Moloney, 2016; Macnamara, 2014; Rupar, 2015). This process of intermedia agenda-setting can be explained by the so-called multi-staged sourcing process or ladder of news sourcing (De Keyser, 2010; Hijmans et al., 2003; Kroon, 2013; Van Leuven et al., 2015). Third, journalists also maintain a discourse of denial, not openly recognizing the use of PR and therefore withdraw from being transparent towards their audience and tend to mask the use of PR material (Broersma, 2009; Reich, 2011; McIntosh White, 2012; Salter, 2005). Therefore, PR input becomes, what McChesney (2013, p.90) calls "*the dirty little secret of journalism".* Due to its commercial interests, nonetheless, PR content is treated with more vigilance by journalists and the credibility and reliability of those commercial sources is carefully looked into. Slight distrust and vigilance lead to a more cautious relationship described as "*a love-hate relationship*" (Tilley & Hollings, 2008, p.1), or as a "*strained bed-fellowship*" (Macnamara, 2016, p.4). Press releases are send out and pseudo-events (e.g. press conferences) are organized with commercial benefits and free advertisement in mind and this should be taken in account (Broersma & Graham, 2012; Dimitrova & Strömbäck, 2009; McManus, 2009; Raeymaeckers et al., 2015; Reich, 2010, 2015; Salter et al., 2005; Siapera, 2012; Tilley & Hollings, 2008).

1.3.1.1 Governmental sources and policy makers

A first relevant player who is able to translate the investments in public relations into a successful participation in the news production, are institutional and government sources (McIntosh White, 2012; Prenger et al., 2011). Health journalists value government sources because of their credibility, authority and medical expertise and label them as primary definers because of their elite status and knowledge on complex health matters such as health policy, reimbursements of medication, health care,

adjustments in regulations concerning hospitalization, medication or the food and pharmaceutical industry, sensitive discussions with sickness funds, health organizations, patient associations etc. (Allgaier et al, 2013; Avraham, 2002; Dunwoody, 2008; Forsyth et al., 2012; Hinnant, Len-Rios, & Young, 2013; Hodgetts et al., 2007; Kruvand, 2009; Lariscy et al., 2009; Len-Rios et al., 2009a; Morrell et al., 2015; Peters et al., 2008; Wallington et al., 2010). Furthermore, the government acts as the prime source of information concerning epidemics and outbreaks and foresees not only the audience but journalists as well in informative campaigns, promoting and raising awareness on health problems and illnesses (e.g. the promotion of preventive checkups of colon cancer, informing about vaccinations, supporting sexual health education) (Ashton & Feasey, 2014; Aylesworth-Spink, 2015; Couldry & Curran, 2002; Schudson, 2011; Viswanath et al., 2008; Wallington et al., 2010). By providing this information to the news media, journalists have relevant and valuable information at their fingertips. Government sources easily outnumber any other type of source and are deeply rooted in health matters. A survey of American health journalists on public information officers (PIOs), communication professionals within governmental agencies and educational research institutions, explained that these sources are highly valued by health journalists because of their broad health knowledge, their reliability, their authority within a specific health domain, their help when journalists need a translation of complex health information, and their availability (Dunwoody, 2008; Furlan, 2016; Lariscy, Avery, Sweetser, & Howes, 2009; Macnamara, 2014; McIntosh White, 2012; Peters, Brossard, de Cheveigné, Dunwoody, Kallfass, Miller, & Tsuchida, 2008; Waisbord, 2011).

Yet, health journalists are also aware of the interests that are at stake since the government also disseminates certain health information out of personal benefits (Barry et al., 2011; Briggs & Hallin, 2016; Clarke & Everest, 2006; Clarke, Shim, Mamo, Fosket, & Fishman, 2003; Kim & Willis, 2007). Since governments make policies, adjust regulations and try to implement new promotional campaigns, they only carefully spread the information they want to support their own viewpoints and to prevent controversies (Tiffen et al., 2014). In order to consolidate their dominant position as credible and reliable elite sources and their patronizing access to journalists, institutional sources already early learned the tricks of the trade, increasingly adopted PR strategies and invested in well-established PR departments (Broersma & Graham, 2012; Couldry & Curran, 2002; Davis, 2000b; Herman & Chomsky, 2012; Hodgetts et al., 2007; Macnamara, 2014, 2016; Van Leuven & Raeymaeckers, 2012). These investments have paid off and made government sources evolve into proactive sources who are able to send crafty stories and press releases about health issues (Davies, 2008; Deprez & Van Leuven, 2017; Hodgetts et al., 2007; Macnamara, 2016; Schudson, 2011; Viswanath et al., 2008). Since institutional actors possess the majority of financial, political and social means in society, they are able to invest in PR resources and educated, well-trained practitioners who can apply every possible strategy from the book in order to influence the news production compared to non-elite sources who have less economic resources (Davis, 2000; Franklin, 2011; Hijmans, Schafraad, Buijs, & d'Haenens, 2011; Kroon & Schafraad, 2013; Wolfsfeld, 2011). Financial resources induced the possibilities to explore constant information dissemination to the news media in the form of press releases, research reports, promotional health campaigns and press conferences, with promised scoops and novelty of information. Policy makers and their PR professionals use exclusive data, anecdotes, personal testimonies of patients as strong emotional and identifiable appeals, reframe the public health debate and apply symbolic images that speak to crowds in order to frame health issues and solutions the way they prefer, often opting for a focus on social or individual responsibility or preventive measures (Barry et al., 2011; Briggs & Hallin, 2016; Davies, 2008; Frank, 2013; Kim & Willis, 2007; Montgomery, 1990;

Wallack, 1990). Furthermore, policy makers often work together with renowned research institutions in order to add an extra layer of value to their information to promote the political agenda (Dorfman, 2003; Hodgetts et al., 2007; Larsson et al., 2003; Thorson, 2006).

In addition, we notice that, because they were able to build such a steady relationship with journalists as constant providers of information, this source type also was able to further enlarge symbolic capital (Bubela & Caulfield, 2004; Conrad, 2007; Davis, 2000a; Kroon & Schafraad, 2013; Stryker, 2002; Tanner, 2004; Viswanath et al., 2008; Wallington et al., 2010). Due to the time constraints and the demand for multi-skilled journalists, reporters gladly incorporate the information of government sources in their news, for instance, by directly copying information of press releases in the coverage or by quoting one of the offered contacts to comment on the health matter. Some scholars (Dorfman, 2003; Hodgetts et al., 2007; Len-Rios et al., 2009a; Scholten & Ruigrok, 2009) raise concerns about the increasingly dominant position of government sources. Findings illustrate that while journalists accept the information from government sources and policy makers, they also treat the information with the necessary vigilance (Boumans et al., 2014; Davies, 2008; Davis, 2000b; Grünberg & Pallas, 2013; Prenger et al., 2011; Reich, 2015). Especially television and newspaper health journalists are more hesitant towards sourcing their health coverage with government sources and quotes from policy makers since it remains promoting the political agenda rather than a balanced and democratic viewpoint on health. However, government websites are perceived as reliable and likely serve as sourced information (Avraham, 2002; Bubela et al., 2009; Bubela & Caulfield, 2004; Bucchi, 2008; Secko, Tlalka, Dunlop, Kingdon, & Amend, 2011; Tiffen et al., 2014; Viswanath et al., 2008).

1.3.1.2 Medical experts, scientists and university press releases

A special type of elite sources investing in public relations, are scientists, research institutions and universities, who have interests in a broad panoply of fields (e.g. engineering, health, science) (Allgaier et al., 2013). Information stemming from medical experts (e.g. medical doctors), scientists, research centers and universities, so-called expert sources and actors, is highly valued in health journalism and is considered more reliable and credible than government sources or commercial companies (e.g. the pharmaceutical industry) (Briggs & Hallin, 2010; Kroon & Schafraad, 2013; Stryker, 2002; Tanner, 2004). In order to interpret and contextualize scientific results and health information, journalists become increasingly dependent on these sources and actors (Camporesi et al., 2017; Dunwoody, 2008; Holton et al., 2012; Kroon & Schafraad, 2013; Stryker, 2002; Viswanath et al., 2008; Wallington et al., 2010). Complex, technical and abstract matters like health and science require a larger level of expertise and knowledge. Yet journalists usually do not have sufficient background knowledge or specialized education (Briggs & Hallin, 2010; Coddington & Holton, 2013; Furlan, 2016; Leask, Hooker, & King, 2010; Viswanath et al., 2008). Consequently, the need for access to accurate and specialized information in the personification of an expert source or actor is high and also leads towards a need for churnalism in the field of health news (Berkowitz, 2009; Hinnant et al., 2012; Lazaroiu, 2015; O'Keefe, 2002; Peters, 2008; Rowe et al., 2003).

Dealing with PR is a common-or-garden reality for most journalists, but particularly in health journalism it is a distinctive and frequently occurring routine (Bubela & Caulfield, 2004; Dunwoody, 2008; Kroon & Schafraad, 2013; Peters, 2008; Scholten & Ruigrok, 2009). Research of Len-Rios et al. (2009a) illustrates that health journalists, compared to other news specialties, are even more susceptible to information

subsidies. Particularly information supplied by PR departments of universities and research centers enjoy the reputation of reliable and credible sources, since they offer a complete package of information as well as contact with authoritative scientists and academics (Conrad, 2007; Dunwoody, 2008; Franzen, Weingart, & Rödder, 2012; Leask et al., 2010; Ransohoff & Ransohoff, 2001; Rödder & Schäfer, 2010). Moreover, their PR departments are strongly professionalized in order to promote ongoing research (Dunwoody, 2008; Peters et al., 2008). Scientific research centers and universities invested time and money in the development of public relations in order to promote their research results and findings, developments of new medication and treatments, as well as to valorize their own research (Kroon & Schafraad, 2013; Peters, 2008; Rödder & Schäfer, 2010; Smith, Singer, & Kromm, 2010). In subsidizing the efforts of news organizations to cover health news, press releases are often sent to journalists written in the exact style of news stories. According to the Dutch researchers Kroon and Schafraad (2013), 45% of the Dutch health journalists admitted regularly using press releases from universities when covering health issues. Newspaper journalists in particular, attach importance to this source type and indicate that in almost 60% of all health coverage, ready-made content from universities or academic institutions is the starting point. Especially when press releases raise connections between scientific or academic research and practical applications in the audience's daily lives or connect to the political discourse, they are generally more easily picked up (Allgaier et al., 2013; Camporesi et al., 2017; Peters, 2008; Stryker, 2002; Van Trigt, De Jong-Van Den Berg, Haaijer-Ruskamp, Willems, & Tromp, 1994; Weingart, 2001; Peters, 1995, 2008). Furthermore, domestic scientific research, innovation, impact on a large group or controversy attract journalistic attention as well (Rödder & Schäfer, 2011; Stryker, 2002). When press releases contain these elements, health journalists mainly apply two strategies concerning the coverage. First, they opt for popularization of the PR content and use it as a simplified translation of complex health matters (Franzen et al., 2012; Kroon, 2013; Schäfer, 2011). Second, they can apply the mediatization of science strategy, which will be discussed in the next paragraphs (Holton et al., 2012; Peters, 2008; Rowe et al., 2003; Sumner et al., 2014; Williams & Gajevic, 2013).

In health journalism, source credibility and reliability require a cocktail of expertise on the topical matter, competence in the field in question and trustworthiness (Hinnant et al., 2012; O'Keefe, 2002). Reich (2011) and Van Leuven and Deprez (2017) extrapolate the inextricable need for expertise and credibility to the aforementioned concept of 'hierarchy of credibility', while Briggs and Hallin (2010) connect it to the medical authority aspect of the biocommunicability model. Since they meet the demanded criteria, expert sources and actors are preferable sources for health journalists and ought to their black book of steady contacts due to their accessibility, willingness to cooperate and trustworthiness (Andsager & Powers, 1999; Cho, 2006; Hinnant, 2009; Hinnant et al., 2012; Hodgetts et al., 2007; Holland, 2017b; Holton et al., 2012; Kruvand, 2009; Van Leuven & Deprez, 2017). As a result, journalists can increase the credibility of their health story and make it more authoritative by providing information supported by this source type (Kruvand, 2009; Peters, 1995, 2008), or as Len-Rios et al., (2009b, p.318) describe it: "*journalists use expert actors in health stories to provide perspective, contribute balance to the story, discuss research implications, and legitimize other research*". By doing so, health journalists hand over their power to these experts, who then have the advantage to heavily influence the media agenda (Albaek, 2011; Berkowitz, 2009; Camporesi et al., 2017; O'Keefe, 2002; Sumner et al., 2014). In addition, this practice might enforce reliance on elite sources and actors instead of opening health journalism to alternative voices (Berkowitz, 2009; Briggs & Hallin, 2010; Coddington & Holton, 2013; Hodgetts et al., 2007; Leask et al., 2010; Stryker, 2002; Tanner, 2004).

Nevertheless, some scholars remain somewhat cautious and critical towards expert sources and actors who are cooperating willingly and argue that commercial rationales and self-serving motives as funding and advertisement for their own research are at the basis of their assistance (Bubela et al., 2009; Dunwoody, 2008; Lariscy et al., 2009; Levi, 2001; Peters et al., 2008; Wallington et al., 2010). This is closely relates to the so-called 'mediatization of science', as academics, scientists and scientific organizations have successfully intensified and professionalized their media efforts and established strong public relations in response to the increasing pressure to legitimize research and maximize the acquisition of research funds due to the demand of a larger outreach and pressure from universities that want to increase speed of research and the publication output (Holton et al., 2012; Peters, 2008; Rowe et al., 2003; Sumner et al., 2014; Williams & Gajevic, 2013). In addition, when reporters want to bolster their stories with comments from the scientific community, they usually seek for experts who can speak with enthusiasm, underwent media training or are mediagenic (Goodell, 1977; Hinnant et al., 2012; Len-Rios et al., 2009a, 2009b; Levi, 2001; Williams & Gajevic, 2013). Peters (2008) and Shephard (1981) add that journalists not necessarily quote the most experienced or relevant experts to the field, but rather the most prominent ones. Experts that can speak with enthusiasm and have repeatedly been contacted before, are often considered better suited than field specialists. Furthermore, expert actors and sources defending minority stances or having quite outspoken opinions are preferred as well (Allgaier et al., 2013; Berkowitz, 2009; Bucchi, 2008; Leask et al., 2010; Rothman, 1990). Journalists are aware of the strategies behind expert sources and actors' cooperation in the news coverage and of the fact that these sources have different means to push their news stories (Dunwoody, 2008; Hinnant et al., 2012; Hodgetts et al, 2007; Stryker, 2002; Tiffen et al, 2014; Viswanath et al., 2008).

Due to the demand for media visibility, the relationship between scientists and journalists becomes fairly complex (Allgaier et al., 2013; Briggs & Hallin, 2010; Camporesi et al., 2017; Dunwoody, 2008; Timmer, 2007; Peters, 2008; Secko et al., 2013). Their interactions are often colored by incomprehension due to different communication strategies and ignorance of each other's norms, values and goals (Allgaier et al., 2013; Larsson et al., 2003; Peters, 2008). This is due to the fact that experts adopt a science literacy communication model and journalists a contextual communication model. While experts want to inform and nurture a lay audience, journalists want to reduce health issues' complexity by simplifying messages and translating them to the audience's needs and understanding (Brossard & Lewenstein, 2010; Bucchi, 2008; Larsson et al., 2003; Nelkin, 1987; Secko et al., 2013). Furthermore, experts do not always seem to be pleased with the way the news media portray them and their research or medical innovations. In addition, they argue that interactions with journalists feel obliged in order to receive positive coverage and detracts them from their own work (Allgaier et al., 2013; Peters, 1995; Wallington et al., 2010). Some academics criticize the oversimplification and unbalanced coverage of complex topics and therefore demand to check stories before they are published or broadcasted in the news media (Allgaier et al., 2013; Badenschier & Wormer, 2012; Caulfield, 2004; Hijmans et al., 2003; Shuchman, 2002; Timmer, 2007).

Furthermore, taking into account the need for accurate and specialized information, journalists routinely search medical and scientific journals as well and claim them as sources of information and inspiration for health stories ideas or translate them directly into news issues (Len-Rios et al., 2009b; Rowe et al., 2003; Trench, 2008; Van Trigt et al., 1994). Health journalists often lack sufficient scientific background and therefore tend to redistribute news published in scientific journals, thus relying on

checks and balances of peer-reviewed content (Bubela, 2006; Bubela et al., 2009; Diekerhof & Bakker, 2012; Holton et al., 2012; Tanner, 2004; Tanner et al., 2015; Trench, 2008). Specifically for health issues, this entails information disseminated by (websites of) academic institutions, research reports or journals is highly valued because of the authority (Abelson & Collins, 2009; Hodgetts et al., 2007; Holton et al., 2012; Park & Reber, 2010; Trench, 2008). Semir, Ribas and Revuelta (1998) conducted a study on the extent to which journal articles with newsletters and news releases, such as Nature, Science and The Lancet, were picked up compared to other journals not sending out newsletters and press releases. Findings illustrate that intermedia agenda is stronger than the presence of sophisticated public relations output in the news (Len-Rios et al., 2009b). Almost 95% of all health news coverage has scientific papers as main source and academics and scientists as main actors (Besley & Nisbet, 2011; Bubela & Caulfield, 2004; Schwitzer, 2008). Only 8% of all health coverage mentions non-scientific sources and actors and in only 2% of those cases, these sources and actors were the most prominent voice (Bubela & Caulfield, 2004; Kroon, 2013; Kroon & Schafraad, 2013; Schwartz, Woloshin, Andrews, & Stukel 2012). Thus, journalists evaluate peer-reviewed journals as more reliable and authoritative (Abelson & Collins, 2009), although Levi (2001) warns for myopic copying their content and/or omitting crucial information or a lack of decent contextualization of research results.

1.3.1.3 Big bad pharma sourcing health news

Ample sources have invested in the professionalization of public relations the past few decades and introduced public relations tools into their communication strategies (Carlson, 2009; Curtin, 1999; Davis, 2000a; Franklin & Carlson, 2011; Reich, 2016; Salter, 2005; Van Leuven & Deprez, 2017). In this respect, ready-made content is opening up the newsroom for those actors possessing enough financial and economic means to invest in professionalized public relations, such as pharmaceutical companies. The last decennia, the pharmaceutical industry evolved in a successful and lucrative sector that can count on elaborated spin doctors (Allgaier et al., 2013; Atkinson, 2005; Bell & Figert, 2012; Davis, 2000a, 2000b; Dunwoody, 2008; Zoch & Molleda, 2006). By doing so, pharmaceutical companies turn into powerful players in the health and medical field, able to influence and gain access to journalists and the media agenda (Davis, 2000a; Hodgetts et al., 2007; Morrell et al., 2015; Park & Reber, 2010; Tanner et al., 2015; Tiffen et al., 2014). Journalists state that they copy news from information subsidies and especially from PR material with the necessary vigilance and remain cautious about the motives behind it (Broersma, 2009; Moynihan, Heath, &, Henry, 2002) but further attention is desperately needed since the PR nature of information subsidies is not always traceable and it remains unclear whether PR solely triggers journalists to start a journalistic query or copy-paste PR content integrally in the news without passing it through the procedures of checks and balances (Bucchi & Mazzolini, 2003; Diekerhof & Bakker, 2012; Dunwoody, 2008; Goldacre, 2013; Park & Reber, 2010; Peters et al., 2008; Picard & Yeo, 2011; Secko et al., 2013; Tanner, 2004).

Considering the low transparency about PR material in the news, the often rather implicit copy-pasting techniques and the many informal contacts between both parties, the biggest challenge is to indicate precisely how far pharmaceutical companies tentacles reach in health news reports, (Carlson, 2009; Davis, 2000b; Franklin & Carlson, 2011; Reich, 2011; Sallot & Johnson, 2006). One of the factors making this a complicating job, is the fact that production processes prior to health coverage are quite difficult to determine and to trace in the eventual news output. In addition, public relations content such as press releases are rarely the only source providing information for the journalist's story, which makes it

challenging to precisely determine their exact influence in the eventual coverage (Reich, 2010). Journalists remain cautious and try to not simply copy-paste press releases from PR departments. Instead, they complement these releases with additional information to contextualize the content and add some more nuance and balance. They paraphrase parts instead of literally copying them and foresee alternative voices of other parties involved with the health issue in order to create an independent story standing on its own, barely recognizable from press releases (Dunwoody, 2008; Hijmans et al., 2011; Sallot & Johnson, 2006). To gain more insight in how health journalists treat materials from public relations, Sallot and Johnson (2006) conducted a meta-analysis of more than 150 different studies that 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 ten years since their analysis, the number of studies has continued to grow resulting in even more public relations input in health news coverage (Borchelt, 2008; Jackson & Moloney, 2016; Kroon & Schafraad, 2013; Macnamara, 2014; Morrell et al., 2015; Reich, 2010; Scholten & Ruigrok, 2009; Tanner et al., 2015). More importantly, these studies notice that health journalists use significantly more content from information subsidies compared with their colleagues covering other specialty areas (Hinnant et al., 2013; Len-Rios et al., 2009b; Moynihan et al., 2000; Park & Reber, 2010; Tanner, 2004).

Despite this reliance on PR material, health journalists treat this source type very carefully (Lariscy et al., 2009; Logan, 2001; Nelkin, 1987; Peters et al., 2008; Saari et al., 1998; Sallot & Johnson, 2006; Secko et al., 2011). Journalists feel like it is important to act like a watchdog since PR is driven by commercial intentions and profit maximization (Davis, 2000a, 2000b; Dunwoody, 2008; Len-Rios et al., 2009b; McIntosh White, 2012; Salter, 2005; Van Trigt et al., 1994; Waisbord, 2011). Len-Rios et al. (2009a) believe that health journalists are especially critical towards press releases originating from powerful and commercial institutions such as companies, while they are more acceptant and receptive towards PR material from organizations that serve society such as universities and nonprofit organizations. Public information officers (PIOs), communication professionals within governmental agencies and educational research institutions are highly valued by health journalists because of their extensive knowledge and expertise on health issues, their proven reliability and authority (Allgaier et al., 2013; Dunwoody, 2008; Kruvand, 2009; Lariscy et al., 2009; Macnamara, 2014; McIntosh White, 2012; Peters et al., 2008; Waisbord, 2011).

In contrast, journalists tend to take a more skeptical stance when processing information stemming from pharmaceutical companies. The pharmaceutical industry is considered to have less credibility and therefore has to invest more in decent PR content and has a harder job maintaining regular contact with health journalists (Len-Rios et al., 2009b; Morrell et al., 2015; Park & Reber, 2010; Tanner, 2004, Tanner et al., 2015). While there is nothing inherently wrong with using subsidized content, several critical voices (Bubela & Caulfield, 2004; Caulfield, 2004; Peters et al., 2008; Secko et al., 2013; Tiffen et al., 2014; Wallington et al., 2010) question how ideals like accuracy, completeness and objectivity rime with the reliance on PR material from pharmaceutical companies (Borchelt, 2008; Forsyth et al., 2012; Logan, 2001; Nelkin, 1987; Saari et al., 1998; Weigold, 2001). Pharmaceutical companies can leave a clear mark on news content because they know how to anticipate the professional needs and routines of health journalists in very subtle ways and know better than any other actor how to fabricate attractive press releases by offering accompanying interesting benefits such as exclusive contacts (Borchelt, 2008; Len-Rios et al., 2009b). In essence, the communication strategy of the pharmaceutical actors coincides with the traditional flaws of the news ecology driven by commercialism (Seale, 2002). Press releases from

pharmaceutical companies often offer sensationalized health problems (Allan, 2011; Bubela & Caulfield, 2004; Hinnant et al., 2012, Len-Rios et al., 2012; Moynihan et al., 2002; Nelkin, 1987; Weigold, 2001), responding to the news values news media pay attention to, such as emphasis on crisis, a personalized story or event, conflict, creating distorted and exaggerated media stories and unrealistic expectations (Allgaier et al., 2013; Badenschier & Wormer, 2012; Cooper & Roter, 2000; Dunwoody, 2008; Kline, 2006; Nelkin, 1987; Ransohoff & Ransohoff, 2001). Furthermore, pharmaceutical companies tend to exploit scientists who made new discoveries or have expertise in a certain health domain to give their press releases and aura of objectivity and credibility (Forsyth et al., 2012; Klin & Lemish, 2008; Kline, 2006; Sismondo, 2008). In addition, the pharmaceutical industry regularly tries to invest in academic research, providing funding and therefore increasing their media presence more subtly (Picard & Yeo, 2011). Therefore, critics question the journalistic fascination for new treatments and drugs (DeVisch, 2013; Goldacre, 2013; McIntosh White, 2012; Moynihan et al., 2002; Shuchman, 2002; Sismondo, 2008), often instigated by pharmaceutical actors who stress the novelty of products, treatments and research developments. Moreover, the risks of medical treatments are often overshadowed by advantages in the news media (Borchelt, 2008; Boyce, 2007; Bubela & Caulfield, 2004). Lastly, pharmaceutical companies gladly bind celebrities to them as a face of their products or treatments (Chapman, McLeod, Wakefield, & Holding, 2005; Hijmans et al., 2003; Caulfield, 2004; Levi, 2001; Maier & Ruhrmann, 2008; Ransohoff & Ransohoff, 2001).

The influence of pharmaceutical companies on health news can be directly observed, for example, by incorporating press releases in the news output (Allan, 2011; Goldacre, 2013; Len-Rios et al., 2009a). For instance, Van Trigt et al. (1994) found that Dutch health journalists incorporate information stemming from pharmaceutical companies in their health coverage, yet, they confront it more often with additional sources and information originating from –considered neutral- experts. But the influence of the pharmaceutical industry on health news can also be more indirect and subtle, almost inattentively sneaking in health coverage (Allan, 2011; Borchelt, 2008; Dunwoody, 2008; Morrell et al., 2015; Picard & Yeo, 2011; Williams & Gajevic, 2013), for example in the practice of aligning editorial content and advertising, especially in magazine news (Dunwoody, 2008; Edelman, 2013; Len-Rios et al., 2009b; Macnamara, 2014; Moynihan et al., 2000; Peters et al., 2008; Sismondo, 2008). Williams and Gajevic (2013) examined news coverage on human-animal embryos in the British press and found that proponents united in the 'Science Media Centre' used various sophisticated techniques to orchestrate a media campaign. For example, they redirected journalists towards mediagenic and talkative scientists but also to patients who underwent a certain (drug and/or medical) treatment to provide a human interest angle. This abuse of patients and of public opinion in a broader perspective by pharmaceutical companies and the impact of the latter on the news practices, raised a lot of criticism. Second, attention should be drawn to the role of news agencies as a crucial gatekeeper to news access. This is important, as they also struggle to survive financially and search for more efficient ways to produce news (Davies, 2008; Davis, 2000a; Herman & Chomsky, 2012; Lewis et al., 2008; McIntosh White, 2012; Salter, 2005). In addition, Jackson and Moloney (2016) describe how press agencies search for new income sources and organize opinion polls or implement ideas in editorial content on request by actors. By doing so, news stories are pitched by the news agency with several PR messages included in a more subtle way. However, journalists receiving this packaged content believe the journalists working at the press agency serve as independent gatekeepers, checking information on reliability and credibility and producing objective news output (Allgaier et al., 2013; Diekerhof & Bakker, 2012; 2013; Forsyth et al., 2012; Jackson & Moloney, 2016; Morrell et al., 2015; Sismondo, 2008). In addition, the indirect impact of the

pharmaceutical industry on health news can be linked to their presence as important advertisers on non-prescription medication (Allgaier et al., 2013; Dorfman, Wallack, & Woodruff, 2005; Hinnant et al., 2013). Furthermore, journalists admit commercial actors are also noticeable in the newsroom, since commercial departments and management put pressure on journalists and reporters to avoid critical coverage on medication distributed by important advertisers, but instead foresee beneficial news coverage on their products and treatments (Bubela, 2006; Delorme & Fedler, 2005; Goldacre, 2013; Moynihan et al., 2002; Wang & Gantz, 2010). Research of Delorme and Fedler (2005) illustrates that 41% of the magazine journalists regularly experiences a demand for favorable news stories by the advertisers. Because news organizations do not want to violate their image of independent watchdog and endanger their integrity and credibility, these negotiations usually take place behind closed doors and not easily unveiled (Bubela et al., 2009; Dorfman et al., 2005; Forsyth et al., 2012; Lipworth, Kerridge, Morrell, Forsyth, & Jordens, 2015; Morrell et al., 2015; Sismondo, 2008).

1.3.1.4 The professionalization of patient associations

While health journalists strongly rely on elite sources such as universities, government sources and partially the pharmaceutical industry, they were often accused in the past of painting a too narrow picture, neglecting other relevant actors, such as NGOs, nonprofit organizations and patient associations (Hivon, Lehoux, Denis, & Rock, 2010). Although these organizations do not have the same commercial motives and financial means compared to the aforementioned elite sources and actors, they still have an agenda they want to promote in the news media (Balasegaram, Balasegaram, Malvy, & Millet, 2008; Miranda, Vercellesi, & Bruno, 2004; Len-Rios et al., 2009a). Yet health journalists have long time remained hesitant relying on this non-elite source since they are less familiar with it and these sources are less established than their elite counterparts (Friedman, Tanner, & Rose, 2014; Len-Rios et al., 2009a). Patient associations, nonprofit organizations and NGOs try to defend the interests and rights of patients or people coping with certain health issues that are difficultly addressed in the news media. They want to inform a broad audience and sensitize patients, their close environment, health professionals, pharmaceutical companies and the government by reaching out to health journalists and informing them about their stances on certain local, national or global health issues in order to bring more nuance and balance to the existing health coverage (Balasegaram et al., 2008; Giovanna et al., 2004; Hawn, 2009; McNab, 2008; Visnawath et al., 2008). With local (e.g. Eclips vzw) and national (e.g. Zitstil, KOTK) patient associations and international NGOs and nonprofit organizations (e.g. Doctors Without Borders, International Medical Corps, Partners in Health, Oxfam), these sources can act like advocates responding to citizens' needs, enforcing their rights (Balasegaram et al., 2008).

NGOs, patients associations and nonprofit organizations are, nonetheless, gaining more importance in the daily sourcing routines (Van Leuven & Joye, 2014; Yearly, 2008). Some authors compare health coverage to a battlefield and these sources need to fight the battle as well, competing against elite sources. To do so, public relations can serve as their secret weapons (Davis, 2000a; Franklin & Carlson, 2011; Viswanath et al., 2008). These non-elite actors and sources have professionalized their public relations as well, as press releases seemed a simple and cheap practice to invest in (Boumans et al., 2014; Davis, 2000b; McNair, 2013; Prenger et al., 2011). Furthermore, non-elite sources have new technologies in their advantage because they make a more easy flow of information towards journalists possible (Boumans et al., 2014; Heinrich, 2011, 2013; Hodgetts et al., 2007; Kroon & Schafraad, 2013; McNair, 2013; Reich, 2011, 2016; Shaver, 2010; Vargas & Paulin, 2007). Ample scholars suggest that

public relations might prove its benefits and can enlarge the potential for non-elite sources to gain media attention (Boumans et al., 2014; Hijmans et al., 2011; Shaver, 2010; Van Hout & Jacobs, 2008; Van Leuven & Joye, 2014). Since these sources often move against the stream and the dominant opinion, it is important to invest in a strong messages (Yearly, 2008). Consequently, NGOs, patient associations and nonprofit organizations can choose between a broad panoply of strategies to communicate their ideas to the news media.

First, scholars argue that non-elite sources should try to get the news media's attention with PR by focusing on creating a positive image rather than putting big events or dramatic facts first (Hermans Vergeer, & Pleijter, 2011; Kroon, 2013; McNair, 2013; Vargas & Paulin, 2007). Second, according to Davis (2000a), exploiting networks of contacts by offering human connections and personal stories and testimonies, non-elite sources can enlarge their reach through PR (Boumans et al., 2014; Davis, 2000a, 2000b; Frank, 2013; Sambrook, 2010; Vargas & Paulin, 2007; Waisbord, 2011). Especially adding a more human face to hard health facts that already have a scientific and/or expert foundation, can make them stand out against the large bastion of elite sources (Dorfman, 2003). In addition, they can receive a label of trust by health journalists by providing reliable witnesses or testimonies, personal anecdotes and expert testimonials on a regular basis (Andsager & Powers, 2001; Davis, 2010; Powers, 2012; Van Leuven & Joye, 2014; Waisbord, 2011). Health journalists, on their turn, desperately need a connection to ordinary people such as patients and their families to make a complex and technical health issue more relatable and identifiable (Dorfman, 2003; Friedman et al., 2014; Hawn, 2009; Hermans et al., 2011; McNab, 2009).Third, by positioning themselves as experts in a specific domain relevant to the media agenda, they are able to send out press releases more regularly and proactively contact news media (McNair, 2013; Reich, 2010, 2015; Sambrook, 2010; Vargas & Paulin, 2007; Van Leuven & Joye, 2014). By doing so, a broader, balanced and more diverse collection of sources can influence the editorial content. Fourth, it remains important to transmit a message that is generally applicable to a broad audience or to communicate messages about the common good linked to the composition of the media agenda (Davis, 2000b; Dorfman, 2003; Yearly, 2008). Furthermore, some scholars (Hodgetts et al., 2007; Kline, 2006; McNab, 2009; Shaver, 2010; Waisbord, 2011) suggest a handful of alternative strategies in order to directly engage with health journalists. Some organizations succeed in building a trustful relationship with health journalists by collaborating with valued scientists or even politicians and government institutions (Davis, 2000b; Friedman et al., 2014; Hall et al., 1999; McNab, 2009; Tiffen et al., 2014). Others invest in press releases connected to elaborated research reports and significant health statistics, provide connections with celebrities who serve as a representative face of the organization, or organize pseudo-events such as press conferences or tuition conferences (Chapman et al., 2005; Davis, 2000a; Sambrook, 2010; Vargas & Paulin, 2007; Viswanath et al., 2008; Waisbord, 2011).

By professionalizing these activities with the help of communication officers and a public relations department, patient associations, nonprofit organizations and NGOs can frequently produce high level information subsidies and interesting news packages concerning health issues (Andsager & Powers, 2001; Dorfman, 2003; Hawn, 2009). Research of Hallin, Brandt and Briggs (2013) illustrates that since the 2000s, the amount of health stories based on information originating from patient associations and NGOs was about 6.3%. Hermans, Vergeer and Pleijter (2011) illustrate that 77.1% of all Dutch journalists consider NGOs a credible and reliable source. A study from Van Leuven, Deprez and Raeymaeckers (2013), on the other hand, indicates that there was a decrease of NGO sources in the Belgian context.

If press releases from NGOs like Doctors Without Borders were used, they were always complemented with other sources. As a conclusion, we can state that different patient associations, NGOs and nonprofit organizations have a different impact and have mixed success in health news coverage (Deacon, 2003; Lewis et al., 2008; Van Leuven & Joye, 2014; Waisbord, 2011). While in some occasions, their press releases are solely used in a fragmented way, quoting limited parts of the ready-made comment as an addition to an elite-provided news item, in others, these sources are an equivalent to and counterweight against these elite sources and are considered a credible and valuable addition to the news output compared to the past (Albaek, 2011; Bucchi, 2008; Friedman et al., 2014; Lewis et al., 2006; Peters, 2008). NGOs and patient associations create a more diverse sourcing landscape for journalists and open up the news production process for alternative voices with different, yet valuable, expertise on health matters (Andsager & Powers, 2011; Boyce, 2006; Dorfman, 2003; Franklin, 2011; Hawn, 2009; Hermida, 2012; Hodgetts et al., 2007; Peters, 2008).

1.3.2 Social media bringing alternative voices to the table: ordinary citizens showing the human face of health

Journalistic sourcing practices and routines seem to be dominated mainly by elites and powerful actors. Nonetheless, this approach is severely criticized in light of the advancements of new digital technologies, which shed new light on the formerly existing relationship between journalists and sources and slowly decrease the gap between elite and non-elite sources. Not only caused digitalization economic pressure on media companies, forcing them to adjust their business models and jump on the online news train. New technologies have also reshaped the media environment and have changed up health journalists' sourcing practices (Abdenour, 2016; Barthel et al., 2015; Castells, 2008; Gulyas, 2016; Hinnant, Len-Rios, & Young, 2013; McNair, 2013; Pavlik, 2013; Raeymaeckers et al., 2015; Rahmanzadeh & Harrower, 2016; Waisbord, 2013). The empowering capacities of (micro-)blogs and social media, like Facebook, Twitter and Instagram, have the possibility to create a news environment with room for a more balanced news access (Castells, 2008; Hedman & Djerf-Pierre, 2013; Heinrich, 2011; Maier, 2010), especially in health news, where new technologies are embraced more rapidly compared to other speciality areas (Coddington & Holton, 2013; Deprez & Van Leuven, 2017; Hinnant et al., 2015; Hodgetts et al., 2007; Molyneux & Holton, 2015; Rahmanzadeh & Harrower, 2016).

Since news media are still the number one information channel on health issues and need to provide balanced news to their readership and viewers, journalists need to expand sources beyond their usual suspects, offering informative value as well as recognizable stories (Dorfman, 2003; Park & Reber, 2010; Viswanath et al.,2008). Due to social media and the internet, the traditional gatekeeping and sourcing practices shifted towards more interactive contacts between journalists and their sources (Heinrich, 2008, 2011, 2013; Hermida et al., 2014; Kaplan & Haenlein, 2010; Rahmanzadeh & Harrower, 2016; Russell, 2011). Citizens and civil society actors have evolved from a rather passive audience into a more active and engaged group because of social media channels. Social media allow users to spread information cheaply and instantaneously throughout their network, resulting in more open news gates for non-elite or bottom-up actors (Heinrich, 2011; Neuberger et al., 2014; Paulussen & Harder, 2014; Pavlik, 2013; Van Leuven et al., 2015). The empowering capacities of social media may constitute a key element for inclusive journalism (Castells, 2008; Coleman et al., 2011; Deprez & Van Leuven, 2017; Heinrich, 2011; Maier, 2010; Tiffen, et al., 2014) or a "*network journalism sphere*" by Heinrich (2013,

p.767), where openness and interactivity between journalists, sources, actors and audience are key and where these players continuously exchange valuable information. This practice of incorporating new voices in the news via new information channels also transforms the role of the journalist and challenges traditional gatekeeping practices. Journalists are no longer seen as gatekeepers filtering information but as curators or guidedogs in permanent dialogue with citizens, bringing information together from a global network of formerly unknown sources (Allan, 2011; Bruns, 2012; Corten Opgenhaffen, & d'Haenens, 2011; Hayes, Singer, & Ceppos, 2007; Hinnant et al., 2015; Pavlik, 2013).

Ample studies discuss the advantages of the adoption of content from social media in the newsroom (Dahlgren, 2013; Heinrich, 2011, 2013; Kaplan & Haenlein, 2010; Neuberger et al., 2014; Noguera Vivo, 2013; Raeymaeckers et al., 2015; Tiffen et al., 2014). They suggest that journalists are becoming more tolerant towards valuing information stemming from ordinary citizens and civil society actors, since they offer something new to the table. For example, 65% of Dutch-speaking journalists in Belgium believe that social media can be an important information channel in the news gathering process (Van Leuven et al., 2015). Carrera Alvarez, Sainz de Baranda, Andujar, Herrero Curiel and Limón Serrano (2012) interviewed 50 Spanish journalists and found that most of them agree that social networks affect reporting in the sense that they can lead to a broadening of sources (80%) and that they can be sources for story ideas (72%). Journalists use the web to gather background information on facts, provide context and nuance, stay in touch with peer media and search for experts as well as witnesses or individuals who can contribute to the news (Wallington et al., 2010). This idea of bottom-up communication suggests that digitalization can broaden the diversity of sources in news gathering (Barthel et al., 2015; Beckett & Mansell, 2008; Broersma & Graham, 2012; Canter, 2015; Dimitrova & Strömbäck, 2009; Heinrich, 2011, 2013; Hermida, 2010; Kaplan & Haenlein, 2010; Matthews, 2013; Örnebring, 2010; Rahmanzadeh & Harrower, 2016; Reich, 2015; Rowe, 2011; Wardle & Williams, 2010). Research of Hermida, Lewis and Zamith (2014) notices citizen voices are included more rapidly in the news due to social media. Although they are not thought to powerfully shape media agendas, Len-Rios et al. (2009a) found that news audiences and alternative sources are valued and desired in health journalism since they offer food for thought and inspiration for story ideas. Previously, health journalism was considered an elite's job (Allgaier et al., 2013; Hodgetts et al., 2007; Holton, 2013; Nelkin, 1987; O'Keefe, 2002; Park & Reber, 2010; Saari et al., 1998; Stryker, 2002; Tiffen et al., 2014; Van Trigt et al., 1994; Viswanath et al., 2008). However, due to new technologies, another side of the true health story emerges (Barthel et al., 2015; Bubela et al., 2009; De Pous, 2011; Hodgetts, 2012; Len-Rios et al., 2009a; Rowe, 2011; Tiffen et al., 2014; Van Leuven et al., 2015; Wardle & Williams, 2010). Secko et al. (2013) label this evolvement within health journalism as the 'unfinished story' of health, which entails that due to the increasing importance of civil society actors and citizens within health journalism, health issues are corrected over and over again by the audience, commenting on the news output online by following a lay-expertise or public participation communication model (Colson, 2011; Dunwoody, 2008; Secko et al., 2001, 2013). Stories based on elite sources can be adjusted and complemented with knowledge and expertise of ordinary citizens coping with certain issues or arguing from their own experience, offering a more diverse panoply of viewpoints in health issues (Park & Reber, 2010; Secko et al., 2013). Elite sources offer scientific expertise on health facts, while citizens offer journalists the possibility to easily translate the story in a more personal way, creating a balanced health story (Boyce, 2006; Bubela et al., 2009; Machill & Beiler, 2009; Noguera Vivo, 2013; Secko et al., 2011, 2013; Wallington et al., 2010). Citizen sources were often neglected in traditional news coverage, due to time and other constraints, but they are easily accessible today through social media platforms. As such, the sourcing opportunities

within network journalism correspond with the claim for multiperspectival news made by Gans (2011) or a journalism of conversation (Deprez & Van Leuven, 2017; Fahy & Nisbet, 2011; Hodgetts et al., 2007; Hodgetts, 2012). Furthermore, social media have become platforms where elite and non-elite actors can share breaking events. Twitter in particular has become an important part of the journalistic toolkit to scan the internet for breakthroughs and discover new story leads, find eyewitnesses and first-hand visuals (Rahmanzadeh & Harrower, 2016; Van Leuven & Deprez, 2017). Not only in the case of breaking news, but also political decisions and scientific discoveries are excellent topics to sleuth via social media since ordinary citizens often beat traditional sources such as news agencies in speed (Allan, 2011; Broersma & Graham, 2012, 2016; Canter & Brookes, 2016; Hedman & Djerf-Pierre, 2013; Heinrich, 2013; Hermida et al., 2014). According to Rahmanzadeh and Harrower (2016) and Hermida et al. (2014), Twitter facilitated the inclusion of non-elite actors in the news during breaking news events. In situations like, for instance, the outbreak of the zika virus or swine flu, social media act like enormous pools of collective intelligence and experience stemming from a rich online community (Broersma & Graham, 2012; Gulyas, 2016; Holland & Blood, 2013; Rahmanzadeh & Harrower, 2016).

