



# The media's coverage and framing of hospital reforms: The case of Germany

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## Abstract

**Aim** In Germany, a long-lasting debate about the need for a hospital reform, including centralisation, now resulted in reform plans. As cutbacks to essential services such as hospitals are an emotional topic, the public should be properly informed, which is a central role of the media. Based on a media analysis of a large-scale hospital reform in Denmark, showing that the media's reporting might have had an agenda-setting effect, we analysed the media's coverage and framing of restructuring the hospital landscape in German newspapers.

**Subject and methods** A systematic search identified relevant articles in national and regional newspapers. The coverage between January 2018 and January 2023 was analysed regarding quantity and main theme (agenda-setting). Each article's title and main text were analysed for tone and whether it focused on episodic (single events) or thematic (broader context) framing.

**Results** A total of 705 newspaper articles (592 regional, 113 national) were included. Both regional and national newspapers mainly used episodic framing. Regional newspapers mostly reported on single closures of hospitals or departments. The tone of the title and main text in national newspapers was mainly negatively depicted, which applied to less than half of the articles in regional newspapers. These differences were, however, not statistically significant.

**Conclusion** Results indicate higher agenda-setting effects in regional compared to national newspapers. However, the overall high amount of episodic framing can result in less attribution of responsibility to policy-makers, thereby conserving the status quo. To succeed, a media strategy might help to raise problem awareness among the public.

**Keywords** Framing · Agenda-setting · Hospital reform · Hospital closure

## Background

Many European countries facing challenges like increasing expenditure and staff shortages have begun to reform and restructure their hospital landscape towards specialisation and quality of care. Hospital reforms are among the top reforms undertaken in the last few years (Polin et al. 2021).

This is also the case in Germany, where the hospital landscape is characterised by a decentralisation of the range of services provided, low levels of specialisation and significant overcapacity. Germany's current plans for a major hospital reform are accompanied by a government commission for a modern and needs-based hospital landscape, which was convened in 2022 (Bundesministerium für Gesundheit (BMG) 2023) (an overview of the recommendations can be found in S1).

When it comes to reforming hospital structures, Denmark is often seen as a role model (OECD 2013), as a continuous restructuring of the hospital landscape has been undertaken since the early 2000s. Among other things, after a larger structural reform in 2007 which redefined the responsibilities of regions and communities, hospitals have been rebuilt, many smaller hospitals have closed, and the number of emergency rooms has been halved (Christiansen 2012) (see Reichebner et al. 2020 for more information on the structural and hospital reform in Denmark). In Germany, a

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heated debate on how to learn from Denmark's experiences with hospital closures started in 2016 with a report from the Leopoldina, the National Academy of Sciences (Busse et al. 2016).

In Germany, the concept of essential services, including hospitals, has a longstanding tradition, making cutbacks of infrastructure an emotional topic. Especially in rural areas, certain parts of the population feel marginalized and left behind (Weingarten and Steinführer 2020). As one countermeasure, social scientists advocate for greater public participation, i.e. by relying (more) on direct democracy through referendums and citizen initiatives (Heinrich-Böll-Stiftung 2017). In contrast, however, some states have been removing the opportunity to vote about hospitals and emergency services in referendums (Kamlage 2021) because the topic is too complex. This is also reflected in a discrepancy regarding hospital care and healthcare information, resulting in the belief that "Germany has one of the best healthcare systems in the world" (Schattauer 2023).

From an objective perspective, arguments for not closing hospitals apply to (1) access to services but not necessarily to (2) quality and (3) costs which, according to the Federal Office for Building and Regional Planning's (Bundesamt für Bauwesen und Raumordnung, BBR) definition, together form the three pillars of essential services in Germany (Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) 2017). Results from the OECD demonstrate that Germany, despite having the highest healthcare expenditure across Europe (of which 27% is allocated to hospital services), does not fare as well in international comparisons of avoidable mortality with other Western countries as it is often portrayed (OECD/European Observatory on Health Systems and Policies 2021). Regarding avoidable hospital admissions for asthma, COPD or diabetes, the German performance is even worse than the EU average (ibid.).

Although there is a long-standing consensus among relevant stakeholders and experts that "something needs to be done", citizen initiatives mobilise and protest against hospital closures and mergers (Nützel 2019) – even in metropolitan areas (Kneist 2022). As to larger (hospital) reforms, a first step for participation might be to inform the public properly (Arnstein 2019), which is one central mission of the media (Happer and Philo 2013).