Furthermore, specifically for health journalism, Bubela et al., (2009) and Colson (2011) argue that health and science blogs can also play an important role and provide room for social interaction between journalists and their engaged audience or can invoke communication between journalists and health bloggers. Science and health bloggers falsify information published by the news media by tapping from their own health experience (e.g. education, profession or patient experience) and cover health and science issues on their turn as well (Allan, 2011; Bubela et al., 2009; Secko et al., 2011). Some authors (Deuze, Bruns, & Neuberger, 2007; Dimitrova & Strömbäck, 2009; Fahy & Nisbet, 2011; Hinnant et al., 2013; Maier, 2010; Park & Reber, 2010; Sismondo, 2008) even suggest that online platforms like social media are most convenient to find personal stories to illustrate health issues, creating both a well-informed as well as an empathic audience (Ray & Hinnant, 2009). Gans (2011) stresses that journalists and news media should represent the general public and make their views and voices heard to foster public discourse. Other authors suggest that this journalistic approach allows more ordinary people to understand the news from real-life experiences (McNair, 2009). Many journalists consider personal testimonies and stories as an added value to their health issues and a way to achieve balance in the coverage and offer a counterweight to dry statistics (Beckers et al., 2016; Frank, 2013; Hinnant et al., 2013; Hodgetts et al., 2007; Kim & Willis, 2007; Kline, 2006; Saari et al., 1998). Citizens as sources or actors in the news are a simple way to draw attention to the public opinion and make health issues recognizable (Beckers et al., 2016; Brookes, Lewis, & Wahl-Jorgensen, 2004). According to Lewis, Inthorn and Wahl-Jorgensen (2005), citizens can bring a story to life, providing health issues with emotions, background and a more personal than scientific approach (Goldacre, 2013; Hinnant & Hendrickson, 2012; Kline, 2006; Moynihan et al., 2000; Ransohoff & Ransohoff, 2001; Wallington et al., 2010). Furthermore, if journalists would solely rely on elite sources, the point of view on health issues would be limited to an elite vision on the facts. By including citizen sources and civil society actors in health news, journalists broaden their network and are able to translate new and more individualized health information to the public (Atkin, Smith, McFeters, & Ferguson, 2008; Dorfman, 2003; Park & Reber, 2010; Verhoeven, 2008). Health journalism has become more open towards personal experiences of citizens that reach them. The interests of readers and viewers in personalized stories and experiences instead of lists of treatments may be at the bottom of this (Dorfman, 2003; Parmelee, 2014; Secko et al., 2013).

In contrast, Rowe et al. (2003) believe that compared with the traditional elite sources, ordinary citizens are not often represented in health-related issues. The impact of social media sources is often questioned, since their contribution is often limited to occasional references as a vox pop or a personal testimony to provide human interest, or as personal comments and superficial illustrations and not necessarily as in-depth contextualization of an issue. As with general news and other specialty beats, citizen sources are less likely to provide information or comments in health news coverage (Avraham, 2002; Frank, 2013; Hodgetts et al, 2007; Machill & Beiler, 2009; Van Leuven & Deprez, 2017). Citizens or civil society actors are mainly a means by which the news is made recognizable and accessible for the audience, spicing it up with a personal dimension (Beckers et al., 2016; De Swert et al., 2013; Frank, 2013; Lewis, Inthorn, & Wahl-Jorgensen, 2005; Machill & Beiler, 2009). In addition, studies conclude that social media are used to contact non-elite actors, not to gather facts but instead for soft news purposes (Neuberger et al., 2014; Paulussen & Harder, 2014). Furthermore, in a recurring point of critique on citizen sources in the news, some authors state that ordinary citizens do not add depth, nor new viewpoints to health-related issues but rather dumb down the information in the news article. Subsequently, social media rather reinforce privileged news access of elite sources, than allowing citizens or civil society actors to take the lead (Hedman & Djerf-Pierre, 2013; Hodgetts, 2012). Research of Parmelee (2014) and Broersma and Graham (2012) points out that elite sources remain the dominant players on social media channels. They apply the full potential of social media to maintain their relationships with journalists, provide them information and see it as an extra way to confirm their role as 'leading dancer'. Van Leuven and Deprez (2017) confirm these findings in their research on the use of Twitter by Belgian health journalists. They found Twitter is not used to reach out to bottom-up actors, as for instance patients and patient organizations. To the contrary, health journalists mainly use Twitter, and other social media channels to monitor peer media and expert sources, thus sticking with their traditional sourcing routines and considering it an extension of their routine practices, notwithstanding the potential of social media. Rupar (2015) therefore labeled Twitter as the 'press club' of journalists.

Due to the often unknown origin of information or the lack of steady relationships between journalists and their social media sources, journalists doubt objectivity and truth of information disseminated by bottom-up actors via social media (Broersma & Graham, 2016; Matthews, 2013). Especially for health issues this is a major issue. The process of information verification is "*the beating heart of credible journalism in the public interest"* (Hermida, 2012, p.661). In order to be able to trust information from these new sources, health journalists need to make sure their information passes the same tight reliability and credibility checks as elite sources such as universities, research centers, government sources or commercial companies (Broersma & Graham, 2012; Corten et al., 2011; Diekerhof & Bakker, 2012; Heinrich, 2011; Hermida et al., 2014; Opgenhaffen & Van Belle, 2012; Rahmanzadeh & Harrower, 2016; Shapiro et al., 2013; Van Heeswijk, 2007). Reich (2015) describes these disadvantages as logistical and evaluative variables that cost journalists time and effort and are not desirable during the news production. Inclusive or multiperspectival news is therefore a well though-out ideal that does not yet work in practice in health journalism. Even when using social media, traditional sourcing practices prevail due to expertise, knowledge and credibility at the cost of alternatives (Hedman & Djerf-Pierre, 2013; Van Leuven & Deprez, 2017).

Chapter 2: Framing health and mental illness

2.1 The research tradition of framing

The field of framing research has its foundations in multiple disciplines (Deprez, 2008; Entman, Matthes, & Pellicano, 2009; Reese, 2001; Van Gorp, 2007). With its roots in cultural anthropology, sociology, political communication and social psychology (Bateson, 2000; Dan, 2017; Gitlin, 1980; Goffman, 1974; Wolfsfeld, 1997), the concept of framing was introduced in the field of communication sciences in the nineties as, according to Reese (2007, p.151), *"a more compelling hook to hang content analyses on"*. The broad panoply of definitions about framing, the lack of uniformity and numerous disagreements by scholars about its specific content and means, is founded in the variety of research fields where framing analysis is applied (Geise, Lobinger, & Brantner, 2013; Matthes, 2014). In general, the literature distinguishes between two different types of frames when discussing framing analysis. At the one hand, media frames, situated on the level of the journalistic production process and news selection, are considered but at the other, audience frames surface (Dan, 2017; Deprez, 2008; Entman, 1993; Gitlin, 1980; Kim, Scheufele, & Shanahan, 2002; Semetko & Valkenburg, 2000; Van Gorp, 2001). According to Conrad (2001) and Gamson and Modigliani (1989) media frames determine what becomes news and how an issue is constructed and depicted. Therefore, they are seen as a common thread throughout this dissertation between the literature review and empirical chapters. The objective of this chapter is to present an overview of the different working definitions on the concept of media framing and the construction of media frames. The focus is narrowed further to media frames used to report health and mental illness in the news media.

2.1.1 Framing analysis: conceptualization of media frames

Journalists present news in a specific frame and decide which points of view to show and which aspects of reality to stress from a specific angle (Dan, 2017; Holton et al., 2012; Zoch & Molleda, 2006). Some argue that journalists unconsciously develop specific media frames, often suggested by relevant actors and sources, which enable them to work fast under stressing deadlines and time pressure (Holton et al., 2012; Wallington et al., 2010). Others state that journalists can also consciously heighten the salience of specific issues and when they construct stories, they must decide how to frame issues choosing from a handful of available frames (Dorfman et al., 2005; Gans, 1979; Hawkins & Linvill, 2010; Holton et al., 2012; Iyengar & Kinder, 1987; Iyengar, Peters, & Kinder, 1982; Park & Reber, 2010; Tiffen et al., 2014; Wallington et al., 2010). In what follows, we will give an overview of the different visions on media frames and we will indicate which of those conceptualizations is carried forward in this dissertation.

Within the tradition of media framing, Deprez (2008) distinguishes three large branches, building on one another. A first group of authors (e.g. Gamson & Modigliani, 1989; Reese, 2001; Tuchman, 1978) focuses on media frames as aspects of the actual news text. A media frame is considered a tool to cover events due to its ability to structure and label reality and to give meaning to it. A second group of scholars (e.g. Lakoff, 1996; Pan & Kosicki, 1993) connects media frames to the journalistic news selection process, stressing the importance of at the one hand the journalists themselves, and at the other hand relevant actors (e.g. government institutions, pressure and lobby groups, social movements) in the

selection of media frames. A last group of researchers (e.g. Entman, 1993; Dan, 2017) focuses its attention towards how media frames work and can be interpreted, dismantling how they are structured and of what they consist.

Tuchman (1978), Gamson and Modigiliani (1989) and Reese (2001) can be considered representatives of the first take on media frames. According to Tuchman (1978), media frames or news frames organize the daily reality and are an essential characteristic of the news coverage. More abstractly, she further argues that frames are means by which information can be interpreted, evaluated and shared, guiding an audience through the mass of available information. Gamson and Modigliani (1989, p.3) depict media frames as "*central organizing ideas*", giving meaning to and making sense of the existing reality. Reese (2001, p.11) goes even further and depicts media frames as follows: "*frames are organizing principles that are socially shared and persistent over time, that work over time, that work symbolically to meaningfully structure the social world.*" Reese's definition is powerful because it indicates the shared nature of media frames: they work because audience members understand them and because of their social importance. Therefore media frames often overlap with the individual frames of the audience (Dorfman et al., 2005; Hawkins & Linvill, 2010; Moynihan et al., 2000; Park & Reber, 2010). Reese argues that antecedents to media frames may include priority setting by journalists and editors-in-chief, and the angles through which journalists choose to tell a story. That is, news may be constructed using a priori ideas about how stories should be told in order to gather sufficient impact. Furthermore, Reese (2001) is convinced that sharing and belonging to a certain culture may create shared frames and beliefs, a statement that is shared by Gamson and Modigliani (1989), Goffman (1981) and Van Gorp (2007). Similarly, a number of researchers argue that frames link issues, events and people with familiar interpretations (Dan, 2017; Deprez, 2008; Gurevitch, Levy, & Roeh, 1991), values (Deprez, 2008; Gans, 1979), and worldviews (Van Gorp, 2007), which leads to a shared frame repertoire (Gamson & Modigliani, 1989; Reese, 2001).

Pan and Kosicki (1993) on the other hand, support the second approach towards media frames, following the argumentation of necessary characteristics emerging with media frames. Media frames encode information in a certain way. Stylistic elements as metaphors, exemplars and visual illustrations are essential in the development and composition of those frames and are labeled as framing devices (Neuman, Just, & Crigler, 1992; Pan & Kosicki, 1993), which are communicated by actors relevant to the issue. Subsequently, Lakoff (1996) approaches media frames from a cultural and linguistic perspective, claiming that they are compositions and a mixture of different factors, mainly societal values, stereotypes and visual images. Also, he stresses the importance of metaphors to concretize abstract issues and matters (Dorfman et al., 2005). Together, those elements trigger an available frame that directs the public attention towards specific facets of the issue and forces certain patterns of reasoning (Dorfman et al., 2005; Lakoff, 1996). Just a few cues, words or images can trigger a whole frame and force the portrayal of an issue in a certain way (Lakoff, 1996).

The third and last approach towards media frames is founded on the work of Gitlin (1980, p. 28), who notes that frames are: "*persistent patterns by which the news media organize and present the news so that it concerns the event, not the underlying condition; the person, not the group; conflict, not consensus; the fact that advances the story, not the one that explains it*". Media frames are seen as patterns that help to recognize, present, interpret, select, emphasize and exclude different aspects of reality or an event, verbally or visually (Gitlin, 1980). Frames are considered labels our mind uses to

organize the world and have opinions about it. Those frames are made of visual images, values and stereotypes, complemented with valid information and tell us what and how to think about issues (Barry et al., 2011; Park & Reber, 2010; Sieff, 2003). In addition, research of Goffman (1981) stresses the important contribution of frames in organizing fragmented information and experiences (McQuail, 2005). Individuals, such as journalists, possess their own little black box of primary frameworks to organize information, based on personal experiences and media viewpoints. This process leads to tracing out, identifying and labeling issues and giving meaning to the outside world. Therefore, Goffman (cited in Fisher, 1997, p. 2) labels frames as "*the set of rules governing a given type of activity*". However, while attempting to define media frames and while being one of the founding fathers of the third approach towards media framing, Goffman rather describes media frames as individual audience frames.

This called for a more specifically tailored definition, eventually given by Entman, (1993). Entman's (1993, p. 51-52) vision on media frames, a landmark in the framing tradition, defined media framing practices as followed: "*to frame is to select some aspects of perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation.*" According to Entman (1993) frames organize the meaning of stories and stress what is important and what is to be left out (Klin & Lemish, 2008; Sieff, 2003; Wahl et al., 2002; Wallington et al., 2010). Frames are said to emerge depending on the presence or the absence of certain key words, concepts, symbols, visual illustrations, sources-, catch phrases, actors, metaphors and sentences that form thematic clusters (Coleman & Perlmutter, 2005; Dan, 2017). Furthermore, Entman's definition proposes four main overarching framing functions as basic frame elements: problem definition, cause, evaluation and remedies (Coleman & Perlmutter, 2005; Conrad, 2001; Entman, 1993; Matthes & Kohring, 2008; Schmitz et al., 2003). First, the problem definition includes the costs and benefits of some act of a causal agent. Second, an origin of the cause or forces creating the issue are determined. Third, frames make moral judgements or evaluations of the causes and the effects the problem has. Fourth, remedies and justifications are suggested. These four functions are able to coexist within one news item, yet not all four framing functions are present in every frame (Entman, 1993). Gamson and Modigliani (1989) are partially connected to these visions on framing, distinguishing different reasoning devices within media frames. These devices inform the public and include a causal analysis of the issue, discuss consequences and their effects and offer sets of moral claims. Pan and Kosicki (1993) on the other hand, took Entman's definition to the next level, following the argumentation of necessary characteristics emerging with media frames. Stylistic elements like metaphors, exemplars and visual illustrations are essential in the development and composition of frames, labeling them as framing devices. Together with Gamson and Modigliani's (1989) reasoning devices, framing devices define the media frame (Feeley & Vincent, 2007; Sandberg, 2007; Higgins, Naylor, Berry, O'Connor and McLean, 2006).

Similar definitions can be found in visual framing literature (Benford & Snow, 2000; Coleman, 2010, Geise et al., 2013), where scholars argue that Entman's definition also applies to visual media frames. Frames remain salient and selective when communication channels are saturated with them, and thus stand good chances that people get exposed to them (Entman et al., 2009; Matthes, 2008; Tewksbury, Jones, Peske, Raymond, & Vig, 2000; van Gorp, 2007). As an example, Dan (2017, p.37) updated Entman's approach and proposed a superordinate definition on the concept of media frames including both visual and verbal elements and taking into account the shortcomings of previous

conceptualizations. She states that: *"frames are rather enduring verbal or visual interpretations of issues, events or people. Frames seem natural to those whose ideas, norms or values they reference. By simplifying complex matters through the emphasis of some aspects and the disregard of others, frames organize social reality."* Additionally, she shares the views of Entman (1993), offering four distinctive characteristics inextricably connected to frames. First, a problem has to be addressed. Second, moral evaluations are suggested. Third, causes that are found at the basis of the problem are given as well as, lastly, solutions to resolve the problem.

In conclusion, multiple definitions on media frames exist in the literature, all of them accentuating different aspects of media frames and taking different approaches, which can be translated to the different research traditions the concept originates from. While these definitions all contribute to a better understanding of this complex concept, the third approach is the most specific one and the approach we will continue to take on throughout this dissertation. Especially the completeness of Dan's definition and the take of Entman on media frames, are highly valued and will be reflected in our literature review and empirical chapters.

2.2 Framing health problems and medical issues

People often do not have direct or personal experience with certain health issues. By trusting in and adhering the proposed frameworks by the news media, health does not only become more interesting, but also more comprehensible (Bubela et al., 2009). When discussing health issues in the news media, journalists have the option to choose between, what scholars call, at the one hand, generic frames, and at the other, issue-specific frames (Dan, 2017; De Pous, 2011; Deprez, 2008). De Vreese (2005) argues that issue-specific frames are closely intertwined with specific topics or sudden events. Therefore, they lack generalizability and are almost only applicable to the case or situation they are connected with. The biggest advantage of the use of issue-specific frames lies in the fact that in-depth data can be found and the production of news items can be studied more detailed (Dan, 2017; De Pous, 2011; Deprez, 2008). According to De Vreese, Peter and Semetko (2001, p.108), issue-specific frames *"may capture specific aspects of selection, organization, and elaboration that are present in news coverage and pertain specifically to a well-defined issue".* Generic frames, however, exceed those thematic limitations and can be applied to a broader range of news items and topics. Furthermore, when covering health, scholars notice journalists more frequently rely upon this frame type (Shih et al., 2008). For instance, Semetko and Valkenburg (2000) identified five frames (e.g. conflict frame, human interest frame, morality frame, responsibility frame and economic consequences frame) that are applicable to news items discussing economics, foreign affairs and even lifestyle and health. Iyengar (1991) and Iyengar and Kinder (1987) as well, developed generic frames that are more generalizable (e.g. episodic frame and thematic frame), followed up by Kim and Willis (2007) (e.g. individual responsibility frame and social responsibility frame) and Hawkins and Linvill (2010). While these frames generate less detailed data, they have a comparative advantage (De Vreese et al., 2001). In this particular subchapter, we will discuss the different ways in which health is framed. We will review the different frames apart from one another to make differences and detailed nuances more clear.

2.2.1 Generic frames

2.2.1.1 Binary oppositions: the episodic and thematic frame or attributing responsibility

Iyengar (1989) distinguished two types of generic frames: at the one hand episodic frames and at the other thematic frames. He developed these frames in the context of attributing responsibility during political crisis, and poverty and racial inequality in particular. Hodgetts et al. (2007) further translated these two frames to the context of health news stories and converted them into the traditional conflict frame and explanatory frame, yet largely continued the vision of Iyengar (1991). In addition, Kim and Willis (2007) built on Iyengar's frames as well, acknowledging at the one hand the individual responsibility frame (instead of the episodic frame) and at the other hand the social responsibility frame (instead of the thematic frame). Hawkins and Linvill (2010) at last distinguish individualizing and systemic news frames, deepening once again the original frames of Iyengar (1991). These approaches will be discussed simultaneously in the next paragraphs, however, we will mainly use the terminology of Iyengar and Kim and Willis since they capture the content of the frames the best.

The first frame, the episodic or traditional conflict frame, tends to individualize (health) issues. Small events, details, isolated cases, individual problems, personal stories and examples, offering personal causes and ready-to-apply solutions are painted as the focal point of the news item. With little to no contextualization of the social and/or political characteristics of the health issue, the episodic frame makes it seem like a stand-alone issue (Dorfman, 2003; Dorfman et al., 2005; Gearhart & Trumbly-Lamsam, 2017; Slater & Jain, 2011), and creates a hyper-individualized orientation of health news (Hinnant, 2009). This leads to attributing responsibility to the people presented in the health story since they are considered to be responsible for their own health (causes and solutions), or, what Iyengar (1989) calls the blame-the-victim approach and Kim and Willis (2007) and Hawkins and Linvill (2010) describe as the individual (responsibility) frame. This implies that health issues are caused by individuals and their (incorrect) daily behavior and routines (Barry et al., 2011; Clarke & Everest, 2006; Kim & Willis, 2007), rather than being the result of a person's social background and the more profound political and socioeconomic environment he or she lives in. An example can be found in the framing of obesity, which is often depicted in accordance with the individual responsibility frame. Someone is obese because it is caused by a genetic default or because his/her eating habits are unhealthy, omitting any sort of environmental cause (Barry et al., 2011; Gunnarsson & Elam, 2012; King & Watson, 2005). Furthermore, solutions as well are discussed as merely personal. Individual behavioral changes and adjustments are considered the ideal treatment for a health problem. Again we can take the example of obesity, stating that by eating healthier and exercising more, weight loss can be established (Bubela et al., 2009; Clarke, 2011; Dentzer, 2009; Dunwoody, 2008; Gunnarsson & Elam, 2012; Holton et al., 2012; Russell, 2006; Saikkonen, 2017; Timmer, 2007).

According to Hallahan (1999) and Holton et al. (2012) journalists have the tendency to opt for clear and simple stories, appealing to a broader audience, mainly focusing on individual triumph or misery, personal stories and exemplars. Also according to Cho (2006) episodic framing such as blaming the victim and focusing on the patient's own responsibility is the most popular approach concerning health. Especially in television news and magazines, episodic frames are an easy way to reach out to the public and give health a more human face (Gearhart & Trumbly-Lamsam, 2017; Guo, Hsu, Holton, & Jeong, 2011; Hallahan, 1999; Hinnant, 2009; Holton et al., 2012; Iyengar, 1989). By simplifying complicated

health issues to personal narratives, Iyengar (1991, p.136) states that "*journalists shield society from its own responsibility*" (Barry et al., 2011; Dorfman et al., 2005; Husemann & Fisher, 2015). Health news needs to be easily consumed and filled with ready-made tips and tricks that can be applied by the public in an instant (Seale, 2002). Personal anecdotes and emotional testimonies therefore do not only make stories more relatable, they also reduce health issues to individual-level problems one can change in a heartbeat (Barry et al., 2011; Frank, 2013; Kim & Willis, 2007; Wallack, 1990). By focusing so strongly on the individual's own responsibility, hyper-individualized news items are covered, making a personal experience look like a generalizable story (Hawkins & Linvill, 2010). Especially since health and science are so difficult to grasp due to their complexity and jargon, human interest can make a story more comprehensible (Briggs & Hallin, 2016; Gasher et al., 2007; Lengauer et al.2012; Viswanath et al., 2008). From a commercial perspective, personal portrayals of people coping with health problems, are also seen as more beneficial, since drama and personal stories sell and attract a larger audience, compared to purely factual information that offers underlying mechanisms at the basis of the issue (Dorfman et al., 2005).

Yet, news media are often criticized for their preference for individual stories since media (un)consciously omit social responsibility connected to health problems (Montgomery, 1990; Wallack, 1990). The lion-part of scholars (Allan, 2011; Bubela & Caulfield, 2004; King & Watson, 2005; King & Street, 2005; Larsson et al., 2003; Maillé, St-Charles, & Lucotte, 2010; McGrath & Kapadia, 2009; Nabi & Prestin, 2016; Nelkin, 1987; Peters, 2008; Shuchman, 2002; Weigold, 2001) condemn this so-called 'sensationalism' tendency. Media pay attention to issues that can be dramatized through emphasis on crisis, a personalized story or event or through conflicts. Levi (2001, p.23) states that this "*quest for exciting events to fill a daily news quota often outweighs the need for well-researched, critical, in-depth, investigative medical journalism*". This drive towards sensationalism, mainly noticeable in magazine health coverage, translates into the portrayal of celebrities, medical miracles and gawp stories to increase the informative value of health news (Cassels, 2005; Chapman et al., 2005; Coombes, 2009; Henson et al., 2009; Hinnant & Hendrickson, 2012; Kurzman, Anderson, Key, Lee, Moloney, Silver, & Van Ryn, 2007; Maier & Ruhrmann, 2008; Nabi & Prestin, 2016; O'Neill, 2012). Yet, this too intensive focus on personal testimonies and human interest, implies the need for political and socioeconomic contextualization (Caulfield, 2004; Dentzer, 2009; Einsiedel, 2008; Frank, 2013; Hijmans et al., 2003; Hiltgartner, 1990; Russell, 2006).

Many different health issues are beyond immediate individual control and are caused by an interplay between the personal characteristics of an individual, social context and political circumstances (Hawkins & Linvill, 2010). By consuming episodically framed health stories, the larger social and political context surrounding the individual health issue remain masked (Clarke & Everest, 2006; Dorfman et al., 2005; King & Watson, 2005). Therefore an alternative framing approach was considered. Since the 1990s, we notice a shift towards a second frame, namely the thematic frame, which tries to paint the bigger picture, generalizing health stories and emphasizing the social, political and economic background (Dorfman et al., 2005; Gearhart & Trumbly-Lamsam, 2017; Hodgetts et al., 2007; Iyengar, 1991; Iyengar & Kinder, 1987). Since health problems are not solely due to the individual's responsibility, the thematic frame focuses the collective accountability rather than blaming the victim (Dorfman et al., 2005; Hawkings & Linvill, 2010; Hodgetts et al., 2007). Moreover, Kim and Willis (2007) even go as far as describing this as the social responsibility frame since societal factors, such as education, socioeconomic status of the patient, neighborhood and environmental factors, access to resources,

flaws in economic and political regulations etc., are seen as a cause and solution of a health problem (Clarke & Everest, 2006; Dorfman, 2003; Graham, 2008; King & Watson, 2005). According to Iyengar (1991) thematic stories offer background, provide consequences and extra information and pass the message that the government and different political and social institutions have a role in solving health issues. By doing so, systemic or thematic news frames or social responsibility frames show a broader range of causes and solutions of health problems by assigning responsibility to other factors (Barry et al., 2011; Briggs & Hallin, 2016; Clarke & Everest, 2006; Clarke et al., 2003; Gearhart & Trumbly-Lamsam, 2017; Hawkins & Linvill, 2010; Kim & Willis, 2007; Lawrence, 2004). Kim and Willis (2007) discuss the impact of social causes and solutions on the case of obesity, stating that two main factors are at the basis of the disease: the food industry which adds more sugar to products and schools that do not always provide healthy meals and are therefore stimulating obesity at a young age.

Subsequently, the thematic frame or social responsibility frame relies on the presence of a completely different type of actors, mainly spokespeople from the (pharmaceutical) industry and sickness funds, politicians and experts from research and medical institutions compared to episodic or individual responsibility frames. They outline a broader context, using statistics and diagrams and explore the issue in depth (Coleman et al., 2011; Dorfman, 2003; Guo et al., 2011; Hodgetts et al., 2007; King & Watson, 2005; Len-Rios et al., 2009b; Zoch & Molleda, 2006). These actors need to step it up in order to stimulate thematic framing in media coverage and to raise awareness that a mixture of individual and institutional forces are at work in the context of health (Dorfman et al., 2005; Gearhart & Trumbly-Lamsam, 2017). According to Coleman, Thorson and Wilkins (2011), thematic stories are consistent with, what they call public health framing, pointing at the role of the government and social institutions (Dorfman, 2003). We notice that responsibility frames are applied differently according to different types of media. While television news and magazines rely often on an individual responsibility frame, as was demonstrated in the paragraphs above, Barry et al., (2011), Dorfman et al. (2005) and Wallack (1990) find proof that newspapers rather focus on societal solutions and treatments for health problems, resulting in mainly applying a thematic or social responsibility frame in health coverage. Furthermore, the latter is on the increase in magazines and even television news as well when covering health (Briggs & Hallin, 2016; Campbell, 2011; King & Watson, 2005). Especially when trying to clarify the causes of a health problem, social responsibility is the most preeminent approach, while solutions are often connected to individual behavior changes (Campbell, 2011; Kim & Willis, 2007).

We feel that this binary opposition is maybe too limited to fully grasp the complexities of health news and lacks depth, since health issues and medical problems are often more than what is attributed to an individual or society. While a focus on individual problems and therefore attributing responsibility to an individual is often remarked in the press and while the opposite take of a responsible society is noticeable as well, health issues are layered more in depth than these generic frames recon for. However, they make it possible to compare and contrast coverage of different health issues in order to generalize findings.

2.2.1.2 The five frames of Semetko and Valkenburg applied to health

Semetko and Valkenburg (2000) are advocates of deductive framing analysis and developed five generic frames related to political news issues and crime, covered in both newspapers and television broadcasts. Previous research had focused on the separate appearance of a handful of frames, yet those studies

neglected the possibility of frame coexistence and focused mainly on binary oppositions such as the aforementioned attribution of responsibility (e.g. Hallahan, 1999; Hawkins & Linvill, 2010; Iyengar, 1989, 1991; Kim & Willis, 2007; Lawrence, 2004). A study of Neuman, Just and Crigler (1992), however, broadened framing analysis, and identified no less than four different frames in the U.S. news coverage: a human impact frame, a morality frame, conflict frame and economic consequences frame. This American study formed the foundation for the frames of Semetko and Valkenburg (2000) and was complemented with the work of Iyengar (1989, 1991) on social and individual responsibility and thematic and episodic frames.

In particular, Semetko and Valkenburg (2000) tested five frames from previous research. First, they detected a conflict frame, which centers the conflict between groups, institutions or specific individuals in order to attract the audience's attention to the news issue through negativity and sensationalism (Briggs & Hallin, 2016; Bubela & Caulfield, 2004; Gregory & Miller, 1998; Hinnant et al., 2011; King & Watson, 2005; Larsson et al., 2003; Marinescu & Silistraru, 2017; Nabi & Prestin, 2016; Semetko & Valkenburg, 2000; Shuchman, 2002). An example can be found in scientific breakthroughs and new treatments where two different oppositions take on a polemic in the press and defend their positions pro and con new medication. In addition, a conflict between two (or more) parties serves the simplification of complex (health) matters and masks the multi-layered discussions and mechanisms leading up to a conflict (Aylesworth-Spink, 2015; Levi, 2001; Shuchman, 2002; Weigold, 2001). Second, a human interest frame is distinguished, which brings a more human face and a more personal approach to (health) issues, which is in line with the episodic frame of Iyengar (1991) and the human impact frame of Neuman et al. (1992). The level of competition between different news media leads to more of this sensationalized coverage with regard to sales figures (Ellis, 2015; Haller, 2010; Nelkin, 1987; Seale, 2002). Third, Semetko and Valkenburg (2000) notice an economic consequence frame based on previous literature, which implies that the consequences an issue will have economically on a country, institution, group or individual are stressed. The impact of adjustments in regulations of the pharmaceutical industry, for instance, can have a severe impact on those companies, but also on the products available for patients. Fourth, the morality frame sheds light on the moral prescriptions and or the context of religious tenets of an issue. Due to neutrality and objectivity as professional journalistic values, journalists rather make indirect inferences to moral frames, by quoting specific actors according to Neuman et al. (1992). Semetko and Valkenburg (2000) bring up the example of sexual transmitted diseases. By using the perspectives of certain interest groups and patient associations connected to these specific health problems, a health story can contain a moral message to a broader audience. Unique for this frame is that it informs the public about preventive measures that can be made and – most importantly- mobilizes people (Coleman & Thorson, 2002; Hawkins & Linvill, 2010). At last, the authors got inspired by the work of Iyengar (1989, 1991) and distinguished a responsibility frame (Semetko & Valkenburg, 2000). At the one hand, journalists can individualize (health) issues, blame individuals for their own (health) situation and suggest that they should solve their own problems, reinforcing individual responsibility (Dorfman, 2003; Iyengar, 1989; Hawkins & Linvill, 2010), or, what Iyengar (1989) calls the blame-the-victim approach. At the other hand, journalists can also opt for portraying the economic and political background of (health) issues (Dorfman et al., 2005; Hodgetts et al., 2007; Iyengar & Kinder, 1987; Iyengar, 1991).

By conducting a quantitative content analysis of Dutch television and newspaper news concerning the E.U. meeting of 1997 and crime, the scholars tried to compare the frames between media types, yet

also aimed to compare the use of frames during the coverage of different topics (Semetko & Valkenburg, 2000). To detect which frames are present in the news coverage, the scholars developed a series of twenty yes-or-no questions to measure the presence of the different frames. By clustering the list of questions, they were able to reveal underlying dimensions. Results showed the dominance of the responsibility frame and conflict frame especially in hard news facts, while the human interest frame and morality frame were significantly less noted and supported soft news and sensationalized stories (Semetko & Valkenburg, 2000). The results concerning the responsibility frame, however, contradict Iyengar (1989), who was convinced of the episodic nature of television news and encouraged the audience to attribute responsibility for social and health-related problems to the individual rather than society. Semetko and Valkenburg (2000) proved that television issues can be both episodic and thematic at the same time. They suggest that, while television news is mainly episodic in many media cultures, the way in which responsibility is framed depends largely on the social context and political structure of a country in which the news is produced.

The frames suggested by Semetko and Valkenburg (2000) have proven their importance in research in the field of communication sciences. While being developed in the context of European and political news, they are also applicable to economic issues, foreign affairs and even lifestyle and health news. Semetko and Valkenburg (2000) wrote that frames are generic and thus applicable to an array of topics. However, while this approach has been successful, it has not been without its critics. The proposed frames remain rather general, therefore focusing on more suitable health-related generic frames or on issue-specific ones seems more appropriate. Entman et al. (2009) proposed that only issue-specific frames are truly frames, since they allow a detailed analysis of the issue. According to Dan (2017), scholars investigating generic frames contribute most to building framing theory, whereas those scrutinizing issue-specific frames contribute most to understanding a specific issue.

2.2.2 Health-specific generic frames: medicalization, self-responsibilty and demedicalization

Many authors are hesitant about the blaming-the-victim and blaming-society approach of the aforementioned researchers and are convinced that health-specific frames offer a more accurate and complete health coverage (Bubela & Caulfield, 2004; Conrad, 2001, 2007; Hodgetts et al., 2007; Sobal, 1995). Generally, scholars notice a double perspective when health is covered in the news media, which makes it easy for journalists to choose how to cover a health issue and to decide which story needs to be told (Hodgetts et al., 2007). When writing about health-related issues, journalists can use a medicalization frame, highlighting medical treatments, or they can opt for the self-responsibility frame, which implies people are in charge of their own health (Conrad, 2001, 2007). Of course the prominence of those frames is related with the topical elements of the health news, but we detect them in all kinds of topics in health journalism. Hodgetts et al. (2007), however, in their turn link this to the distinction between health news that is biomedical in focus or centering on lifestyle approaches.

Many definitions concerning medicalization are circulating, yet, according to Conrad and Leiter (2004, p.158) "*medicalization occurs when previously nonmedical problems are defined as medical problems, usually in terms of illnesses and disorders.*" The medicalization frame entails a medical vision, labeling every health issue as a problem, illness, disorder or disease with a biological or biogenetic origin and symptoms, solvable by using medication, behavior modification or biogenetic technologies (Applbaum, 2009; Barry et al., 2011; Briggs & Hallin, 2016; Clarke et al., 2003; Conrad, 2001; Conrad & Leiter, 2004;

Devisch, 2013; King & Watson, 2005; Kvaale, Haslam, & Gottdiener, 2013; Wahl, 2000). Some authors even argue that health journalism appears to be inextricably bound up with a focus on (the use of) medication (Bazan, 2013; Coveney et al., 2009; King & Watson, 2005; Maturo, 2009; Williams, Seale, Boden, Lowe, & Steinberg, 2008). Pellechia (1997) supports this opinion and noticed that when news about health received attention of the media, in 70% of the cases, the press focused on the use of medication. This preference for medical news is closely intertwined with two more concepts: over-diagnosis and overtreatment (Harwood, 2006; Walsh-Childers & Braddock, 2013). Over-diagnosis refers to the overuse of screening tests and diagnoses when individuals identify conditions that could predict certain health problems (Swensen, Kaplan, Meyer, Nelson, Hunt, Pryor, Weissberg, Daley, Yates, & Chassin, 2011; Walsh-Childers & Braddock, 2013; Welch, Schwartz, & Woloshin, 2011). Secondly, overtreatment means subjecting a patient to tests, medication and medical procedures that provide little or no useful information about the patient's condition or do not improve the patient's health (Swensen et al., 2011). Therefore we can conclude that the medicalization frame can be linked to what Lawrence (2004) and Hodgetts et al. (2007) label as the biological or biomedical frame which implies that health storytelling depends on biomedical remedies and technologies, miracle workers in life sciences, health risks, scientific studies stressing medical progress, breakthroughs and failures, covering the so-called 'hard health news' (Boyce, 2007; Briggs & Hallin, 2016; Cassels, 2005; Clarke & Everest, 2006; Conrad, 2001; Gupta & Sinha 2010; Hodgetts et al., 2007; Hodgetts & Chamberlain, 2006; Vandenberghe, 2015). This often leads to telling and retelling the same medically inspired health stories, often from a different point of view, for example the pros and cons of Obamacare, changes to maternity care, waiting list for mental health institutions etc. (Hodgetts et al., 2007). Especially the simplicity of the stories and the ability to rely on medical and academic experts, politicians and spokespeople, make biomedical or medicalized framing of health issues relevant (Aylesworth-Spink, 2015; Bubela & Caulfield, 2004; Clarke & Everest, 2006; Conrad & Leiter, 2004; Dorfman, 2003; Dunwoody, 2008; Wahl, 2000). The last thirty years, scholars argue that a medicalization of society can be noticed (Zola, 1972; Conrad & Schneider, 1992; Barsky & Boros, 1995; Picard & Yeo, 2011; Secko et al., 2013). Conrad (2005) is convinced that three causes are at the basis of medicalization: (1) medical professionals claiming a health issue as a medical one, (2) the presence of actors (e.g. the pharmaceutical industry) who want to get an issue recognized as a medical one and (3) social movements and patient organizations defending the interests of those suffering from the health problem. This runs parallel with 'mediatization of health' (e.g. Albaek, 2011; Allgaier et al, 2013; Dunwoody, 2008; Weingart, 2001), which Sobal (1995), defines as the popularization of health problems and defining a problem as a disorder or disease in public communication.

Subsequently, a second frame, the lifestyle approach, is gaining more and more attention in health news (Conrad, 2007; Conrad & Leiter, 2004; Gallagher & Updegraff, 2012; Hinnant & Len-Rios, 2009; Len-Rios, Hinnant, & Jeong, 2012; Wahl, 2000), as journalists argue for a more personal style of journalism. The lifestyle frame states that health-related issues are not solely described as (bio)medically soluble or genetic in origin. Solutions can also be offered by undertaking individual actions and preventive measures by the patient, adjusting his/her own behavior and (un)healthy habits particularly in relation to lifestyle disorders and disease (Campbell, 2011; Coveney et al., 2009; Hodgetts et al., 2007; Howell & Ingham, 2001), which echoes aspects of the individualizing frame and individual responsibility frame (Briggs & Hallin, 2016; Campbell, 2011; Hawkins & Linvill, 2010; Kim & Willis, 2007) and episodic frame (Iyengar, 1991) and showcases that the lifestyle frame is an extension of the previously discussed biomedical frame (Hodgetts et al., 2007). Patients are seen as individually responsible for their health

and or often displayed in health coverage to raise public awareness and educate the public about risks and preventive measures one can take by him/herself to obviate these risks (Boyce, 2007; Campbell, 2011; Coleman et al., 2011; Hodgetts et al., 2007 Ortendahl & Fries, 2005; Vandenberghe, 2015). By doing so, journalists point at the individual responsibility of patients when causing and resolving their health problems, presenting ordinary citizens as actors in the news (Hodgetts et al., 2007). Hodgetts et al. (2007, p. 50) describe the lifestyle frame as "*tools for educating the public about lifestyle risk factors and promoting prevention through acceptance of personal responsibility and behavioral change. Such stories reflect a moral obligation to be healthy, based on notions of individual responsibility for health.*"

Sobal (1995) and later Clarke and Everest (2006) refined the approach of Conrad by distinguishing three different news frames when covering health issues in particular, keeping the medicalization and self-responsibility frame and adding a third frame: the demedicalization frame. This frame offers counterweight to the medicalization frame, which labels issues as diseases or medical problems, and the self-responsibility frame, which blames individuals coping with the health issues. It states that issues are more than our biogenetic and individual nature and health must be seen in the context of society, government and economic, political and cultural factors, such as socioeconomic status of the patient, access to resources, flaws in regulations etc. (Saguy & Riley, 2005; Sobal, 1995). By doing so, the demedicalization frame strongly resembles the thematic frame and social responsibility frame (Conrad & Leiter, 2014; Devisch, 2013; Hawkins & Linvill, 2010; Iyengar, 1989, 1991; Kim & Willis, 2007). Since health problems are not solely due to the individual's responsibility (Dorfman, 2003), the demedicalization frame focuses the accountability of the community rather than blaming the victim for his or her own health situation (Campbell, 2011; Dorfman et al., 2005; Hawkins & Linvill, 2010; Hodgetts et al., 2007). The frame shows a broader range of causes and solutions of health problems and looks at the bigger picture (Barry et al., 2011; Briggs & Hallin, 2016; Clarke & Everest, 2006; Clarke et al., 2003; Hawkins & Linvill, 2010; Kim & Willis, 2007; Lawrence, 2004). Furthermore, the demedicalization frame stresses an aspect that is not mentioned in the social responsibility or thematic frame, namely the importance of accepting the differences within society instead of seeing health problems as a necessary evil or obstruction (Sobal, 1995).

Yet, some scholars argued that the terminology used to describe the trio of frames found in health news, does not capture the content of the frames. Therefore, Gollust, Lants and Ubel (2009) renamed the frames mentioned by Conrad and Sobal in order to better clarify their content. They transformed the medicalization frame into the genetic predisposition frame, the self-responsibility frame into the behavioral choices/lifestyle frame and the demedicalization frame into the social determinants frame, focusing rather on the causes of health issues with this terminology than the solutions. Others, such as Park and Reber (2010) tried to make a large-scale analysis of the literature on framing of health issues and tried to compose an overarching frame cluster, extending the previously discussed frames. By doing so, Park and Reber (2010) made a broader and more complete distinction of frames based on Iyengar (1989, 1991), Conrad (2001) and Sobal (1995), distinguishing five separate health frames. First, they distinguish the medical research frame, which focuses on new important discoveries or breakthroughs in medical research or medication development, which partially overlaps with the medicalization frame, but also covers the biomedical frame to a certain extent (Bubela & Caulfield, 2004; Conrad, 2001, 2007; Hodgetts et al., 2007; Sobal, 1995). Second, a social support frame or educational frame can be present in health news. The issue then reports on health problems supported by public education or preventive measure taken by educational systems, however, this frame mostly seems applicable to health problems

concerning children and teens (e.g. learning disorders, behavioral issues, mental health problems, disabilities). Third, the basic information frame reports on annual statistics or general information about treatment or preventive measures and therefore overlaps with the self-responsibility frame and explanatory frame (Graham, 2008; Hodgetts et al., 2007) if the suggested preventive measures should be taken on the individual level (Campbell, 2011; Park & Reber, 2010). The frame explores an issue in-depth with all its complexities, statistics and nuances, with all its context in mind, but also with an eye for personal experience and anecdotes to make the connection with the public, resembling as well Iyengar's (1991) episodic frame. Fourth, the socioeconomical-political frame places health issues in a larger context, overlapping with thematic framing (Iyengar, 1991; Kim & Willis, 2007), yet connecting even more to a higher level with the content of the demedicalization frame. Last, the personal stories and experience frame focuses on personal health stories and experiences and is closely linked to Iyengar's (1991) episodic frame and Hodgetts et al. (2007) traditional conflict frame.