Despite hospital reforms and centralisation being highly relevant topics and emotional subjects, research addressing the respective media coverage has been non-existent in Germany. As the media has an agenda-setting role in influencing the public's opinion (Valenzuela 2019), it seems important to analyse the media's reporting on hospital reform plans and centralisation. Thus, the present analysis aims to determine whether the media effectively raises awareness among the population about the need to reform the German hospital landscape. Additionally, how the media frames an issue is

also important for the understanding of problem awareness. According to Iyengar (1991), stylistic frames describe the impact of the media's reporting by the way a topic is presented and are related to the assignment of responsibility for a certain issue. Therefore, guided by Iyengar's framework, the present study additionally aims to analyse the representation of the hospital reform and associated debates. As the COVID-19 pandemic has sparked a debate about capacities, particularly in the inpatient sector (Heinze 2020), the study also looks for changes in coverage after the outbreak in 2020.

Internationally, previous research has explored media coverage of hospital closures (Eivor 2008, Henry 2015), and only few studies have employed framing and agenda-setting theory (Eriksen et al. 2023). By integrating these theories, this study enhances our comprehensive understanding of the dynamics involved in restructuring the German hospital landscape.

One study (Collins et al. 2006) has investigated potential media effects, including framing and agenda-setting, in the coverage of a healthcare reform in Canada. Based on differences in quantity, their findings suggest that the focus on single events (episodic coverage;  $n = 341$ ) provided more opportunities to inform the public and act as conduits for the reform agenda than focussing on the broader context (thematic coverage;  $n = 77$ ). Furthermore, episodic coverage tended to have a positive tone, whereas thematic coverage ranged in tone.

Prior studies examining contextual framing, differentiating between episodic and thematic news frames, have been used to analyse the media's coverage of healthcare-related topics. These topics encompass smoking (Kenterelidou 2012), obesity (Kim and Willis 2007; Gearhart et al. 2012; Suran et al. 2014), cancer (Cho 2006; Miller et al. 2019), Alzheimer's disease (Kang et al. 2010), autism spectrum disorder (Kang 2013), public health issues (Jarlenski and Barry 2013), pandemics (Chen and Xu 2021; Dudo et al. 2007), and mental health (Myrick et al. 2014; Wu 2017; Zhang et al. 2015, 2016; Yang and Parrott 2018).

A study analysing framing and agenda-setting related to the Danish hospital reform, the preceding structural reform, as well as three "events" (Eriksen et al. 2023) showed that a substantial amount of media coverage was generated, although there were variations in the titles' context and tone of the coverage. The difference between the events in terms of context and tone was statistically significant. The difference between the two reforms in terms of context was not statistically significant, but it was in terms of tone. Concerning the structural reform, a higher share (55%) of titles was episodically framed, while reporting on the hospital reform was more balanced between episodic and thematic framing. Overall, the media's reporting likely contributed to raising public awareness about the challenges within the

healthcare system. This increased awareness may have created a favourable environment for implementing the Danish hospital reform, potentially opening a window of opportunity for change.

This study represents the first part of two analyses focusing on the German media's reporting on hospital reforms, hospital closures and hospital mergers. While the present study examines media coverage and stylistic frames, the second study applies content-related frames (Entman 1993) and delves deeper into a detailed analysis of the hospital reform.

## Theoretical background

In accordance to Kingdon's Multiple Stream Approach (MSA) (Kingdon 2014), problem awareness among the public is key for the successful implementation of reforms. The MSA explores why certain issues gain political attention and eventually lead to policy decisions. The framework is used in policy analysis to understand the process of political agenda-setting. According to it, three key factors determine the success of political initiatives:

- (1) raising public awareness about the problem (problem stream),
- (2) building majority support for political decisions (politics stream) and
- (3) developing solutions that correspond to the interests of relevant actors (policy stream).

If these three streams align, a policy entrepreneur can seize the opportunity to effectively couple them together. This alignment creates a window of opportunity where the political climate is conducive to advancing policy proposals and making meaningful decisions. Several studies have used the MSA to analyse the political processes concerning healthcare-related issues (Babaey et al. 2019; Jones et al. 2016). However, to our knowledge, none explicitly analysed the role of the media's reporting as one determinant for the problem stream. Inspired by Eriksen et al. (2023) and because a policy analysis of Denmark's hospital reform (Reichebner et al. 2020) has shown that the media's coverage helped raise the public's problem awareness, we decided to exploratively analyse how media coverage of hospital reform plans in Germany are interlinked with Kingdon's MSA (Kingdon 2014).