This attempt to create an overview of health frames is an important step in the right direction. Yet, we feel the frames suggested by Park and Reber (2010) are not mutually exclusive and overlap to some extent. These problems served as a starting point for our qualitative framing research. For instance, we see a strong resemblance between the basic information frame and personal stories frame. As we see it, different aspects of the latter are used to attract a broader audience when applying the first one. We feel a combination of the generic health frames and more issue-specific frames is necessary when trying to fully grasp health issues and medical problems in the news. We suggest that centering the idea of the attribution of responsibility could offer a decent base of a frame cluster. At the one hand, there is a social responsibility frame (Kim & Willis, 2007; Wahl, 2000), at the other hand, we clearly distinguish an individual responsibility frame (Barry et al., 2011; Campbell, 2011; Kim & Willis, 2007; Wallack, 1990). While social responsibility can been seen in light of thematic framing and demedicalization, it is concerned with socioeconomic factors and responsibility. The individual responsibility frame, however, has a closer connection with episodic framing, yet, we notice two subdivisions within this frame: the medicalization frame and the self-responsibility frame. Both of these frames are connected to the individual and mask socioeconomic factors while attaching importance to or genetics or to lifestyle and behavior (Briggs & Hallin, 2016; Clarke & Everest, 2006; Conrad, 2001; Hodgetts et al., 2007; Howell & Ingham, 2001; King & Watson, 2005). Therefore, both frames find themselves on other ends of the individual responsibility spectrum. However, additional frames are necessary to complete the frame cluster.

2.2.3 Alternative health frames

Previously discussed research mainly focused on the responsibility connected to health problems and whether or not this could be traced back to the individual or a broader social context. The framing of solutions for health problems mainly is a choice between medical, lifestyle or social changes as we concluded in our final analysis. Yet, we notice that in health journalism, some authors approach health issues differently and distinguish different frames, shedding a different light on health in general, yet, they also reduce health coverage mainly to binary oppositions.

De Pous (2011) interprets framing practices within health journalism from the stance of the actors involved. At the one hand, health issues can be framed by using an industry frame, adopting the frame the (pharmaceutical) industry wants journalists to copy. This implies that journalists frame health issues

as beneficial as possible for pharmaceutical companies by responding to the lobby techniques used by PR practitioners (De Pous, 2011; Van Schendelen & Van Schendelen, 2010). Journalists try to inform the public and patients suffering from certain health problems about medical products and treatments and biomedical technologies they might benefit from or (legal) adjustments in regulations regarding medication use and prescriptions. Furthermore, this type of framing (un)consciously stimulates competitiveness between different pharmaceutical companies that try to catch media attention, even resulting in global competitiveness (Briggs & Hallin, 2016; Van Schendelen & Van Schendelen, 2010). At the other hand, De Pous (2011) distinguishes the health frame, a frame supported by consumer organizations, interest groups and patient associations. The frame centers direct implications of health decisions made at the policy level to the lives of ordinary citizens, and puts ordinary people as their focal point by promoting their interests and stimulating patient empowerment (Briggs & Hallin, 2016; Van Schendelen & Van Schendelen, 2010). De Pous (2011) gets her inspiration from Beauchamp (1976) who respectively labeled these frames as the market justice frame and social justice frame. The market justice frame is based on the principle of the free market and states that competitiveness will lead to an environment where the health desires and needs of ordinary citizens are met. The personal wellbeing of ordinary citizens is depicted as less important than profit margins. Therefore, involvement of the government and restrictive policies are not desired (Dorfman et al., 2005). His interpretation of the social justice frame is closely intertwined with the health frame mentioned by De Pous (2011) and centers the ordinary citizen, but connects elements from the social responsibility frame to it by stressing the fact that besides individual factors, such as individual behavior and lifestyle, social factors as well contribute to someone's health. Especially these social factors (e.g. government policies) can improve people's health situation, thus providing social justice (Dorfman et al., 2005). These frames are, compared to the aforementioned frames, more focused on the actors bringing their story to the journalistic table. Furthermore, they strongly imply that journalists always consciously choose for certain frames, neglecting the fact that time pressure and deadlines might cause unconscious selection of frames (Dan, 2017; Deprez, 2008; Entman, 1993; Gitlin, 1980; Van Gorp, 2007). Moreover, this distinction suggests a strong presence from pharmaceutical companies (and none of the other relevant actors) putting pressure on health coverage and an uncritical journalistic attitude towards them (Kroon & Schafraad, 2013; Nelkin, 1987; Stryker, 2002; Viswanath et al., 2008; Wallington et al. 2010).

Scholars have theorized other strategies and frames that try to evoke and promote behavior changes and try to establish mobilization of people (Orthendahl & Fries, 2005). Gallagher and Updegraff (2012) and Orthendahl and Fries (2005) highlight the use of a gain frame and loss frame in health coverage, based on the prospect theory of Kahneman and Tversky (1979). Health issues can be framed like gains, by stressing benefits accompanying certain behavior and treatments, but they can also focus on loss if one fails to persist in a behavioral change or medical therapy (Orthendahl & Fries, 2005). When journalists opt for the gain frame, they tend to focus on preventive measures that result in a positive health outcome, while a loss frame asks a different approach and promotes the adoption of a new lifestyle or treatment adding that rejecting behavioral changes might lead to health disadvantages (Gallagher & Updegraff, 2012). Rothman and Salovey (1997) argue that both frames can have a different effect on the audience, suggesting that gain frames more often have the desired informative result than loss frames since promoting lifestyle and behavioral changes and taking preventive measures involves less risk and danger (and therefore loss) than behavior that serves as a detection mechanism to discover illnesses or disorders and therefore includes a higher risk and loss since a serious health problem could be discovered (Cassels, 2005). Orthendahl and Fries (2005) discuss the examples of obesity and breast

cancer. Sports and exercising can make you lose weight in a short amount of time, which implies the use of a gain frame. However, when someone is a risk patient for breast cancer, news items on taking a mammography might imply a loss frame for that person. While focusing on preventive measures and their final outcome on an individual's health in the case of a health risk, these frames are relevant, yet limited to a specific aspect of a health story. Therefore, these frames will not be able to fully grasp the complete content of health issues in the news.

Lastly, we noticed that news media cover health issues on a daily basis, yet, do not have enough room to cover them extensively. Especially in the case of the coverage of epidemics, journalists are loyal to the issue-attention cycle (Downs, 1972) that illustrates that health-related events come in waves and while an issue can be relevant one day, it can decline in relevance as well and can even be replaced by other concerns. These different phases can be connected to different media frames (Shih et al., 2008). Nisbet, Brossard and Kroepsch (2003) award four frames to health coverage in light of the issue attention cycle and distinguish the conflict frame, the morality frame, the uncertainty frame and reassurance frame (Griffin, Dunwoody, & Gehrmann, 1995; Nisbet et al.,2003; Nisbet & Huge, 2006). Shih, Wijaya and Brossard (2008) reevaluated these frames and kept three of them: the conflict, uncertainty and reassurance frame, while also adding a new evidence frame, consequence frame and action frame in health coverage of epidemics. Definitions of the frames are based on the scholars' framing typology for media coverage of epidemic diseases. The conflict frame entails that the health issue on the epidemic stresses a difference in opinion between two (or more) main parties involved. Disagreement can be concerned with causes of a disorder, advantages and disadvantages of a (new) treatment, adjustments in government policies or laws etc. (Nisbet et al., 2003; Shih et al., 2008). Therefore, this particular frame shows similarities with the study conducted by Semetko and Valkenburg (2000). The uncertainty frame is characterized by news coverage on the causes and treatments of certain diseases and illnesses (Nisbet et al., 2003; Shih et al., 2008). The reassurance frame stresses the fact that the news consumer does not need to be afraid of the epidemic since there exists solid medication and treatment, while the government has taken sufficient measures at the same time in order to prevent a further outbreak (Aylesworth-Spink, 2015; Nisbet et al., 2003; Shih et al., 2008). By doing so, the frame overlaps with both the medicalization and demedicalization frame (Conrad, 2007; Hodgetts et al., 2007; Sobal, 1995). The new evidence frame stresses new developments, new treatments and results of scientific research in its media coverage (Shih et al., 2008). The consequence frame centers the social and economic consequences of an epidemic and the consequences accompanying an outbreak (Shih et al. , 2008). The action frame, at last, discusses preventive possibilities and remedies (Shih et al., 2008) and resembles the self-responsibility frame (Clarke & Everest, 2006; Conrad, 2007; Sobal, 1995). According to the scholars (Shih et al., 2008), who conducted the study on newspapers, the action and consequence frame, are the most dominantly used frames in coverage of epidemics. The consequences on economic, financial and social level as well as the measures taken by the government and scientists are the aspects shed most light on. The strong presence of these frames is according to Shih et al., (2008) as sign of journalists relying habitually on certain frames. However, some frames depend strongly on the health topic (e.g. conflict frame and reassurance frame). As stated before, the frames suggested by these scholars are a valuable contribution to the framing of health. Yet, the idea of the issue-attention cycle in health coverage and the frames themselves are not applicable to non-epidemic health issues. Whenever there is a breakout, these frames come and go in waves, yet, with one-off events or less sensationalized issues, they are less likely to be found.

2.3 Framing mental illness: the ADD/ADHD story in the news media

Mainstream news media are the primary source of information about health news and mental illnesses like ADD/ADHD in particular (Dorfman, 2003; O'Hara & Smith, 2007; Park & Reber, 2010; Wallington et al., 2010). The news media do not only try to transmit information and act like a mouthpiece voicing societal values and visions, but also try to influence and shape them (Barry et al., 2011; Conrad, 2001, 2007; Conrad & Potter, 2000; Conrad & Leiter, 2004; Henson et al., 2009; Rafalovich, 2004; Wahl et al., 2002). Since information about mental health is rather limitedly gathered by personal experience, the audience strongly relies on media coverage about mental health and positive and/or negative slant of the news media towards those who suffer from mental illness is important (Ellis, 2015; Foster, 2006; Haller, 2010; Hawkins & Linvill, 2010; Henson et al., 2009; Kline, 2006; Link et al. 1999; O'Hara & Smith, 2007; Ray & Hinnant, 2009; Sieff, 2003; Wahl et al., 2002).

In the previous subchapters, we thoroughly discussed the range of health frames journalists can pick to cover health. Many of these frames are also applicable to how journalists cover ADD/ADHD and are often fit to discuss the issue in the news media. In this specific section, however, we aim at giving a complete overview of the issue-specific mental health frames found in the literature, complementing the aforementioned general health frames and applied to the ADD/ADHD case. We mainly are tributary to the work of Rafalovich (2001, 2004), Ray and Hinnant (2009), who both translated mental health frames to the context of the ADD/ADHD issue. Furthermore, they are few of the only research examples in communication sciences focusing on this particular case.

2.3.1 Danger and childlike state as most prevalent frames

In general, all of the studies focusing on the framing and coverage of mental illnesses like ADD and ADHD come to similar conclusions, suggesting that journalists rather simplify the disorders and use negative portrayals, depictions and stereotypes supported by negative terminology and slant (Allen & Nairn, 1997; Jorm, 2000; Nairn, Coverdale, & Claasen, 2001; Sieff, 2003; Wahl, 2000, 2003a). Moreover, many authors (Amaral, 2007; Coverdale et al., 2002; Horton-Salway, 2011, 2012; Klasen, 2000; Ray & Hinnant, 2009; Read et al., 2006; Sieff, 2003; Wahl, 2003a) are convinced that the news media are showing only one side of the ADD/ADHD story due to these negative depictions, focusing on two of the most prevalent portrayals: the dangerous frame and the childlike state frame, both distinctive features of mental health coverage but applicable to ADD/ADHD coverage in the news.

Negative frames of ADD/ADHD mainly revolve around associating people who suffer from mental diseases with violence and depicting them as deviant and aggressive (Coverdale et al., 2002; Hawkins & Linvill, 2010; Henson et al., 2009; Link et al., 1999; O'Hara & Smith, 2007; Ray & Hinnant, 2009; Schneider & Ingram, 1993; Sieff, 2003; Wahl et al., 2002). Since the 1960s the rather negative image of ADD/ADHD patients established itself, implying that people coping with the disorder are psychotic and need to be handled with care and vigilance (Harwood, 2006; Read et al., 2006; Taylor, 1957; Sieff, 2003). This resulted in media portrayals of people with ADD/ADHD as weak, selfish, dangerous and not deserving any sort of social protection (Hawkins & Linvill, 2010; Schneider & Ingram, 1993). The most common view of the mentally ill framed in the news media remains that those with mental disorders like ADD/ADHD pose a danger to others (cf. violence, crime, police involvement) and to themselves (cf.

suicidal behavior) (Allen & Nairn, 1997; Foster, 2006; Henson et al., 2009; Ray & Hinnant, 2009), which is stressed in many crime stories and legal issues where mental health patients are often depicted as the perpetrator (Wahl et al., 2002). Mentally ill are most commonly linked in mass media to violence and criminal activities and are considered unpredictable, anxious and anti-social (Harwood, 2006; Link et al., 1999; Nairn et al., 2001; Sieff, 2003; Wahl et al., 2002). Patients can be portrayed as both rational and irrational, which emphasizes their evilness and dangerousness and even results in labelling them as psychopaths who want to harm people (Ellis, 2015; Haller, 2010; Horton-Salway, 2011, 2012; Philo, 1996; Olstead, 2002). This portrayal of mental illness as danger prevails in 26% of all mental health coverage according to Wahl et al. (2002), who conducted a quantitative study on 300 newspaper articles containing the key words 'mental illness' from six different American newspapers. Klin and Lemish (2008) and O'Hara and Smith (2007) take a step further and determined that, based on a meta-analysis of research on mental illness and an American newspaper study,75% of the newspaper coverage concerning mental illness results into an association with violence and danger to society. Danger to themselves appeared in roughly 20% of mental health coverage. Signorielli (1989) found that 72% of characters with mental illnesses were depicted as violent, compared to 42% of 'normal' characters, however, his study concentrated on entertainment media and results might slightly differ from news media coverage. Coverdale, Nairn and Claasen (2002) add that the association with danger, violence and aggressiveness also results into connecting vulnerability, unpredictability, untrustworthiness, fright and unreliability to those coping with mental issues like ADD/ADHD, and state that more than half of all news items concerning ADD/ADHD paint a picture of patients as dangerous, criminal and violent, a vision shared by Sieff (2003) who confirms the tendency towards this negative portrayal in both television news and in newspapers. Klin and Lemish (2008) and Rowe, Tilbury and O'Farrell (2003) mention the focus on self-destruction of patients with ADD/ADHD. When ADD/ADHD is viewed within the danger frame, a multi-causal explanation is given for the disorder. At the one hand, biologic and genetic factors are at the basis of the issue, yet, on the other hand, socioeconomic background and upbringing also leave their mark (Conrad, 2001; Henson et al., 2009; O'Hara & Smith, 2007; Read et al., 2006). Genes are proof that ADD/ADHD is partially inherited, and that a combination of biogenetics and chemical imbalances in the human brain can lead towards the diagnosis. Yet, the way a person was raised or stressful environmental factors in one's life, can also evoke the disorder (Conrad, 2001; Gonon, Konsman, Cohen, & Boraud, 2012; Holland, 2017a; Link et al., 1999; Ellis, 2015; Foster, 2006; Haller, 2010; Rafalovich, 2004). Solutions are medical (e.g. pharmacological treatment with medication or behavioral treatment by a psychiatrist) and focused on socioeconomic circumstances (e.g. adjusting parenting styles). This results in associating and identifying people coping with ADD/ADHD with the label the DSM proposes and the symptoms the manual clarifies (Coveney et al., 2009; Efron et al., 2013; Link et al., 1999).

A possible explanation for the journalistic preference for danger-related depictions could be motivated by sensationalism. By examining a series of articles assembled for educational purposes, Allen and Nairn (1997) discovered that sensationalism alone does not contribute to dangerous and negative stereotypes about those coping with mental illness. Their work illustrates that different types of dangerousness are attributed to those with mental disorders (Graham, 2008; Harwood, 2006; Henson et al., 2009; Nairn et al., 2001; Read et al., 2006; Sieff, 2003). Furthermore, news media designate negativity and danger as news values which leads to a biased negative framing: "*if those with mental illness are only newsworthy when they generate conflict or constitute a threat to the community, then these aspects will be emphasized in organizing stories and headlining articles*" (Sieff, 2003, p.380). The emphasis on the

dangers that those with mental disorders pose, is elucidated because of the journalistic routines judging stories as newsworthy (Ellis, 2015; Haller, 2010; Link et al., 1999; Ray & Hinnant, 2009). Consequently, framing ADD/ADHD as a possible danger, has an effect on the audience and might cause people to think mentally ill are more dangerous and commit more crimes (Horton-Salway, 2011, 2012; O'Hara & Smith, 2007; Riddle, 2014). Also, within the danger frame, ADD/ADHD is often linked with abuse of alcohol and/or drugs and the belief that a person is likely to be violent and therefore stimulates maintaining a certain social distance from people suffering from the disorder (Coverdale et al., 2002; Link et al., 1999; O'Hara & Smith, 2007; Taylor, 1957; Wahl et al., 2002). Negative characteristics of patients as being anti-social, dangerous to themselves and others, violent, unpredictable, edgy, anxious, abusing medical treatment and connections to institutionalization are omnipresent (Allen & Nairn, 1997; Auslander & Gold, 1999; Billig, 2002; Coverdale et al., 2002; Efron et al., 2013; Klin & Lemish, 2008; Kline, 2006; Lawson & Fouts, 2004; Ray & Hinnant, 2009; Read et al., 2006; Sieff, 2003; Wahl, 1995, 2000; Wilson et al., 2000). This terminology stressing dangerousness, complemented by the misuse of psychiatric terms and labels, adds to the dissemination of stigma and dehumanization of the mentally ill but also increases fear for those who are considered different, reducing them to nothing more than their disorder (Angermeyer & Schulze, 2001; Briggs & Hallin, 2016; Harwood. Jones, Bonney, & McMahon, 2017; Jorm, 2000; Lasorsa, 2008; Rowe et al., 2003; Taylor, 1957; Wahl, 2003b). The news media should provide more context and should show a different side of the ADD/ADHD story as well in order to prevent stigmatization and discrimination since repetitive use of the danger frame might have a negative impact on the audience (Arboleda-Florez, 2002; Allen & Nairn, 1997; Horton-Salway, 2011, 2012; Sieff, 2003; Wahl, 2003b; Wahl et al., 2002).

The second frame repeatedly used by health journalists, is called the childlike state frame and depicts ADD/ADHD patients as childlike and innocent (Coverdale et al., 2002; Ray & Hinnant, 2009; Sieff, 2003; Wahl, 2003a). ADHD patients are seen as immature, stupid, naughty and young scallywags, having no sense of responsibility (Coverdale et al., 2002; Klasen, 2000). Furthermore, at the one hand they are seen as crazy and wild, but at the other, they are perceived as vulnerable, weak and 'special' children, incompetent to control and lead their own life, being more dependent and needing somewhat adjusted parenting methods, protection and care. This portrayal leads to a simplification of the disorder as well, without having an eye for its nuances and complexity (Coverdale et al., 2002; O'Hara & Smith, 2007; Sieff, 2003; Wahl, 2003b). The vision of ADD/ADHD patients as childlike partially fits the passive patient portrayal of Olstead (2002), which entails that patients are unable to control their behavior (in a non-violent way), helpless, vulnerable, wild and childlike, as opposed to the danger frame. Life with a hyperactive child is portrayed as exhausting and challenging according to the childlike state frame, since they do not think before undertaking action, quickly lose their attention and interest, are playful, and mostly an uncontrollable force of nature (Klasen, 2000; Olstead, 2002; Ray & Hinnant, 2009). Quite often this results in a portrayal of a disturbed and challenging family life, where the ADD/ADHD child is the center of attention since parents fail to control him or her, causing the audience and close environment of the families to judge them (Allen & Nairn, 1997; Coverdale et al., 2002; Klasen, 2000). Furthermore, stressing the childlike aspect of the disorder, might contribute to a lack of understanding and a lack of sensitivity towards the disorder and might neglect its seriousness (Ray & Hinnant, 2009; Sieff, 2003). Moreover, this frame especially stresses the responsibility of the parents and their parenting methods since they may contribute to or soften ADD/ADHD symptoms. Suffering from ADHD is not necessarily connected to the child's biogenetics or the presence of certain hormones in the brain, but is rather the result of the socioeconomic environment of the child and his or her upbringing (Ellis, 2015; Haller, 2010;

Klasen, 2000; Olstead, 2002; Rafalovich, 2004). According to Olstead (2002) mental illness like ADD/ADHD is strongly determined by social class and social class sensibilities. Therefore, mainly practical help is suggested by health journalists, offering parents ways to cope with the disorder by improving or adjusting their parenting skills, while also creating the hope that the child's health problem might improve and adjusted parenting methods might be a key element in reducing symptoms (Foster, 2006; Klasen, 2000; Rafalovich, 2004). Not being as negative as the danger frame, the childlike state frame is damaging as well, creating false hope and incomplete portrayals of mental illnesses like ADD/ADHD in the media, but also having an impact on patients and their families who might worry about the stigma attached (Klasen, 2000; Nabi & Prestin, 2016). Sieff (2003) and Ray and Hinnant (2009) stress the prevalence of the childlike state frame in mental health coverage, yet, give no exact numbers on the precise use of the frame in their respective studies on American television and American magazines. Furthermore, no other studies were able to exactly pinpoint the amount of childlike frame usage in mental health coverage and ADD/ADHD coverage in particular (Holland, 2017a).

2.3.2 Other ways of framing ADD/ADHD

Ray and Hinnant (2009) felt the aforementioned two-fold division was too limited to fully grasp the ADD/ADHD problem and its patients. Starting from the danger and childlike state frame, research of Sieff (2003) and international studies on the media framing of mental health issues and health in general, the scholars distinguished a broader range of frames describing the disorder, which we completed with findings from our literature review.

The scholars discerned that mental illnesses like ADD/ADHD are portrayed in a humorous context, describing patients and their health problem as hilarious or as a joke. Those who cope with the disorder are described as humorous and quirky characters, therefore, the scholars designate this as a humorous frame (Ray & Hinnant, 2009; Sieff, 2003). Patients are portrayed in the news media as happy, clumsy, awkward, cheerful people, being without any worries in life, and the seriousness of their illness is not or rarely mentioned since they are introduced as silly jokes (Ellis, 2015; Haller, 2010; Henson et al., 2009; Ray & Hinnant, 2009; Sieff, 2003). This aligns with research of Wahl (2000; 2003a) and Wahl et al. (2002) who state news media simplify mental health problems like ADD/ADHD and reduce disorders to a few symptomatic characteristics, neglecting complexities. Furthermore, Wahl (2003b) notes the derogatory tone health journalists regularly use to cover the issue in the news media, turns ADD/ADHD into a joke or a humorous and funny comment, rather than accepting it as a multi-layered medical issue. While, being obviously more positive than the danger frame and being closely linked to a childlike state perspective, a humorous approach towards ADD/ADHD is as damaging and makes stigmas persist, since the frame obviates that the disorder and its patients are taken seriously (Foster, 2006; Ray & Hinnant, 2009; Sieff, 2003). Since researchers mainly conducted qualitative studies on mental health frames, no concrete percentages on the appearance of this frame could be found in the literature.

Furthermore, ample examples were found, where journalists used pejorative and exploitative language, misused psychiatric terms originated in the DSM and used slang words (e.g. retarded) to illustrate the ADD/ADHD case and to describe people coping with the disorder, thus creating an environment where the issue is labeled as 'different' and the patients marked as 'others', which can be referred to as the othering frame (Briggs & Hallin, 2016; Harwood, 2006; Ray & Hinnant, 2009). People with ADHD are seen as abnormal, unusual, often shortsighted to the point of disability and unlikely to step into the

regular Joe's footsteps. Moreover, they are frequently compared to so-called 'normal' people and journalists thoroughly describe what makes them different, strange or divergent (Briggs & Hallin, 2016; Ellis, 2015; Henson et al., 2009; Olstead, 2002; Ray & Hinnant, 2009; Wahl, 2003b). Olstead (2002) supports the frame by stating that the othering frame is proof of a polarized ideological framework making a division between the mentally ill (them) and the so-called normal people (us), stressing that those suffering from mental illness are in fact ill and divergent compared to the rest of the society. This frame therefore also has a role to play as a bridge to the danger frame, since describing people as different and other than social norms is only a small step away from portraying them as deviant and showing bad (and violent) behavior (Olstead, 2002). According to Wahl (1995), those with a mental health problem are depicted as looking different in the news media, which stimulates the idea of being different and being an 'other'. Research from Auslander and Gold (1999) states that 'disabling' terminology is used to describe mental illness and the patients suffering from it within this type of frame. Henson et al. (2009) labels this differently, suggesting that ADD/ADHD patients have always been considered as 'them' or 'other' historically since it is quite difficult to see them as a strong community with shared values, while people with good health are considered 'us', reducing patients to their disease. Henson et al. (2009), on the other hand, show a whole different perspective on the coverage of ADD/ADHD. The authors are convinced that, in Australian news media, people suffering from the disorder are painted as being part of the community, are 'one of us' and are seen as a valuable contribution to society. The authors (Henson et al., 2009) suggest this might be due to Australian campaigns, actively promoting personal experiences of the community with mental illnesses in order to change the previously negative depictions and media portrayals. Furthermore, they are shown as functioning well within society (Harwood, 2006; Henson et al., 2009).

Research shows that in more than half of the ADD/ADHD coverage, journalists focus on the relationship between education and the disorder, painting the ADD/ADHD picture in an academic setting, an environment where the disorder most frequently manifests itself. ADD/ADHD is regularly connected to the classroom or an educational context, stimulating adjusted education, more one-on-one attention, extra intellectual stimulation, less distractions in the classroom, less competitiveness and educational advantages. Therefore, the issue is labeled as a learning disorder where loss of concentration and attention are key (Graham, 2008; Ray & Hinnant, 2009). The academic setting frame suggests that new parenting skills and teaching methods should be developed to cater ADHD, to fit in teaching programs and the available educational system and to make life more bearable for patients, their family, and teachers as well (Foster, 2006; Graham, 2008, 2010; Harwood & Allan, 2014; Rafalovich, 2004; Sieff, 2003). Furthermore, scholars also notice that educational systems and associations mainly use this frame to draw attention to a more precise diagnosis of the disorder and even stimulate it in their media frame, since the school context is a crucial context for the discovery of the disorder (Graham, 2008; Harwood, 2006; Rafalovich, 2004). Due to the intellectual and social skills that are demanded from children, ADD/ADHD utters more visibly. Yet, we also notice a slightly medicalized approach promoting Ritalin and medical treatment as supplementary to the abovementioned solutions. In the classroom context, taking Ritalin is not seen as an abnormal activity (Conrad, 2001; Conrad & Leiter, 2004; Coveney et al., 2009; Efron et al., 2013; Graham, 2010). According to Ray and Hinnant (2009), the tone accompanying the issue here is informative and educational, turning the academic setting frame into one of the more neutral ADD/ADHD frames.

Ray and Hinnant (2009), Rafalovich (2004) and Sieff (2003) categorize as well the aforementioned medicalization, neurologic or biogenetic frame (cf. Chapter 2.2.2), which is particular for the coverage of ADD/ADHD in the news media and which is stimulated by medical doctors, the pharmaceutical industry, the government and teachers who 'practice medicine' in their classrooms (Gonon et al., 2012; Graham, 2010; Harwood et al., 2017; Norris & Lloyd, 2000; Rafalovich, 2004). According to the appliance of this frame, news coverage focuses on the relationship between medication (e.g. Adderall, Ritalin) and the disorder, new studies developed to examine ADD/ADHD, the brain activity, neurological dysfunction and hormones of the patient and notes hyperactivity and concentration loss as the prime symptoms of the illness (Barry et al., 2011; Ellis, 2015; Haller, 2010; Knight, 1997; Rafalovich, 2004; Ray & Hinnant, 2009). The interest in the link between medication and ADD/ADHD has a longstanding tradition and is related to what Conrad (2001) describes as the genetic optimism frame, arguing that mental disorders like ADD/ADHD are inherited for the most part since they find their origin in biology and genetics, are a neurological dysfunction and stress that specific clusters, patterns and combinations of genes evoke ADD/ADHD (Conrad & Leiter, 2004; Coveney et al., 2009). Hand in hand with the genetic optimism frame, the coverage on issues like ADD/ADHD increased in the news. Especially quoting medical doctors, politicians, patient associations and activists stimulates a medicalization frame (Conrad & Potter, 2000; Foster, 2006; Rafalovich, 2004) and claims that medical treatment is the one and only solution and can even cause improvement of the disabled ADD/ADHD patient (Efron et al., 2013; Rafalovich, 2004). Negative outcomes of treatment or scientific discoveries are rarely mentioned (Conrad & Potter, 2000; Wahl, 2003b). While the genetic story is accurate to some level, medical sociologists criticize this trend and have used hyperactivity as a prime example of the process by which social deviance is constructed as illness, stating that focusing on genetics and medication alone creates a distorted and partial media image of the disorder (Coveney et al., 2009; Harwood, 2006; Harwood et al., 2017; Klasen, 2000; Rafalovich, 2004). This is the result of the appearance of more and more patient groups and self-help organizations that now play an active role in shaping medicine and medical doctors pushing medicalization. A major shift has taken place with regard to medicalization. Especially in disorders that can be conceptualized as incompletely medicalized, such as hyperactivity, it is now the patients who lobby for greater recognition and medicalization, accusing the medical profession of withholding the diagnosis. In this regard, taking Ritalin is regarded as a normal activity, as well as undergoing brain scans (Conrad, 2001; Coveney et al., 2009; Rafalovich, 2001, 2004; Ray & Hinnant, 2009; Wahl, 2000). Focusing in medical treatment, however, can cause negative effects and even stigmatization by suggesting people with ADD/ADHD should be treated with Ritalin, Adderrall or behavioral therapy (Ray & Hinnant, 2009; Riddle, 2014).

A psychodynamic approach was later developed, serving as a counter-frame for the medicalization frame (Rafalovich, 2004). This approach suggests that the socioeconomic environment of the patient as well as external cues, food, social contact and connections with school and parents might stimulate mental illnesses like ADD/ADHD. Therefore, the frame might offer a concrete solution to ADD/ADHD, and seems to partially overlap with the childlike state and academic setting frame as well (Graham, 2010; Rafalovich, 2001, 2004; Ray & Hinnant, 2009; Saikkonen, 2017). Impulsivity, recklessness, vividness, irrationality, hyperactivity and a lack of long-lasting concentration are due to individual behavior and lifestyle (Campbell, 2011; Conrad, 2001, 2007; Ellis, 2015; Haller, 2010; Knight, 1997; Ray & Hinnant, 2009; Sobal, 1995). Specific treatment can be found in adjusting the dietal program of the patient by consuming less sugar, processed food and food without coloring agents and certain nutritional supplements (e.g. saturated fats) (Gunnarsson & Elam, 2012; Harwood & Allan, 2014;

Rafalovich, 2001, 2004; Saikkonen, 2017). Regulating the use of television and computer and playing video games at home could also reduce overstimulation of hyperactive children and ADD/ADHD patients (Rafalovich, 2001). Lastly, parenting methods and an adjusted educational accommodation with special needs teaching programs or more inclusive schools could also lead towards a solution (Ellis, 2015; Haller, 2010; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003). This conflict between frames implies that the medicalization/biological vs. self- responsibility/lifestyle/behavior vs. demedicalization dilemma is also present in the case of ADD/ADHD coverage and those general health frames should be taken into account when discussing and studying this specific mental health issue (Ray & Hinnant, 2009).

EMPIRICAL INQUIRY

Chapter 3: Methodology

3.1 Introduction

The next four empirical chapters of this dissertation explore journalistic sourcing and framing practices in the context of health journalism in a multi-method research design. We aim at answering three central research questions connected to the theoretical framework of this dissertation: (1) *How are health-related news items sourced (cf. use of sources and actors) by journalists in a different range of news media*, (2) *How do journalists source (cf. use of sources and actors) news about mental health issues in a different range of news media* and (3) *How are mental health issues, ADD/ADHD in particular, framed by health journalists in the news media.*

To do so, we conducted two waves of content analyses in different media outlets and combined this with in-depth and reconstruction interviews and a qualitative, inductive framing analysis. Four different studies were carried out in order to answer the proposed research questions, to include the full spectrum of health journalism and mental health issues as a particular case. Two goals are being put forward in this methodological chapter. First, we clarify the different methodological choices we made during our different studies. Additionally, we also want to shed light on the reliability and validity of the methods we used. Second, we contextualize the different studies and how they are connected to the theoretical framework discussed in the previous chapters, to each other, and to the predetermined research questions. Table 3.1 gives an overview of the different studies that were conducted as part of this dissertation. The time frames of the data collections, the demarcation of the samples as well as the media outlets under investigation, the selection of the interviewees and the specificities of every sample will be indicated in the following sections.

Chapters four and five will address the first main research question and focus on the sourcing practices and actor preferences of health journalists and the specific relationship between health journalists and their sources. With the exception of chapter six, which is based on one sole research method, namely content analysis, chapters four and five turn to account of a multi-method approach, combining quantitative and qualitative methodologies. To be precise, chapter four offers insight in the general sourcing practices (e.g. how many times is a source used, do journalists prefer elite or non-elite sources, which types of sources can be distinguished when covering health) and actor preferences (e.g. how many times is an actor quoted, do journalists prefer elite or non-elite actors, which types of actors are noticed in health coverage) of magazine journalists. By adding the personal perspectives of journalists on their own sourcing routines by the use of a combination of in-depth and reconstruction interviews, we looked into this subject more in depth and unveiled hidden or less transparent sourcing practices that are not directly visible in the news output. Chapter five zooms in on the specific relationship between magazine journalists and public relations sources, and the pharmaceutical industry in particular. Not only did we include editorial content in our content analyses, we also took commercial content into account. Again, we consulted professional journalists and their editors-in-chief about this remarkable journalist-source relationship. This multi-method approach combines the strengths of both quantitative content analysis and qualitative interviewing, offering a deeper understanding of the the exceptional relationship between journalists and pharmaceutical companies.

Topic	Method	Media	Period	Sample	Chapter
Sourcing practices of magazine health journalists	Content analyses I and II, qualitative interviews	Magazines	March-June 2013 and February 2015 November 2014-February 2015	Content analysis I: 19 magazine titles and 1047 news items Content analysis II: 10 magazine titles and 202 news items 16 interviewees	4
Information subsidies and PR from the pharmaceutical industry	Content analyses I and II, qualitative interviews	Magazines	March-June 2013 and February 2015 November 2014-February 2015	Content analysis I: 19 magazine titles, 1047 news items and 288 commercial content items Content analysis II: 10 magazine titles and 202 news items 16 interviewees	5
Comparing sourcing practices of health coverage in general with mental health coverage	Content analysis II	Newspapers, magazines, radio, broadcasts, television and online news	February 2015	35 different media titles 981 health-related news items of which 471 newspaper items, 202 magazine items, 102 television items, 103 radio items , 103 online news items	6
Framing of ADD/ADHD	Qualitative framing analysis	Newspapers	January 2012-December 2016	170 news items	7

Table 3.1: Outline of the different topics, studies, media, samples and time periods addressed in the empirical chapters of this dissertation.

In chapter six, we answer both the first and second research question of this dissertation. First, we make the comparison between five different media types (e.g. newspapers, magazines, television, radio and health news websites) to paint an inclusive Belgian overview of health journalists' sourcing practices and actor use. Second, we complement our general data of health journalism with a case study on the sourcing practices and actor preferences in mental health coverage in order to answer our second research question. In the case of mental illnesses, the news media are the principal source to have accurate and up-to-date information (Clarke, 2011; Holton et al., 2012; Wahl, 2000). Yet, the literature on mental health coverage and its sourcing practices is rather scarce. By conducting a content analysis of health coverage in general and mental health coverage in particular, we are able to draw comparisons between not only five different media types but are also able to compare mental health coverage with general health coverage in order to unveil the differences between their approach towards certain sources and actors.

Finally, chapter seven looks at the framing practices of journalists when covering mental health issues, and the case of ADD/ADHD in particular. In the past, only a handful of studies dedicated their attention towards the specific frames used by the news media to depict mental illnesses and ADD/ADHD (Coverdale et al., 2002; Ray & Hinnant, 2009). By conducting an inductive, qualitative framing analysis in the Belgian newspaper context, we aimed at filling this gap and answering our third and last research question.

In total, there were four sequential phases of data collection during the period of this PhD. The four empirical chapters included in this dissertation have been published (chapters four and five) or are in review in highly valued peer-reviewed academic journals (chapters six and seven). The publication status is mentioned at the beginning of every empirical chapter. Consequently, this has some implications on the content that is covered, the reference types and the layout. First, there is a level of overlap between the theoretical framework of this dissertation and the literature reviews of the conducted studies. Furthermore, restrictions of the journals concerning the word count did not always allow us to elaborate extensively on the methodology and research designs. Second, the reference systems of the empirical chapters do not always match with the style used throughout the introduction, literature review, discussion and conclusion of this dissertation since they had to meet the demands of the journals they were published in. All the references can be consulted at the end of the dissertation. The following sections of this chapter elaborate on the different methods that were used, sampling, demarcation of the time periods, the construction of the registration forms, coding guides and framing instrument, the construction of the questionnaire for the qualitative interviews and the reliability and validity of our studies.

3.2 Two waves of quantitative content analyses

The first steps into research with the help of content analysis were made in the late 1930s and early 1940s as a result of the period following the economic crisis and the numerous social and political problems that were related to it. At the same time, news media were blooming and radio and television became competitors of newspapers. It is in this context that content analysis, hand in hand with communication sciences, emerged and further established as a research method to study news media

and (the characteristics of) media messages (Berelson, 1952; Franzosi, 2010; Krippendorff, 2013; Neuendorf, 2002; Ohm, 2016; Shoemaker & Reese, 2014; Wester & van Selm, 2006).

According to Berelson (1952, p.18) "*content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication".* Holsti (1969) later added that content analysis could be used as a quantitative as well as a qualitative research method to objectively and systematically identify characteristics of (media) messages. In other words, content analysis studies the characteristics of media content and how these characteristics are connected to one another (Franzosi, 2010; Krippendorff, 2013; Ohm, 2016; Wester & van Selm, 2006). The largest advantage of the quantitative method is the transparent, flexible and objective way of working due to the registration form and coding guide (Bryman, 2012; Van den Bulck, 2010) and the possibility to collect and analyze large data sets (Krippendorff, 2013; Neuendorf, 2002; Wester & van Selm, 2006). Within the framework of this dissertation, this research method is justified since we aim at extensively describing the sourcing practices and actor preferences of health journalists when covering health issues in a broad range of different media types (e.g. Belgian newspapers, magazines, radio broadcasts, television broadcasts and health news websites) and magazines and mental health issues as in-depth cases. In addition we want to map sourcing routines as a characteristic of the journalistic profession, and news messages, which also implies the relevance of content analysis as research method.

Content analysis, especially in its quantitative equivalent, has its perks as well. Due to the registration form and coding guide, the media reality breaks up into fixed categories and gets fragmentized, losing perspective on latent content within the media texts and the context in which those messages are produced (Bryman, 2012; Franzosi, 2010; Holsti, 1969; Krippendorff, 2013; Neuendorf, 2002; Ohm, 2016; Wester, 2006; Wester, Renckstorf, & Scheepers, 2006; Rössler, 2012). Therefore, we need to focus on the manifest news content. By limiting our research to manifest content, we have no insight on the news production processes behind the screen, input from organizational structures or editors-in-chief etc. The content analysis of Tiffen et al. (2014) on newspapers and public service broadcasters was confronted with limitations due to the applied research method. While sources were easily coded, many journalists do not always have the tendency to mention all of the sources consulted to produce a news item, a given that is confirmed in many international studies on journalistic sourcing practices (Bucchi & Mazzolini, 2003; Peters, 2008; Picard & Yeo, 2011; Tanner, 2004; Tiffen et al., 2014). Consequently, we deepened the results from our two waves of quantitative content analyses with a combination of qualitative in-depth and reconstruction interviews in order to shed light more thoroughly on the journalistic sourcing practices.

3.2.1 Method of sampling

The two content analyses provide data on the character of health journalism for variables linked with news selection and sourcing, answering the first research question. Yet, the sampling method of both analyses was conducted differently. The first content analysis solely focuses on magazine content (editorial as well as advertorial) in a four-month time frame. The second content analysis comprises a shorter time period, yet, a larger and more media diverse sample. Most studies on health journalism focus on a specific case study such as a specific disorder, disease or illness or an epidemic outbreak. We opted for a broader approach in both of our content analyses in order to give an overview of health

coverage in general, but also took disorders and diseases into account. Hereby it was possible to filter mental health issues from the total amount of health news in order to answer the second research question of this dissertation, as is visible in our third empirical chapter. For both analyses, we applied a similar registration form and coding guide in order to be able to compare and contrast findings.

In order to select our samples, we have to take three levels into account in accordance with the principle of multistage sampling (Bryman, 2012; Deprez, 2008; Riffe, Lacy, & Fico, 1998; Van Leuven, 2013). First, a selection needs to be made on the level of examined news media. Second, sampling on the level of a time frame or period is necessary. Third, criteria that define which news items to select and which ones to leave out, need to be marked out.

3.2.1.1 Content analysis of magazines

The first content analysis tries to fill two gaps in the literature: it covers (1) the lack of empirical studies on magazine content since most research investigates newspapers and television health news (Dorfman, 2003; O'Hara & Smith, 2007; Park & Reber, 2010; Picard & Yeo, 2011) and (2) the lack of studies that examine sourcing practices and especially PR influence in health news. Chapters four and five partially build on the data derived from this analysis, complemented with the magazine data from the second content analysis and qualitative interviews.

In the first content analysis, we have examined a broad segment of the Belgian magazine market as units of analysis in order to be able to paint a generalizable picture of the Belgian magazine landscape. Our focus on magazine content within the framework of this analysis, is driven by multiple arguments. First, magazines count, more than newspapers, television and radio, on the incomes of advertisers (e.g. pharmaceutical companies, the food industry) due to the strong decrease in profit margins (De Bens & Raeymaeckers, 2013). Second, magazines have the habitual practice of including commercial content such as advertorials written by the commercial department, aligned with editorial content, while at the same time providing promotional coverage from the editorial staff (Carsten, 2004; Franklin & Carlson, 2011; Webster, 2011). Third, magazines are considered one of the most important sources of health information (Dorfman, 2003; Park & Reber, 2010; Viswanath et al., 2008; Wallington et al., 2010) in Belgium, especially for the younger and older generations who often solely receive information about health issues via magazine content (CIM, 2015). Fourth, magazines are routinely monitored by other news media as a source of health information and story ideas in order to see what is relevant by intermedia agenda-setting (Len-Rios et al., 2009a).