Guided by Collins et al. (2006) and Eriksen et al. (2023), the present study uses framing and agenda-setting theory, two different, but interlinked models, for explaining the relationship between media coverage of political issues and the public's perception of those issues (Scheufele 2000).

The selection of issues deemed newsworthy by the media is influenced by whether news stories are related to conflict,

drama, personalization, proximity, timeliness, and novelty (Price and Tewskbury 1997). Consequently, the media's choice of which issues to cover can shape the public's perception of issue importance and thus push it on the public's agenda [ibid.].

Agenda-setting, the influence of the media's reporting on the public issue perception, is analysed by examining the quantity. Framing is the relationship between the media's representation of issues and the public response. According to Iyengar (1991), there are two types of news framing: (1) Episodic framing focuses on presenting issues through specific instances, leading to extensive coverage within short time periods. In contrast, (2) thematic framing involves broader and abstract depictions of political issues by placing them in a relevant context. Episodic framing often shields public officials and institutions from responsibility, thereby conserving the status quo. Interestingly, healthcare-related topics are mostly episodically framed (Major and Jankowski 2020). Furthermore, and inspired by Wiedicke et al. (2023), we also use the tone (neutral, negative, positive, ambivalent) of coverage to examine the framing of hospital closures, hospital reforms and hospital mergers. For more information on the theoretical background, see Eriksen et al. (2023) and Reichebner et al. (2020).

## Material and methods

### Selection of newspapers

Due to the topic's regional importance and to explore differences between national and regional reporting, we included both regional and national newspapers in our analyses. The reason for this is the assumption that communities are more likely to be affected by hospital reforms, closures and mergers. Additionally, results of prior studies on the media's reporting of other healthcare issues support this assumption (Hong 2007; Wu 2017; Afrin et al. 2022).

Next, we identified national and regional print media with the highest circulation. For this purpose, the quarterly circulations of the Information community for determining the distribution of advertising media (Informationsgemeinschaft zur Feststellung der Verbreitung von Werbeträgern e. V., IVW) from 2022 were used (IVW 2023). To identify relevant regional print media for each region (North = Bremen, Hamburg, Mecklenburg-Western Pomerania, Lower Saxony, Schleswig-Holstein; East = Berlin, Brandenburg, Saxony, Saxony-Anhalt, Thuringia; South = Bavaria, Baden-Württemberg; West = Hesse, North Rhine-Westphalia, Rhineland-Palatinate, Saarland), we included the two daily newspapers with the highest circulation according to IVW in our sample. In addition, we included Bild regional to cover the tabloid press, where previous research has observed a higher

proportion of judgmental or sensationalist articles on health-care topics compared to other newspapers (Rossmann et al. 2018; Gallagher et al. 2022).

### Selection of articles

Using a systematic search strategy, the selected regional and national daily newspapers were searched via the media databases adlr.link and Nexis Uni for relevant hits from 1 January 2018 to 31 January 2023. The study period was chosen so that the time before the COVID-19 pandemic could also be depicted. The specific search strategies for each database can be found in supplementary material, S2.

First, the overall number of hits ( $n = 8,221$ ) was adjusted for duplicates ( $n = 286$ ) and then checked for relevance using the four-eyes-principle. In total, 704 relevant articles were identified and included in the analysis. A schematic representation of the selection process can be found in Fig. 1.

### Coding of articles

Inspired by Wiedicke et al. (2023) each article's title and text were coded for the tone of coverage, categorized as neutral, positive, negative, or ambivalent. For instance, a positive tone was assigned if the article conveyed an optimistic or favourable attitude towards the issues presented, while a negative tone indicated a pessimistic view. Furthermore, the context of each article was coded as either thematic (1) or episodic (2) (Iyengar 1991). More

information can be found in the codebook (S3). Additionally, each article was coded to identify its main theme, capturing the media's role as agenda-setters. An inductive approach was employed to identify the main debate themes, which were iteratively determined in discussions between two researchers.