A wide-ranging amount of magazines coexist in the Belgian media landscape, including magazines for a broad audience that usually contain a separate health section (women's magazines, popular weeklies, general interest magazines) and even magazines that are completely dedicated to health news (CIM, 2015). We focus our attention on health-related issues in these magazines since they are proof of the importance of health as a news topic. We selected the sampled magazine titles with a few criteria in mind. First, we included different magazine types: women's magazines, popular weeklies, general interest magazines and health magazines, to be able to grasp the diverse ways in which health is covered and the attention dedicated to the topic. Additionally, this selection mechanism gives us the chance to compare sourcing practices and actor preferences regarding to magazine type and notice differences

as well as similarities in their routines. Second, we based the selection of our magazine sample on the readership size of the magazines according to the numbers published by the Belgian Center for Information about the Media (CIM, 2015) and included the most read magazines since they have the largest reach, and excluded those with a limited audience since their impact on the public opinion is rather minimal. Third, we aimed at representing the different Belgian media groups on the magazine market (e.g. Sanoma Media, Mediahuis, De Persgroep, Roularta, Cascade, Think Media) since it is possible they affect the ideological and editorial lines of the magazines and therefore have an impact on how health is covered, which topics are addressed and which sources are used. Furthermore, we aimed at representing not only large media groups, but also some smaller publishers active in Belgium. This led to the composition of a representative sample that entails 19 different magazine titles, 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).

Due to the explorative nature of the content analysis and the aim to receive a general overview of magazine journalists' sourcing practices concerning health, it is necessary to select an appropriate time period for this study. Since the 2010s, there is an increasing interest in health journalism in the field of communication sciences due to the augmented interest of the public in health information (Picard & Yeo, 2011). Moreover, as was mentioned in the introduction of this dissertation, the Kaiser Family Foundation (2009) and the Pew Research Center (2011) take note that health is the eight most covered issue in the press, while others (Weitkamp, 2003) attach even more importance to the topic. These facts combined with the changing media environment, characterized by commercialization and the arrival of new technologies, made us opt for a recent period of research. Therefore, we composed a representative sample of 19 magazine titles published in a four-month time period that started on March 1st and finished on June 30th 2013. Moreover, the time period represents an alternation of seasons, which provides us with seasonal-bound health issues (e.g. flu, hay fever) but also leaves room for random health issues that are bound to current affairs and coincidence, thus leading to a balanced health coverage. Furthermore, by focusing on a recent period of time, we can also take the influence into account of the decreasing advertising rates in magazines and the rise of social media as a source. Research shows that focusing on a larger time frame would not be beneficial since news media offer seasonal-bound information and therefore recurring patterns of news coverage (Lacy, Riffe, Stoddard, Martin, & Chang, 2001; Wester & Van Selm, 2006). In order to guarantee representativeness, we did not further stratify our data since working with composed weeks proved a too limited sample to make any significant statements. Therefore, we opted for the inclusion of every edition of the 19 magazine titles that were sampled. In total, an amount of 208 different magazines were analyzed. Our data (units of registration) were not collected by using digital archives or keyword searches, since it would be uncertain if complete search results would have been provided due to the complex definition of health and the abundance of topics it entails. In accordance with our first research question, we, consequently, browsed through the hard copies of the magazines, page by page in order to manually select our data. As mentioned in the introduction of this dissertation, we first aimed at following the holistic conceptualizations of health by the World Health Organization (1946) and Huber et al. (2016). Those approaches were, in our research, however, too narrow, since different health, lifestyle and illness-related elements are not included. Therefore, we selected all items that were labeled as a health-related issue by the magazines themselves (e.g. in the header of the page, mentioned in the article itself or in a

news beat section etc.) and utilized the definition the magazines attached to health in order to include all relevant news items. In this content analysis, we also included health advertisements and advertorials. Here as well, we applied a similar strategy and coded commercial content if it was clearly mentioned as health-related by the magazine. The demarcation of a four-month research period resulted in a total sample of 1335 health-related magazine items, enclosing 1047 news items with editorial content and 288 items with commercial content (e.g. advertisements and advertorials). By doing so, we are also able to determine whether commercial content accompanied editorial content about the same topic. This approach gives a first indication of whether editorial content is geared to commercial content.

A coding guide and registration form (cf. appendixes) were developed in order to successfully carry out the quantitative content analysis. While the first version of the coding guide and registration form was merely the result of a process of trial and error, we are indebted to the work of Van Leuven (2013) and De Dobbelaer et al., (2013) for variables concerning sources. The first version of the measurement instruments was pretested on 30 random health-related news items and was adjusted and specified with respect to the categorization of the sources and actors, the health issues discussed and the health perspectives that were portrayed. Variables particularly relevant for chapters four and five of this dissertation, are 'sources' and 'actors', which we defined according to the interpretation in the introduction of this dissertation. Furthermore, the classification is mainly based on trial and error due to the explorative nature of this study and the lack of exemplar studies in this field. In the context of sources, we discern between information or editorial subsidies and social media sources in order to fully capture the evolutions caused by commercialization and digitalization in the newsroom and their impact on health journalists' sourcing practices. The first category is defined as PR material originating from the pharmaceutical industry, policy sources, the nonprofit sector (e.g. patient organizations, sickness funds and professional unions), health institutions, or academic sources. Social media sources are defined as information from ordinary citizens (user-generated content). We also added traditional media brands as a source category due to intermedia agenda-setting practices concerning health news. Because we do not have information on the production process, and to guarantee the reproducibility and validity of the measurement, we only take sources into account in our analysis when they are explicitly mentioned in the article. In the context of actor preferences, we consider, at the one hand, elite actors, which we distinguished by trial and error as well: (1) general practitioners; (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) health care organizations; (7) the pharmaceutical industry; (8) academics (e.g. professors, researchers); (9) policy/government institutions.; and at the other hand non-elite actors: (10) patients as ordinary citizens; (11) celebrity patients acting as ordinary citizens, (12) close relatives/friends of the patient and (13) patient associations and organizations. In addition, we opted for an extra category (14) 'other actors' that could not be categorized in the previously discussed categories. While we checked the presence for the 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), since their appearance was considered more relevant than the actual quantity of their contribution to the articles. Furthermore, prevalence of an actor does not imply the contribution made to the news item was qualitatively valuable.

3.2.1.2 Content analysis of newspapers, magazines, television, radio and online news

While most studies on health journalism (and mental illnesses) mainly direct their attention towards television and/or newspaper coverage of health, we aim at exploring a broader range of media (e.g. newspapers, magazines, radio, television and online news), while focusing on health in general and at the same time on mental illnesses and magazine news as a case study as well. The choice for a multi-media approach is related to the first and second research question and is addressed in chapter six, comparing health coverage to the case of mental health issues and implying that digitalization affected the niche of mental health coverage more severely. The data concerning magazine health content from this second wave of analysis, address the first research question and are part of the comparative studies in chapters four and five where magazine health news from 2013 is compared to health coverage of 2015 in order to get insight in the sourcing routines of magazine journalists (chapter four) and their peculiar relationship with pharmaceutical companies as a news source and advertiser (chapter five).

Here as well, we opt for a for an explorative approach in order to examine health journalists sourcing routines and actor preferences. However, since information about mental health is on the rise in different types of media and since it is a topic whereby information is rather limitedly gathered by personal experience, ample scholars argue that the audience strongly relies on media coverage about mental health issues (Haller, 2010; Hawkins & Linvill, 2010; Henson et al., 2009; Kline, 2006; O'Hara & Smith, 2007; Ray & Hinnant, 2009; Sieff, 2003). This led to the selection of this particular issue as a case study within this content analysis.

As mentioned previously, the sampling method applied during this study differs from our first content analysis since we work with a larger media sample. Additionally, by comparing several media types, a more explorative take is necessary. For the selection of the media sample, we have examined a broad segment of the Belgian news media to get insight in the diverse and varied media landscape in Belgium, while also offering a manageable basis for comparison with empirical research in other national contexts. Belgium has a strongly diversified media landscape, with multiple newspapers, magazines and news websites in the hands of large media conglomerates, as well as public and commercial broadcast services. This abundance of media content induces a strong sense of competition between media outlets and media groups, but, moreover, turns the Belgian news media into a comparable case concerning sourcing practices and health coverage of other Western democracies (Hallin & Mancini, 2004). The media outlets in this content analysis are, just as the media in the first analysis, selected, with several criteria in mind. First, we include different media types, that is not only traditional print media and magazines, but also online content and television and radio broadcasters. This led to the selection of newspapers (broadsheet, quality newspapers and free dailies) as well as television (commercial and public broadcasters), radio (commercial and public broadcasters), magazines (popular weeklies, women's magazines, men's magazines, general interest magazines, age-related magazines and scientific magazines) and health news websites. Second, we aimed at representing all the different Belgian media groups operating in the Northern region of Flanders: large media groups like Mediahuis, De Persgroep, VRT, Medialaan, Sanoma, and Roularta; and smaller publishers like Cascade and Think Media were both included. Therefore, diversity in health coverage and organizational practices was ensured. Third, circulation and distribution numbers published by the Belgian Center for Information about the Media (CIM, 2015) were checked for readership size as well as the audience numbers published by the Flemish Regulator for the Media (VRM, 2015), ensuring that we include the most

consumed Belgian news media in our sample in order to examine content with a possible high impact and reach. Fourth, we only selected media in the Dutch-speaking part of the country, because most health issues in Belgium are organized and regulated on the regional instead of federal level for the most part, resulting in largely different networks of health-related actors and sources in the different parts of the country. Furthermore, news media are organized on the regional level as well and show some significant differences between Flanders and Wallonia, in structure, organization and audience (De Bens & Raeymaeckers, 2013). By taking these criteria into account, we were able to compose a representative sample of the diverse landscape of Belgian news media and selected 35 individual media titles where we focus on news content since we want to explore solely journalistic sourcing practices in the context of health journalism, as opposed to the first content analysis, and make a comparison with the specific case of mental health. With regard to newspapers, we selected five different titles: two popular newspapers, Het Laatste Nieuws (De Persgroep) and Het Nieuwsblad (Mediahuis), two quality newspapers, De Morgen (De Persgroep) and De Standaard (Mediahuis) and one free daily, Metro (Concentra & Rossel). Second, ten magazine titles were selected: popular weeklies (Dag Allemaal and Humo), women's magazines (Flair, Libelle and Vitaya Magazine), a men's magazine (P-magazine), a general interest magazine (Knack), scientific magazines (Eos and Bodytalk) and an age-related magazine (Plus Magazine). In the matter of television news, we made a distinction between, on the one hand daily news broadcasts (7 p.m.): Het Journaal (één, VRT) from the public broadcaster and Het Nieuws (VTM, Medialaan) from the commercial broadcaster. On the other hand, we also selected current affairs programs from commercial as well as public broadcasters: Ook Getest Op Mensen (VRT), Reyers Laat (VRT), Terzake (VRT), Bart & Siska (VRT), De Zevende Dag (VRT), Koppen (VRT), Café Corsari (VRT), Koppen XL (VRT), Het Journaal op Canvas (VRT), Het Spreekuur (Medialaan), Telefacts (Medialaan) and Straffe Verhalen (Vijf). Similarly to television news, Het Nieuws on Q Music and Het Journaal on Radio 1 were selected as daily news broadcasts on respectively the commercial and public broadcaster, completed with current affairs programs covering news more in depth: De Ochtend (VRT) and Vandaag (VRT). Finally, we selected two health news websites in Flanders: www.gezondheid.be (Mediahuis & Rossel) and www.gezondheidenwetenschap.be (nonprofit CEBAM-Cochrane Foundation).

Since we opt for an explorative approach as well in this second content analysis but include a large set of different media types, we selected a more limited time frame from February 1st to February 28th 2015. Due to matters of practicality, a period of 28 consecutive days was chosen rather than a sample that consisted of constructed weeks focused on a more extensive time frame. Since only twelve out of 35 media outlets included in the sample are available in online databases, a live media monitoring over a period of one month was chosen. Yet, this does not endanger the validity of the sample. First, while the emphasis on one specific period during the winter season might lead to a seasonal bias concerning covered health problems, disorders and diseases (e.g. the prominence of the flu epidemic, winter colds and losing winter weight during the month of February), we want to stress that we did not aim at mapping out the prominence of disorders and diseases in health coverage but focus on the journalistic sourcing routines. Second, we doubt that keyword searches in online databases such as GoPress (the Belgian equivalent of Lexis Nexis) and the Electronic News Archive (ENA) provide complete search results in the case of health news. Searches based on keywords can lead to the selection of irrelevant news items or might overlook news that is considered relevant for the analysis yet not includes the predetermined keywords. Additionally, relying only on those media titles that are available in archives would cause a bias in the sampling method of our data since newspapers are strongly present in databases and are categorized well while audiovisual media and magazine content is categorized less

structured. Therefore, we browsed through the hard copies of the print versions of the newspapers and magazines because in Belgium digital sales are rather low (and in the case of magazines as good as non-existing) (CIM, 2015). By doing so, we get insight into explicit references to sourcing practices and actor preferences of journalists covering health issues. In addition, we watched live emissions of television broadcasts (which were recorded), and visited the health news websites on a daily basis. Only for radio news, we relied on the archives of the broadcasters (Medialaan and VRT), where metadata and audio-fragments were made available. In accordance with our first content analysis, we selected health issues according to the definition and categorization offered by the sampled news media themselves (e.g. header of the (web)page, including the beat as a separate section, announcement during live emission on the radio or in a television program), applying the definition all of the different media types give to health themselves. The one-month research period left us with 120 newspapers, 28 magazines, 212 television emissions, 96 radio emissions and two websites to analyze and search for health news. The newspapers provided 471 health news items in our sample (48.0%). 70 of those items covered mental illnesses. The scanning of the magazines resulted in 202 magazine items (20.6%). 31 items in this subsample were addressing mental illnesses. In the matter of television news 102 television items (10.4%) of which 17 treated mental illnesses were selected. Furthermore, we coded 103 radio news items (10.5%) of which 16 items covered mental illnesses. Finally, two health news websites provided us with 103 health-related issues (10.5%). 10 online health issues covered mental health. This broad sample is the strongest advantage of this content analysis. By following up the health news content and sourcing practices in the same time frame for such a large amount of news media, we are able to compare the sourcing practices and actor preferences according to media type and to the specific case of mental health issues. Of course we have to take the technical differences (e.g. time and space limitations, periodicity, news beat system) into account as well as organizational differences and routines between the different media. Yet, by researching such a short time period in depth and by focusing on routine practices such as sourcing, we are able to compare media types to each other and get an overview in general and per media type. While the case study of mental health issues seems rather limited, we are still able to compare these data to the general health coverage due to the similar time frame.

In the coding guide and registration form, we developed general variables for identification such as the specific illness, disease or disorder the news item focuses on, since it is important to demarcate mental health issues for our case study in chapter six. Mental health issues (e.g. mental disorders, mental illness, psychiatric disorders, neurological disorders, learning disabilities, intellectual disability) are defined as a behavioral or mental pattern that may cause suffering or a poor ability to function in life. These issues may be persistent, relapsing and remitting, or occur as a single episode (e.g. schizophrenia, depression, autism, anorexia, ADD/ADHD, etc.) (APA, 2013). Further measurements are to a large extent similar to the variables measured in the first content analysis and focus on sources and actors. However, this time, we measured the quantity (i.e. number of sources/actors per source category), a decision which was instigated by our purpose to get an overview of sourcing practices on the level of the article.

3.2.2 Validity and reliability checks

Validity relates to the operationalization process, the sampling method, statistical analyses and measuring instruments (Krippendorff, 2013; Lauf, 2001; Ohm, 2016; Riffe, Lacy, & Fico, 1998; Wester &

Van Selm, 2006). In the two quantitative content analyses conducted within the framework of this dissertation, our samples were composed in a representative way, taking several criteria into mind, making it able to portray a general overview of health journalists' sourcing practices and answer our first and second research question. Second, the coding guides and registration forms were carefully developed and thoroughly pretested. Based on an extended literature review and processes of trial and error, we operationalized relevant concepts concerning sourcing in the context of health journalism and translated them into variables answering to the proposed research questions. Third, we can ensure the correctness of the statistical analyses that were used on the different variable types (mainly nominal variables) used in the registration forms. Therefore, we can conclude that both of the content analyses are valid.

Lauf (2001) and Wester and Van Selm (2006) distinguish three types of reliability, depending on the amount of coders, the moment of measuring and the presence or absence of a coding standard: intra-coder reliability, inter-coder reliability and coding stability. For our content analyses we opted for inter-coder reliability tests that measure the extent to which different coders apply the same coding guide and registration form to the same set of data and overlap in their interpretation of the set of variables. According to Krippendorff (2013), inter-coder reliability is measured by determining the replicability of the research. Replicability is the degree to which a process can be reproduced by different researchers. Demonstrating replicability requires reliable data that are obtained under test-test conditions, for example, two or more researchers working independently of each other, apply the same instructions (described in their measuring instruments) to the same units of analysis (Bryman, 2012; Krippendorff, 2013; Neuendorf, 2002; Wester, 2006). Since we apply the definitions of health given by the news media themselves, we did not test the reliability of the selection of news items. It was made clear by means of a header or a clear mention by the journalists whether or not an article treated health as a topic. Therefore we only tested reliability for coding guides and registration forms. The measuring instruments of the first content analysis were carefully pretested during two phases by seven coders (a group of six students and the doctoral student) who were intensively trained together in how to use the registration form and coding guide. A critically composed random sample of 20% of the items (n=208) was tested for inter-coder reliability (Lauf, 2001; Riffe et al., 1998) with an outcome of Cohen's kappa values ranging from 0.72 to 1.00 (cf. appendix). In the second content analysis, a coding guide and registration form were developed as well to ensure uniformity in the analytical choices. Uniformity between 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 inter-coder reliability test. Furthermore, coding decisions were discussed with each other whenever necessary. We used an inter-coder-reliability test on 15 percent (n=147) of our total sample of data (Lauf, 2001; Riffe et al., 1998), however, we did not opt for a random reliability sample because we wanted all of the variables to be represented in the reliability test, even those who appear less frequently in the news content (Riffe et al., 1998). The values of Cohen's Kappa range from 0.68 to 1.00, which indicates good agreement (Neuendorf 2002).

3.3 Qualitative interviews

Two of the empirical chapters included in this dissertation partially draw on qualitative interview data. As was mentioned earlier, empirical chapters four and five are based on a multi-method research design, combining quantitative content analyses and a combination of semi-structured in-depth

interviews and reconstruction interviews. The combination of both interview types gives us the opportunity to get more precise insight in magazine journalists' sourcing practices concerning health by asking them about their routines in general and by confronting them with pieces of their own work, venturing into a detailed account of their exact process of working, specific sourcing routines and selection of relevant actors. In both chapters, the data retrieved from the interviews were utilized to contextualize the quantitative data in order to elaborate on the hidden journalistic practices and decisions made at the managerial level by editors-in-chief and advertisers (Creswell, 2014; Holstein & Gubrium, 2016; Kvale & Brinkmann, 2015; Miller & Glassner, 2016). We opted for interviews solely with magazine health journalists because, as mentioned in the previous section, they are strongly influenced in their routines by processes of commercialization and count more heavily on advertisers, such as the pharmaceutical industry, compared to other journalists. For this reason, we want to scrutinize the relationship between magazine journalist and their sources more carefully (chapter four) and especially look into the peculiar bond with pharmaceutical companies (chapter five).

The qualitative interviews in this dissertation complement the quantitative studies we conducted and are an added value to our research because they provide richer data, clarify irregularities and unveil a social reality that is unnoticeable in our quantitative studies (Holstein & Gubrium, 2016). Compared to our quantitative sample, the interviews were able to uncover more complex sourcing processes and actor preferences of magazine journalists by asking elaborate and detailed questions and by confronting professional health journalists with pieces of their own work in order to reconstruct their routines (Reich, 2015). The respondents in our interview sample were encouraged to elaborate the specific details of their answers in order to be able to fully grasp the complex news production processes happening behind the scenes of the newsroom. While the registration forms and coding guides of our quantitative content analyses asked about whether or not certain sources were presented and whether or not some actors were being quoted while others were avoided, the qualitative interviews gave us the opportunity to dig deeper into the construction of news and the careful selection process of sources and information reaching the newsroom on a daily basis. Taking into consideration that the first and second chapter in our empirical inquiry focus on the production of news and the mechanisms behind the journalistic sourcing practices in magazine health journalism, qualitative interviews are a suitable method to offer insight in how our respondents select relevant health issues, which sources are considered relevant by them, which actors should be given a voice and how journalists decide which sourced information is reliable and which one is to avoid. Therefore, we aim at researching the ways our interviewees make sense of their social reality and construct the social reality of the newsroom (Bryman, 2012; Kvale, 1996; Mortelmans, 2008).

3.3.1 Method of sampling

Chapters four and five are based on three pilot interviews and thirteen additional interviews. In a first round, we conducted three pilot interviews with a rather limited topic list based on the results from the first content analysis and adjusted our questionnaire afterwards. Questions concerning specific sourcing routines via social media, the relationship between journalists and commercial sources such as pharmaceutical companies and the relationship between journalists, editors-in-chief and advertisers were added and specified, since journalists were surprisingly open to talk about these topics. Furthermore, we also decided to focus more strongly on the reconstruction facet of the interviews,

providing not only one but three cases of the journalists' own work to reflect on. Table 3.2 offers an overview of our complete interview sample with some of the characteristics of the journalists.

Type of magazine	Number of journalists	Number of editors-in-chief	Statute	Sex	Period	Average duration of interview
Popular weeklies	2	1	One freelancer, two journalists under wage	One male, two female	November 2014 – February 2015	46 minutes
Women's magazines	7	1	Two freelancers, six journalists under wage	One male, seven female	November 2014 – February 2015	1 hour and 7 minutes
General interest magazines	3	1	One freelancer, three journalists under wage	All female	November 2014 – February 2015	1 hour and 2 minutes
Health magazines	1	none	One journalist under wage	All female	November 2014 – February 2015	1 hour and 18 minutes

Table 3.2: Overview of respondents in the interview sample (N=16).

According to Bryman (2012), Creswell (2014) and Mortelmans (2008), qualitative research methods such as in-depth and reconstruction interviews have a different way of sampling and collecting data than, for instance, quantitative content analysis. Qualitative methodology demands a strong interplay between sampling of the respondents, collecting the data and analyzing them, constantly going back and forth between data collection and analysis. Since the content analyses only brought us insight into explicit references to sourcing practices and since we wanted to gain a better understanding of pharmaceutical (PR) impact on health coverage, we opted for a qualitative approach as well. This is a necessary addition because few traces of direct and indirect PR input are visible in the news texts. In order to select information-rich cases, we opted for a combination of two different sampling methods. In a first phase, the respondents in this dissertation were sampled by using purposive sampling, consciously selecting relevant interviewees for the case of health journalism via our quantitative data and by contacting the VVJ database (a database of all Flemish journalists). However, by purposively selecting journalists, our sample remained too limited to transfer and generalize our data to the population of Belgian magazine health journalists. Therefore, we additionally selected respondents via snowball sampling. Journalistic contacts we made during our first phase operated as central nodes in a

network of health journalists and connected us to colleagues in the field working at the same magazine or at a different magazine title. Considering this sampling method, we were able to expand our sample to 16 relevant interviewees and conducted interviewing sessions with the (almost) complete population of journalists (13) covering health for the selected magazines (e.g. Goed Gevoel, Vitaya Magazine, Flair, Libelle, Story, Bodytalk, Knack, Plus Magazine etc.) and a few of their editors-in-chief (3) (cf.Table 3.2). We were able to interview journalists (2) and an editor-in-chief (1) from popular weeklies, journalists (7) and an editor-in-chief (1) from women's magazines, journalists (3) and an editor-in-chief (1) from general interest magazines and a journalist (1) from a health magazine. A more detailed overview of the questionnaire can be found in the appendix of this dissertation. We decided to not include the transcripts of the interviews in order to guarantee the promised anonymity according to the informed consent. The sample is skewed towards female journalists, with less than one fifth of the respondents being men. This can be explained by the specialty area as female journalists are overrepresented in women's magazines and 'soft' news areas as popular weeklies (Raeymaeckers et al., 2013; Weaver & Cleveland, 1992).

A short introduction of our topic of research paved the way for cooperation and trust in the interviews. Openness was further aided by offering anonymity to interviewees, both for their name and their organization's name. In the interviews that combined elements of semi-structured in-depth interviews and reconstruction interviews, respondents reflect on (their perceptions of) sourcing practices in health news (chapter four), use of and attitude towards PR input, and the relationship with the advertisers (chapter five). Interviewees were asked which sources and actors they regularly used when covering health issues, how often they relied on information from these sources and actors, what their attitude was concerning their reliability, credibility and authority, which alternative sources and actors were used in which cases etc. Many of these questions were based on the results of our first content analysis and aimed at testing these results qualitatively, getting a more detailed insight in sourcing practices and actor preferences. We used the data from the first content analysis to encourage respondents to elaborate on their own routines and attitudes towards sources and actors (e.g. methodological triangulation) (Annells, 2006). The semi-structured interviews were complemented with a reconstruction facet (Beardsworth & Keill, 1992; Bryman, 2012; Reich, 2015). We presented each journalist a sample of three health news stories s/he wrote during the month preceding the interview and asked to reconstruct the sourcing processes to retrieve the direct and indirect role of certain sources and actors on the news output.

All interviews were either digitally recorded and transcribed, except for one that was obtained by e-interview in which the respondent wrote comments and responses directly. Most interviews were conducted face-to-face, two were conducted by Skype conversation. The majority of the respondents was contacted by email, telephone or via social media. The participants were free to choose the time and location of the interview. With the exception of the Skype and email interviews and one interview that took place at the house of the respondent, all of the interviews took place at the newsroom, out of reach of colleagues in order to talk freely about the news production routines. All of the interviews took place in Dutch, but were translated into English in light of the empirical chapters four and five of this dissertation. We worked with one semi-structured questionnaire (cf. appendix). Journalists were informed about the goals of the research and how the data and results would be reported and their anonymity was guaranteed. Conversations were only recorded after interviewees gave their consent. While three researchers transcribed the interviews, only one of them coded them. Analysis was carried

out using NVivo software in line with the method of thematic coding (Jensen, 2002). We followed the six stages of thematic analysis during our research, described by Braun and Clarke (2006) and De Vuyst (2016): familiarization with the data by (transcribing and) reading the interviews thoroughly, generating initial codes during which the preliminary data were reduced and relevant parts labelled, searching for themes and combining the initial codes, reviewing themes, defining and naming the themes and producing a research report. These different stages were constantly executed in order to be able to fully grasp the depth of our data and to avoid overlooking codes and themes.

3.3.2 Validity and reliability checks

Reliability and validity are important criteria in establishing the quality of research for both quantitative and qualitative research. However, both research traditions have another approach towards these concepts. Since external validity or transferability of the data are rather limited, reliability checks occur differently in qualitative research compared to quantitative counterparts (Bryman, 2012; Holstein & Gubrium, 2016; Mortelmans, 2008). Mason (1996, p.21) argues that "*reliability, validity and generalizability are different kinds of measures of the quality, rigour and wider potential of research, which are achieved according to certain methodological and disciplinary principles.*" By describing our methodological choices and our way of working in detail, while being reflexive about our position as a researcher, we hope to cater reliability and validity of our research design and the results of our study.

External reliability or the degree to which a study can be replicated is a difficult criterion to meet in qualitative research since it is impossible to freeze a social setting and the circumstances of a study to make it replicable. Yet, there do exists strategies that can more or less reassure external reliability. For example, a researcher replicating qualitative research should be able to adopt a similar social role to the one adopted by the original researcher. Otherwise, what a researcher conducting a replication sees and hears will not be comparable to the original research (Kirk & Miller, 1986; LeCompte & Goetz, 1982; Mason, 1996). Internal reliability implies that one observer agrees about what he sees and hears. By working systematically and writing down every decision made concerning initial codes, connections between them and themes, a researcher can adopt an auditing approach. This entails ensuring that complete records are kept of all phases of the research process (problem formulation, selection of interviewees, notes, interview transcripts, data analysis, decisions) (Kvale & Brinkmann, 2015; Lincoln & Guba, 1985). By doing so, qualitative research can establish a label of trustworthiness and reliability. We have done this in the research memos included in our NVivo analysis. We tried to ensure internal validity (Sandelowski, 1993) by applying a questionnaire that measures the data we wanted to measures since the topics in our questionnaire concerned sourcing practices, actor preferences, attitudes towards routines etc. By basing our questionnaire on the first content analysis, we have a credible and valid base to start from. Finally, external validity is difficult to accomplish in qualitative research since findings are not easily generalizable. We are aware that Belgian magazine media represents a specific niche. Nonetheless the findings are to a large extent comparable with those of similar studies conducted in other Western democracies (e.g. Hallin & Mancini, 2004; Jackson & Moloney, 2016; Len-Rios et al., 2009a; Williams & Gajevic, 2013) and fill an important gap in studying health journalism.

Another element which can enlarge the level of reliability and validity and ensuring an objective way of working, is self-reflection (Mortelmans, 2008). By reflecting on the personal and professional position and by acknowledging having certain prognoses when conducting research, a researcher is open about

the mechanisms behind selecting the research topic and respondents, and about how to approach the data. My position as a white, middle class academic researcher in the field of health journalism, former health journalist and current freelance lifestyle journalist is not considered neutral. As a Bachelor and Master student in Mediastudies, at the University of Antwerp and a freelance student-journalist, I already had strong interests in journalism and the news production process. During the writing process of my Master thesis, I developed a more fanatic interest in the sourcing routines of (foreign) reporters and especially during my first newspaper internship, my interests for health and science journalism started to grow. Choosing a topic for my own PhD research was, therefore, rather evident and based on both academic as well as professional experience. My experience as a journalist, is a characteristic that came in handy during the qualitative interviews in this dissertation. I knew some of the journalists I interviewed personally and had shortly worked with them in the past, which lowered the barriers to talk about their jobs and made it very easy to interview them in order to retrieve valuable data. It also lowered the barriers to connect me to their colleagues, who were otherwise harder to find. Due to my position, the journalists considered me an insider, yet also saw me as an objective observer of their practices, which made them eager to cooperate with me and comforted them. Every journalist that was contacted for an interview, eventually became part of the interview sample of this dissertation. My position as both journalist and researcher created some sort of common understanding and mutual respect, and offered me the opportunity to explore sourcing routines even more in depth, unveiled more nuances and practices that remained hidden in previous research on journalist-source relationships.

Very few journalists asked for an indication of the questions before meeting. In these cases, I emailed a short summary of the questionnaire and the topics that were going to be discussed. I felt that in those cases, respondents were comforted and were even more eager to work with me. Furthermore, journalists also could decide when and where to meet me for the interview. With the exception of one journalist, the skype interviews and email interview, all journalists invited me to the newsroom. This offered me the opportunity to see where the health news desk was situated (and to see if there was a separate health news desk at all), whether or not the management and newsroom were intertwined, meet colleagues, was able to see the software and source feeds applied by the journalists etc. The interviews themselves always took place in a small meeting room or lounge room, away from colleagues or superiors. By doing so, journalists were able to talk more freely about their jobs and routines.

3.4 Qualitative framing analysis

As we mentioned in the theoretical inquiry of this dissertation, the field of framing research has its foundations in multiple disciplines (Deprez, 2008; Entman et al., 2009; Gitlin, 1980; Goffman, 1974; Reese, 2001; Van Gorp, 2007). Yet, it took until the early nineties to introduce the concept of framing in communication sciences (Bateson, 2000; Dan, 2017; Gitlin, 1980; Goffman, 1974; Wolfsfeld, 1997). Journalists do not simply report facts or cover the different sides of a story equally. According to Conrad (2001), journalists always cover news in the light of a specific frame. Some scholars even argue that journalists develop specific media frames, which enable them to work more routinely when they are under pressure (Dan, 2017; Holton et al., 2012; Wallington et al., 2010; Zoch & Molleda, 2006). Furthermore, news media coverage can have a powerful, yet subtle, influence on the public and its convictions since media frames decide how people should think about certain topics, such as health and

mental illness. They can decide which symptoms one should link to certain diseases or disorders, which treatments should offer help, how to label patients, etc. (Iyengar & Kinder, 1987; Iyengar et al., 1982; Viswanath et al., 2008).

By conducting a qualitative, inductive framing analysis, addressing the third research question, chapter seven tries to provide an overview of how ADD/ADHD as a specific mental health case is framed in Belgian newspapers. Since we know relatively little about the mechanisms through which media perceptions about mental illnesses like ADD/ADHD are formed, a systematic analysis of the ways in which ADD/ADHD is portrayed in the news media is forced and will help us to understand the formation and persistence of mental health frames, filling a major gap in research. Compared to content analysis, framing analysis works with smaller data samples and includes both manifest and latent media content in the analyses, raising the opportunity to take the social context of the constructed media output into account (Bryman, 2012; Dan, 2017; Matthes, 2014; Van Gorp, 2001, 2007).

3.4.1 Framing ADD/ADHD by newspaper journalists

The literature on framing analysis illustrates that research on media frames can be achieved by applying two discrepant strategies. On the one hand, researchers can make the choice between a deductive or inductive approach, while at the other hand, they have the option of choosing between quantitative or qualitative framing analysis (Dan, 2017; Deprez, 2008; Semetko & Valkenburg, 2000). However, research questions and research topics, mainly require one of those approaches. In respect of this particular framing analysis of ADD/ADHD coverage in Belgian newspapers, we experimentally determined the appropriate research method. In what follows, we give an overview of the decisions that led to the eventual choice for our method of analysis: a qualitative, inductive framing approach towards ADD/ADHD coverage.

A preliminary inquiry, carried out between November and December 2016, aimed at determining the media frames in ADD/ADHD newspaper coverage by the means of a quantitative, deductive framing analysis, based on the magazine research of Ray and Hinnant (2009), which is one of the sole studies focusing on ADD/ADHD media coverage, and research of Rafalovich (2001, 2004). After the scholars' example, we compiled a list of frames that were likely to appear in the news content. These frames were already used in previous research on framing ADD/ADHD, yet with a focus on American coverage of the issue. In particular, the presence of the danger, childlike state, humorous, academic setting, othering, medicalization and psychodynamic frame (Ray & Hinnant, 2009; Sieff, 2003; Wahl, 2000). While this frame set consists of mainly issue-specific frames, it also includes generic frames applicable to health coverage in general. Each of these frames was operationalized and categorized in a content analysis. Our pretest consisted of a limited random sample of 25 news items. Yet, we were confronted with several problems. First, it was nearly impossible to find a clear operationalization of the frames we deductively wanted to test. While different scholars apply the aforementioned frames in their research, none of them clearly defines the characteristics that are at the basis of the frames (e.g. framing and reasoning devices), which made it quite impossible for us to detect frames in the news items based on the proposed criteria. This made us question the replicability of the research and made us realize a more systematic and structured operationalization of the frames was necessary. Second, the list of frames in the proposed studies was not developed with exhaustive frames in mind. By selecting some frames and excluding others, we would push our research in a certain direction. Furthermore, by focusing on the

descriptions that were available, the chances increased we would solely tick boxes of our quantitative measurement instrument without having an eye for keywords, terminology and latent content. Third, we questioned whether the list of frames was the right fit for our research since many news items did not fit the proposed frames. After contact with one of the authors (Amanda Hinnant from the Missouri School of Journalism), we decided that a different and more qualitative take on our case study was more relevant and valuable.

Consequently, we adjusted our approach and conducted a second preliminary inquiry on the same sample in January 2017, starting from a qualitative, inductive analysis in order to meet the aforementioned points of critique. We opted for a qualitative and more explorative approach in order to research the ADD/ADHD case more in depth and in light of developing a clearly operationalized set of frames that could be used in future research on the ADD/ADHD case. Yet, in order to increase replicability, we opted for a structured reading of the news texts by the means of the framing-memo method described by Dorfman (2003). Framing memos provide a concise overview of the broad issues that appear in the news and can serve as background summaries for those new to an issue, a simple and short yet comprehensive and sophisticated understanding of the various perspectives on the issue as it is presented in news coverage. Framing-memo methodology combines quantitative research of the frames, making cluster analysis possible, with a deeper qualitative analysis that unveils the nuances of language and the development of arguments made in the news (Dorfman, 2003). Furthermore, this method creates the opportunity to structurally detect framing and reasoning devices (Coleman & Perlmutter, 2005; Conrad, 2001; Entman, 1993; Schmitz et al., 2003). By doing so, we were able to detect three out of four of Entman's reasoning devices as basic frame elements: problem definition of ADD/ADHD, (responsible) causes of ADD/ADHD and possible remedies of ADD/ADHD. These functions are able to coexist within one ADD/ADHD news item, yet not all framing functions are present in every frame (Entman, 1993). Additionally, we also distinguished several framing devices relevant for this topic. We did not include visual images due to the lack of visuals in the applied news database. Lastly, this approach also leaves room for unveiling frames that are specific for the Belgian context and the development of frame clusters. While both approaches have their pros and cons, a qualitative, inductive framing analysis offered more potential and seemed within the context of future international research and replicability the better option. While our first pretest offered limited results, the second pretest offered richer data and more detailed information on the ADD/ADHD case.

In our sample, we examine the news content concerning ADD/ADHD of four different Belgian newspapers: Het Laatste Nieuws, Het Nieuwsblad, De Morgen and De Standaard. The selection of those newspapers depends on three different criteria. First, we wanted to include both popular (Het Laatste Nieuws and Het Nieuwsblad) and quality newspapers (De Morgen and De Standaard) in order to compare whether or not these newspaper types have a different framing approach of the ADD/ADHD case. Furthermore, Belgian popular and quality newspapers have a different newsroom structure. While quality newspapers have a specific science and health beat and specialized journalists working this specialty area, popular newspapers have a staff oriented around the concept of jacks-of-all-trades who are generalists, which might have an impact on framing practices. Second, the newspapers were chosen based on their wide circulation (CIM, 2015). Over the years, Het Laatste Nieuws and Het Nieuwsblad have been the most-read newspapers in Belgium, while at the same time, De Standaard and De Morgen are their quality counterparts with a higher educated readership. Third, we aimed at representing the

two main media groups in Belgium (De Persgroep and Mediahuis). By taking these criteria into account, we have a representative media sample for our study.

Subsequently, newspaper data for this study came from a keyword search of the Gopress database (an equivalent of Lexis/Nexis and Factiva), which includes the targeted publications. This computerized database was used to identify stories about ADD/ADHD. We employed the same calibrated method for the selection of newspaper articles, based on previous research on ADD/ADHD and mental health issues (Barry et al., 2011; Coverdale et al., 2002; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003; Sobal, 1995; Wahl, 2000; Wahl et al., 2002). Articles from the sampled newspapers were identified by using the key words 'ADD', 'ADHD', 'attention deficit disorder', 'attention deficit hyperactivity disorder' and 'Ritalin' (the most popular subscribed medicine for the disorder in Belgium). Both the acronyms 'ADD' and 'ADHD' were taken into account as well as the terminology 'attention deficit disorder' and 'attention deficit hyperactivity disorder', since both mental illnesses express the same symptoms and are not easily distinguished from one another. In our data collection, we noticed only the acronyms were mentioned in Belgian newspapers and therefore only these key words proved to be relevant.

Moreover, we selected a five-year time period as our sample, starting to collect news items from January 2012 to December 2016. We selected this time frame because we wanted to focus on a newer sample compared to previous research to see if the understanding of the disorder over time has improved framing. Previous research has taken a longitudinal approach, focusing on media framing in the 1980s and 1990s (Ray & Hinnant, 2009), while we wanted to scrutinize current coverage. The first date demarks the renewal of the DSM definition for ADD/ADHD and seemed an appropriate starting point because the DSM-V definition is much more fluid and inclusive than previous ones, possibly affecting coverage on the disorders. Consequently, we kept collecting and analyzing data until the moment of redundancy, which provided us with a period of five years.

Newspaper	2012	2013	2014	2015	2016
Het Laatste Nieuws	5	9	8	14	8
Het Nieuwsblad	7	5	6	10	7
De Morgen	15	10	9	5	10
De Standaard	5	7	7	11	12
Total (N)	32	31	30	40	37

Table 3.3: The amount of news items covering ADD/ADHD as a main issue, compared over the five year research period.

By using the key words and this specific time frame, this eventually lead to a first sample of 468 news items on ADD/ADHD. The articles were checked to make sure that they explicitly mentioned the particular disorder and had it as its main focus. We used a systematic sampling determination method to screen all stories to exclude those that were not focused on ADD/ADHD and not focused on children and teens younger than 18 years old, since coverage of adult ADD/ADHD is widely different. Furthermore, we also decided to exclude items not having a main focus on ADD/ADHD (e.g. criminality, sports, medication abuse and exam fraud) because otherwise we would be unable to detect how

ADD/ADHD and patients were framed and it would be difficult to make conclusions about our specific case study. Results of our pre-tests indicted the reliability of this approach. We decided to exclude news stories shorter than 100 words because their word count is too limited to measure frames. Furthermore, news items classified as corrections, reviews, duplicates, letters to the editor, previews of content and items unrelated to the main issue of ADD/ADHD were also excluded. This left us with a sample of 170 news items on ADD/ADHD in the four sampled newspapers.

Since we take a qualitative approach on framing, we will make use of the aforementioned framing-memo method described by Dorfman (2003). The texts were approached as news texts, but analyzed as interview transcripts and read and re-read several times with analytical notes and frame-memos, using Nvivo software for data management and analysis. News articles were coded using an iterative process of classifying news, first applying open coding and labeling explicit themes and terminology, followed by axial and selective coding, distinguishing more nuanced views on ADD/ADHD in the news texts and making it possible to conduct in-depth research (Bryman, 2012; Creswell, 2014; Holstein & Gubrium, 2016; Miller & Glassner, 2016). In particular, we followed the previously described stages of thematic analysis during our research, described by Braun and Clarke (2006) and De Vuyst (2016). These different stages were constantly executed in order to be able to fully grasp the depth of our data and to avoid overlooking codes and themes. We examined how the stories were framed, how the disorder was reported, how patients were portrayed and the extent to which this was in line with previous research. Additionally, we examined clusters of mutually coherent discourse, words, metaphors and storylines and examined whether differences could be noticed between the different newspapers in our sample.

Our qualitative coding and framing memos provided us with information on the aforementioned framing and reasoning devices that were thought to be relevant for developing frames. We examined the type of story: human interest or scientific information. We measured whether a news story mentioned any causes of ADD/ADHD and whether they included individual parent or child behaviors, addiction to unhealthy foods and other health conditions, the school environment, the pharmaceutical industry, environmental factors, socioeconomic matters etc. Next, we looked at potential solutions for the disorder and their effectiveness. We determined as well how ADD/ADHD was specified within each item, focusing on the specific terminology accompanying the disorder and its patients. Furthermore, we also took into account the source of the information used in the frame. By doing so, we address our third research question in chapter seven.

3.4.2 Validity and reliability checks

Reliability and validity are important criteria in establishing the quality of research for both quantitative and qualitative research. By describing our methodological choices and our way of working in detail and by working with framing-memos and being reflexive about our position as a researcher, we hope to meet the criteria of reliability and validity of our research design and the results of our study. By keeping framing memos and notes in the Nvivo software of how we managed our data and analyzed them, our research becomes replicable by others on a qualitative level since others become able to see what we were able to see and connect and why we made those connections and approaches towards our data. However, the main challenge remains generalizability. Our sample is small and limited to the Belgian context and a recent time frame. How ADD/ADHD was framed in the past, might differ from how it is currently framed, especially since medical perceptions of the disorder in the DSM vary over time.

Furthermore, the Belgian media perspective on this mental illness might not coincide with other countries. We have to take these limitations into account.