### Statistical analyses

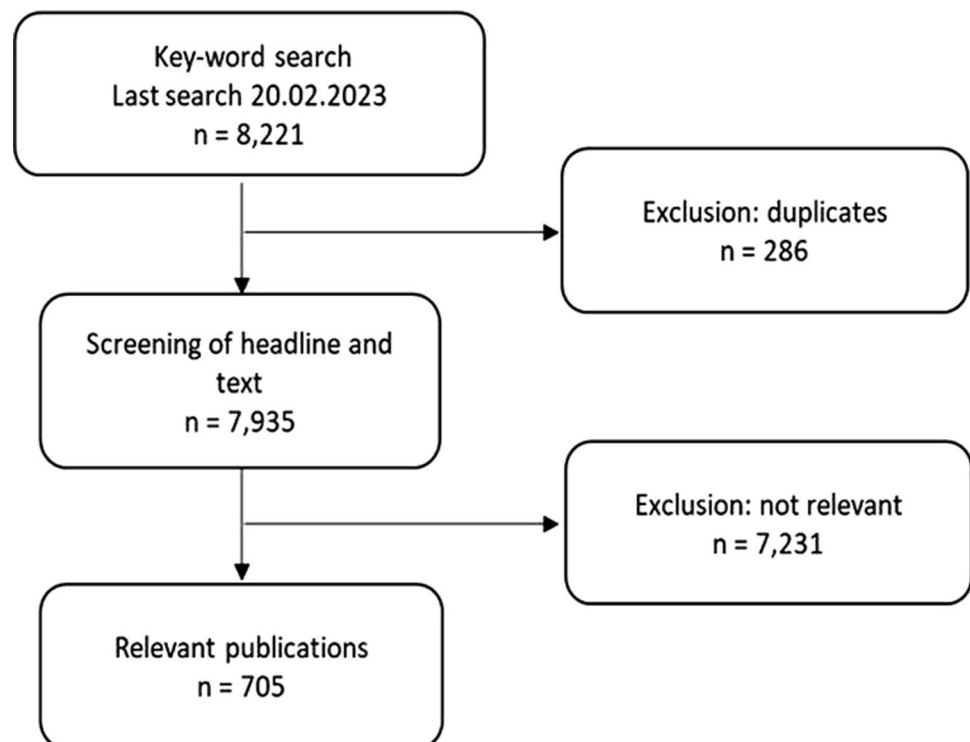
Two researchers independently performed the coding described above for a selection of articles ( $n = 83, > 10\%$ ). Cohen's Kappa was applied to test the intercoder reliability (Landis and Koch 1977). Chi-Square tests were performed to test for statistical differences between variables. A significance level of 0.05 was set. Statistical analyses were performed using SPSS 26.

## Results

### Intercoder reliability

Overall, Cohen's Kappa was higher than 0.61, indicating a substantial intercoder reliability (Landis and Koch 1977). Please refer to the supplementary material (S4) for detailed reliability measures.

Fig. 1 Flowchart



**Table 1** Overview of included newspapers and articles

Region	Name of the newspaper	Number of articles included
<i>Regional (n = 592)</i>		
North	Hamburger Morgenpost	3
	Nordwest-Zeitung	224
East	Der Tagesspiegel	35
	Mitteldeutsche Zeitung <sup>a</sup>	111
South	Nürnberger Nachrichten	37
	Stuttgarter Zeitung	75
West	Darmstädter Echo	22
	Rheinische Post	83
	Bild regional	2
<i>National (n = 113)</i>		
	BILD Bund	1
	Die Welt	14
	FAZ	35
	SZ	12
	TAZ	51

<sup>a</sup>The database used did not include Mitteldeutsche Zeitung after February 2021. Given its high circulation we still decided to include its coverage from January 2018 to February 2021

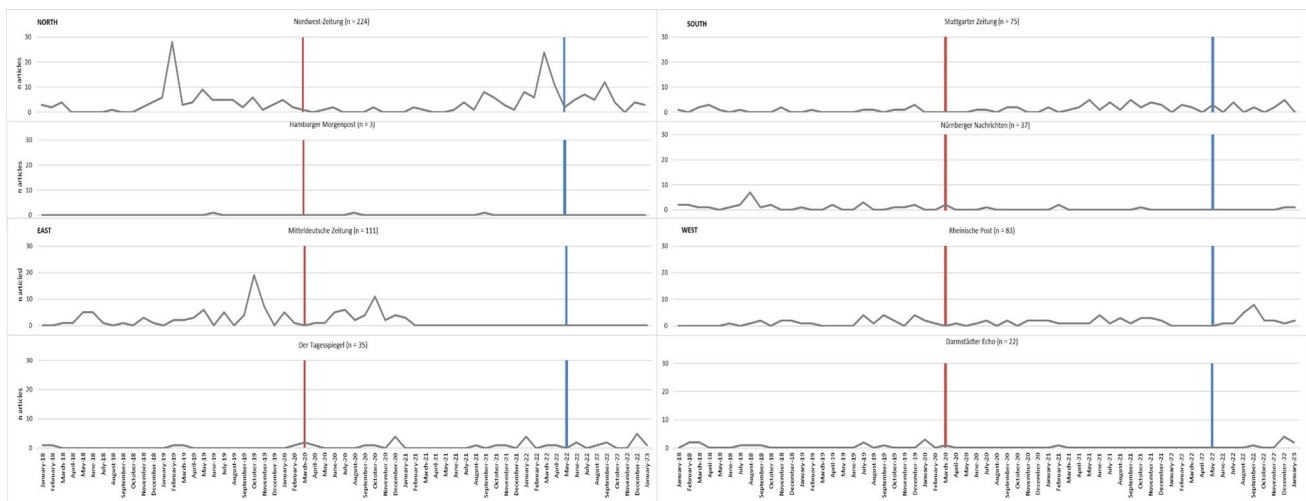
### Newspapers and articles included

The final sample consists of 705 articles, with n = 592 being from regional and n = 113 being from national newspapers. A detailed overview, including the selected newspapers, can be found in Table 1.

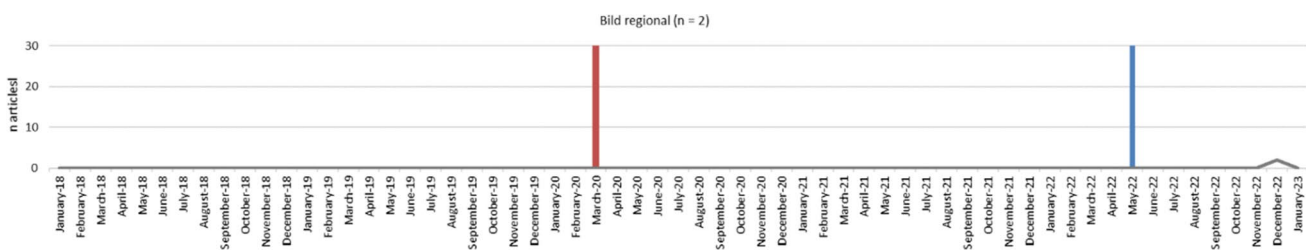
### Coverage

Figures 2, 3 and 4 show the quantity of coverage by national daily newspapers and the regional print media by region as well as for the regional editions of Bild. The comparison between regional and national reporting illustrates that the topic of hospital closures, reforms and mergers is relevant at the regional level and that national daily newspapers, in comparison, are rarely devoted to the topic.

Among the national newspapers, Bild Bund stands out in particular, as it only reported once in the period analysed. Overall, taz had the highest media coverage, with a peak after the hospital reform commission was convened. A larger variation in the coverage can be observed among the regional newspapers. Here, the coverage is highest in the North (n = 227), followed by the East (n = 146), South