In the next four chapters, we will zoom in on the four different empirical studies that were conducted and try to answer the research questions that were formulated at the beginning of this chapter. As a conclusion, however, we argue that a multi-method approach, combining content analyses, qualitative interviews and framing analysis, offers a strong foundation to gain insight in the specific sourcing routines and actor preferences of health journalists when covering health issues in general and mental health problems more specifically, in the journalist-source relationships and the media frames used to cover mental health issues such as ADD/ADHD. By doing so, we think we can offer a valuable contribution to the rather limited literature and fill in research gaps in the field of health journalism and mental health coverage.

Chapter 4: The human face of health news

A multi-method analysis of sourcing practices in health-related news in Belgian magazines

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 is 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 like produsers (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'.

4.1 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., 2009a). 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.

4.1.1 Sourcing practices in the 21st 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, [1973] 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, [1978] 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 ten years since their analysis, the number of studies has continued to grow, resulting in comparable findings (e.g., Jackson & Moloney, 2016; Kroon & Schafraad, 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, 2008; Heinrich, 2011). 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, 2011). 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 et al., 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 per cent of Dutch-speaking journalists in Belgium believe that social media can be an important information channel in the newsgathering 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 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 et al., 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.

4.1.2 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 don't have a background in life sciences (Holton et al, 2012; Len-Rios et al., 2009a). 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., 2009b, 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., 2009b; 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., 2009b).

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.

(2009b) 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 towards PR content originating from powerful organizations as pharmaceutical companies while they are less suspicious towards 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. (2009b) 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 like 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).

4.2 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 coexist 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 fourteen different types of actors, 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) health care organizations; (7) the pharmaceutical industry; (8) academics (universities and journals); (9) policy/government institutions. At the other hand non-elite actors are: (10) patients as ordinary citizens; (11) celebrity patients acting as ordinary citizens; (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 inter-coder reliability test[2]. Furthermore, coding decisions were discussed with each other whenever necessary.

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	/

Table 4.1. Overview of respondents in the interview sample (N=16).

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 4.1). These data will provide valuable extra information on their sourcing practices and attitudes towards certain actors and sources. Furthemore, we presented our respondents a sample of the news stories 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 and 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).

4.3 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.

4.3.1 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 nonprofit 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 towards PR content originating from powerful organizations (Len-Rios et al., 2009b).
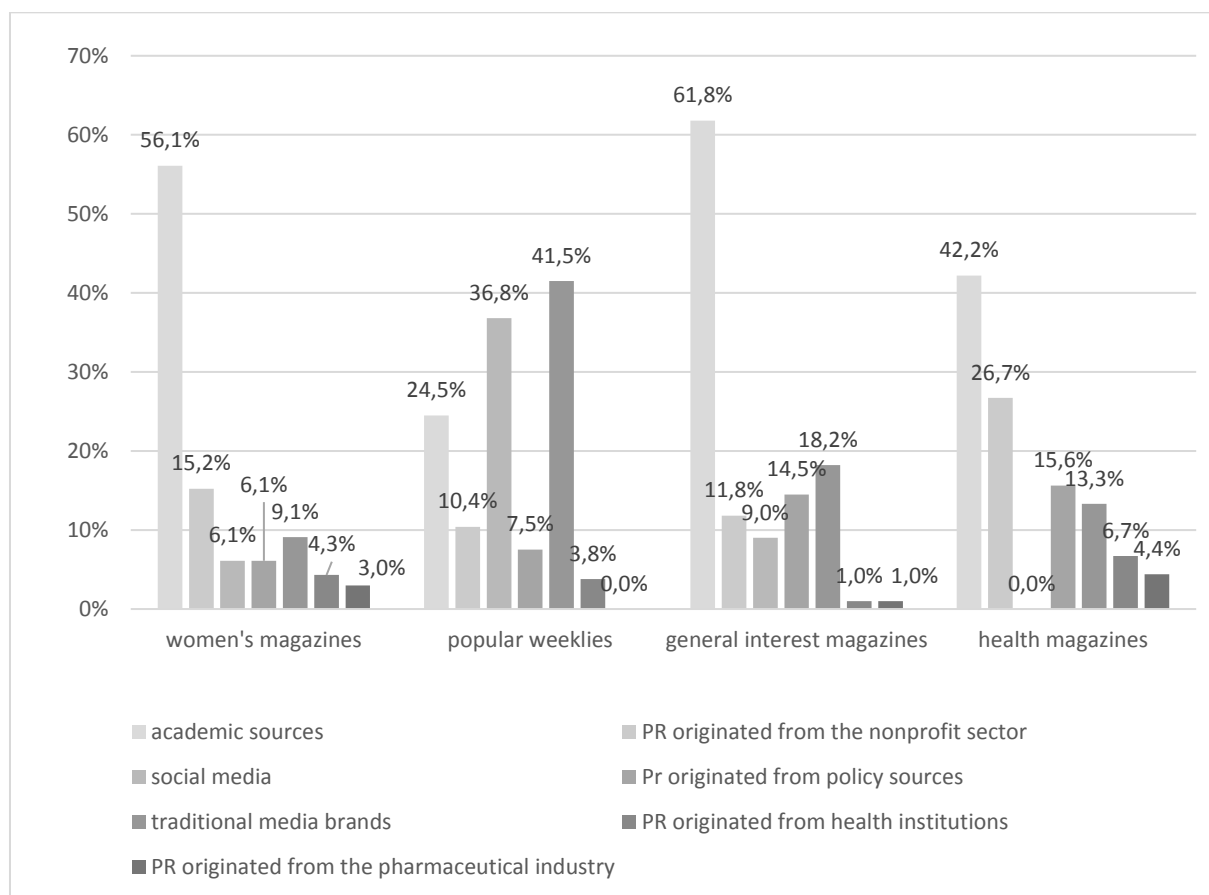
Figure 4.1: Sources used in health news in 2013 (% of articles, n=425), per magazine category.

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 (respectively 9.1%, 18.2% and 13.3%). 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 towards 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 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 like Time Magazine, Top Santé, Gezond Nu, Margriet or Natural Health are writing about.

The interviews confirm that information stemming from academic sources 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 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 as well as 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 a 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 towards 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.

4.3.2 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. 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 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.

	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%	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

Table 4.2: Actors in health news in 2013 (% of articles, n=780). The 2015 data are in line with these results.

A comparison between the different types of magazines (see Table 4.2) 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 which reflects 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 actors are not considered as relevant primary partners. This actor 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 are 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)

4.4 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 towards a few remarkable contradictions as well as towards 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., [1978] 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., 2009b). 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., 2009a), 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' since 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, as well as 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 et al. (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 health care policy, and tend towards a thematic approach (e.g. number crunching and more factual coverage), they linger more towards 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 towards 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. McNair, 2009; Gans, 2011). 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 and examine how readers process different approaches to

health journalism (which sources are valued most in terms of understandability, credibility etc.), and to 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. Len-Rios et al., 2009b; Jackson & Moloney, 2016) 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.

Notes

[1] The 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).

[2] A critically composed sample of 20% of the items was tested for inter-coder reliability with an outcome of Krippendorff's alpha and Cohen's kappa values ranging from 0.72 to 1.00. Analysis was carried out using PASW Statistics 22.

Chapter 5: Dirty dancing: Health journalists and the pharmaceutical industry

A multi-method study on the impact of pharma PR on magazine health news

Abstract

Applying a multi-method approach, the purpose of this paper is to analyze the complex ways in which Belgian magazines deal with health information supplied by PR practitioners related to the pharmaceutical industry. First, we conducted two waves of quantitative content analysis of health items published in 2013 and 2015 in a representative sample of magazines to get an overview of the sourcing practices of Belgian magazine journalists as visible in the news output. Second, we included 16 in-depth interviews with leading magazine health journalists and their editors-in-chief to confront the findings of the content analyses and search for additional evidence of how the pharmaceutical industry directly and indirectly tries to influence health news. The findings confirm that academic and medical experts are the most important sources. They help to explain and contextualize often complex and technical health issues, and they credit authority and credibility to a journalist's story. In contrast, we found very little explicit references to pharmaceutical industry sources in journalistic content. Nevertheless, the findings of the interviews suggest that pharmaceutical PR creeps into health coverage in a more indirect and much more sophisticated manner, for instance by offering additional services such as contacts with scientists or patients. In addition, editors-in-chief admit they try to anticipate the needs and preferences of advertisers in aligning editorial and commercial content. We conclude that the influence of pharmaceutical PR in magazine health news is stronger than would be expected based solely on quantitative analyses of editorial content.

Reference: De Dobbelaer, R., Van Leuven, S., & Raeymaeckers, K. (2017). Dirty dancing : Health journalists and the pharmaceutical industry : A multi-method study on the impact of pharma PR on magazine health news. *Public Relations Review*, *43*(2), 450-459.

5.1 Introduction

The current news ecology is characterized by tendencies of cost-cutting, globalization and digitization. Regardless of media type or news domain, research demonstrates that a severe drop in advertising revenues, combined with fragmented audiences and a rise in production costs, resulted in decreasing profit margins (Carsten, 2004; Franklin & Carlson, 2011; Webster, 2011). Media concentration and competition open the door to what McManus [1994] (2009) calls 'market driven journalism'. Efficiency considerations and cost-cutting measures reduce the editorial staff, and journalists must therefore produce more content in less time and with fewer resources. Journalists' workload has increased even more due to the increasing number of pages, supplements and online editions (Curtin, 1999; Davies, 2008; Davis, 2000a, 2000b; Franklin & Carlson, 2011; Lewis et al., 2006; Van Leuven, 2013). In these circumstances, 'desk journalism' increasingly substitutes active news gathering outside the newsroom. Davies (2008) contends that many journalists have transformed into 'information brokers' that mainly recycle existing content in a process of 'churnalism'. Combined with the professionalization of sources that have overwhelmingly started to use public relations tools, it is no surprise that ample research shows that journalists habitually incorporate PR material or 'information subsidies' into the news output (Curtin, 1999; Davis, 2000a, 2000b; Franklin & Carlson, 2011; Gandy, 1982; Lewis et al., 2006; Paulussen & Ugille, 2010; Reich, 2010, 2011; Salter, 2005; Van Hout & Jacobs, 2008). As such, studies indicate that mainly elite actors as governments and companies possess the necessary financial and social resources to produce PR material, leading to privileged news access when compared with non-elite actors as civil society organizations (Curtin, 1999; Cottle, 2000; Davis, 2000b; Franklin, 2011; Gans, 1979; Lewis et al., 2006;). In addition, studies find that news organizations are not very transparent towards their readership and tend to mask the use of PR material implying that it is often presented as independent information checked and balanced by journalists (Broersma, 2009; McChesney, 2013; McIntosh White, 2012; Reich, 2011; Salter, 2005; Van Hout & Jacobs, 2008). Therefore, concerns are growing about newsrooms' increasing reliance on churnalism practices and subsidized content (Broersma & Graham, 2012; Cottle, 2003; Davies, 2008; Kroon & Schafraad, 2013; Lewis et al, 2008; McChesney, 2013; Reich, 2010; Van Leuven & Joye, 2014; Zelizer, 2004). This is especially the case in the field of health journalism, which has been found to be an important source of information for audiences to manage their own health (Dunwoody, 2008).

Research of Len-Rios et al. (2009a) illustrates that health journalists compared to other news specialties are even more susceptible to information subsidies (e.g. from experts, universities and research centers, pharmaceutical companies, etc.) due to their lack of (scientific and/or health) background and knowledge. Furthermore, research shows that especially the pharmaceutical industry is a present source offering subsidized content, thus responding to journalistic needs and influencing journalistic content directly (Goldacre, 2013). Moreover, we notice a more indirect influence of the pharmaceutical industry on health journalists as well, for example in the practice of aligning editorial content and advertising, especially in magazine news (Dunwoody, 2008; Len-Rios et al, 2009a, 2009b; Macnamara, 2014; Peters et al, 2008). Yet, a lot of questions remain about the routines and processes behind these practices (Bucchi & Mazzolini, 2003; Dunwoody, 2008; Metcalfe & Gascoigne, 1995; Picard & Yeo, 2011; Secko et al., 2013). Considering the low transparency about PR material in the news, the often rather implicit copy-pasting techniques and the many informal contacts between both parties, the biggest challenge is to indicate precisely how far pharmaceutical companies tentacles reach in health news reports, (Davis, 2000a; Franklin & Carlson, 2011; Reich, 2011; Sallot & Johnson, 2006; Van Leuven &

Joye, 2014). The purpose of this research is, therefore, to highlight the direct and indirect impact of PR practitioners, especially of pharmaceutical companies, on health journalists' magazine news selection and sourcing practices.

In what follows, we will give an overview of previous studies to shed light on this issue and then present the multi-method data combining quantitative content analysis and in-depth interviews. More specifically, we will zoom in on the precarious situation of the Belgian magazine market, which of all Belgian media is most severely challenged by takeovers and reorganizations, layoffs, concentration and convergence, withdrawing advertisers and dramatically declining circulation/sales (VRM, 2015). As a consequence, we expect that the influence of PR on health issues will be highly visible in Belgian magazines.

5.2 The influence of 'Big Pharma' on health news

Dealing with PR is a common-or-garden reality for most journalists, but particularly in health and science journalism it appears to be a distinctive and frequently occurring practice (Reich, 2010). Yet, the amplitude of studies investigating the amount of PR subsidized content in journalism and especially the erratic results of different studies indicate that analyzing sourcing practices, and even more measuring the incorporation of PR in editorial content, is a complex and tricky task. A complicating factor is that production processes are difficult to trace in the news output. Studies show that journalists are often not transparent about the use of PR sources in the news (Van Leuven & Joye, 2014). In addition, press releases are seldom the sole source serving the journalist's story which makes it difficult to determine their exact influence (Reich, 2010). Journalists often avoid to verbatim copy-paste PR material but instead try to search for additional information to contextualize the content, paraphrase parts of press releases and reflect opinions of other parties involved to create their own unique story (Dunwoody, 2008; Hijmans et al., 2003; Sallot & Johnson, 2006; Van Hout & Jacobs, 2008; Van Leuven & Joye, 2014). To gain more insight in the phenomenon, Sallot and Johnson (2006) conducted a meta-analysis of more than 150 different studies that 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 ten years since their analysis, the number of studies has continued to grow resulting in comparable findings (e.g. Boumans et al, 2014; Jackson & Moloney, 2016; Kroon & Schafraad, 2013; Macnamara, 2014; Reich, 2010; Scholten & Ruigrok, 2009), also in the Belgian context (Van Leuven & Joye, 2014). Importantly, studies suggest that health journalists use significantly more content from information subsidies compared with their colleagues covering other specialty areas (Len-Rios et al, 2009a). Tanner (2004) found that the top two resources used by television health journalists were news releases and public relations. A common explanation for these findings is that abstract topics as science and health demand a greater level of expertise while journalists usually don't have an expert background in life sciences. In addition, specialized health or science journalists are increasingly replaced with generalists (Williams & Gajevic, 2013). Therefore, when covering health issues, journalists rely frequently on public relations sources (Hinnant et al., 2013; Tanner, 2004).

5.2.1 PR practitioners and journalists: a complex relationship

Despite the fact that journalists make extensive use of PR material to speed up the news production process, studies show that they often watch PR material with vigilance (Lariscy et al, 2009; Sallot & Johnson, 2006; Waisbord, 2011). Salter (2005) explains the difficult relationship between public relations officers and journalists by their different communication approaches. While journalists consider it important to act like a watchdog (communicative mode), PR is driven by commercial goals and wants to create an advantage (strategic mode), which is not always clear due to hidden intentions (Davis, 2000a, 2000b; Dunwoody, 2008; Len-Rios et al, 2009b; McIntosh White, 2012; Salter, 2005). The most important and prevalent PR sources in health news identified by literature within this domain are politicians, governmental institutions, influential pharmaceutical companies, scientists and academic experts (Dunwoody, 2008; Hinnant et al, 2009; Herman & Chomsky, 2012; McIntosh White, 2012; Van Trigt et al., 1994). Importantly, studies show that not all of these PR sources are considered distrustful or watched with vigilance by health journalists. Len-Rios et al. (2009a) assumed that health journalists because of their watchdog role would be more critical towards PR material originating from powerful institutions as business and governments while they would be more receptive to PR content from organizations that are thought to serve society such as universities and nonprofit organizations. This hypothesis was largely confirmed in their survey of American health journalists except for government PR that was also frequently used by the journalists. This latter finding can be further explained by research on public information officers (PIOs), communication professionals within governmental agencies and educational research institutions (Allgaier et al, 2013; McIntosh White, 2012). These sources are highly valued by health journalists because of their broad and specific health knowledge, their reliability, their authority within the health domain, their help when journalists need a 'translation' of complex health information, and their availability to offer additional reports (Dunwoody, 2008; Lariscy et al, 2009; Macnamara, 2014; McIntosh White, 2012; Peters et al, 2008; Waisbord, 2011). These elite sources are often the primary sources of health news because of their knowledge of health issues and their medical expertise. Experts in health news increase the credibility of the story and make it more authoritative (Allgaier et al, 2013; Cottle, 2003; Dunwoody, 2008; Gans, 1979; Kruvand, 2009; Lariscy et al, 2009; Macnamara, 2014; Peters et al, 2008). Nonetheless, Levi (2001) and Williams and Gajevic (2013) remain critical by linking the willingness of experts to help reporters to potential commercial rationales as a way of establishing visibility, attract funding and advertising their own research.

In contrast, journalists tend to take a more skeptical position when processing PR content originating from pharmaceutical companies due to the commercial background. "*The information may be 'good', but often represents a one-sided view*" (Van Trigt et al., 1994, p.640). The pharmaceutical industry appears to have less credibility with journalists and has to work harder to develop appropriate materials and to maintain relationships with health journalists (Len-Rios et al, 2009b). While there is nothing inherently wrong with using subsidized content, several critical voices (Bubela & Caulfield, 2004; Caulfield, 2004; Peters et al, 2008; Secko et al., 2013) reflect ideals as accuracy, completeness and objectivity as an important issue when health journalists rely on PR material from the pharmaceutical industry (Logan, 2001; Nelkin, 1987; Saari, Gibson & Osler, 1998; Weigold, 2001). Pharmaceutical companies can leave a clear mark on news content because they know how to anticipate the professional needs and routines of health journalists in very subtle ways (Len-Rios et al, 2009b). In essence, the communication strategy of the pharmaceutical stakeholders coincides with the traditional flaws of the news ecology driven by commercialism (Seale, 2002). Different authors discuss the

tendency towards 'sensationalism' of health news (Allan, 2011; Bubela & Caulfield, 2004; Hinnant et al., 2012, Len-Rios et al, 2012; Nelkin, 1987; Weigold, 2001;). News media pay attention to issues that can be dramatized through emphasis on crisis, a personalized story or event or conflicts, creating distorted and exaggerated media stories and unrealistic expectations (Allgaier, 2013; Dunwoody, 2008). Nelkin (1987) disapproves of the utopian character of health news in that journalists give the impression that scientists and medical innovation are able to solve all health problems. As such, some authors have doubts on the journalistic fascination for new treatments and drugs (Goldacre, 2013; McIntosh White, 2012), a fascination that is steered by pharmaceutical stakeholders who stress the novelty of their products. The news media emphasize the advantages of medical treatments but often do not talk about the risks (Bubela & Caulfield, 2004). In addition, Levi (2001: 23) states that this "*quest for exciting events to fill a daily news quota often outweighs the need for well-researched, critical, in-depth, investigative medical journalism*". This drive towards sensationalism also translates into the portrayal of celebrities to increase the information value of health news such as the worldwide coverage on Angeline Jolie's breasts' amputation to prevent breast cancer. By associating a disease, illness or disorder with a celebrity, the health issue becomes more important and relevant to the public (Chapman et al., 2005). As a consequence, some academics criticize the oversimplification of complex topics (Caulfield, 2004; Hijmans et al, 2003; McIntosh White, 2012). Some focus on the inaccuracies and the scientific credibility of the displayed stories (Levi, 2001; Ransohoff & Ransohoff, 2001; Shuchman, 2002). Taking into account these many criticisms on the use of PR, and especially pharmaceutical PR, in health journalism it is worrying to find that research on the impact of the pharmaceutical industry on health news is rather scarce. In what follows, we give an overview of the few studies that examined the impact of pharmaceutical PR on health news.

5.2.2 Measuring the (in)direct influence of 'Big Pharma' PR on health news

The influence of pharmaceutical companies on health news can be directly visible, for example in the incorporation of press releases in the news output (Allan, 2011; Goldacre, 2013; Len-Rios et al., 2009a). For instance, Van Trigt et al. (1994) found that Dutch health journalists incorporate information originating from pharmaceutical companies in their health reports, although they do confront it more often with additional sources compared to information originating from experts. But the influence of the pharmaceutical industry on health news can also be more indirect and subtle.

Williams and Gajevic (2013) examined news coverage on human-animal embryos in the British press by means of a content analysis complemented with interviews with key stakeholders and found that proponents united in the 'Science Media Centre' used various sophisticated techniques to orchestrate a media campaign. For example, they redirected journalists towards 'media friendly' scientists but also to patients to provide a human interest angle. A notorious example of these practices in the Belgian context is that of Viktor, a seven-year-old boy suffering from an ultra-rare but fatal blood disorder (aHUS) whose parents launched a petition that received widespread media attention. A potentially life-saving drug (Soliris, by Alexion) to treat his condition was very expensive and not refunded by the Belgian Social Security System. After the appearance of the first human interest stories about Viktor in which journalists had allegedly adopted an investigative perspective, the same media soon changed their tone. Two journalists revealed that the media campaign was in fact initiated and monitored by G+ Europe, a PR company representing Alexion, to influence public opinion and to increase pressure on the Belgian government to refund Soliris to aHUS patients (Eckert & Baumers, 2013). This media strategy of Alexion,

a global pharmaceutical stakeholder, to market Soliris can be observed worldwide for different national stories. Similar cases are described in other countries such as Australia, Canada, and the UK.

A second example that illustrates the indirect impact of the pharmaceutical industry, is the Menarini case. In 2013, the Belgian media reported extensively on a so-called scientific study which proved that more than one third of all men ejaculate prematurely (Sleurs, 2013). Press agency Belga was the first media outlet to report on this and spread details of the study towards subscribed media brands. The news became a headline in many media, but shortly after that, some investigative journalists found out the study represented in the media was financed by the large and well-known Italian pharmaceutical company Menarini, the producer of the only commercial medicine to treat premature ejaculation. Furthermore, the study the company subsidized was not scientifically conducted since analyses and numbers were based on perception research conducted by a marketing office (Gallasz & Amkreutz, 2013). This second controversy draws attention to the role of news agencies as a crucial gatekeeper to news access. This is important, as they also struggle to survive financially and search for more efficient ways to produce news, taking into account cost-cutting measures as a reduced staff who are faced with shorter deadlines and less time to check and balance stories (Davies, 2008; Lewis et al., 2006). In addition, Jackson and Moloney (2016) describe how press agencies search for new income sources and organize opinion polls or implement ideas in editorial content on request by stakeholders. As such, news stories are pitched by the news agency with several PR messages included in a more subtle way. This way, PR stories and editorial content get mixed in journalistic output. However, journalists receiving these 'news' releases believe the journalists working at the press agency serve as an independent gatekeeper, checking information on reliability and producing objective news output. Therefore, these messages are slipping through the news gates more easily, increasing news access for well-resourced stakeholders.

In addition, the indirect impact of the pharmaceutical industry on health news can be linked to their presence as important advertisers on (in Europe: non-prescription) medication (Allgaier et al, 2013; Hinnant et al, 2013). Critics claim that their influence is also felt in the newsroom, for example in that commercial departments put pressure on editorial departments to avoid critical coverage on large advertisers or in selling 'packages' of advertisements and favorable news coverage (Dodd & Morse, 1994; Goldacre, 2013; Wang & Gantz, 2010). Research of Delorme and Fedler (2005) illustrates that 41% of the magazine journalists regularly experiences a demand for favorable news stories by the advertisers. In newspapers, the pressure from the advertisers appears to be even higher (Delorme & Fedler, 2005). Because news organizations do not want to violate their image of independent watchdog and jeopardize their journalistic integrity and credibility, these negotiations usually take place in the backrooms of media groups and are very difficult to uncover.

Taking into account these considerations, the purpose of this research is to investigate the direct and indirect impact of PR practitioners, especially from the pharmaceutical industry, on health journalism in Belgian magazines. Our intentions are to uncover the relationship between journalists and PR practitioners, address the challenge of uncovering PR input in the news, and reveal the impact of advertisers on journalistic content by using a multi-method approach combining quantitative and qualitative methodologies.

5.3 Research questions and methodology

In our study, we analyze the complex ways in which Belgian magazines deal with health information supplied by PR practitioners related to the pharmaceutical industry applying a multi-method approach. This way, the study aims to fill three gaps in the literature: it covers (1) the lack of empirical studies on magazine content although they struggle to stay financially healthy in a highly competitive news environment (most research investigates newspapers), (2) the lack of studies that examine sourcing practices and especially PR influence in health news, and (3) the lack of studies that combine content analysis and in-depth interviews to give a more complete overview of PR influence in the news. Following from our literature overview, we formulate two research questions, focusing on the direct and indirect impact of the pharmaceutical industry on health news.

RQ1: How important is the pharmaceutical industry as a source in health items in magazines?
      RQ1a: Which stakeholders are involved as sources in health content?
      RQ1b: What is the impact of pharmaceutical PR on health news?
RQ2: Does the pharmaceutical industry influence magazines' health coverage indirectly as advertiser?

We will answer these two research questions combining quantitative and qualitative methods. A quantitative content analysis of health news in magazines addresses RQ1. A wide-ranging amount of magazines coexist in the Belgian media landscape including magazines for a broad audience that usually contain a separate health section (women's magazines, popular weeklies, general interest magazines) and even magazines that are completely dedicated to health news (CIM, 2015). Between March and June 2013, we composed a representative sample of 19 magazines in all four categories 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 health-related items in editorial as well as commercial content (advertisements and advertorials) and analyzed whether commercial content accompanied editorial content about the same topic. This approach gives a first indication of whether editorial content is geared to commercial content (RQ2), which will be further explored as part of the interviews. This selection procedure results in a total sample of 1335 health items, enclosing 1047 items with editorial content and 288 items with commercial content. For 2015, 202 items with editorial content were included. Because we do not have information on the production process, and to guarantee the reproducibility and validity of the measurement, we only take sources into account in our analysis when they are explicitly mentioned in the article. We differentiate between seven types of sources: (1) traditional media brands; (2) the pharmaceutical industry; (3) government sources; (4) the nonprofit sector (referring to patient organizations, sickness funds and professional unions); (5) health institutions (e.g. hospitals); (6) ordinary citizens and (7) academics (by which we imply universities and scientific journals). A coding guide and registration form were developed to ensure a high level of uniformity in the coding output[2].

The data are complemented with in depth interviews to gain a better understanding of pharmaceutical (PR) impact. This is a necessary addition because few traces of direct and indirect PR input are visible in the texts. In 16 in-depth interviews we reach almost the complete population of journalists (13) writing health reports for the selected magazines and three of their editors-in-chief. The sample is skewed towards female journalists, with less than one fifth of the respondents being men. This can be explained by the specialty as female journalists are overrepresented in women's magazines and 'soft' news areas

(Raeymaeckers et al., 2013; Weaver & Cleveland, 1992). Introductions paved the way for cooperation and trust in the interviews. In the interviews respondents reflect on sourcing practices in health news, use of and attitude towards PR input, and the relationship with the advertisers. The in-depth, semi-structured interviews were complemented with reconstruction interviews (Reich, 2015). We presented each journalist a sample of health news stories and asked to reconstruct the sourcing practices.

5.4 Results

5.4.1 Sourcing practices in health journalism (RQ1a)

Figure 5.1 gives an overview of the percentages of items per content type that refer to the different source categories (one item can contain multiple sources) in 2013. Almost half of the items (47.5%) contain no source. This does not necessarily imply the absence of sources, it simply states that no sources were explicitly mentioned. For reasons of clarity and comprehensibility of the articles, it is not always opportune to mention every consulted source. In addition, we have seen that journalists are often not transparent about the use of PR sources.
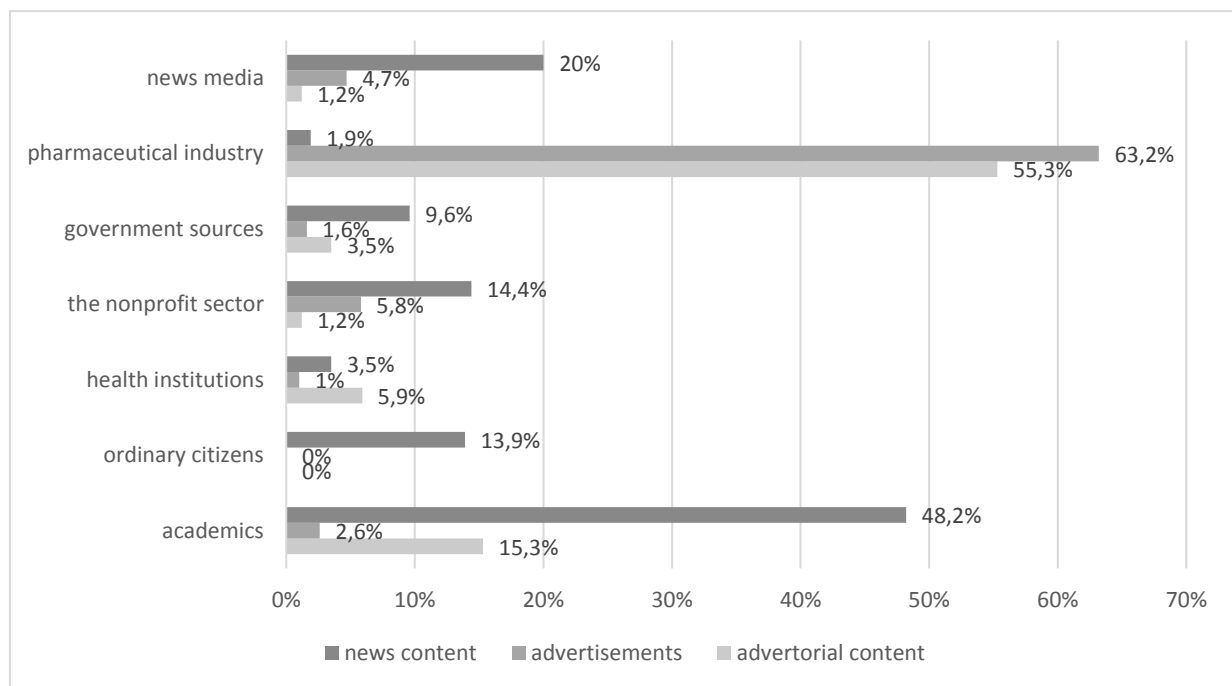
Figure 5.1: Sources used in editorial content (n= 1047), advertisements (n=191) and advertorial content (n=97) (in %) in 2013.

Figure 5.1 shows that editorial and commercial content originate from different types of sources in 2013. In line with the literature, the primary sources for editorial content are academics (present in 48.2% of the editorial content) and traditional media brands (20%), followed by the nonprofit sector (14.4%) and ordinary citizens (13.9%). When we compare these data to the findings of our follow-up research in 2015, we see that the magazines' sourcing routines are rather stable. Academics still prevail as most important news source (40.2%), followed by traditional media brands (18.3%) and the nonprofit sector (10.9%). Only ordinary citizens appear significantly less as a source of information in 2015 (5.9%). During the interviews, the journalists confirm that experts in the medical and academic world are their

most important sources. Journalists invest in a personal network of reliable GPs, specialists, scientists, dermatologists, dieticians and academics because of their expertise in health issues. 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). The interviews also confirm that information from other traditional media brands is an important source. National and international newspapers as well as press agencies, television news and BBC documentaries are regarded as important sources of inspiration. In addition, international magazines as Time Magazine, Top Santé, Margriet, or Natural Health are considered primary sources. They offer articles that can be translated and paraphrased into the journalists' own magazine. During the interviews, the journalists declare that they contact the nonprofit sector mainly to get in touch with patients, for example when they want to include personal testimonies concerning a certain illness to add a human interest perspective to the coverage.

Government sources (9.6%), health institutions (3.5%) and especially the pharmaceutical industry (1.9%) seem to be less important sources in our sample of 2013. Our data from 2015 confirm this as well (respectively 8.3%, 3.2% and 0.4%). In contrast, when we look at the commercial side of the magazines, the dominant role of the pharmaceutical industry is confirmed. 63.2% of the advertisements and 55.3% of the advertorial content originates from pharmaceutical companies. Considering the importance of pharmaceutical companies as advertiser in Belgian health magazines, we will further explore, by means of the interviews, to what extent they also have an impact on editorial content even though we would not suspect it based on the content analysis.

5.4.2 The importance of pharmaceutical PR as a source in health news (RQ1b)

The interviews confirm that health journalists maintain an ambivalent relationship with PR practitioners. The respondents experience PR content as a rather negative and unpleasant phenomenon. They are annoyed with the overdose of, often unprofessional, press releases they are confronted with on a daily basis through a steady stream of emails and through the importunate telephone calls of PR practitioners. Especially the pharmaceutical industry is often experienced as pushy and harassing.

Journalists show a critical attitude and tend to treat information supplied by PR practitioners with a lot of vigilance. They stress how they stand for critical research and select the news they think is necessary and important enough to inform the readership. In addition, they try to contact independent experts, next to those recommended by the industry, since they suspect the latter uphold the interests of the company they are closely intertwined with. The entire group of respondents stress their function as information provider, delivering accurate, true and reliable information without being a mouthpiece for certain interests. The journalists describe how pharmaceutical companies try to anticipate this attitude by including an exceptional condition in PR content, stating that journalists are not obliged to cover their issues, to safeguard themselves from critiques about their attempts to influence health news. Nonetheless the journalists admit to use PR material as a time-saving addition to the broad panoply of sources journalists can pick from on a daily basis. In line with our expectations, they feel that the importance of PR material in the newsroom is increasing, due to the changing economic conditions that are particularly strongly felt in the Belgian magazine market. 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. The interviews allowed to uncover several mechanisms behind this process.

First, personal preferences may trigger a journalist to translate a PR message into a news article, for example when a press release contains information close to their personal lives or if the PR information emotionally affects them. Second and more importantly, journalists refer to the changing media landscape as a reason to tap into PR content. The pressure of deadlines and the demand of working on multiple platforms pushes journalists into the direction of using more ready-made content to control their workload. In addition, the economic crisis and media concentration have created stronger competitiveness between magazines to get scoops, publish information first, report the most remarkable story or most innovative research, which similarly stimulates the use of PR messages to report instantly on new developments in the health field without investing much time and effort. The seasonal approach of health-related issues also contributes to the use of PR material. Magazines are, for instance, more positive towards certain organizations and institutions, when their news can be connected to the weather conditions (e.g. hay fever) or when this can be linked to a certain day dedicated to a disease or illness (e.g. World Aids Day). Commercial input is valued at those moments.

In contrast with the results of the content analyses, the interviews show that PR material is an important information source, also when it originates from the pharmaceutical industry. In line with the findings of Williams and Gajevic (2013), the 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. When journalists pick up a press release and contact the organization for more information, PR departments are eager to cooperate and 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 towards information stemming from scientific publications and studies from universities or research centers, pharmaceutical companies try to increase the authoritativeness of their PR messages, as is exemplified by the following quote:

> "*They never ask us directly, but they try to take another road to get to us. They know how we work and try to feed us with the right information, by sending us interesting statistics and research when they bring a new product to the market. A product as such is no news and does not lead to news coverage, but by offering statistics that value the importance of it, and provide contact with experts, PR practitioners know how to play the strings*." (journalist IX)

Similarly, by helping journalists to contact experts, pharmaceutical PR anticipates the journalistic need to reassure the credibility and authority of their work. The existence of such practices suggests that at least a part of the many academic sources in the quantitative content analyses are in fact instigated by pharmaceutical PR efforts. News agencies contribute to this practice as well. As Jackson and Moloney (2016) suggested, news agencies also struggle to survive financially and search for new income sources by offering additional services to stakeholders such as the production of PR messages packaged as journalistic news releases. The Belgian news agency Belga indeed offers additional services to clients,

including Belga E-poll (on-demand surveys) and Belga Media Support (distribution of press releases to journalists with Belga quality label) (www.belga.be/diensten).

5.4.3 How pharmaceutical advertisers indirectly influence editorial content (RQ2)

In our research, we measure to what extent commercial and editorial content on the same health issue accompany one another as a first indication of advertisers' influence on editorial content (Delorme & Fedler, 2005). The content analysis in 2013 demonstrates that 29.3% of all advertisements and 29.9% of all advertorials are aligned with journalistic content. For instance, the sample contains an article on hay fever that is followed by multiple advertisements on hay fever treatments and medications. In 60% of those cases, the commercial content linked to news items originates from the pharmaceutical industry. The interviews allow to further explore to what extent this finding is a reflection of advertisers' influence on editorial content. Conversations with the editors-in-chief confirm that they have to take the wishes and desires of advertisers and the commercial department more and more into account by adjusting the editorial content to their preferences and agenda. The interviews reveal several patterns of how editorial and commercial content are aligned. The first two patterns relate to the selection of topics in editorial and commercial output, the third pattern relates to advertisers' indirect influence on the content of editorial output.

The impact of advertisers on editorial content is most visible in the selection of topics. Health advertisements are placed next to editorial content discussing a similar health issue, confirming the findings of the content analysis. The first pattern is to send the planning and content of the upcoming magazine to the advertiser who then can decide whether or not to advertise a product in the issue near a corresponding article. The second pattern follows the opposite direction as editors-in-chief coordinate the magazine's content (in terms of selection of topics) to a certain extent to anticipate the needs and preferences of the advertisers. Companies, who advertise on a regular basis, send advertorials, commercial content that resembles news content, to the editor-in-chief who then decides to put a certain topic on the editorial agenda as a suggestion for journalists to write about. Consequently, advertisers do not determine directly what is written in the magazines, but they unconsciously have an impact on the topic that is covered in the magazine.

Third, the editors-in-chief deny that advertisers have a direct say in the editorial content but instead describe how journalists sometimes on their own accord attune the content of their pieces to the advertisers' interests. For example, when a news article is written about a certain health issue and journalists refer to certain products in their article to address this issue, they will more often refer to the brand of the advertiser compared to other brands. One of the editors-in-chief refers to specific advertisers who have a VIP partnership with the magazine brand:

> *"Once, we had a large partnership with a large pharmaceutical company. They invested an enormous budget in the magazine by placing advertisements in several issues. We decided to go a long way to meet them. For instance, they have a product to cure house dust mite allergy. Next to the advertisement in one of the issues, we covered an article on this issue and proposed their product as one of the solutions to deal with it. We don't do this very often, but the company's ideals are very closely linked to the magazine's DNA. They don't decide therefore what we write, although they have an impact on what we write about."* (editor-in-chief II)

Furthermore, the journalists admit they would never write something negative about advertisers, due to the importance of a stable and good relationship between magazine and advertisers in times of economic crisis and decreasing readership and advertisers. They would rather publish no article than a negative one if it implies a product of the advertiser would be criticized.

The editors-in-chief have no objection to a close collaboration of commercial and editorial departments, compared to the journalists who often fear a decreased credibility and authority if this link becomes too close. To justify this practice, the editors-in-chief refer to the economic crisis affecting the news media which implies that financial resources need to be optimized wherever possible to remain financially healthy. They often draw a parallel with fashion magazines where advertorials and publicity content are more accepted. They do not see why this same practice would be more problematic concerning health-related products in health and lifestyle magazines.

5.5 Conclusion and discussion

The goal of this study was to shed light on the complex pharma-journalist relationship and to demonstrate by means of a multi-method study the direct and indirect impact of pharmaceutical PR on magazine health news. The findings of the content analyses and interviews point out that the pharmaceutical industry has a considerable influence on magazine health journalism that is generally not explicitly visible in the news output.

In line with the literature, we found that academic and medical expert sources are the most important information sources. They help to explain and contextualize often complex and technical health issues, and they credit authority and credibility to a journalist's story. In contrast, we found very little explicit references to pharmaceutical industry sources in two waves of magazine health content in 2013 and 2015. This can partly be explained by the finding of a previous study that journalists are often not transparent about the use of PR content (Van Leuven & Joye, 2014). In addition, interviews with health journalists and editors-in-chief of the Belgian magazines under scrutiny in this study help to gain a better understanding of their sourcing practices. The findings suggest that pharmaceutical PR may not be directly visible in the news output, but nonetheless creeps into health news coverage in a much more sophisticated manner (Williams & Gajevic, 2013). PR practitioners understand that journalists are often suspicious of their work and the underlying commercial motivations and try to counter these feelings by providing additional services. For example, by redirecting journalists to scientific publications that correspond with their message, or by helping journalists to contact experts or patients, they hope to increase the authority and/or believability of their message. In this context, Jackson and Moloney (2016, p.1) suggest that Gandy's (1982) notion of information subsidies or pre-packaged news is no longer sufficient to understand the influence of PR practitioners on news content. They propose the concept of editorial subsidies to refer to "*targeted, tailored, page-ready news copy that contains key client messages*". PR material is tailored to the specific needs of individual journalists and it is offered as a whole content package including not online press releases but also additional materials as third-party commentary, case studies and contact references. In addition, the interviews suggest that many PR materials slip into news coverage unnoticed as part of Belga news releases. As a consequence, we

conclude that the influence of pharmaceutical PR in magazine health news is stronger than would be expected based solely on a content analysis of explicitly mentioned sources (RQ1).

In this study, we hypothesized that the importance of the pharmaceutical industry as an advertiser might also increase their impact on health news (Delorme & Fedler, 2005), especially in the Belgian magazine market that is strongly hit by financial cutbacks (RQ2). Our findings show that editors-in-chief anticipate the needs and preferences of advertisers in aligning editorial and commercial content, for example in placing an article on a certain health issue next to a corresponding ad. In addition, even though the respondents stress that advertisers have no direct say in editorial content, journalists display a certain sensitivity to take into account the interests of important advertisers when reporting on a certain health issue, for instance in choosing to give visibility only to their brand from a range of available health products. The fact that editors-in-chief parallel the existence of these practices in health coverage with fashion news is worrying. As such, health is certainly a more delicate topic than fashion, with more far-going implications for the health behavior and personal lives of ordinary citizens. This approach towards health suggests that the magazine world is a different –and possibly more commercial- news culture compared to newspapers. Further research could further investigate this assumption.

To conclude, we are aware that 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., 2009a; Williams & Gajevic, 2013) 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 to test the influence of the alignment of editorial and commercial content, and to monitor elements of health literacy and media literacy (Nutbeam, 2008).

Notes

[1] The sample of 2013 entails 19 different magazines. We can divide these 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 sample of 2015, 10 titles were selected: popular weeklies (Dag Allemaal, P Magazine and Humo), women's magazines (Flair, Libelle and Vitaya Magazine), quality brands (Knack and Eos) and health magazines (Plus Magazine and Bodytalk).

[2] A critically composed sample of 20% of the articles (n=208) was tested for coder reliability with an outcome of Cohen's Kappa values ranging from 0.72 up to 1.00. Analysis was carried out using PASW Statistics 22.

Chapter 6: Covering rain men and beautiful minds

A media monitoring study comparing sourcing practices of news on health and mental illness in Belgian newspapers, magazines, radio, television and news websites

Abstract

During recent years, health receives more attention by journalists, and especially mental illnesses are having an important place in the coverage due to the increasing number of people coping with schizophrenia, depression, ADHD, autism, etc. Studies have confirmed the prominence of elite sources like medical doctors, the (pharmaceutical) industry and scientific experts in health news. However, in mental health coverage, patients and their close environment seem to provide media with information. This study aims at detecting whether sourcing practices in Belgian health journalism can be connected to strategies of empowerment of non-elite sources and actors from a comparative perspective, taking a broad range of media types into account: newspapers, magazines, television, radio and news websites. A large-scale quantitative content analysis of 981 health-related news items, of which 144 items address the issue of mental illness, collected in February 2015, was set up with a specific interest in 35 selected media outlets. The key findings show that elitist sourcing practices still prevail. However, this study reveals as well that journalists prefer to contact bottom-up actors when mental health issues are adressed. As such, many journalists, especially in television and magazine news, consider patients and social media as relevant sources for health news.

6.1 Introduction

The news media are seen as an important source of information and especially in the case of health news, they are considered a bridge that is able to transmit complex medical information to the public (Dunwoody, 2008; Hinnant, 2009; Park & Reber, 2010). By covering important health issues, journalists cannot only inform the public, but can also raise awareness (Andsager & Powers, 1999), promote changes in lifestyle (Chapman et al., 2005; Cho, 2006) and focus people's attention towards new medical and pharmaceutical developments (Holton et al., 2012). In current news media, health is an increasingly prominent news category and its importance in legacy and new news media is growing on rapid speed (Hodgetts et al., 2007; Secko et al.,2013). Furthermore, health is closely connected to different facets of our daily lives and has an impact on regulations at the (inter)national policy level (Allgaier et al., 2013). This makes this specialty beat a more delicate issue and makes it more challenging for journalists to correctly cover it by contacting and relying on the right sources and by quoting the right stakeholders.

Journalists decide which sources to use when covering health, and which ones to avoid (Zoch & Molleda, 2006). According to Len-Rios et al. (2009b), health journalists lay their trust in elite sources, often experts, as for instance medical specialists, academic researchers, general practitioners or politicians involved with health policy. Yet, the current news ecology is characterized by desperate cost-cutting measures, globalization and digitalization, which is especially noticeable in specialty beats like health, and forces journalists to drastically change their routines (Len-Rios et al., 2009b; Maier, 2010). Especially digital technology, the internet and mobile media are transforming journalism and the media landscape by influencing the news gathering and sourcing processes, leading towards a possibly more balanced news access and inclusive journalism (Coleman et al., 2011; Gans, 2011; Tiffen et al., 2014). The input of citizen sources in the news seems a highly used practice when covering mental health issues (Dorfman, 2003; Sieff, 2001; Wahl, 2000). When we open up a newspaper or magazine, scroll down our online newsfeed or watch television, we often notice ordinary citizens are displayed. They take the lead in stories or serve as background figurants in addition to factual information (Beckers et al., 2016). However, the use of citizens in health news, is a rather scarcely researched topic.

Therefore, we want to explore the sourcing practices and actor preferences of health journalists, and argue for the relevance of civic-oriented journalism for broadening the scope of health coverage. This paper aims to fill two voids in the body of work on health journalism. First, it investigates whether the arrival of networked social media empowers non-elite actors such as ordinary citizens and gives them a chance to become part of the regular sourcing routines of health journalists. Second, the inter-media comparative outset of this study contrasts with previous studies that usually focused on one type of news medium. We will examine and compare sources and actor preferences of journalists working at these different media outlets when reporting about health in general and mental illnesses in particular by the means of a quantitative content analysis. In what follows, we will first give an overview of the literature about sourcing practices in health journalism in general, followed by an overview of the (fairly limited) literature on sourcing practices in mental health coverage before discussing our results.

6.2 Literature review

6.2.1 Health journalists' sourcing practices

6.2.1.1 Expertise of doctors, policy makers and pharmaceutical companies?

The way professional journalists source their news, is a topic widely studied in different areas of news reporting. Studies on news sourcing demonstrate that traditional practices of newsgathering and sourcing remain dominant (Broersma & Graham, 2012; Shoemaker & Vos, 2009; Vargas & Paulin, 2007). Notwithstanding the vast amount of information and sources in a digitalized society, a limited group of elite sources prevails, leaving journalists with a small collection of contacts they can rely on. A multitude of national and international studies have come to the same conclusions over the years and state that news access is strongly determined by the distribution of power and the distribution of resources in society (Gans, 2011; Holton et al., 2012; Reich, 2011, 2016; Wallington et al., 2010). This leads to a situation where top-down or elite actors, such as politicians, experts and companies, profit from a privileged news access compared to bottom-up or non-elite actors, such as ordinary citizens (Gans, 2011; Shoemaker & Vos, 2009; Vargas & Paulin, 2007). This hierarchy of credibility combined with a context of efficiency considerations results in a situation where so-called highly credible elite actors are consulted more frequently than those who are considered "less credible" (Herman & Chomsky, 2012; Reich, 2011).

Levi (2001), Hodgetts et al. (2007) and Tiffen et al. (2014) state that the preference for elite actors is especially strong in the domain of health journalism. Complex and abstract topics like health and science require a larger level of expertise and knowledge, while journalists usually do not have a background, nor an education in life sciences (Len-Rios et al., 2009b). On that account, the need for access to accurate, trustworthy and specialized expert information is high (Coddington & Holton, 2013; Dunwoody, 2008; Hinnant et al., 2012; Kruvand, 2009; O'Keefe, 2002; Rowe et al., 2003; Tiffen et al., 2014). Since they meet the aforementioned criteria, experts (e.g. health scientists, government officials and health professionals) are preferable sources for professional health journalists (Andsager & Powers, 1999; Cho, 2006; Hinnant, 2009; Park & Reber, 2010). Furthermore, taking into account the need for specialized information, scientific journals as well as information stemming from academic institutions and research centers serve as inspiration for health stories and are highly valued due to their authority (Abelson & Collins, 2009; Park & Reber, 2010; Rowe et al; 2003). However, some authors remain critical towards experts' willingness to cooperate, since scientists and scientific organizations have successfully professionalized their media efforts (Levi, 2001; Sumner et al., 2014; Williams & Gajevic, 2013).

This brings us to the use of public relations input in health journalism. Because journalists are sometimes not capable of covering all aspects of major topics, they also depend on public relations practitioners (Dorfman, 2003; Wallington et al., 2010). Many actors, who are considered less credible because of their commercial interests, are successful in gaining news access as elite sources because they offer journalists information subsidies and invest in ready-made news packages composed by their PR departments (Hodgetts et al., 2007; Jackson & Moloney, 2016; Macnamara, 2014; Tiffen et al., 2014). In subsidizing the efforts of news organizations to cover the news, press releases are one of the most frequently used sources of information by public relations practitioners and often are sent to journalists

written in the exact style of news stories (Dorfman, 2003; Park & Reber, 2010). Powerful actors, for instance pharmaceutical companies, as well as government agencies and health providers invest in their commercial departments that know how to play the strings of the news production process (Lariscy et al., 2009; McIntosh White, 2012; Peters et al., 2008; Waisbord, 2011; Zoch & Molleda, 2006).

6.2.1.2 What about social media and citizens?

As was mentioned above, journalistic sourcing practices and routines seem to be dominated by powerful actors. Nonetheless, this approach is criticized in light of the developments of new digital technologies. The empowering capacities of social media have the possibility to create a more balanced news access, especially in specialty beats such as health news (Hodgetts et al., 2007; Molyneux & Holton, 2015; Rahmanzadeh & Harrower, 2016; Van Leuven & Deprez, 2017). The augmenting speed of news, the need for constant information and the connectivity accompanying social media offer health journalists the potential to reevaluate their traditional sourcing practices (Callison, 2003; Coddington & Holton, 2013; Dorfman, 2003; Park & Reber, 2010; Viswanath et al.,2008).

Journalists use the web to gather background information on facts, to provide context and nuance, to stay in touch with other media brands and to search for experts as well as ordinary citizens who can contribute to the news (Wallington et al., 2010). Len-Rios et al. (2009b) found that news audiences and alternative perspectives are valued in health journalism since they offer food for thought and inspiration for story ideas (Bubela et al., 2009; De Pous, 2011; Len-Rios et al., 2009b). Secko et al. (2013) label this evolvement as the 'unfinished story' of health, which entails that due to the increasing importance of civil society actors and citizens within health journalism, health issues are corrected by the audience, with comments on the news output on –and offline. Stories based on elite sources can be adjusted and complemented with knowledge and expertise of ordinary citizens coping with certain issues or arguing from their own experience, offering a panoply of viewpoints on health issues (Secko et al., 2013). According to Lewis, Inthorn and Wahl-Jorgensen (2005), citizens can bring a story to life with their personal input, contrasting the more scientific approach of medical experts. By including citizen sources and civil society actors in health news, journalists broaden their network and are able to translate more individualized health information to the public (Dorfman, 2003) thus creating a balanced health story (Brookes et al., 2004; Bubela et al., 2009; Noguera Vivo, 2013; Rahmanzadeh & Harrower, 2016; Wallington et al., 2010). In contrast, Rowe et al. (2003) believe that compared with the traditional elite sources, ordinary citizens solely appear on occasional reference as background illustration to provide human interest or as a way to hold up a mirror to the audience. As with other specialty beats, citizens are less likely to provide information or comments in health news coverage (Avraham, 2002; Hodgetts et al, 2007). Research of Parmelee (2014) and Broersma and Graham (2012) points out that elite sources remain the dominant players on social media channels. They apply the full potential of social media to maintain their relationships with journalists, provide them with information and see it as an extra way to confirm their role as 'leading dancer' (Van Leuven & Deprez, 2017).

6.2.2 Sourcing practices and mental health coverage

According to the Diagnostic and Statistical Manual of Mental Disorders, mental health issues or mental illnesses are described as behavioral or mental patterns that may cause suffering or a poor ability to

function in life. These issues can be persistent, relapsing and remitting, or occur as a single episode (e.g. schizophrenia, depression, autism, anorexia, ADD/ADHD, etc.) (APA, 2013; Westerhof & Keyes, 2010). As mentioned before, in the case of mental illness, the news media are the principal source to have accurate and up-to-date information (Clarke, 2011; Holton et al., 2012; Wahl, 2000). The literature on mental illnesses confirms previous research on sourcing practices within health news and states the tendency of elite dominance is carried forward (Ray & Hinnant, 2009). Especially health professionals, like psychiatrists and medical doctors, are preferable sources. According to Len-Rios et al. (2009b, p.318) *"journalists use expert sources in health stories to provide perspective, contribute balance to the story, discuss research implications, and legitimize other research"*.

Yet, while ordinary citizens are less regularly represented in health news in general, apart from the human interest perspective they offer and the personal testimonies they foresee (Len-Rios et al., 2009b; Rowe et al., 2003), we notice news on mental health offers more room for citizen sources who are able to shape media agendas in some ways (Holton et al., 2012; Ray & Hinnant, 2009). According to multiple authors (Auslander & Gold, 1999; Clarke, 2011; Coleman et al., 2011; Coverdale et al., 2002; Holton et al., 2012; Sieff, 2003; Wahl et al., 2002), ordinary citizens, and especially patients, more often take the lead in mental health coverage, which leads to what De Pous (2011) calls 'patient empowerment'.

Many reasons apply to why journalists have a slight preference for the use of ordinary citizens when covering mental illnesses. By using a patient or his/her family as an exemplar with a testimony or personal contribution to a news issue, journalists can easily link patients to stereotypes, affirming or contradicting them (Coverdale et al., 2002). First, mental health patients can complement the existing portrayals of criminality and vulnerability, both distinctive characteristics of mental illnesses in media coverage (Coverdale et al., 2002; Sieff, 2003). Vulnerability portrays the patient as incompetent and unable to control his/her own life, a stereotype which can be affirmed by personal testimonies of the family of a patient, offering anecdotes of the patient's behavior. Criminality can be illustrated by testimonies of the patient's family as well, stressing dangerousness to self and society. Second, the mentally ill can be portrayed as childlike (Sieff, 2003; Wahl, 2000). Wahl (2000) notes how media tend to simplify those who suffer from mental illness, using so-called silly testimonies and personal stories (Dorfman, 2003; Wahl et al., 2002). Therefore a testimony of a patient actor, family or a patient association is perceived as a logical choice in supporting the news coverage (Dorfman, 2003; Hinnant et al., 2015; Ray & Hinnant, 2009; Sieff, 2003). Dentzer (2009) also states patients serve as a perfect source in the news when the mental health issue is quite sensational or provocative. Yet, to deliver accurate, complete and balanced information, Dentzer (2009) mentions as well that elite sources, as medical doctors and academics, contribute to the news issue as a counterbalance. Shuchman (2002) recognizes this tendency towards a balanced coverage of mental illnesses when the story is more or less provocative. Finally, ordinary citizens and patient associations serve as a news source when an issue is more activist, defending the rights of people coping with mental illness (Klasen, 2000; Rafalovich, 2004; Ray & Hinnant, 2009). The appearance of more and more patients and self-help organizations now plays an active role in shaping medicine and lobbying for greater recognition and medicalization of mental health issues (Hinnant, 2009; Klasen, 2000). On the other hand, more fact-bound, clinical and diagnostic news issues on mental illness ask for elite sources due to the delicate and complex nature of the matter and the need for medical expertise (Coverdale et al., 2002; Holton et al., 2012). Yet, we must take into account that this might be one of the factors linked to possible over-diagnosis (Swensen, 2011; Walsh-Childers & Braddock, 2013).

According to Holton et al. (2012) a limited amount of actor categories appears in news on mental illness. These include peer media/ traditional media brands, politicians, scientific journals (e.g. The Lancet), individual actors (e.g. patients), society (e.g. family of the patient and patient associations) and medical doctors and scientists. In the case of mental health, especially medical doctors and scientists, patient associations and family of patients are the most quoted actors. While scientists provide specific knowledge about a mental health issue, family members of the patient can humanize coverage by considering how issues might relate to their personal lives (Holton et al., 2012; Ray & Hinnant, 2009; Zoch & Molleda, 2006). As noted by many scholars, journalists rely on multiple different sources for various reasons. However, with delicate health issues like mental illnesses for which people are seeking reliable and fact-based information, the news media have the responsibility to foresee credible sources offering reliable health information, as for instance medical doctors and academics, next to personal stories and testimonies (Holton et al., 2012).

6.3 Research questions and methodology

While most studies on health journalism and mental illnesses are solely directed towards television and newspapers, we aim at exploring a broader range of media, while focusing on health in general and mental illnesses specifically. To fill in this gap in research, we try explore two main lines of research:

RQ1: Which sourcing practices and actor preferences characterize health news in Belgian news media (newspapers, magazines, television, radio and news websites) in general, but also in the case of mental illnesses?

       RQ1a: Which source materials are used?

       RQ1b: How is the prominence of elite versus non-elite actors?

RQ2: Are there any differences in the sourcing practices and actor preferences of different types of media?

By using a content analysis, we want to answer the proposed research questions. We have examined a very broad segment of the Belgian news media to get insight in the diverse media landscape. The media titles in this content analysis are selected with four criteria in mind. First, we include different media types: newspapers, magazine content, online content and television and radio broadcasts. Second, we aimed at representing different media corporations. Third, circulation and distribution numbers published by the Belgian Center for Information about the Media (CIM, 2015) were checked for readership size as well as the audience numbers published by the Flemish Regulator for the Media (VRM, 2014). Fourth, we only selected media in the Dutch-speaking part of the country, because most health matters in Belgium are organized on the regional level in Belgium. This led to the selection of 35 individual media titles.

With regard to newspapers, we selected five different titles: two broadsheet newspapers (Het Laatste Nieuws and Het Nieuwsblad), two quality newspapers (De Morgen and De Standaard) and one free daily, (Metro). The newspapers provided 471 health news items in our sample (48.0%). 70 of those items covered mental illnesses (14.9%). Secondly, we selected ten magazine titles: popular weeklies (Dag Allemaal and Humo), women's magazines (Flair, Libelle and Vitaya Magazine), men's magazines (P-magazine), general interest magazines (Knack), scientific magazines (Eos and Bodytalk) and an age-

related magazine (Plus Magazine), which resulted in 202 magazine items (20.6%). 31 items in this subsample (15.3%) were addressing mental illnesses. In the matter of television news, we made a distinction between, on the one hand daily news broadcasts (7 p.m.): Het Journaal from the public broadcaster and Het Nieuws from the commercial broadcaster. On the other hand, we also selected current affairs programs from commercial, as well as public broadcasters: Ook Getest Op Mensen, Reyers Laat, Terzake, Bart & Siska, De Zevende Dag, Koppen, Café Corsari, Koppen XL, Het Journaal op Canvas, Het Spreekuur, Telefacts and Straffe Verhalen. This resulted in 102 television items (10.4%) of which 17 treated mental illnesses (16.7%). Similarly to television news, Het Nieuws on Q Music and Het Journaal on Radio 1 were selected as daily news broadcasts on respectively the commercial and public broadcaster, completed with current affairs programs covering news more in-depth: De Ochtend and Vandaag. We were able to select 103 radio news items (10.5%) of which 16 items covered mental illnesses (15.5%). Finally, we selected two health news websites in Flanders: www.gezondheid.be and www.gezondheidenwetenschap.be, that provided us with 103 health-related issues (10.5%). 10 online health issues (9.7%) covered mental illness.

Given the wide variety of media outlets in the analysis, we opted for a short sampling period from February 1st to February 28th 2015. We manually browsed through the hard copies of the print versions of the newspapers and magazines, watched live emissions of television broadcasts and paid daily visits to the health news websites. Only for radio news, we relied on the archives of the broadcasters Medialaan and VRT, where audio-fragments were made available. We selected all items that were labeled as a health news by the sampled news media themselves. This resulted in a total sample of 981 health-related news items, with 144 of those items (14.7%) addressing mental illnesses (e.g.. schizophrenia, OCD, AD(H)D, autism, burn-out, depression, etc.). A coding guide and registration form were developed to ensure uniformity in the 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 inter-coder reliability test, with values of Cohen's Kappa ranging from 0.68 to 1.00. Analysis was carried out by using PASW Statistics 22 and all reported results are significant at p≤0.05 level.

To answer our research questions, we developed variables which can be divided into two categories. RQ1a has interest for journalistic sourcing practices. Sources are defined as material resources that contain relevant information for journalists (Van Leuven & Joye, 2014). On the one hand, we identified different types of elite or top-down sources: (1) news agencies; (2) traditional media brands (national as well as international); (3) subsidized content and PR input and (4) since the remarkable presence of scientific publications and journal articles, we decided to name them as a separate source in our research. On the other hand, we identified non-elite sources: social media (e.g. Twitter, Facebook, YouTube, Instagram). To answer RQ1b, we looked at the presence of different actors, dividing them into 13 categories. Actors are defined 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). On the one hand, we distinguish bottom-up actors as (1) patients as ordinary citizens; (2) celebrity patients, who are positioned within the news texts as ordinary patients despite their celebrity status; (3) inner circle of the patient and (4) patient associations. On the other hand, we identified elite actors as well: (1) general practitioner; (2) medical specialist; (3) alternative medicine; (4) paramedics; (5) professional associations; (6) sickness funds; (7) pharmaceutical industry; (8) academics and (9) politicians. 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) and measured their quantity. Additionally, we also checked for their importance, namely who is the most prominent source or actor in the issue.

6.4 Results

6.4.1 Types of sources

In this section, we will discuss the specific sourcing practices of different media types, focusing at the one hand top-down or elite sources (e.g. news agencies, traditional media brands, subsidized content and scientific publications and journal output) and at the other hand bottom-up or non-elite sources (e.g. social media like Twitter, Facebook, YouTube). What is worth mentioning, is the fact that 45.6% of the general health news items were not transparent in their use of sources and did not explicitly mention any source. Similar conclusions were found for news about mental illnesses, where 52.1% of the items did not show source transparency. Our analysis, however, does not permit us to detect to which sources these less transparent health issues trace back. An overview of the sourcing practices is displayed below in Figures 6.1 and 6.2 and serves as the basis for our following analysis.
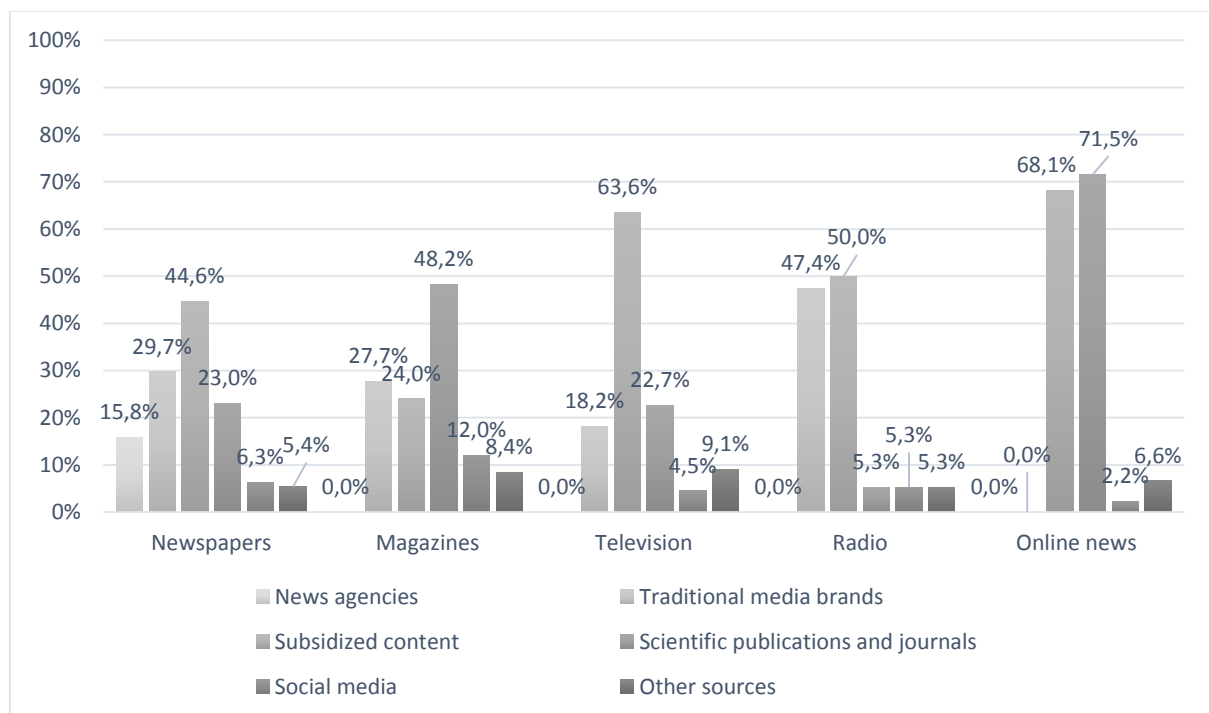
Figure 6.1: Comparison of different sources used by different types of media when covering health news (n=837). Percentages do not meet up to 100% since multiple sources can be used in one news item at a time.
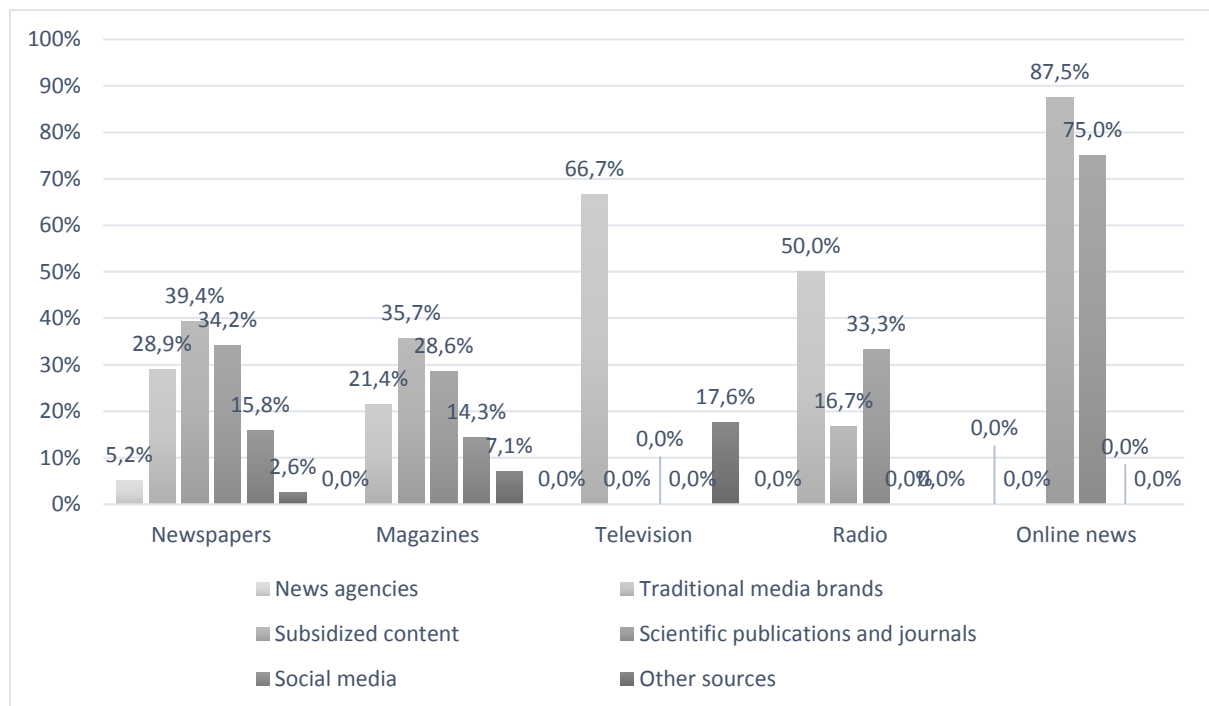
Figure 6.2: Comparison of different sources used by different types of media when covering mental health issues (n=144). Percentages do not meet up to 100% since multiple sources can be used in one news item at a time.

6.4.1.1 Media sources

We notice newspapers are the only medium that relies on materials supplied by news agencies when covering health news. Magazines, television, radio and online news fail to explicitly incorporate content from agencies in their (mental) health coverage. More specifically, newspapers make use of this source because of their subscriptions to certain Belgian and international agencies. 15.8% of general health news items relied on news agencies. The most frequently used agency source is Belga, which is due to its close link to national health issues. The appearance of news agencies as sources in issues covering mental illnesses (n=144) is rather limited. Here as well, newspapers are the sole medium applying news agencies as a news source. However, this use is limited to 5.2% of all cases.

Traditional media brands are an important player when scrutinizing journalists' sourcing routines. In our analysis, we made the distinction between national and international media brands. National media brands, however, are considered more relevant by health journalists since they fail to include international brands on a regular basis, a tendency that sets through in coverage of mental illnesses. Traditional media brands that regularly appeared, are Belgian popular weeklies, health-oriented magazines and newspapers, whose content is being reused or offers inspiration for story leads. International media brands are less regularly used and in those cases mainly CNN, BBC and Time Magazine have a role to play. The use of traditional media brands as sources is a practice more prevalent in mental health coverage, compared to general health coverage, especially in audiovisual media. Figures 6.1 and 6.2 illustrate that television journalists rely on traditional media brands in 18.2% of general health issues. However, we notice television news on mental illnesses relies significantly more on peer media (66.7%), providing televised in-depth stories. Another statement can be made, yet, for radio news covering health. Here as well, mental health coverage takes the lead with 50.0% of the news items based on content from peer media, while there is a slightly less reliance when covering health in

general (47.4%). This sourcing preference can be explained by the routine of starting every broadcast by transferring the headlines of other media. Other media types have similar sourcing routines when it comes to covering health in general or mental illnesses in particular. We notice a relatively strong reliance on traditional media brands by newspapers in 29.7% of the reported health issues in general and in 28.9% of mental health coverage. Popular newspapers use content from traditional media brands significantly more than their quality counterparts, more specifically reporting back on issues that already appeared in printed quality brands. Similarly, magazines are often inspired by content from competing media, resulting in a reliance on traditional media brands as a source in 27.7% of magazine health issues in general and in 21.4% of the mental health issues. Finally, traditional media are rarely found as a source in online news.

6.4.1.2 Scientific journals and subsidized content

In this section, we explore issues of power invoked by proactive sources who 'push stories' to the news media. First, we distinguish subsidized content (e.g. public relations, press releases, press conferences, reports from governmental and non-governmental organizations) from more specifically the WHO, health insurance, health policy organizations, sickness funds and patient organizations. Subsidized content is by far the most prevalent source when journalists cover health issues in general, with the exception of online mental health coverage. According to Figures 6.1 and 6.2, PR input is the number one source utilized by newspapers to write about health in general (44.6%), compared to 39.4% in mental health coverage. Yet there are differences between the titles in our sample. Quality newspaper De Standaard and the popular newspapers in our sample rely more on press releases and add more content from this source to their health coverage. This trend continues in mental health coverage. Magazines rely on subsidized content as often as in 24.0% of the general health news items. Women's magazines Flair and Vitaya Magazine, age-oriented magazine Plus Magazine and health magazine Bodytalk have a higher use of subsidized content compared to other magazines. The use of subsidized content in mental illness coverage in magazines is slightly higher with 35.7% of the issues relying on this type of source. Television news, however, refers even more explicit to this type of source. 63.6% of the general health issues rely on PR input, while none of the televised mental health issues refer to this source. Furthermore, this trend continues in radio broadcast news. 50.0% of general health issues are supplied with subsidized content, while only 16.7% of mental health coverage utilizes this source, confirming subsidized content is rarely applied when covering mental illnesses in radio news. Online journalists need to produce news constantly on their online platforms. Ready-made news can, after a few alterations, be published in its original form, therefore resulting in 71.5% of all general health issues and 87.5% of all mental health issues relying on PR input.

Second, scientific publications and research reports, are incorporated frequently in the routines of health journalists. Scientific journals and manuscripts published in A1 journals like The Lancet, The British Medical Journal and JAMA as well as reports from renowned universities and research institutions, like Harvard Medical School, John Hopkins University and MIT serve as a source. Especially general health coverage trusts upon scientific sources compared to mental health coverage, with the exception of mental health issues on the radio and online. When zooming in on the different media types, we notice newspaper use academic sources in no less than 23.0% of their health issues and in 34.2% of the cases concerning mental illnesses. Furthermore, we notice that this type of source is used significantly more in quality newspapers than their popular counterparts. Next, we notice magazine

journalists rely significantly more on scientific publications since in 48.2% of general health issues journal articles and university research reports are the basis of the news output. However, only in 28.6% of mental health magazine coverage, journal articles offer food for thought. Especially Bodytalk and Eos, more specialized health magazines, use information from scientific journals. Moreover, health news in audiovisual news media is less sourced by academic sources. On television, scientific papers are no popular source (22.7%, in health news in general; 0.0%, in news on mental illnesses) and the same conclusion can be found for health issues during radio broadcasts when covering health in general (5.3%), yet, 33.3%, of mental health coverage on the radio relies on academic sources. Online news media, at last, often mention scientific publications (71.5% in health news in general; 75,.0% in mental health coverage). Online news is full of hyperlinks that direct the reader to reports and journal articles.

6.4.1.3 Social media

Social media can express the marginal voices and can offer a distinct point of view on health issues. We notice that social media are rarely registered as an explicitly mentioned news source in general health news (n=837). News on mental illness, however, displays significantly more social media sources (n=144). Twitter is considered the primary social medium used by journalists. Mainly celebrities, politicians and (inter)national research centers are closely followed by journalists. Their comments and tweets are incorporated in health news items, which implies the use of a bottom-up information channel, yet still, elite actors are the ones that are able to express their point of view. However, journalists relied more on tweets of patients and their family when covering mental health issues. An explanation might be that tweets from ordinary citizens might cause identification and give mental health issues a more human face, rather than solely describing it from a medical and expert point of view, especially since mental health is often accompanied by negative connotations (Holton et al., 2012; Ray & Hinnant, 2009; Sieff, 2003; Wahl, 2000). Other social media, like Facebook and YouTube had a rather minimal impact. Information coming from these platforms was mostly linked to ordinary citizens, as for instance patients and their family and friends or citizens connected to certain patient associations, thus implying this social media source actually serves as a bottom-up system. Comparing the social media sourcing practices between different media, leads us to conclude that while social media are not as omnipresent as, for instance, academic sources or traditional media brands, there does exist a difference in use between media. Especially magazines (12.0% in health news in general and 14.3% in mental health coverage) and newspapers (6.3% in health news in general; 15.8% in news on mental health) have a tendency to rely on this source. Moreover, popular newspapers source more news items with information from social media. Further, we state that content from social media like Facebook is used significantly more in magazines (5.9% in issues on health in general; 6.5% in news on mental illness), mostly by following celebrities and quoting personal stories from them, holding up a mirror for the audience and making space for empowerment and bottom-up-oriented sourcing strategies. Television (1.0% in health in general; 0.0% in news on mental health), radio (1.9% in news on health in general; 0.0% in news on mental illnesses) and online news (1.9% in health news in general; 0.0% in news on mental illness) rather shy away from social media, which might be connected to space and time constraints because news items need to be short and snappy and therefore have to display more basic, fact-based information.

6.4.2 Actor preferences

Our data illustrate that general health coverage and mental health coverage display rather different actor preferences. While general health coverage has a stronger reliance on academic and policy actors and medical specialists, mental health coverage has a stronger focus on patient and celebrity actors. This leads to a reversed actor use. In what follows, we will give an overview according to each medium.

First, newspapers have a strong reliance on elite actors. We find that in 14.7% of general health-related items, medical experts are quoted and are giving further information. Issues concerning mental illness follow this trend (16.9%). Furthermore, we notice that academics (16.7% in health news in general; 22.0% in news on mental health) and the government (16.7% in health news in general; 11.9% in news on mental health) appear often as an actor in news, even multiple times in one article on health to illustrate a point or to compare and contrast visions. When we look at differences within our newspaper sample, we find that Het Nieuwsblad is the newspaper with the broadest panoply of actors in health news and mental health coverage. Other differences we noticed are, first, that quality newspaper De Standaard more often presents patients in mental health coverage, however this difference is not significant. Second, we find that free daily Metro presents significantly less medical specialists, as well as academics.

As we look further into the actor preferences of magazine journalists, we see that magazines offer a more human face of health. In 23.7% of all health-related issues and in 34.8% of all mental health issues, we see a patient as ordinary citizen. In 10.3% of all items and in 13.0% of all mental health coverage, a celebrity patient is shown, while in respectively 14.4% and 17.4%, family and the close environment of the patient take the lead. Elite actors are present as medical experts (7.2%) and academics (12.4%) in general health news in magazines, but their appearance is balanced out in mental health coverage by a stronger focus on bottom-up actors since no medical experts or policy actors are shown and academics only get a voice in 4.3% of mental health coverage. An explanation might be that mental illness is a topic more strongly relying on personal testimonies, connecting the issues to the life of the readers. When looking at the different titles in our magazine sample, we notice that all of them follow the general actor trends of magazines, however, one magazine does it differently. Dag Allemaal shows a more diverse use of actors: patients/ordinary citizens, celebrity patients and the close environment and family of the patients.

Third, when we consider the actor use in television health news, we observe a more frequent use of patients such as ordinary citizens in general health news (22.0%) compared to mental health coverage (12.5%). Celebrity patients (12.5% vs. 2.6%) and the patient's close environment, (12.5% vs. 5.3%) on the other hand, more often take the lead in news on mental illness. The effect of such vox pops in television news is probably stronger than in print media because of the additional visual and audible cues. These findings illustrate that the amount of patients increases when journalists cover mental health. However, these bottom-up actors are not the only ones present, since we find a similar diversity in the top-down actors. In 10.5% of general health items medical experts are quoted and this increases to 18.8% in news on mental health, in 18.4% of the items academics take the lead, an amount that decreases to 6.3% in mental health coverage and in 5.3% government actors have a voice, an actor that is not present in news on mental illness.

Radio news, on the other hand seems to focus more on government actors. In 21.4% of general health issues in general and 31.3% of the mental health issues, the government is mentioned as an actor, followed by academics (18.6% in health news in general; 12.5% in news on mental illnesses), medical experts (17.4% in health news in general; 12.5% in mental health coverage) and patient associations (8.6% in health news in general; 6.3% in mental health coverage). Finally, we notice once again the lack of actors within online health-related news. In 61.5% of general health-related issues, an academic actor takes the lead. Very little other actors are mentioned throughout the news, which makes online health news significantly different from other media types. In coverage on mental illnesses online, we notice no actors are being quoted at all.

6.5 Discussion and conclusion

This study aimed to examine sourcing practices and actor preferences in different news media in health news and in news on mental illnesses in particular. Our findings largely confirm previous national and international studies on sourcing practices in health journalism reestablishing elite sourcing practices. Yet, we unveiled some remarkable differences between media outlets and between the coverage of health in general and mental illnesses.

First, we notice that our results indicate a tendency towards top-down communication concerning the journalists' sourcing practices, a superordinate conclusion which entails all of the different media in our research sample. This reliance on elite sources is the result of the long-standing routine incorporated in many newsrooms and is in line with what is called the 'hierarchy of credibility' (Reich, 2011, 2016). Hodgetts et al. (2007) describe this as a result of the process of cultivating sources and state that this can lead to a reliance on stock contacts. As our study and previous research indicate (Hodgetts et al, 2007; Tiffen et al., 2014), academic sources are a starting point for health-related issues in print, audiovisual and online news media. Furthermore, we notice that journalists covering mental health base their information as well on scientific publications and journals. According to Hinnant et al. (2012) and O'Keefe (2002) expert sources are the most preferable sources for professional health journalists due to credibility and reliability aspects and expertise and trustworthiness. Since mental health is such a delicate topic, sources with sufficient background knowledge on the matter such as expert sources are needed. In addition, national media brands play an important role, mainly in magazine, television and radio issues. Especially television and radio coverage of mental illnesses taps into information spread by peer media. Health-related peer media and popular-scientific publications are considered relevant sources since they often act like a guide through the abundance of complex and specialized health information (Hodgetts et al., 2007). Previous research warns about the hidden omnipresence of PR input in health issues (Hinnant et al., 2012; Kroon & Schafraad, 2013; Macnamara, 2014). We can confirm the importance of reports of the World Health Organization, many patients associations, health insurance companies and the pharmaceutical industry. This trend was particularly observable in online health news media. Furthermore, we notice PR input is often the most prevalent source when journalists cover general health issues. However, mental health coverage shies more away from the use of subsidized content. Nonetheless, the practice is still visible online and to a lesser extent in newspaper and magazines. The most remarkable finding, however, is the lack of reliance on social media as news source. Online health media have a hyperlinking tradition, but links to social media are almost never made. We came to similar conclusions for print and audiovisual media. However, we notice journalists

covering mental health rely slightly easier on information from social media and use this tool to follow up patients, their family and patient associations. Mental health coverage therefore applies social media's empowering capacities more regularly to the benefit of non-elite actors.

Second, in contrast to the sourcing practices of health journalists, actor preferences are less focused on top-down communication but leave room for alternative voices. Our results prove that Belgian news media display more actor diversity. Patients and their family are heard and offer a personal approach to health, causing the public to identify with the story being told (Rowe et al., 2003). These findings relate to international studies that mention the importance of personalization and identification as news values (Beckers et al., 2016; Brookes et al., 2004; Hodgetts et al., 2007). Nonetheless, the use of citizens is more customary in mental health coverage, where patients and celebrity patients are more present and are often the only actors being quoted in the news, while general health coverage is more likely to balance the number of bottom-up actors out by displaying top-down actors like academics, specialist practitioners and government actors as a counterweight. In our sample, we notice health news in newspapers and radio is mainly a playground for elite actors, while television and magazines represent a more diverse group of actors. Online media are the outsider in our research since there is very little appearance of actors in health issues, although this is compensated by the use of multiple sources (Rowe et al., 2003).

To conclude, we are aware that the Belgian news market is specific case, yet, it fits the North-Central European Democratic Corporatist Media Model of Hallin and Mancini (2004) which includes the larger part of Western-European news media. Furthermore, our findings are to a large extent in line with the findings of similarly conducted studies (Hodgetts et al., 2007; Tiffen et al., 2014) and fill an important gap in studying health journalism, a field in journalism that is often off the radar in journalism studies. Furthermore, this studies offers a great supplement to research on mental illnesses and the accompanying sourcing practices and actor preferences, despite our limited sample. Since our sample solely focuses on one specific month in time, future research could include a more longitudinal approach since this would help to see if seasonal or other contextual factors might explain findings.

Chapter 7: Kids interrupted

A qualitative framing analysis of ADD and ADHD in Belgian newspapers

Abstract

News media are an important source of information about mental illness. However, journalists do not only disseminate knowledge, they also frame health-related issues. The framing practices concerning mental illnesses like Attention Deficit (Hyperactivity) Disorder, cause concerns. Journalists dramatize mental health coverage, which often results in describing people with ADD/ADHD as dangerous, unpredictable, or in need of medical treatment, leading to negative stereotypes. In this research, we look at the current ADD/ADHD coverage and explore how journalists frame the issue in a Belgian news context. To do so, we conducted a qualitative framing analysis of ADD/ADHD-related issues, that appeared in four Belgian newspapers over a five-year time period (2012 −2016), which led to the selection of 170 articles. The key findings indicate that three frame clusters prevail. Yet, our research also found frames typical for the Belgian context, describing ADD/ADHD within an over-diagnosis frame or as an 'imagined illness' and therefore 'fake news'.

7.1 Introduction

Recent numbers of the Belgian government on the sales of Ritalin and other attention and behavior controlling medication indicate that children between the age of six and eleven are taking more Ritalin and Adderall than ever before. Within a time frame of ten years, the daily consumers of these pills augmented from 207,895 people in 2005 to 339,350 people in 2015 within a population of ten million people (RLA, 2016). Despite the fact that central nervous system stimulants are prescription medicines, the news media express their concern with regard to the growing consumption (Beel, 2016). Scholars (Lakoff, 2000; Sieff, 2003; Wahl, 2000) reported that, in the mid-nineties, ADD/ADHD was the most commonly diagnozed mental disorder among children in the United States and Europe. In the early 2000s, the diagnosis became widely accepted, and the criteria for ADHD in the fourth and later fifth edition of the Diagnostic Statistical Manual of Mental Disorders (DSM) became more inclusive, turning it into a controversial topic for media coverage (Henson et al., 2009; Viswanath et al., 2008). Over the years, however, the portrayal of ADD/ADHD has been dominated by negative depictions. People suffering from the disorder are commonly described as dangerous and violent to themselves and others, or are seen as childlike and unable to take care of themselves (Henson et al., 2009; Horton-Salway, 2012; O'Hara & Smith, 2007). Because of this, media frames applied by journalists may contribute to negative perceptions (Dorfman, 2003; Henson et al., 2009; Sieff, 2003).

In the past, a handful of studies dedicated their attention towards the specific frames used by the news media to depict mental illnesses and ADD/ADHD in particular (Coverdale et al., 2002). This paper will attempt to elucidate how health journalists cover ADD/ADHD in Belgian newspapers and which frames journalists apply when covering this issue. Due to the high amount of children and teens coping with the disorder in Belgium, the differences between the language communities and the fact that the disorder became more established with the publication of the fifth DSM, we consider it important to explore the ADD/ADHD news coverage in Belgium. Furthermore, we want to compare frames of the disorder and its patients to international framing studies. By the means of a qualitative framing analysis, we want to reveal characteristics of ADD/ADHD coverage and explore what this means for public opinion about the disorder.