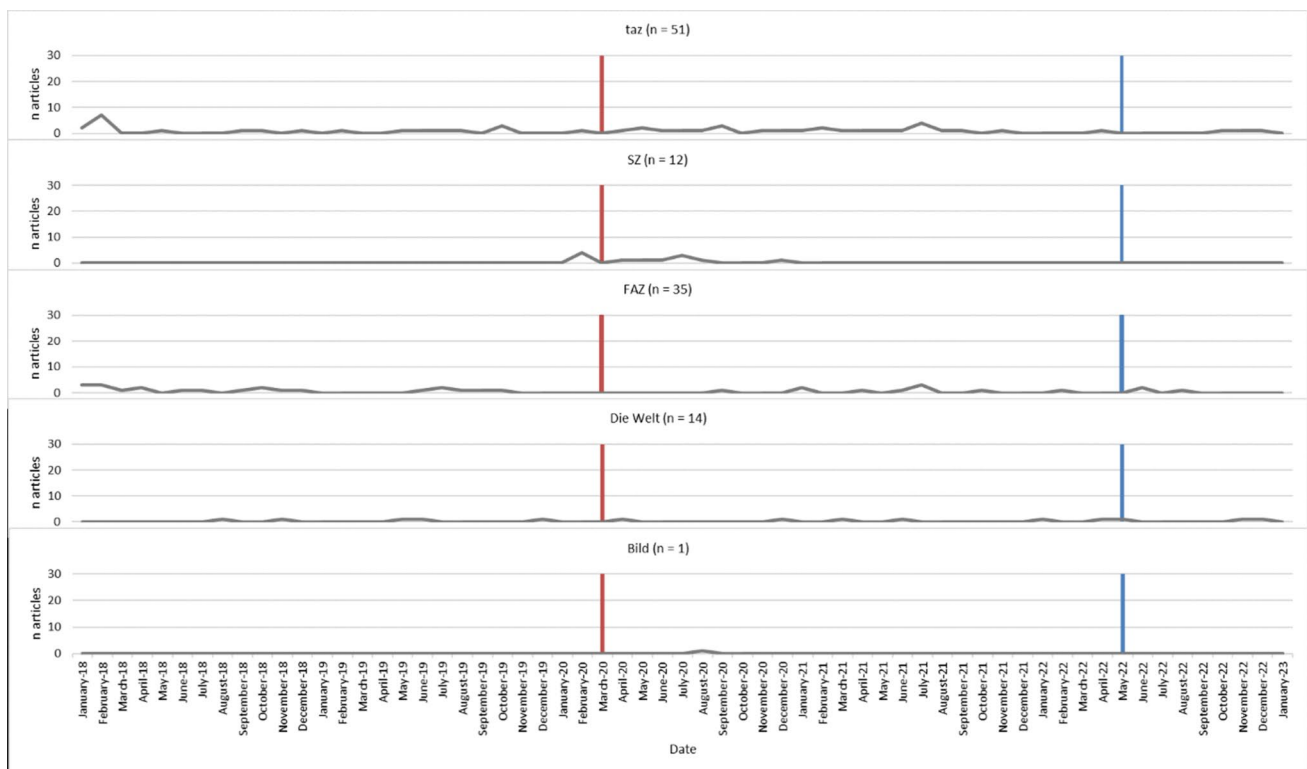


**Fig. 2** Coverage in regional newspapers. Notes: red line: COVID-19 pandemic; blue line: hospital reform commission



**Fig. 3** Coverage in regional newspapers—Bild regional. Notes: red line: COVID-19 pandemic; blue line: hospital reform commission





**Fig. 4** Coverage in national newspapers. Notes: red line: COVID-19 pandemic; blue line: hospital reform commission

( $n = 112$ ) and West ( $n = 105$ ). Regarding temporal developments, in 2019, peaks of coverage can be observed. The same is shown for two selected national newspapers (FAZ and taz).

After the onset of the COVID-19 pandemic in February 2020 (red line), half of the regional newspapers (Darmstädter Echo, Nordwest-Zeitung, Mitteldeutsche Zeitung, Rheinische Post) showed a decline in coverage, while the coverage in other newspapers increased (Nürnberger Nachrichten, Tagesspiegel) and in others there was no change (Hamburger Morgenpost, Stuttgarter Zeitung, Bild regional). The picture for the national newspapers is different. For the SZ and taz, the coverage increased, while the remaining four national newspapers did not change reporting behaviour related to the topic after the onset of the pandemic.

Another important event to take into consideration is the work of the hospital reform commission (blue line). Three national newspapers (Die Welt, FAZ, taz) showed an increased coverage followed by further peaks possibly related to the recommendations being published starting in July 2022 (see S1). For regional newspapers, the picture is comparable.

## Main topic

The main topics of the included articles are shown in Fig. 5. At the national level, reporting focuses on the hospital reform, nursing staff and other topics such as election campaigns or international comparisons. Conversely, regional newspapers mostly report on the closure of obstetric departments, single hospital closures and hospital mergers. In the Western region, the hospital reform in NRW is the most important topic. In contrast, newspapers in the Southern region mainly covered single hospital closures (not shown in the graph).

## Framing – context of coverage

The framing of articles differentiated by regional affiliation is shown in Figs. 6 and 7. Articles in regional newspapers were mainly episodically framed (average 89.8%), ranging from 82.2% in the West to 100% (Bild regional).

Likewise, articles in national newspapers were also mainly episodically framed (average 74.3%), ranging from 64.3% (Die Welt) to 100% (Bild Bund).

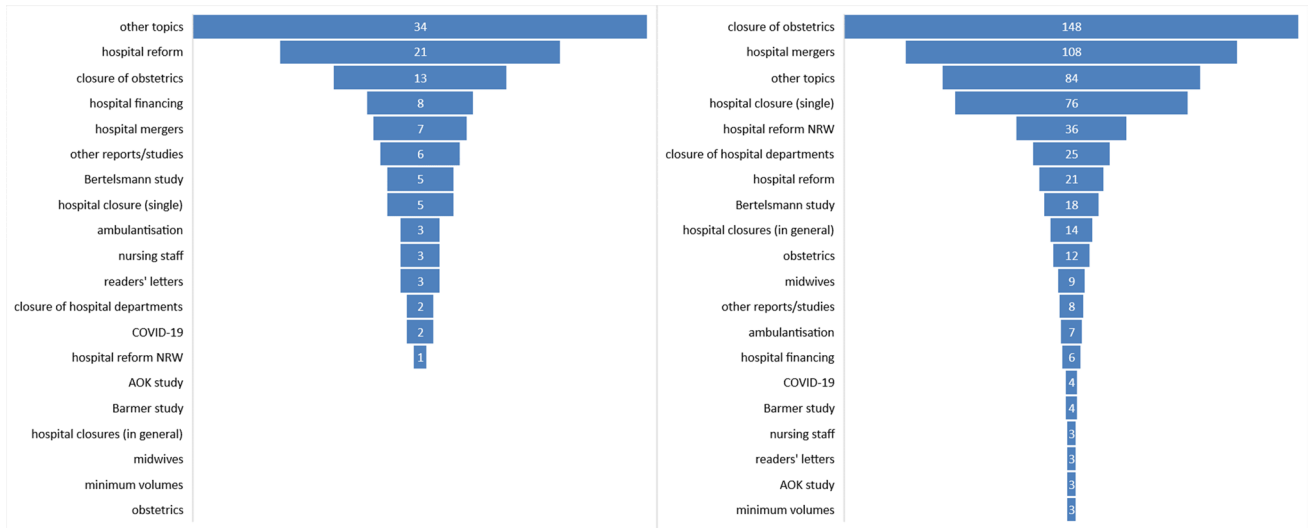


Fig. 5 Main topic in regional and national newspapers

Fig. 6 Framing of articles in regional newspapers

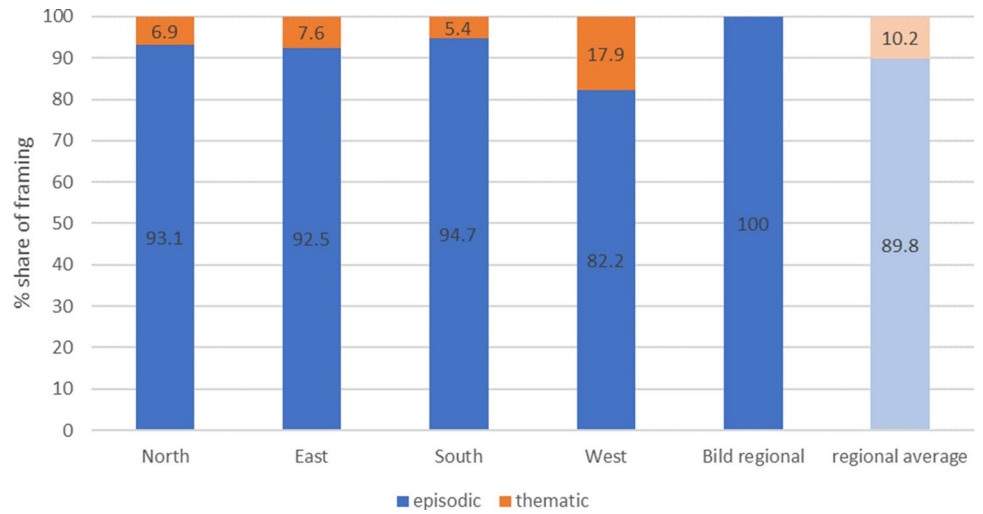
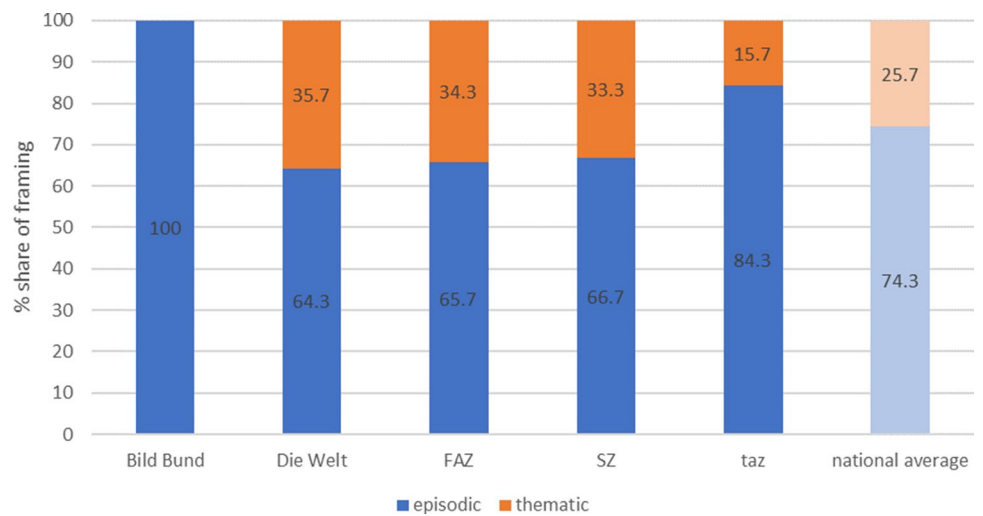


Fig. 7 Framing of articles in national newspapers



Overall, the national newspapers used less episodic framing than regional newspapers and thus showed higher rates of thematic framing. However, with a p-value of 0.831, the differences between national and regional newspapers were not significant.