7.2 Literature

7.2.1 Framing health news

Journalists can heighten the salience of specific health issues and media frames have a preeminent role in this accomplishment. This turns news media into intermediaries who frame health and scientific information (Cho, 2006; Dorfman et al., 2005; Park & Reber, 2010). Entman (1993, p. 51-52) defined media framing practices as followed: "*to frame is to select some aspects of perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation*." According to Entman (1993) frames organize the meaning of stories and stress what is important and what is to be left out (Klin & Lemish, 2008; Wahl et al., 2002).

Journalists easily rely upon the same narratives to talk about health issues and use specific media frames to translate complex medical or health-related information into comprehensible health stories tailored to the lay public (Dorfman, 2003; Hodgetts et al., 2007; Len-Rios et al., 2009b). Hodgetts et al. (2007) believe in framing health issues by using at the one hand episodic frames and at the other thematic frames, a distinction that is based on Iyengar (1991) and further developed into the conflict frame and explanatory frame (Hodgetts et al., 2007) or individual responsibility and social responsibility frame (Kim & Willis, 2007). The episodic frame tends to individualize health issues and blames individuals for their own health situation (Iyengar, 1991; Hawkins & Linvill, 2010). Small events, miscellaneous news and people (e.g. patients or their family) are painted as the focal point of the news item (Dorfman et al., 2005; Slater & Jain, 2011). The creation of such hyper-individualized orientation of health news (Hinnant, 2009), leads to attributing responsibility to the patient and suggests that health issues are caused by individuals and their incorrect behavior. On that account, health issues are reduced to individual problems, rather than being the result of a person's social background and the more profound political and economic environment s/he lives in (Hawkins & Linvill, 2010). According to Cho (2006) episodic framing is the most popular approach to health issues. However, by consuming episodically framed health stories, the public does not gain any insight into the larger social and political circumstances accompanying the individual problem (Guo et al., 2011; Klin & Lemish, 2008). Therefore a second type of frame was developed by Iyengar (1991) which takes these socioeconomic and political aspects into account: the thematic frame, which focuses on society's responsibility and collective accountability (Coleman et al., 2011; Dorfman et al., 2005; Hawkins & Linvill, 2010; Hodgetts et al., 2007; Iyengar & Kinder, 1987).

However, many authors shy away from this approach and state there is a shift away from these frames, making the distinction between health news that is (bio)medical in focus or health issues that are focusing on lifestyle approaches. Conrad (2007) describes this as the medicalization frame and self-responsibility frame. The medicalization frame entails a medical vision, labelling every health issue as a problem, illness, disorder or disease with a biogenetic origin, solvable by using medication of behavior modification (Barry et al., 2011; Gallagher & Updegraff, 2012; Kvaale et al., 2013; Ortendahl & Fries, 2005). This can be connected to what Lawrence (2004) and Hodgetts et al. (2007) label as the biological or biomedical frame. The second frame, the self-responsibility frame reduces health to a personal or individual story rather than a generalizable issue aimed at the larger population, resembling to some extent the aforementioned individual responsibility frame (Barry et al., 2011; Coleman et al, 2011; Kim & Willis, 2007; Ortendahl & Fries, 2005). Sobal (1995) refined the approach of Conrad by distinguishing three frames, keeping the medicalization and self-responsibility frame but adding a third one: the demedicalization frame, which states that issues not only depend our biogenetic nature since health must be seen in the context of socioeconomic and sociocultural factors and government regulations (Saguy & Riley, 2005; Sobal, 1995). Furthermore, the demedicalization frame stresses the importance of accepting the differences within society instead of seeing health problems as a necessary evil (Sobal, 1995). Gollust, Lantz and Ubel (2009) renamed the concepts both authors use and labelled the frames as followed: the genetic predisposition frame, the behavioral choices/lifestyle frame and the social determinants frame.

7.2.2 Framing mental illness: the case of ADD/ADHD

Because the public generally relies on media to receive mental health information, the negative orientation of media towards those who suffer from mental illness is not innocuous (Henson et al., 2009). News coverage of mental health issues can encourage stereotyped images of mental illness (Hawkins & Linvill, 2010; Kline, 2006; Link et al., 1999). In the previous section, we discussed a broad panoply of frames used by journalists to cover health issues. Many of these frames are also applicable to covering ADD/ADHD. In what follows, we will give an overview of the framing of ADD/ADHD specifically.

7.2.2.1 Dangerous and innocent children

In general, studies focusing on mental health frames come to the same conclusions, stating news media simplify the disorders and paint a rather negative picture (Allen & Nairn, 1997; Horton-Salway, 2012; Nairn et al., 2001). Furthermore, many scholars (Coverdale et al., 2002; Klasen, 2000; Rafalovich, 2001, 2004; Ray & Hinnant, 2009) are convinced that the news media show a limited side of the ADD/ADHD story, focusing on two main frames: the danger frame and the childlike state frame.

First, negative images revolve mainly around associating people who suffer from mental illness with violence (Coverdale et al., 2002; Link et al., 1999; O'Hara & Smith, 2007; Ray & Hinnant, 2009; Sieff, 2003). Media portrayals of people with ADD/ADHD commonly consider patients a danger to themselves and to others, describe them as unpredictable and anti-social (Allen & Nairn, 1997; Henson et al., 2009; Sieff, 2003) and link them to violence and criminal activities (Nairn et al., 2001; Wahl et al., 2002). Klin and Lemish (2008) and Rowe, Tilbury and O'Farrell (2003) mention the focus on self-destruction of patients with ADD/ADHD. According to Coverdale et al. (2002), more than half of all news items concerning ADD/ADHD paint a picture of ADHD patients as dangerous and violent (Link et al., 1999; O'Hara & Smith, 2007). Research of Sieff (2003, p.380) illustrates that news media judge newsworthiness of mental illness based on deviance and therefore, "*if those with mental illness are only newsworthy when they generate conflict or constitute a threat to the community, then these aspects will be emphasised in organising stories and headlining article*". When ADD/ADHD is viewed within the danger frame, a multi-causal explanation is given for the disorder. Genes cause ADD/ADHD to be inherited problems with a biologic origin as well as chemical imbalances in the human brain can lead towards the diagnosis (Conrad, 2001; Link et al., 1999; Rafalovich, 2004).

The second frame repeatedly used by journalists, portrays patients coping with mental illnesses like ADD/ADHD as childlike and innocent, a frame referred to as the childlike state frame (Ray & Hinnant, 2009; Wahl, 2003b). ADD/ADHD patients are seen as immature scallywags, having no sense of responsibility (Coverdale et al., 2002; Klasen, 2000). Furthermore, at the one hand they are seen as crazy and wild, but at the other, they are perceived as vulnerable, 'special' children, incompetent to control their life (Coverdale et al., 2002; O'Hara & Smith, 2007; Sieff, 2003; Wahl, 2003b). In addition, stressing the childlike aspect of the disorder, might contribute to a lack of understanding and sensitivity of the disorder and percolate its seriousness (O'Hara & Smith, 2007; Ray & Hinnant, 2009). Lastly, this frame also stresses the responsibility of the parents. Suffering from ADHD is not connected to the child's biological nature, but is the result of his upbringing (Klasen, 2000; Rafalovich, 2004).

7.2.2.2 Other ADD/ADHD-related frames

Ray and Hinnant (2009) felt this two-fold division was too limited to fully grasp the ADD/ADHD disorder. Starting from the danger and childlike state frame and research of Sieff (2003), they brought the attention to four more frames. First, the scholars discerned that mental illnesses like ADD/ADHD are portrayed in a humorous context, describing patients and their health problem as a joke. Those who cope with the disorder are described as humorous and quirky characters, therefore, the scholars designate this as a humorous frame (Ray & Hinnant, 2009; Sieff, 2003). Patients are portrayed as happy, cheerful people, without any worries, and the seriousness of their illness is rarely mentioned (Henson et al., 2009; Wahl et al.,2002). Second, ample examples were found where journalists used pejorative and exploitative language, misused psychiatric terms originated in the DSM, applied 'disabling' terminology and used slang words to illustrate the ADD/ADHD case and to describe people coping with it, thus creating an environment where the disorder is labeled as different and the patients marked as 'others', which can be referred to as the othering frame (Auslander & Gold, 1999; Henson et al., 2009; Rafalovich, 2004; Ray & Hinnant, 2009). Third, research shows that in more than half of the ADD/ADHD coverage, journalists focus on the relationship between education and the disorder, painting the ADD/ADHD picture in an academic or scholastic setting, an environment where the disorder most frequently manifests itself. The news coverage addresses adjusted education and educational advantages, labelling it as a learning disability where loss of concentration and short attention spans are key (Rafalovich, 2004; Ray & Hinnant, 2009). Lastly, Ray and Hinnant (2009) categorize the aforementioned medicalization frame. According to the appliance of this frame, news coverage focuses on the relationship between medication (e.g. Adderall, Ritalin) and the disorder, portrays it as a neurological dysfunction and notes hyperactivity and concentration loss as the prime symptoms (Barry et al., 2011; Rafalovich, 2004; Ray & Hinnant, 2009). One study found that metaphors used in Australia to depict ADHD oversimplified children's health and behavior to favour medicalizing childhood (Harwood et al., 2017). However, a major shift has taken place with regard to medicalization. Especially in disorders that can be conceptualized as incompletely medicalized, such as hyperactivity, it is now the patients who lobby for greater recognition and medicalization, accusing the medical profession of withholding the diagnosis, leading towards overdiagnosis (Conrad, 2001; Rafalovich, 2004).

Based on this review of the literature, we developed four main research questions to describe newspaper coverage of ADD/ADHD.

RQ1: How are patients suffering from ADD/ADHD framed in Belgian newspapers?

RQ2: How is ADD/ADHD framed in the news coverage of Belgian newspapers?

RQ3: Which counter-frames are used in Belgian newspapers to cover the ADD/ADHD issue?

RQ4: Are there any framing differences between Belgian popular and quality newspapers?

7.3 Methodology

We answered these questions by conducting a qualitative framing analysis, inductively determining media frames in the Belgian news coverage. Frames are considered powerful means that can be used by journalists to highlight issues. Furthermore, frames do not only shape the bits and pieces the public

gets to see from reality, they also have an influence on the public itself. Since we know relatively little about the mechanisms through which media perceptions about mental illnesses like ADD/ADHD are formed, a systematic analysis of the ways in which ADD/ADHD is portrayed will help us to fill the gap in research. This study uses the framing-memo method described by Dorfman (2003). Framing-memo methodology combines quantitative research of the frames, making cluster analysis possible, with a deeper qualitative analysis that unveils linguistic nuances and the development of arguments made in the news.

In our sample, we study the content concerning ADD/ADHD of four different Belgian newspapers: two popular newspapers (Het Laatste Nieuws and Het Nieuwsblad) and two quality newspapers (De Morgen and De Standaard). The newspapers were chosen based both on their wide circulation and were selected due to their representation of the two main media groups in Belgium (De Persgroep and Mediahuis). Articles from the sampled newspapers were identified by using the key words 'ADD', 'ADHD', 'attention deficit disorder' and 'attention deficit hyperactivity disorder', since both mental illnesses express the same symptoms and are not easily distinguished from one another. Further, we delimited a five-year time period, starting to collect news items from January 2012 to December 2016. We selected this time period because we wanted to focus on a newer sample compared to previous research. The first date demarks the renewal of the DSM definition and the media discussions accompanying rumors about a new DSM publication. Consequently, we kept collecting and analyzing data until the moment of redundancy, which provided us with a period of five years. Newspaper data for this study came from a keyword search of the Gopress database, which includes the targeted publications. This led to a first sample of 468 news items on ADD/ADHD. We used a systematic sampling determination method to screen all stories to exclude those that were not focused on ADD/ADHD and not focused on children and teens, since coverage of adult ADD/ADHD is widely different. Furthermore, we also decided to exclude items not having a main focus on ADD/ADHD (e.g. criminality, sports, medication abuse and exam fraud). We also decided to exclude news stories shorter than 100 words and those classified as corrections, reviews, duplicates and letters to the editor. This left us with a sample of 170 news items on ADD/ADHD.

Newspaper	2012	2013	2014	2015	2016
Het Laatste Nieuws	5	9	8	14	8
Het Nieuwsblad	7	5	6	10	7
De Morgen	15	10	9	5	10
De Standaard	5	7	7	11	12
Total (N)	32	31	30	40	37

Table 7.1: The amount of news items covering ADD/ADHD over the five year research period.

The texts were re-read several times with analytical notes and frame-memos, using Nvivo software for data management and analysis. News articles were coded using an iterative process of classifying news, first applying open coding and labelling explicit themes, tones and terminology, followed by axial, in-

depth labelling and selective, thematic coding, distinguishing more nuanced views on ADD/ADHD in the news texts. In particular, we followed the six stages of thematic analysis during our research, described by Braun and Clarke (2006): familiarization with the data by reading the news items thoroughly multiple times, generating initial codes during which the preliminary data were reduced and relevant parts labelled, searching for themes and combining the initial codes, reviewing themes, defining and naming the themes and producing a research report.

7.4 Results

To answer the first research question about how ADD/ADHD is framed in Belgian newspapers, we discovered three distinct frames. Each of these frames was, without any exception, accompanied by a specific way of framing the disorder and a solution to it, which is consistent with the literature. Journalists, however, were often critical towards these traditional frames and regularly added a counter-frame connected to them. The three frame clusters that were inextricable bound together were the 'othering' frame, the 'childlike state' frame, and the 'danger' frame.

	Framing of the patient	Framing of the disorder and its solution	Counter-frame
Cluster 1	Othering frame	Educational frame	Demedicalization frame
Cluster 2	Childlike state frame	Self-responsibility frame	Fake news frame
Cluster 3	Danger frame	Medicalization frame	Over-diagnosis frame

Table 7.2: Overview of the frames used in Belgian newspaper coverage of ADD/ADHD.

7.4.1 The othering frame cluster

Within the first cluster, we found that patients are described in accordance with what previous research fills in as the 'othering frame'. The terminology used to describe the patient is limited to a handful of terms comparing ADD/ADHD patients with what is socially accepted and the ideal image of a child in Western society. By using labels as '*normal*' and '*abnormal*', '*regular*' and '*irregular*', '*ordinary*' and '*special*' or '*not ordinary*', '*special needs kids*' and '*problem child*', media create an 'us' versus 'them' situation, causing a process of 'othering'. By using this specific terminology, journalists focus on what is considered different and nonconforming with the standards, insinuating a derogatory attitude towards ADD/ADHD patients (RQ1).

ADD/ADHD itself is labelled as a '*learning disability*', '*learning problem*', '*behavioral disturbance*', '*disability*', '*functional impairment*' or '*cognitive problem*' (RQ2)*.* Furthermore, the terminology is closely intertwined with an educational context or a school setting, since the issue is being labelled as a problem or a disability manifesting itself on the intellectual level. This brings us to the context for ADD/ADHD sufferers who are 'othered,' which is within the educational frame. This frame centers the educational context of the ADD/ADHD story and sees a patient as different and disabled compared to 'normal'

children. Children with ADD/ADHD do not fit in the regular Belgian educational system and belong in a separate special needs teaching program, thus causing the educational system to exclude children with ADD/ADHD from regular education and therefore excluding them from contact with so-called 'normal' children. From 2012 to mid-2015, this is the generally accepted argumentation in the sampled news articles. At the end of 2015 and throughout 2016, the coverage of ADHD starts changing. Patients are still considered different, yet news media start to stress positive characteristics of special needs children, having an eye for their qualities and uniqueness, seeing them as an added value to the regular educational system. A discourse specifically carried forward by parents and the government, in light of the M decree, which stimulates the inclusion of special needs children in the regular educational system and wants to integrate them more carefully in society. However, journalists report on the one hand, on the inclusion and diversity at school, yet, on the other hand, they cover the segregation of free time. The news media also illustrate that more efforts need to be made to ensure inclusion on all levels. To stimulate participation of ADD/ADHD children in the regular educational system, multiple concessions are being made. These are labelled by stories as '*educational benefits*', '*subsidies*', '*derogations*', '*adjusted education*' and '*educational favours*'. Stories display pros and cons to these concessions, however, opponents of concessions see them as '*luxurious products*', '*unequal advantages*', '*privileges*' and '*unfair benefits*' towards children who suffer from non-diagnosed learning disabilities.

However, the debate also suggests other solutions for ADD/ADHD, counter-framing the aforementioned ones (RQ3). Those suggestions fit the demedicalization frame and encourage parents and society to get involved with the treatment of ADD/ADHD. Parent trainings that improve parenting skills and involvement with behavior therapy instead of unsuccessfully adjusting education are described as solutions by media, since they consider the responsibility of the parents as an important starting point for treatment. In addition, a rural and more green environment can decrease the symptoms of ADD/ADHD as well according to the stories. Quality newspapers more often refer to the academic surroundings of ADD/ADHD children compared to their popular counterparts. They describe them as being different, 'othering' them compared to children who do not fit the diagnosis and, they put the responsibility for a solution in the hands of education. However, they also regularly counter-frame the disorder by demedicalizing it, referring to the importance of engaged parents (RQ4).

7.4.2 The childlike state frame cluster

A second cluster portrays ADD/ADHD patients as immature, childlike and innocent. The terms suggesting the symptoms accompanying this portrayal, are '*hyperactive*', '*energetic*', '*vivid*', '*wild*', '*active*', '*brisk*', '*boundlessness*' and '*impulsive*', stressing the vividness of ADD/ADHD children. These labels are less negative than the description of the 'othering frame', nonetheless, their connotation is not considered completely neutral, since they suggest a child with ADD/ADHD might be more difficult to handle and may ask more from the parents and their close environment (RQ1).

ADD/ADHD is depicted as a problem that has its foundation in both biogenetics and social background. The offered solutions are closely linked to what is described as the self-responsibility or lifestyle/behavior frame in the literature (RQ2). Journalists describe several solutions to reduce the intensity of certain symptoms. First, journalists regularly advise parents to let their children play outside, leading children to stimulate their creativity and talent, but also causing them to get rid of their energy.

Linking outdoor activities to ADD/ADHD creates the image of patients as 'real' children. Second, sports are often considered a way of life that makes living with ADD/ADHD more bearable. A focus on sports might stimulate talent and therefore often leads towards a positive portrayal of an ADD/ADHD child by letting parents tell a personal story about sports accomplishments of their child. Third, hippotherapy is mentioned, which entails the use of horse riding as a therapeutic or rehabilitative treatment. Fourth, nutritional habits might be at the basis of ADD/ADHD. Consuming less sugar and soft drinks is considered beneficial for patients. Fifth, gaming consoles, tablets, mobile phones and computers create more vivid and energetic children. Reducing time online or in front of a screen is suggested by journalists. Sixth and lastly, the behavior of the mother during her pregnancy is criticized. The consumption of alcohol, smoking, lack of exercise and a high level of stress might be connected to ADD/ADHD. When describing these behavioral and lifestyle suggestions, journalists frequently utilize a hypothetical discourse to intimate that it is not yet sure to which extent these suggestion have the desired impact, e.g. '*the intake of less sugar could help...*' or '*hippotherapy might be beneficial...*'. Popular newspapers more often cover patients as childlike and regularly suggest behavioral solutions and specific tips and tricks according to the self-responsibility frame. This leads towards a more personal coverage, while quality newspapers opt for a distant approach (RQ4).

However, the news media dare to take a bold stance as well, calling ADD/ADHD '*fake news'* or an '*imagined disease*' (RQ3). The stakeholders supporting this counter-frame, are most often critics and claim the issue does not need a solution but rather needs to be revised. ADD/ADHD is labelled as '*fake news', 'fake disease', 'the so-called disorder', 'the tag'* and '*the disorder of this time*'. Furthermore, this frame awards the characteristics of childlike state frame to the biological nature of the child. Children have always been considered playful, brisk and impulsive, have difficulties to concentrate for a large amount of time and need variety and structure. Solutions are suggested within the self-responsibility frame and at the same time within the demedicalization frame since the socioeconomic status of parents, living environment and upbringing might reinforce certain aspects of normal children's behavior (RQ3). This counter-frame posits that labelling a child with ADD/ADHD is an excuse to critique parenting, while parents should not be held responsible due to something innate in the child as opposed to their upbringing. The 'fake news frame' points at the lack of necessity to use medication, referring to it as drugging children to create perfect creatures and sheds light on the lack of knowledge concerning the long term effects of Ritalin and other behavior regulating medication brands. According to the frame, the ADD/ADHD diagnosis is stimulated by the pharmaceutical industry that benefits from selling medication due to a positive coverage on Ritalin.

7.4.3 The danger frame cluster

The third cluster labels children with ADD/ADHD according to the danger frame (RQ1). The patient shows '*difficult behavior*', causes '*problems within the family*' and creates an '*unlivable situation at home*'. The patient is described as '*violent', 'aggressive', 'diverged', 'deviant', 'outrageous', 'unmanageable', 'showing risk behavior*' (i.e. drugs and alcohol) and '*dangerous to themselves, others and society*', thus taking a negative point of view on the characteristics of ADD/ADHD patients. The issue itself is described as a '*dysfunction', 'impairment', 'problem', 'trouble', disease', 'psychiatric disorder', 'developmental disorder', 'psychiatric problem', 'mental illness', 'mental handicap', 'minor handicap', 'behavioral dysfunction*' and '*behavioral issue*'. According to the terminology used by journalists,

ADD/ADHD is considered an illness that is biogenetic or neurological in nature and is perceived as treatable with the use of medication, pills and/or psychotherapy. This treatment is covered within the medicalization frame (RQ2), offering a ready-made medical solution to a genetic problem. Cases described as mild forms of ADD/ADHD are resolvable with psychotherapy and light doses of medication, while more serious cases need medication and regular consultation of child psychiatrists and neurologists. Also, the news media point out the differences in treatment according to the socioeconomic status of the patient. Since medication is refundable by the government, people with a lower social status tend to choose this option as ADD/ADHD treatment, while people with a higher social standard more often rely on a combination of medication (refundable) and consultations with a psychologist or psychiatrist (non-refundable). A more scientific and diagnostic terminology and jargon are used to describe the solutions for ADD/ADHD, labelling them as '*pills', 'injections'* and '*placed under custody of a psychiatric institution*'. Medication is often described as a brand (i.e. Ritalin, Adderall), '*psychiatric medication', 'antipsychotics', 'methylphenidate'* and '*behavior controlling medication*'. Most often, Belgian quality newspapers cited the medicalization frame, compared to their popular counterparts. Furthermore, quality papers also have a tendency to be critical towards the medicalization frame, opening up the discussion to whether or not ADD/ADHD is too easily diagnosed (RQ4).

A counter-frame states that the many diagnoses and the advertised advantages of Ritalin and Adderall lead towards over-diagnosis where general practitioners are asked to prescribe medication and diagnoze children with more 'difficult' behavior. Moreover, these diagnoses and prescriptions are requested by parents, teachers and guidance counsellors. ADD/ADHD is labelled as an '*epidemic*' and since parents and teachers demand the diagnosis, too many diagnoses are being made, leading to over-diagnosis and the problematization of the issue (RQ3). The over-diagnosis frame is pushed in the sampled newspapers by psychiatrists and pedagogues, most often in quality newspapers. A more neutral and informative terminology is used to make their statements concerning over-diagnosis, bringing more nuance and depth to the table. Moreover, the over-diagnosis frame is the only frame where a full definition of ADD/ADHD and a clarification for its acronyms is given, how the DSM works, how diagnoses are created and symptoms are recognised, a practice that is moreover regularly executed by quality newspapers (RQ4). Specific for the Belgian context, the debate is situated on the regional level, where Flanders (the Dutch community) has more than double the amount of diagnoses than the French community, being the largest consumer of central nervous system stimulants and behavior controlling medication. According to the journalists, ADD/ADHD is less diagnozed and recognized in Wallonia than Flanders, where there is a less rigorous regulation towards prescription drugs.

7.5 Discussion and conclusion

The goal of this research is to illuminate the framing mechanisms journalists apply when covering ADD/ADHD in both popular as well as quality newspapers in Belgium. By using an inductive approach, we determined frame clusters used by journalists. We discovered the previously established frames are present in the ADD/ADHD coverage, but we found these are not sufficient to fully grasp how Belgian newspapers contextualise the issue.

When Belgian newspapers frame a patient with ADD/ADHD, we notice three frames, which were found in the literature: the child is within 'othering' frame; within the childlike state frame; or within the danger frame (Henson et al., 2009; Klasen, 2000; Nairn et al., 2001; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003; Wahl, 2000, 2003b). The first frame labels patients as different from the norm and from children without a disability. Yet, this is not necessarily considered negative, since journalists also often stress talents and strengths of the child within this frame. The second, the childlike state frame, describes children as energetic and vivid. The third confirms various negative stereotypes described in the literature, stressing aggressiveness and dangerousness. Remarkable for this particular study, is that we linked these patient descriptions to specific frames related to the disorder itself, by developing a cluster matrix.

Our answer to the second research question implies that the first representation of ADD/ADHD only appears in the newspaper coverage matched with an academic setting (Klasen, 2000; Ray & Hinnant, 2009; Sieff, 2003) or educational frame (Park & Reber, 2010). However, previously, it was never linked with the appearance of the 'othering frame'. A counter-frame within this context is offered by the demedicalization frame (Sobal, 1995), which puts the responsibility for the issue with environmental and socioeconomic factors. This fits into what Iyengar (1991) and Hawkins and Linvill (2010) call thematic or systemic framing of the solution of the issue, or what Kim and Willis (2007) mention to be the social responsibility frame. Dorfman et al. (2005) state that not the patient is held responsible, but political and social factors instead have a role in treating the issue. The childlike state frame is seen in light of the self-responsibility frame (Barry et al. 2011; Kim & Willis, 2007; Sobal, 1995), which implies lifestyle approaches serve as a way to take control. This fits the individualizing frame (Guo et al., 2011; Hawkins & Linvill, 2010), the individual responsibility frame (Kim & Willis, 2007) and episodic frame (Iyengar, 1991; Iyengar & Kinder, 1987) mentioned in the literature review, since specific lifestyle adjustments like sports and nutritional habits have an impact on intensity of ADD/ADHD. Remarkable, however, is the fact that, typically in the Belgian context, this idea is counterbalanced by the fake news frame, stating that ADD/ADHD is not real but is characteristic of childhood in general. Lastly, according to our research results, we were able to match the danger frame with the medicalization frame (Conrad, 2001, 2007; Ray & Hinnant, 2009) stating that ADD/ADHD is a medical condition that solely can be treated with the help of (behavior regulation) medication. This is in line with what Park and Reber (2010) call the medical research frame or biomedical frame (Hodgetts et al., 2007; Lawrence, 2004). Yet, in an over-diagnosis frame, this medicalization tendency is debated in the newspapers, which entails coverage of diagnoses pushed by parents, guidance counsellors and teachers but also of the abuse of medication by many children who do not suffer from ADD/ADHD but are medicated to fit the ideal of a 'normal' child.

The newspapers in our sample rarely differ concerning their framing practices. However, we notice that journalists working for quality newspapers more often criticize the danger frame used to describe patient and open up the discussion between at the one hand a medicalization frame, and at the other the over-diagnosis frame, giving a balanced platform to stakeholders who want to express their points of view pro or con those frames. Popular newspapers on the other hand, more often cover patients as childlike and regularly suggest behavioral solutions according to the self-responsibility frame. This leads towards a more personal and involved coverage of the issue, rather than the more informative and distant approach of quality newspapers that take the debate to a higher level, withholding of giving specific tips and tricks. The difference in coverage might be explained by a difference in the structure of

the newsroom. While quality newspapers have a specific science and health beat and specialized journalists working this beat, popular newspapers have a staff oriented around the concept of jack-of-all-trades who are more generalists. Therefore, quality newspapers have the in-house knowledge to take the debate to a higher level, covering more complex ADD/ADHD-related issues than for instance popular newspapers. However, this conclusion only applies to the Belgian media market.

The majority of our conclusions about ADD/ADHD framing in Belgian news supports the findings of other international studies, distinguishing existing frames, yet, also connecting these to clusters with their own counter-frames. A primary strength of this research is that we address media frames of ADD/ADHD during the most recent years. Second, this study does not solely direct its attention towards negative depictions of ADD/ADHD but keeps its eyes open for positive portrayals of mental illness as well, developing frames into a more nuanced network of frame clusters. However, the main challenge remains generalizability. Our sample only covers recent ADD/ADHD coverage and is limited to the Belgian context. Yet, even though Belgium is small, the high rates of ADD/ADHD prescription consumption in the country make it worthy of study. An opportunity for future research arises in interviews with journalists who are confronted with their framing practices. In addition, how media affect citizen's opinions towards ADD/ADHD, might also be an interesting topic of research. Ultimately, this study adds contextual depth to framing analyses of ADD/ADHD that could be replicated in future studies, and it offers Belgium newspapers as a case study for comparison to other countries.

CONCLUSIONS

Chapter 8: General conclusions

First, this dissertation aimed to explore the sourcing practices and actor preferences in health journalism, an under-researched specialty beat under heavy influence of commercialization and digitalization. Specifically, we offered insight in the general sourcing practices of health journalists, including the peculiar relationship between those journalists and at the one hand the pharmaceutical industry and at the other hand ordinary citizens, in a wide range of media outlets. Second, we directed our attention towards the specific case of mental health coverage and explored distinctive sourcing routines, while also deepening the framing practices of journalists when covering the case of ADD/ADHD. We aimed at offering a theoretical contribution to the field of (mental) health journalism since literature and research on this domain remain rather sparse. An empirical contribution is also offered by a multi-method research design and large-scale content analyses including different media outlets.

First, the concluding section of this dissertation will start off by formulating answers to the three central research questions, intertwining empirical findings with relevant concepts of the theoretical framework in order to paint a general picture of sourcing and framing practices in (mental) health coverage: (1) *How are health-related news items sourced (cf. use of sources and actors) by journalists in a different range of news media*, (2) *How do journalists source (cf. use of sources and actors) news about mental health issues in a different range of news media* and (3) *How are mental health issues, ADD/ADHD in particular, framed by health journalists in the news media.* We will focus on the most remarkable conclusions and findings concerning each research question regarding the research papers included in the dissertation. Second, we will formulate our contributions to the field of journalism studies and the specificity of health journalism in particular. In addition, we will provide recommendations for those executing the journalistic profession in the specialty area of health, with special attention to how the selection of sources might impact health coverage and how framing might have a negative outcome if it is not nuanced. Finally, we will criticize the limitations of our own empirical studies and offer food for thought for future research.

8.1 Answers to the research questions

8.1.1 Belgian health journalists' sourcing practices and actor preferences (RQ1 and RQ2)

Our first research question aimed at determining which sources and actors are mainly used during the news production process of health issues and whether we could examine differences between different media outlets (e.g. newspapers, magazines, television, radio and online news), by means of a multi-method approach, combining quantitative content analyses and in-depth and reconstruction interviewing techniques. Our second research question aimed to examine those same routines in the case of mental health coverage by means of a quantitative content analysis.

One of the main conclusions of this dissertation largely confirms theoretical assumptions on health journalists' sourcing practices and is to a large extent in line with previous national and international studies on sourcing practices in other news beats, stating elitist sourcing practices and actor preferences prevail. According to Gans (2011) and Reich (2011), journalistic sourcing practices are profoundly routinized and standardized due to a combination of efficiency and power considerations. Especially those power considerations, which indicate the authority journalists assign to a source (e.g. Allgaier et al., 2013; Becker & Vlad, 2009; Forsyth et al., 2012; Gans, 1979, 2011) determine, according to our findings, the sourcing practices of health journalists. The displayed source dominance can be linked to the idea of social capital, proclaimed by Bourdieu (1993, 2005), which implies that the most powerful and dominant actors in society are perceived as the most relevant, valuable and trustworthy (Benson, 2006; Dimitrova & Strömbäck, 2009; Hellmueller et al., 2012; Holton et al., 2012; Kruvand, 2009; Tiffen et al., 2014). Yet, not only political authority and economic power decide whether or not health journalists use a source. Technical and complex health matters demand a larger level of expertise and credibility, mainly since journalists rarely have the necessary knowledge or education to easily translate the information (Albaek, 2011; Boyce, 2006; Holton et al., 2012; Len-Rios et al., 2009a). Therefore, in health journalism, source credibility is established by a combination of expertise, competence and trustworthiness and is mainly found in the shape of expert sources (Allgaier et al., 2013; Dunwoody, 2008; Hinnant et al., 2012; Lariscy et al., 2009) or sources with institutional power such as government sources (Boyce, 2006; Forsyth et al., 2012), which results in its turn on a journalistic reliance on a steady set of stock contacts that have proven their worth in the past (Allgaier et al., 2013; Kroon, 2013; Stryker, 2002; Tiffen et al., 2014).

The findings described in chapters four, five and six illustrate the preference for elite sources. Our empirical chapters, show that academic sources (e.g. academic research reports, journal articles) are in general the starting point for the majority of the health-related issues in print, audiovisual and online news media. Scientific journal articles and academic research reports, as well as press releases from those journals, universities and research centers, offer inspiration for health story ideas and their summaries can often be entirely integrated in the news. Health journalists often lack sufficient scientific background to monitor the importance and quality of news and therefore tend to redistribute news published in scientific journals, thus relying on checks and balances of qualified peer reviewers who monitor the quality of journal articles and research output (Bubela et al., 2009; Holton et al., 2012; Tanner, 2004; Tanner et al., 2015; Trench, 2008). Chapters four, five and six illustrate that journal articles from mainly Nature, The Lancet, Science and The British Medical Journal and research reports (or their two-pagers) on academic websites provide the larger part of health content in the news media, an assertion that can be extended to all media types in our sample. Yet, online news in particular has a strong preference for academic sources, since it is almost the sole source found in its health coverage (Abelson & Collins, 2009; Holton et al., 2012; Stryker, 2002; Trench, 2008). When journalists cover mental health issues, they base their information as well on scientific publications and journals, yet the reliance is less omnipresent, which might be due to the delicate nature of the topic of mental health problems and the lack of direct experience with certain disorders (Briggs & Hallin, 2010; Dunwoody, 2008; Hinnant et al., 2015; Holton, 2013; Tiffen et al., 2014). While especially radio journalists request more academic sources to scientifically and factually build their cases and fall back on expertise of scientific journals, magazine and television journalists, on the contrary, apply significantly less academic sources in their coverage, simply because they seek unique value in personal testimonies.

Second, the literature review illustrated that in addition to dealing with high turnover rates and cutbacks, health journalists have to produce more content than ever, thus relying to a large extent on ready-made news and information subsidies (e.g. Borchelt, 2008; Jackson & Moloney, 2016; Kroon & Schafraad, 2013; Morrell et al., 2015; Scholten & Ruigrok, 2009). Especially content provided by PR practitioners comes in handy in order to meet the demand for comprehensibly translated health information (Cho, 2006; Furlan, 2016; Gasher et al., 2007; Park & Reber, 2010). In general, studies on the use of PR in health journalism agree on the increasing impact of PR on journalistic content and agree that the amount of PR-based editorial content lies between 40 and 60 percent (e.g. Davies, 2008; Knight, 2011; Kroon & Schafraad, 2013; Prenger et al., 2011). Others are convinced that much more news output is (partially) based on or inspired by PR information (e.g. Herman & Chomsky, 2012; Macnamara, 2016; Reich, 2015). As an overall conclusion, our research results confirm the strong presence of public relations content as a source of health information, however, we found the lack of transparency about the use of this particular source remarkable. Reich (2010, p.811) defined this a "*smokescreen of anonymity*". In health journalism, journalists use significantly more information subsidies compared to their colleagues (Len-Rios et al, 2009a), and especially the pharmaceutical industry is abundantly offering subsidized content according to our results. By taking a multi-method approach, we wanted to shed light on the complex pharma-journalist relationship and to demonstrate the direct and indirect impact of pharmaceutical PR on magazine health news. Previous research warned about the hidden omnipresence of PR input in health issues (e.g. Diekerhof & Bakker, 2013; Forsyth et al., 2012; Jackson & Moloney, 2016; Kroon & Schafraad, 2013; Sismondo, 2008), nonetheless, the findings of the content analyses and interviews point out that the pharmaceutical industry has a considerable influence on magazine health journalism that is generally not explicitly visible in the news output. We noticed very little explicit references to pharmaceutical industry sources in two waves of magazine health content in 2013 and 2015. PR nature of the information subsidies is not always traceable and it remains unclear whether PR solely triggers journalists to start a journalistic query of copy-paste PR content integrally in the news without passing it through the procedures of checks and balances. Mental health coverage shies a bit more away from the use of subsidized content, yet the practice is still visible online and in newspapers and magazines. Our interviews, however, suggested that pharmaceutical PR creeps into health news coverage in a much more sophisticated manner, because practitioners know how to anticipate the professional needs and routines of health journalists in subtle ways and know better than any other stakeholder how to fabricate attractive press releases and offer accompanying interesting benefits such as exclusive contacts with experts and patients, case studies, press releases redirecting journalists to scientific publications that correspond with their message etc. Jackson and Moloney (2016) suggest that Gandy's (1982) notion of information subsidies or pre-packaged news is no longer sufficient to understand the influence of PR practitioners on news content. They propose the concept of editorial subsidies. In addition, the findings of chapters four and five suggest that many PR materials slip into news coverage unnoticed as part of Belga news releases. As a consequence, we conclude that the influence of pharmaceutical PR in magazine health news is stronger than would be expected based solely on a content analysis of explicitly mentioned sources. Journalists state that they copy news from information subsidies and especially from PR material with the necessary vigilance and remain cautious about the commercial motives and accompanying profit maximization behind it (e.g. Levi, 2001; Macnamara, 2016; Moynihan et al., 2002; Tilley & Hollings, 2008). However, communication strategies of pharmaceutical stakeholders coincide with the traditional flaws of the news ecology driven by commercialism (Seale, 2002). Chapters four and five also shed light on the importance of the pharmaceutical industry as an advertiser, which might increase their impact on health news as well. Our

findings show that editors-in-chief anticipate the needs and preferences of advertisers in aligning editorial and commercial content, for example in placing an article on a certain health issue next to a corresponding ad. Subsequently, even though the respondents stress that advertisers have no direct say in editorial content, journalists display a certain sensitivity to take into account the interests of important advertisers when reporting on a certain health issue, for instance in choosing to give visibility only to their brands from a range of available health products. This indication of power stresses the idea that companies possessing economic power and financial means to develop specialized public relations (Davies, 2008; Davis, 2000a; McNair, 2009; Herman & Chomsky, 2012; Macnamara, 2014; McChesney, 2013; Park & Reber, 2010) turn news access into a snake pit where journalists and sources *"slither all over each other, hissing with hatred but hopelessly knotted together"* (Savage & Tiffen, 2007, p.79).

Third, empirical chapters four and six discussed the recent developments in journalism, such as social media and the empowering capacities of network journalism, in light of health coverage. As was previously mentioned, health journalists' sourcing practices seem to be dominated mainly by powerful actors (e.g. Albaek, 2011; Len-Rios et al., 2009a, 2009b; Tanner et al., 2015; Tiffen et al., 2014). Nonetheless, the empowering capacities of social media like Facebook, Twitter, Instagram and blogs, have the possibility to create a health news environment with room for a more balanced news access (e.g. Deprez & Van Leuven, 2017; Hedman & Djerf-Pierre, 2013; Heinrich, 2011; Molyneux & Holton, 2015; Rahmanzadeh & Harrower, 2016). Our different studies contradict the findings of international research on health news and other features, in that ordinary citizens and especially patients are also highly visible in the news output. Especially health journalists' actor preferences are less focused on top-down communication and leave space for citizens and alternative voices in health issues. Belgian news media display a diverse use of actors. Citizens, mainly patients and their family, are considered a way to give health a more 'human face', offering a more personal approach to health issues. Particularly when journalists cover mental health matters, they rely easier on information from social media and use this tool to follow up patients, their family and patient associations, applying this source's empowering capacities. Twitter and Facebook are researched for personal stories, anecdotes and interesting story ideas rather than following research updates of universities and research centers. By doing so, journalists can expand their audience by holding up a mirror for news consumers, who can identify with the health stories (Rowe et al., 2003). These findings also relate to international studies (e.g. Briggs & Hallin, 2016; Brighton & Foy, 2007; Cooper & Roter, 2000; Gregory & Miller, 1998; Kim & Willis, 2007; Ransohoff & Ransohoff, 2001) that mention the importance of personalization and identification as news values. Many journalists consider personal testimonies and stories as an added value to their health issues and a way to achieve balance in the coverage (e.g. Beckers et al., 2016; Noguera Vivo, 2013; Secko et al., 2011, 2013). Patients set the agenda by bringing stories under the attention of journalists, who then cover the issue and further examine it through expert information. Our research indicates that social media add a new dimension to the journalist-source relationship as social media are a useful tool for journalists to find patient testimonies. Additionally, another side of health stories emerges (Bubela et al., 2009; Len-Rios et al., 2009a; Secko et al., 2013): the so-called 'unfinished health story'. Nonetheless, the use of citizens and alternative actors can be described a mere a process of window dressing according to our interview sample, since academic actors, specialist practitioners and government actors still prevail in many media. Since, journalists are not completely persuaded by the informative value of civil society actors, lay narratives are not necessarily included to hear what these people have to say, but instead serve as a means to convey the story to a wider audience (Neuberger et al., 2014; Paulussen & Harder, 2014; Verhoeven, 2008). This trend that hinges on emotional investment,

runs through, not just health news, but through news in general, and is symptomatic of today's news culture (Allan, 2011; Gans, 2009; Goldacre, 2013). Additionally, medical and academic experts help to explain and contextualize often complex and technical health issues as actors as they credit authority and reliability to the journalistic content. This practice might be problematic since statements often contain opinions rather than factual elaborations and since certain scientists become the go-to actors, often neglecting relevant scientists who are less mediagenic (Albaek, 2011; Goodell, 1977; Levi, 2001; Peters, 2008; Williams & Gajevic, 2013). occurrences of ordinary citizens nearly equate the share of experts in health news, however, not to the same extent in every media type. In our sample, we notice health news in newspapers and radio is still a playground for elite actors, while television and magazines have a more diverse group of actors represented in their news. The latter show more balance by combining viewpoints of elite and non-elite actors. Online media are the outsider in our research since there is very little appearance of actors in health issues, although this is compensated by the use of multiple sources, mainly independent experts. While in mental health coverage academic actors, specialist practitioners and government actors still constitute an important group of actors, in many media, citizens are clearly the focal group of actors, especially in magazines and on television. An explanation might be that mental illness is a topic more strongly relying on personal testimonies, connecting the issues to the life of the audience and stimulating identification or creating sympathy for those coping with mental disorders. By doing so, they invert the traditional actor preferences compared to general health coverage, which is a specific finding for mental health news.

8.1.2 Frame clusters covering the Belgian ADD/ADHD case (RQ3)

News media have proven to be an important source of information about mental health issues such as ADD/ADHD. Not only do they reflect the public's attitudes towards those coping with the disorders, they also take part in shaping and framing how patients, the disorder itself and possible causes and solutions are portrayed (Harwood, 2006; Klin & Lemish, 2008; Olstead, 2002; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003; Wahl et al., 2002). By conducting a qualitative, inductive framing analysis, we wanted to retrieve the framing mechanisms health journalists apply when covering ADD/ADHD in both popular as well as quality newspapers in Belgium. Our conclusions meet the findings of other international studies and confirm the presence of some of the developed frames in the literature. Yet, we made some additions adjusted to the Belgian context and were able to connect these frames to the case of ADD/ADHD, and were able to group them into three separate clusters discussing the patient, the disorder and a way to counter-frame classic coverage. This set of frame clusters can be seen as a first overview of previously found frames, complemented with ADD/ADHD frames specific for the Belgian context.

In order to describe patients coping with ADD/ADHD, our research distinguished three frames, that could be found in the literature (e.g. Henson et al., 2009; Klasen, 2000; Rafalovich, 2004; Ray & Hinnant, 2009; Sieff, 2003; Wahl, 2003a), but were not operationalized in detail yet: or the child is framed within the othering frame, the childlike state frame or the danger frame. The othering frame describes patients as being different from the norm and distinguished them from children without a disability, while stressing both shortcomings as well as strengths and talents. The childlike state frame labels children as energetic, while the danger frame confirms various negative stereotypes described in the literature, stressing the aggressiveness and dangerousness of an ADD/ADHD child, focusing on the fact that it is a

dysfunction, impairment or disorder. By including such dramatic descriptions and by making a connection to crime, violence and self-destruction, journalists unnecessarily sensationalize the disorder. Remarkable for our empirical study in chapter seven, however, is the fact that we were able to link these frames of the patient to a set of frames offering a cause and solution of the disorder, with a recurring counter-frame in a clustering matrix.

The othering frame only appears in the newspaper coverage connected to an educational frame, which is also mentioned by several scholars (e.g. Briggs & Hallin, 2016; Ellis, 2015; Olstead, 2002; Sieff, 2003) and matches partially with the academic setting frame (e.g. Graham, 2008; Park & Reber, 2010). This frame stresses the educational context surrounding ADD/ADHD and the responsibility of teachers and an adjusted educational system for those coping with the disorder. A counter-frame within this context is the demedicalization frame (Sobal, 1995), a generic health frame that could be used as a counter-frame in light of ADD/ADHD matters. This frame puts the responsibility for the issue with environmental and socioeconomic factors, which has a link with generic frames such as the social responsibility frame, systemic frame and thematic frame (e.g. Barry et al., 2011; Briggs & Hallin, 2016; Clarke & Everest, 2006; Hawkins & Linvill, 2010; Iyengar, 1991; Kim & Willis, 2007). Dorfman et al. (2005) confirm this and state that not the individual patient is accounted responsible, but political and social factors (i.e. socioeconomic status of parents) have a role in treating the issue.

The second patient-related frame, the childlike state frame, is strongly connected to the self-responsibility frame (e.g. Guo et al., 2011; Hawkins & Linvill, 2010; Iyengar, 1991; Kim & Willis, 2007; Sobal, 1995). Hodgetts et al. (2007, p. 50) describes this frame as "*tools for educating the public about lifestyle risk factors and promoting prevention through acceptance of personal responsibility and behavioral change. Such stories reflect a moral obligation to be healthy, based on notions of individual responsibility for health.*" The issue can be biomedical in focus but is mainly caused by the patient's own doing, therefore lifestyle approaches serve as a way to take control. On that account, ADD/ADHD is reduced to an individual problem, rather than being the result of a person's social background and the more profound political and economic environment s/he lives in. Ready-made tips and tricks are offered to make stories more relatable and encourage lifestyle changes. Patients should undertake individual actions and preventive measures, adjusting their own behavior and (un)healthy habits. Remarkable, and unique however, is the fact that, typically in the Belgian context, this idea is counter-balanced by the fake news frame, which mainly states that ADD/ADHD is not real and is a non-existent disorder. Vividness, hyperactivity, high levels of energy, enthusiasm and impulsivity are considered peculiar to childhood in general and are biological characteristics of children and teens. Children are naturally seen as busy bees, therefore, hyperactivity and lack of concentration are main characteristics of children, which leads to ignoring the existence of a medicalized issue such as ADD/ADHD altogether. Especially critics and pedagogues are used as sources to build up a fake news argumentation, minimizing the existence of a disorder or the need for medical treatment. This approach to ADD/ADHD was not found in any other (international) study on mental health issues or ADD/ADHD in the literature, and is a unique contribution of our Belgian research concerning framing of the issue.

At last, our research results connect the danger frame with the medicalization frame (Conrad, 2001, 2007; Graham, 2010; Rafalovich, 2004; Ray & Hinnant, 2009; Saikkonen, 2017) stating that ADD/ADHD is a medical and genetic predetermined condition which solely can be treated with the help of (behavior regulation) medication. This is in line with what Park and Reber (2010) call the medical research frame.

ADD/ADHD coverage is biomedical in implying that coverage of the disorder strongly depends on biomedical remedies and technologies, miracle workers in life sciences, health risks, scientific studies stressing medical progress, breakthroughs and failures. However, a too strong focus on medicalized origins and solutions of the disorder can lead to genetic determinism and over-optimism (Conrad, 2001; Conrad & Leiter, 2004; Coveney et al., 2009), describing Adderall and Ritalin as miracle drugs despite the fact that they have not proven to be much more effective in alleviating the symptoms than non-medical treatments. This often leads towards framing ADD/ADHD as being over-diagnosed, which entails parents, guidance counsellors and teachers pushing the diagnosis of the disorder, but also the abuse of medication by many children who do not suffer from ADD/ADHD but are medicated to fit the ideal image of a child. This over-diagnosis frame is as well an addition of our research to the framing tradition of mental health. While many news items stress dangerousness and the need for medication, others criticize these aspects, recognizing the existence of ADD/ADHD, but being critical towards the actual treatment. This sense of criticism could be developed into a specified news frame, which distinguishes our study from previous research yet again.

8.2 Contributions to the field

This dissertation contributes to the fields of health journalism, sourcing practices and framing of mental illnesses in several ways. First, we were able to contribute to the rather scarce body of knowledge about sourcing practices and actor preferences of journalists working at different news media types in general, and health journalists in particular. Our exploratory and comparative content analyses did not only offer insight in the sourcing practices of newspaper and television journalists, but also dedicated attention to less researched media outlets, such as radio, online news and especially the magazine genre. Furthermore, we also bridged the gap between research on sourcing practices and health journalism, a field that receives less attention in journalism studies, and unveiled the peculiar relationships between health journalists and their sources.

Second, this dissertation advances the understanding of the sourcing decisions made by journalists when covering mental health problems and the framing routines that go hand in hand with it. Especially in respect of the ADD/ADHD case, our framing research is a valuable contribution, since research on this topic is rather sparse, fragmented and focused on a longitudinal tradition aimed at researching the ways in which the disorder was framed in the past. By selecting a more recent and up-to-date five-year time frame and by connecting different frames, we distinguished a superordinate frame clusters with frames of the patient, the disorder and counter-frames and composed a framework that can form a basis for future international research.

Third, the impact of public relations output and information subsidies on editorial content is a topic already widely studied in the domain of journalism studies (e.g. Herman & Chomsky, 2012; Macnamara, 2014; McChesney, 2013; Reich, 2015). Efficiency considerations, steered by commercialization, globalization, convergence and new technologies, resulted into a journalistic interest in ready-made news and information subsidies. Ample studies have proven that the tendency towards churnalism has reduced the costs of news production and increased the editorial output since many more sources became available and escalated the impact of public relations on editorial content (e.g. Delorme & Fedler, 2005; Reich, 2011). This development altered the relationship between journalists and PR

practitioners. In this dissertation, we tried to look into the impact of content distributed by public relations practitioners on health news coverage. We noticed the government and academic experts discovered the potential of public relations and press releases and are considered an important source of information and often serve as actors receiving a voice in the news. However, the pharmaceutical industry, a source that remained under the radar and rather absent in our quantitative studies, played indirectly a more important part as a source of information according to our qualitative research. By the means of a combination of in-depth and reconstruction interviews, with health journalists and some of their editors-in-chief, we were able to disclose the delicate and scarcely researched relationship between journalists and pharmaceutical companies and provide more in-depth insight in the matter.

8.3 Recommendations

Based on our general conclusions, this dissertation wants to formulate some recommendations and wants to address points of attention with regard to health journalists' sourcing and framing practices. Empirical chapters four to six illustrated that elite sources such as academic and government sources and traditional media brands are considered important sources of health information, which connects to the democratic elite theory supported by Benson (2006). While academic sources try to serve the community by presenting their research outcomes to a broader audience via the news media, government sources communicate their regulations and health decisions to the public. In addition, public relations content, mainly from pharmaceutical companies, is on the rise and has established a steady place in the journalistic network of sources (Boumans, et al., 2014; Dimitrova & Strömbäck, 2009; Gans, 2011; Van Hout & Jacobs, 2009). To meet the pressure of the newsroom and in order to work more efficiently, health journalists almost automatically rely on these sources since they offer information that is ready to be published. At the same time journalists are not always being transparent about the origin of the health information they actively use to produce their news content. However, with such a large amount of people relying on the news media for health information and managing their own lifestyle and health behavior (e.g. Cho, 2006; Feeley & Vincent, 2007; Martinson & Hindman, 2005), more source transparency and more clarity about the nature, origin, reliability, credibility and contribution of the source to the actual news item is needed. By doing so, the audience becomes aware of the interests that are at stake and the different stakeholders that try to influence the news content by offering information as a source or actor or by framing issues in a certain way. Furthermore, by increasing transparency, journalists might be able to rebuild the wall between commercial and editorial departments to clarify which information is supported and provided by commercial companies such as the pharmaceutical industry. By being more transparent about the sources that serve ready-made information and are part of churnalism procedures, health journalists could also make more time and effort for investigative journalism, researching health and science topics more in depth, covering alternative stories in order to upgrade the specialty area instead of repeating the same health stories and distorting reality by copying the overly optimistic voice of press releases. By doing so, according to a paternalistic approach, they could evolve to a more analytical journalism that goes beyond reporting facts and brings the audience to implications of health news on their daily lives.

Other recommendations that could be made, are that journalistic education and media companies should invest in a medical training of journalists or should be encouraged to invest in people with health-related degrees. Health is a complex, technical and delicate matter and many journalists lack the

necessary educational background and often do not have sufficient knowledge about their specialty area (Cho, 2006; Furlan, 2016; Schwitzer et al., 2010). As a result, journalists face challenges when communicating with scientific experts or when translating information from medical journals to their audience, or as McGrath and Kapadia (2009, p.16) describe it "*when the media gets it right, people and patients can benefit, but when they get it wrong, patients can be exposed to inaccurate, or worse, harmful information*". Journalists would definitely benefit from a basic health-oriented education, making them feel more comfortable in their chosen specialization since their understanding of complex health matters can be increased and their evaluation of health-related sources can be improved. However, this might also have a downside concerning the news output. Highly specialized journalists might stay too close to the complex discourse applied in academic studies. Generalists, however, consider themselves laypeople and cover health news with an audience in mind that has no specialized foreknowledge. They know what the audience needs to be better informed and to make better health-related decisions in a democratic society.

Furthermore, our empirical research illustrates the fact that health journalists, especially those working at newspapers, television and magazines, contact a broad panoply of sources and actors when covering health issues. Thus, contrary to the generic approach to news sourcing, that implies that journalists have the same routines because they share the same cultural capital and are affected by the same social, technological, political and economic changes, Benson's (2006) approach recognizes the particularities of media types. Translated to the results we found in our research, we confirm that different media types have their own routines and practices, specific to their features. Therefore, we also notice differences in sourcing practices and actor preferences. Since television attaches importance to visual aspects, personal testimonies and vox pops often compensate the use of academic sources. A second example are magazines. Due to the coverage of and intrusive topic as health news, magazines want to personalize complex health topics and translate them to ready-made tips and tricks for the audience, which implies the reliance on ordinary citizens opposed to academic sources. Radio and online news, on the other hand, rely more on authoritative sources due to their immediacy. In general, we recommend journalists, however, to expand their sources beyond their usual suspects. By constantly relying on a black book of steady contacts, health journalists still limit what they say. While some sources are considered relevant or are valued for their expertise and reliability in the past, the need for nuanced, balanced and complete coverage demands a wider range of sources and suggests contrasting and opposing different perspectives. Depending on the type of story they want to tell, journalists should decide what type of sources could be relevant and should be skeptical of other sources. For example, when covering a more personal story, the added value and experience-based knowledge of a patient can be more relevant than the contribution of an academic researcher or politician to the issue. By doing so, less visible opinions can be communicated and empowered and a more diverse point of view on health is created, which fits the democratic participatory theory mentioned by Benson (2006). While the expertise of a non-elite source should be valued, journalists also should be aware that those personal stories are only a fraction of the reality and a personal single-experience based interpretation of a certain health issue. By generalizing such an experience, journalists can contribute to misleading the audience, dramatization, false hope and optimism and/or forgetting to see the bigger picture (e.g. societal factors instead of personal behavioral changes). On the other hand, when journalists want to bring an alternative health news story with a high informative and educational value, experts might offer more accurate information than for instance patients. When selecting expert sources, journalists should be aware that productivity and reputation are not the only factors that need to be taken into account

(Dunwoody, 2008; O'Keefe, 2002; Stryker, 2002). Some experts are less talkative than others, but this does not imply they are inferior to their more sociable counterweights (Levi, 2001). Furthermore, scientists' need for visibility concerning funding, is another factor journalists should be aware of (Conrad, 2007; Kroon & Schafraad, 2013; Stryker, 2002). By creating a dialogue between different expert opinions in their health coverage and by contrasting perspectives and offering source variation, journalists encourage accurate and nuanced health coverage.

Subsequently, news media receive a lot of competition of Dr. Google, social media, health blogs and online health information platforms due to the digitalization (Colson, 2011; Secko et al., 2013). Health journalists should act as curators or guideposts, showing their audience which information is relevant and reliable and which sources and actors are credible or need to be avoided. It is within journalists' social responsibility and within their role to inform and educate the audience in order to guide them in making well-informed decisions and to encourage them in developing a critical attitude towards the mass of health-related content spread online.

A last recommendation goes up for covering and framing mental health issues. Here as well, journalists should monitor the types of sources and actors being used in the coverage. Mental health is often a topic people only have media-based experience about (Henson et al., 2009; Secko et al., 2003). It therefore is even more important to clarify sourcing practices and source transparency. Furthermore, correct, accessible and accurate information is highly needed, especially when framing ADD/ADHD. Consistently consulting the same types of sources, might lead towards a biased or very limited perspective on the disorder in the news, which should be avoided since media need to offer nuanced and accurate perspectives on the disorder in order to increase health literacy as well. Chapter seven illustrated that the frame clusters used to describe patients coping with ADD/ADHD and the disorder itself, are often limited, one-sided or rather negative in tone. Additionally, by mainly focusing on a biogenetic nature of the disorder and suggesting medication as a solution, news media could unintentionally stimulate over-diagnosis and overtreatment (Swensen et al., 2011; Walsh-Childers & Braddock, 2013; Welch et al., 2011). However, our research illustrated as well that journalists are critical towards the case of ADD/ADHD and often use counter-frames to cover the disorder, by pointing out over-diagnosis and offering lifestyle or demedicalized solutions and treatments. Health journalists then can increase awareness about ADD/ADHD, advantages and risks about treatment and promote behavioral and lifestyle changes. Additionally, our data reveal that medicalization and over-diagnosis are not the only popular frames applied by journalists. De-medicalization and the educational frame also often occur, directing media discussions away from a solely focused medical debate towards attention to educational aspects and policies to make special needs children's life more manageable and bearable. This contributes to a depolitization of the ADD/ADHD debate in Belgian newspapers and opens up the debate.

8.4 Limitations and suggestions for future research

We explored many different theoretical aspects of health journalism and journalistic sourcing and framinig practices by combining different research methods and making certain methodological choices. However, the way we approached our research questions and the methodological choices we

made to answer them, have their limitations and their downsides. In addition, many aspects of our chosen topic still remained untouched in this dissertation due to time limitations or the fact that they were veering too far from our main goals. Consequently, we can critically scrutinize our studies, while also making suggestions for future research.

First, we conducted several content analyses and recognize this research method has many advantages. Compared to other specialty areas such as foreign news coverage and political and economic news, health coverage is a rather underexplored field within journalism studies (Len-Rios et al, 2009b; Hinnant et al., 2015; Hodgetts et al., 2007; Pettersen, 2005; Secko et al, 2013; Van Leuven & Deprez, 2017). By conducting large-scale analyses, taking different media types into account, we were able to systematically explore the field of health journalism and collected large databases of health news. By doing so, our studies can be seen as an important step in the direction of further in-depth research on health journalists' sourcing practices. We listed which sources were exactly used, how many times these sources served the news content and how prominent each source was in not only newspaper and television news, but also magazines, radio and online news. Furthermore, we also looked into the types of actors that were being quoted and their prominence when given the floor. Additional in-depth and reconstruction interviews illustrated how magazine health journalists valued the sources and actors they use to cover health stories. Our results showed that Belgian news media apply a process of top-down communication when covering health and therefore remain attached to the traditional hierarchy of credibility and the medical authority aspect of biocommunicability (Briggs & Hallin, 2010; Gandy, 1982; Gans, 1979, 2011; Hall et al., 1999; Holland, 2017b; Jackson & Moloney, 2016; Len-Rios et al., 2009a; Reich, 2011; Williams & Gajevic, 2013). Especially the dominance of academic sources and actors is remarkable and peculiar to health journalism compared to other specialty beats (Holton et al., 2012). Despite the preference for elite sources and actors, we noticed as well that ordinary citizens nearly equate the share of experts in the news, especially in newspaper and radio news, and even go beyond the dominance of experts in television and magazine news. In future research, however, we could pay attention as well to the content of the contributions of both elite and non-elite sources and actors in order to register whether they add valuable information to a news item or remain a mere illustration of what is being said. In addition, content analysis merely studies the manifest content of news items and only measures sources that are explicitly mentioned in news items. Sources and actors that were consulted when researching a topic to connect the dots of the story altogether, but that are not explicitly present in the news output, were not registered in our analyses. By including metadata of the journalists' working process, a more in-depth content analysis would be possible. Moreover, ethnographic research would also offer the opportunity to dig deeper and unveil sources and actors that were consulted by journalists, but eventually did not make it to the news or were more subtly mentioned (Van Hout & Jacobs, 2008). In particular, by taking a case-oriented, ethnographic approach, we could set out to investigate the complex practices and professional routines that determine the uptake of specific pieces of health information. Yet, despite underestimating the absolute number of sources, our content analyses have been able to capture some overarching tendencies. Our analyses contributed to the scarce comparative knowledge about sourcing practices in different media types in health journalism. However, our content analyses only included a one –and four-month time period. It would be interesting to repeat the study during another and larger time period. On the other hand, in order to outmaneuver seasonal-bound results (of which we were critical in the description of our methodological choices in chapter three), longitudinal (national and international) comparative

research is preferable to detect whether the same results can be found in a different time period and in different international contexts (Dimitrova & Strömbäck, 2009).

Second, considering the fact that health news retrieved from the news media, is an important source of information for citizens when they want to manage their own health and lifestyle (Cho, 2006; Dorfman, 2003; Dunwoody, 2008; Holton et al., 2012; Peters, 2008; Picard & Yeo, 2011; Viswanath et al., 2008; Wallington et al., 2010), it would be relevant to adopt an audience perspective in future research in order to determine how news consumers process different types of health information, how they value the sources and actors that are used by journalists in terms of credibility, valuable contribution or understandability. In addition, health and media literacy are important aspects that should deserve attention in research as well (Nutbeam, 2008).

Third, our interview research indicates that the pharmaceutical industry has more impact on editorial content than our content analyses detected at first sight. Due to their importance as an advertiser (Delorme & Fedler, 2005), editors-in-chief anticipate the needs of the pharmaceutical industry by aligning commercial and editorial content. Furthermore, while these advertisers have no direct say in which health story is being told, journalists and editors-in-chief take their interests into account when reviewing products or discussing certain treatments. We limited our interview research to magazine journalists and their editors-in-chief, since the magazine world is a highly commercial news culture. Future research should also take interviews with health journalists working at different media outlets into account in order to further investigate our assumptions. Moreover, research on the relationship between journalists and the pharmaceutical industry could also benefit from ethnographic research at a pharmaceutical company complemented with an input-output analysis of information subsidies provided by PR practitioners and the eventual news output (Reich, 2015; Van Hout & Jacobs, 2008).

A final remark, is that, we were able to contribute to existing research on mental illnesses in terms of sourcing practices as well as framing practices. Yet, mental health is, while being at topic more covered than ever in the news media (Ellis, 2015; Haller, 2010; Henson et al., 2009; O'Hara & Smith, 2007; Wahl et al., 2002), underrepresented in communication research (Hodgetts et al., 2007; Tiffen et al., 2014). A content analysis which includes a larger time frame in a comparative design, would be interesting here as well. The need for longitudinal comparative research, is a line we can carry forward as a limitation of our framing analysis on the ADD/ADHD case. We only studied the five most recent years of news coverage on ADD/ADHD in a Belgian context. By applying a longitudinal approach, we would be able to detect how coverage changes over time in term of specific frames. In addition, an audience-oriented approach would be interesting to see how framing of ADD/ADHD affects children and teens coping with the disorder and how patient associations try to reframe the issue in the news.

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English summary

This dissertation explores the journalistic sourcing and framing practices in the field of health journalism and highlights the cases of mental health coverage and ADD/ADHD. The last decades, there has been an increase in the amount of health news in the media (Kaiser Family Foundation, 2009; Pew Research Center, 2011; Picard & Yeo, 2011; Weitkamp, 2003). The news media play a key role for information about health-related issues: they transmit useful medical information about treatments and diagnostic matters, discuss new scientific research, translate complex health information and increase public awareness (Briggs & Hallin, 2016; Cho, 2006; Seale, 2002; Turow, 2010). Journalistic decisions about what becomes health news and what not, are influenced by different routines focused on news selection and production. By framing health issues and by applying certain news sources, news media shape the public's social reality and their perspective on health issues (Albaek, 2011; Camporesi, Vaccarella, & Davis, 2017). Contemporary news media are confronted with technological and economic evolutions, which have severe repercussions on the different ways of sourcing and framing news (Deuze, 2005; McChesney, 2013; Singer, 2007; Sissons, 2012). Globalization and privatization of the news media initiated media concentration and eventually led to commercialization of the news production (Davies, 2008; McChesney, 2013; McManus, 2009; Raeymaeckers et al., 2015). Additionally, the introduction of new technologies and the arrival of innovation in the newsroom increased the pressure on journalists, who have to produce more content on multiple platforms, with less resources and people (Broersma & Graham, 2012; Franklin & Carlson, 2011; Heinrich, 2011; McIntosh White, 2012; Pavlik, 2013; Van der Haak, Parks, & Castells, 2012).

The influence of some of these recent evolutions in the journalistic landscape, have been extensively documented in the past (Gans, 2011; Raeymaeckers, Deprez, De Vuyst, & De Dobbelaer, 2015; Shoemaker & Vos, 2009; Wolfsfeld, 2011). Yet, scholars mainly focused on foreign news coverage and political and economic news (Beckers, Walgrave, & Van den Bulck, 2016; De Swert, 2013; Heinrich, 2011; Reich, 2011, 2015; Van Leuven, Deprez, & Raeymaeckers, 2013). Technological and economic developments, however, still have an even stronger impact on the ways journalists work when covering complex and technical topics such as health (Broersma & Graham, 2012; Dunwoody, 2008; Len-Rios, Hinnant, & Park, 2009a; Secko et al., 2013; Van Leuven, Deprez, & Raeymaeckers, 2015; Vargas & Paulin, 2007). Due to the importance of correct and accurate health coverage and the delicate nature of the specialty area, we take a closer look at this scarcely researched field in journalism. This dissertation stands on two twin pillars connected to the aforementioned evolutions. First, we want to examine the journalistic sourcing routines of Belgian health journalists. In order to paint the bigger picture, we want to map the sourcing practices of a broad range of news media, starting from print press (newspapers and magazines), to audiovisual media (television and radio news) and online news content. Second, we also want to focus on mental health coverage, which takes up a growing amount of space in the health news coverage and examine the specific case of ADD/ADHD. By doing so, we want to research whether the recent developments in the media sector also affected the sourcing practices when covering mental health issues. Additionally, we want to determine the frames journalists apply when covering ADD/ADHD.

Using multi-methods research based on quantitative content analyses, a combination of in-depth and reconstruction interviews and a qualitative framing analysis, this dissertation will formulate answers to

three central research questions: *(1)How are health-related news items sourced (cf. use of sources and actors) by journalists in a different range of news media* (2) *How do journalists source (cf. use of sources and actors) news about mental health issues in a different range of news media* and (3) *How are mental health issues, ADD/ADHD in particular, framed by health journalists in the news media*.

The empirical part of this doctoral thesis contains four studies that contribute to answering different aspect of the central research questions. The first study explores the journalistic sourcing routines and actor preferences of magazine health coverage, based on two quantitative content analyses of respectively 19 and 10 magazine titles (2013, 2015) to unveil the daily routines of health journalists. By the means of a combination of in-depth and reconstruction interviews with journalists and some of their editors-in-chief, we deepened the results of the quantitative data and explored the underlying motives of source and actor preferences. The results of this study are a necessary first step towards exploring sourcing practices in the specific field of health journalism. The research indicated that Belgian health journalists working at magazines are, despite convergence, commercialization and digitalization, still subject to traditional routines of sourcing. When covering health issues in magazines, journalists still strongly prefer elite sources, such as scientific publications and journal articles and get inspiration for story ideas from legacy media. However, we noticed as well that, despite traditionalist sourcing practices, an evolution could be notice in the case of actor preferences since more ordinary citizens are visible in health news. Magazines, especially popular weeklies and women's magazines, offer them a space to tell their story by the means of personal testimonies. Nonetheless, in general interest magazines and health magazines, this approach is merely a process of 'window dressing', since politicians, academics and medical specialists are quoted more often to build the argumentation in health coverage.

The second study centers the aforementioned quantitative content analyses and qualitative interviews as well, and examines the sourcing practices of magazine health journalists from a different perspective. In this case, we zoom in on the use of information subsidies and ready-made content due to the increased commercialization. Furthermore, we closely look into the relationship between health journalists and the pharmaceutical industry as a news source. Our data illustrated that, in magazines, editorial and commercial content are often aligned. In the majority of those cases, news content is accompanied by advertisements or advertorials from pharmaceutical companies who want to advertise their products. Additionally, the interviews confirm that pharmaceutical PR may not be directly visible in the news output, but nonetheless creeps into health news coverage in a much more sophisticated manner. The first pattern is to send the planning and content of the upcoming magazine to the advertiser, who then can decide whether or not to advertise a product in the issue near a corresponding article. The second pattern follows the opposite direction as editors-in-chief coordinate the magazine's content (in terms of selection of topics) to a certain extent to anticipate the needs and preferences of the advertisers. Editors-in-chief deny that advertisers have a direct say in the editorial content but instead describe how journalists sometimes on their own accord attune the content of their pieces to the advertisers' interests.

Empirical study three aims at answering the first and second research question by taking the sourcing practices of health coverage into account in a broad range of news media (newspapers, magazines, television, radio and online news), as well as the case of mental health issues in order for comparative reasons. Based on the second content analysis described in this dissertation, we want to give a global

overview as a media monitor of health journalists' sourcing practices as well as specify the practices in mental health coverage. Our research results suggest that, in line with the first study, journalists mainly rely on elite sources and actors when covering health issues. Mainly scientific publications and journal articles, information subsidies and legacy media are applied by health journalists in their daily routines. Moreover, academic experts, politicians and medical experts are consulted and regularly quoted in health news in order to comment on issues. Nevertheless, we noticed differences between the media outlets in our sample. While online news, newspapers and radio news mainly hold on to these traditional sourcing practices, television and magazine news evolve towards more citizen-oriented sourcing routines, quoting ordinary citizens more regularly in the news. Furthermore, our data illustrated that the sourcing routines and actor preferences are inverted in mental health coverage. Ordinary citizens are the focal point in mental health coverage and strongly contribute to health issues with a scientific fundament.

The final study is devoted to the third research question, thus framing practices of journalists when covering ADD/ADHD as an example of mental health issues. Based on a qualitative framing analysis of Belgian newspapers, we established three frame clusters, consisting of frames that are inextricably bound together and each have a counter-frame as alternative perspective on ADD/ADHD. We were able to develop frames for patients, the disorder and a critical counter-frame. In respect of the patient, the data show a negative picture and distinguish a danger frame, childlike state frame and othering frame, which aligns with the literature on the framing of mental health. Yet, in this particular study, we were able to clearly operationalize these frames and linked them to a specific disorder-oriented frame, respectively the educational frame, self-responsibility frame and medicalization frame. Remarkable, however, is that this study links counter-frames to the frame sets, peculiar to the Belgian context: the demedicalization frame, fake news frame and over-diagnosis frame. Especially the last two frames are an addition to the existing framing tradition of mental health issues and illustrate that Belgian news media often portray ADD/ADHD as a fake, made-up disorder or see it as a biological characteristic of every child, rather than a medical issue. Furthermore, the tendency towards the demand of a diagnosis by teachers and schools is strongly criticized.

In general, this dissertation concludes that traditional sourcing routines and actor preferences still prevail in Belgian health journalism. Mainly scientific publications and information subsidies are highly valued sources. Additionally, our data have illustrated that commercial companies such as the pharmaceutical industry have an indirect influence on the health news content. Nonetheless, technological and economic changes affected the actor preferences of health journalists and compensate the elite-oriented sourcing practices by relying more on ordinary citizens as actors being quoted in the news. Especially in magazine and television news and mental health coverage, we notice a high amount of citizen actors in the news in order to give health a more 'human' face. In addition, when journalists frame ADD/ADHD as mental health problem, they mainly fall back on three frame clusters to portray the patient and the disorder. The results partially correspond to the existing research tradition of mental health framing. Nonetheless, Belgian health journalists often critically approach ADD/ADHD in the news by the means of counter-frames. The fake news frame and over-diagnosis frame are in this context and important contribution to the literature.

Nederlandse samenvatting

Dit proefschrift onderzoekt het journalistieke bronnengebruik en de framingpraktijken binnen het domein van gezondheidsberichtgeving, met oog voor de specifieke case van mentale gezondheidsproblemen zoals ADD/ADHD. De laatste jaren is het aandeel gezondheidsnieuws sterk toegenomen in de media (Kaiser Family Foundation, 2009; Pew Research Center, 2011; Picard & Yeo, 2011; Weitkamp, 2003). De nieuwsmedia verspreiden niet enkel informatieve berichten over bepaalde behandelingen en diagnoses, ze vertalen ook complexe en technische informatie, verhogen de bewustwording en hebben een impact op het dagelijks leven van de nieuwsconsument (Briggs & Hallin, 2016; Cho, 2006; Seale, 2002; Turow, 2010). De journalistieke beslissingen over wat gezondheidsnieuws wordt en wat niet in de media verschijnt, zijn onderhevig aan verschillende routines gericht op nieuwsgaring en- productie. Door het gebruik van bepaalde bronnen en het hanteren van bepaalde frames, bepalen de nieuwsmedia de publieke perceptie op gezondheidsproblemen (Albaek, 2011; Camporesi, Vaccarella, & Davis, 2017). Door enkele technologische en economische ontwikkelingen, komen de traditionele praktijken van framing en bronnengebruik echter onder druk te staan (Deuze, 2005; McChesney, 2013; Singer, 2007; Sissons, 2012). Globalisering en privatisering van de nieuwsmedia zorgen voor een sterkere mediaconcentratie en commercialisering van het nieuwsproductieproces (Davies, 2008; McChesney, 2013; McManus, 2009; Raeymaeckers et al., 2015). Daarnaast zorgt digitalisering voor een toegenomen druk op de dagelijkse praktijken van journalisten. Er moet meer en continu nieuws geproduceerd worden voor verschillende platformen, met minder mankracht en middelen (Broersma & Graham, 2012; Franklin & Carlson, 2011; Heinrich, 2011; McIntosh White, 2012; Pavlik, 2013; Van der Haak, Parks, & Castells, 2012).

De druk op de traditionele routines van professionele journalisten door enkele van deze actuele evoluties binnen het medialandschap, werd reeds uitvoerig bestudeerd (Gans, 2011; Raeymaeckers, Deprez, De Vuyst, & De Dobbelaer, 2015; Shoemaker & Vos, 2009; Wolfsfeld, 2011). Desalniettemin bleef dit onderzoek voornamelijk gefocust op de impact van deze factoren op buitenlandberichtgeving en politieke en economische verslaggeving (Beckers, Walgrave, & Van den Bulck, 2016; De Swert, 2013; Heinrich, 2011; Reich, 2011, 2015; Van Leuven, Deprez, & Raeymaeckers, 2013). Technologische en economische ontwikkelingen en evoluties hebben echter een nog sterkere impact op de manier waarop journalisten aan de slag gaan wanneer ze verslag uitbrengen over complexe en technische onderwerpen zoals gezondheid (Broersma & Graham, 2012; Dunwoody, 2008; Len-Rios, Hinnant, & Park, 2009a; Secko et al., 2013; Van Leuven, Deprez, & Raeymaeckers, 2015; Vargas & Paulin, 2007). Omwille van het belang van een correcte gezondheidsverslaggeving en de delicate natuur van het onderwerp, nemen we dit nog vrij onontgonnen domein onder de loep. Dit doctoraat is gebaseerd op twee pijlers die onderhevig zijn aan de reeds vermelde evoluties. In eerste instantie willen we het journalistieke bronnengebruik van Belgische gezondheidsjournalisten nagaan wanneer ze verhalen brengen rond ziekte en gezondheid. Om een volledig beeld te kunnen schetsen, willen we hier de journalistieke praktijken in kaart brengen voor een heel gamma aan nieuwsmedia, gaande van de gedrukte pers (kranten en magazines), tot audiovisuele media (televisie en radio) tot online nieuwsinhoud. Ten tweede, besteden we ook aandacht aan mentale gezondheidsproblemen, die vandaag een steeds grotere hap uit de gezondheidsverslaggeving innemen en bestuderen we specifiek het geval van ADD/ADHD. Ook hier bekijken we het journalistieke bronnengebruik, maar zetten we daarna in op de tweede pijler van dit proefschrift, namelijk de manier waarop dit nieuws door journalisten geframed wordt. Aan de hand van

een multimethodisch onderzoeksopzet, waarbij gebruik wordt gemaakt van kwantitatieve inhoudsanalyses, diepte –en reconstructie-interviews en een kwalitatieve framinganalyse, zal er een antwoord geformuleerd worden op de drie centrale onderzoeksvragen die voortvloeien uit de twee vooropgestelde pijlers: (1) *Welke bronnen hanteren journalisten wanneer ze verslag uitbrengen over gezondheidsnieuws in een divers aanbod aan nieuwsmedia?*, (2) *Welke bronnen hanteren journalisten wanneer ze verslag uitbrengen over de problematiek van mentale gezondheidsproblemen in een divers aanbod aan nieuwsmedia?*, (3) *Op welke manier worden mentale gezondheidsproblemen, met name ADD/ADHD, geframed in de nieuwsmedia?*

Het empirisch luik van dit proefschrift is samengesteld op basis van vier studies die een antwoord proberen formuleren op de verschillende aspecten van deze centrale onderzoeksvragen. De eerste studie brengt het journalistieke bronnengebruik van magazinejournalisten in kaart wanneer ze gezondheidsverhalen proberen brengen. Hiervoor maken we gebruik van twee kwantitatieve inhoudsanalyses (2013, 2015) om de dagelijkse routines bloot te leggen. Aan de hand van een combinatie van diepte –en reconstructie-interviews wordt er diepgaander inzicht verkregen op de kwantitatieve data en de achterliggende motieven van bron –en actorgebruik door journalisten. Het onderzoek toonde aan dat Belgische gezondheidsjournalisten door convergentie, commercialisering en digitalisering nog steeds onderhevig zijn aan traditionele routines en bronnengebruik. Journalisten die gezondheidsnieuws brengen in magazines prefereren nog steeds sterk elitebronnen zoals wetenschappelijke publicaties en halen hun informatie en inspiratie regelmatig bij concullega's. We stellen echter wel vast, dat op vlak van actorvoorkeuren, een evolutie merkbaar is naar steeds meer 'gewone mensen' in het nieuws. In magazines, meer specifiek de vrouwenbladen en populaire weekbladen, krijgen zij steeds vaker een platform om hun gezondheidsverhaal te brengen aan de hand van persoonlijke getuigenissen. Echter stellen we ook vast dat dit in actualiteitsgerichte bladen en gezondheidsmagazines vooral 'schone schijn' is gezien daar voornamelijk tegenwicht wordt geboden door experten zoals politici, academici en medisch personeel om nieuwsstukken te onderbouwen.

De tweede studie is eveneens gebaseerd op de resultaten uit twee kwantitatieve inhoudsanalyses en de kwalitatieve interviews, en bekijkt opnieuw het bronnengebruik van gezondheidsjournalisten werkend in de magazinesector. In dit geval zoomen we, daarentegen, sterker in op het gebruik van informatiesubsidies van commerciële bedrijven in het kader van de toegenomen commercialisering van de nieuwsmedia. We staan hier bovendien ook stil bij de relatie tussen gezondheidsjournalisten en de farmaceutische industrie. Hieruit blijkt dat in magazines redactionele en commerciële inhoud regelmatig aan elkaar gekoppeld worden wanneer een gezondheidsverhaal wordt gebracht. In de meerderheid van die gevallen gaat het bovendien om een concrete link met reclame van farmaceutische bedrijven voor hun merken en producten. De interviews bevestigen bovendien dat de hoofdredactie de wensen van de adverteerders en de commerciële afdeling steeds meer indachtig houdt, wanneer de redactionele inhoud van het magazine wordt bepaald. Zo legt de hoofdredactie enerzijds de agenda van het magazine voor aan de adverteerders die op hun beurt kunnen beslissen om al dan niet te adverteren op basis van de gebrachte thema's. Anderzijds anticipeert de hoofdredactie vaak op de noden van adverteerders door gezondheidsthema's te suggereren aan de schrijvende redactie op basis van inkomende advertenties. Tot slot stelden we ook vast dat er nooit een directe invloed is van adverteerders op de eigenlijke inhoud van nieuwsstukken. Wel hebben ze op een meer indirecte en subtiele invloed op de inhoud door hun partnership met het magazine.

De derde empirische studie probeerde de eerste en tweede onderzoeksvraag te beantwoorden door zowel te kijken naar het bronnengebruik van gezondheidsjournalisten werkzaam in een divers spectrum aan nieuwsmedia (kranten, magazines, televisie, radio en online nieuws), als de case van mentale gezondheidsproblemen te bekijken en te vergelijken met de algemene gezondheidsverslaggeving. De studie is hierdoor gebaseerd op de grootschalige inhoudanalyse. We stelden vast dat journalisten bij hun verslaggeving, in lijn met de eerste studie, voornamelijk vertrouwen op elitebronnen en- actoren. Vooral wetenschappelijke publicaties, informatiesubsidies en concurrerende nieuwsmedia worden gehanteerd. Bovendien worden ook vaak academische experten, politici en medisch personeel (artsen, specialisten, paramedici) aan het woord gelaten om gezondheidsnieuws te kaderen. Desalniettemin merken we wel verschillen op tussen de verschillend types media in onze sample. Zo stellen we vast dat online –, kranten -en radionieuws het sterkst vast blijft houden aan deze traditionele bronnenpraktijken terwijl televisie en magazinenieuws meer evolueert naar het aanhalen van de gewone man of vrouw in de straat als actor in het nieuws. Bovendien, merken we dat nieuws omtrent mentale gezondheidsproblemen het bronnengebruik omkeert ten opzichte van andere gezondheidsonderwerpen en dat er binnen dit thema voornamelijk gewone burgers domineren in de berichgeving om toelichting te geven bij verhalen, die een wetenschappelijke fundering krijgen door wetenschappelijke publicaties.

De vierde en laatste studie, tot slot, behandelde de manier waarop mentale gezondheidsproblemen, meer bepaald ADD/ADHD, geframed worden in het nieuws. Op basis van een kwalitatieve framinganalyse en een inductieve aanpak stelden we vast dat er in de nieuwsmedia gebruik wordt gemaakt van drie frameclusters die onlosmakelijk met elkaar verbonden zijn en bovendien voorzien zijn van een counter-frame als alternatieve voorstelling van ADD/ADHD. We slaagden erin om zowel frames voor de patiënt als de aandoening te ontwarren en een kritisch perspectief hierop door een counter-frame. De frames met betrekking tot de patiënt, namelijk het gevaar-frame, het kinderlijk-frame en het anders-frame, zijn sterk gelinkt aan de reeds bestaande literatuur omtrent framingonderzoek betreffende ADD/ADHD en mentale gezondheidsproblemen. Aan elk van deze frames werd een frame voor de aandoening gelinkt, namelijk respectievelijk het onderwijsframe, het eigen verantwoordelijkheidsframe en het medicaliseringsframe. Opnieuw kunnen we deze resultaten terugkoppelen aan de reeds bestaande framingliteratuur. Opmerkelijk aan deze studie is echter dat we hieraan ook counter-frames kunnen linken die eigen zijn aan de Belgische context, namelijk het de-medicaliseringsframe, het 'fake nieuws'-frame en het over-diagnoseframe. Vooral deze laatste twee frames zijn een toegevoegde waarde aan de bestaande traditie rond framingonderzoek en illustreren dat de nieuwsmedia in België ADD/ADHD regelmatig afschilderen als een verzinsel of een karaktereigenschap van het kind, eerder dan een medisch probleem. Bovendien wordt ook de tendens tot het expliciet vragen om een diagnoses vanuit het onderwijs bekritiseerd.

Algemeen kunnen we besluiten dat de traditionele routines rond bronnengebruik ook nog steeds van kracht zijn in gezondheidsnieuws in België. Vooral wetenschappelijke publicaties en informatiesubsidies worden als een belangrijke bron van informatie voor nieuwsstukken beschouwd. Bovendien stellen we vast dat vooral commerciële bedrijven zoals de farmaceutische industrie een indirecte impact hebben op de specifieke nieuwsinhoud. Desalniettemin brengen technologische en economische evoluties wel een verandering teweeg in actorgebruik binnen gezondheidsnieuws en zien we dat gewone burgers vaak een platform krijgen ter compensatie van elite-georiënteerd bronnengebruik. Vooral in magazine –en televisienieuws en de berichtgeving over mentale gezondheidsproblemen zien we dat de gewone

man/vrouw in de straat steeds vaker de kans krijgt om zijn/haar verhaal te brengen en gezondheid zo een 'menselijk' gezicht te geven. Daarnaast stellen we vast dat gezondheidsjournalisten bij het framen van ADD/ADHD voornamelijk terugvallen op drie clusters van frames om de patiënt en de aandoening te kaderen, deels in overeenkomst met de bestaande onderzoekstraditie rond het framen van mentale gezondheidsproblemen. Desalniettemin zien we dat Belgische journalisten deze nieuwsstukken vaak van een kritische noot voorzien door middel van counter-frames, waarvan het 'fake nieuws'-frame en over-diagnoseframe een specifieke bijdrage vormen vanuit de Belgische context.

Appendixes

Appendix 1: Registration form used for content analysis I

Appendix 2: Coding guide used for content analysis I

Appendix 3: Reliability test for content analysis I

Appendix 4: Registration form used for content analysis II

Appendix 5: Coding guide used for content analysis II

Appendix 6: Reliability test for content analysis II

Appendix 7: Questionnaire for the in-depth reconstruction interviews

Appendix 8: Framing tree