### Framing – tone of coverage

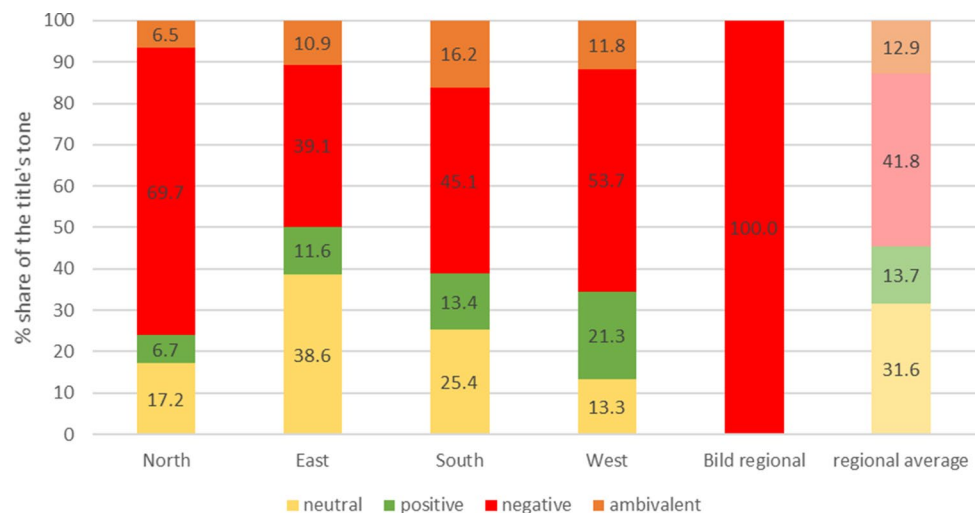
Figures 8 and 9 shows the tone of the articles' titles differentiated by type. In national newspapers, the titles were mainly negative (56.6%) in their tone of coverage, whereas this applied to less than half of titles in regional newspapers (41.8%). While 13.7% of titles in regional newspapers were positively expressed, the share in national newspapers was only 4.4%. The use of an ambivalent tone was nearly equal between regional (12.9%) and national newspapers (14.2%). Almost a third of regional newspapers had a neutral title. This was the case for about a quarter of articles in national newspapers. However, with a p-value of 0.638, the

differences between national and regional newspapers were not statistically significant.

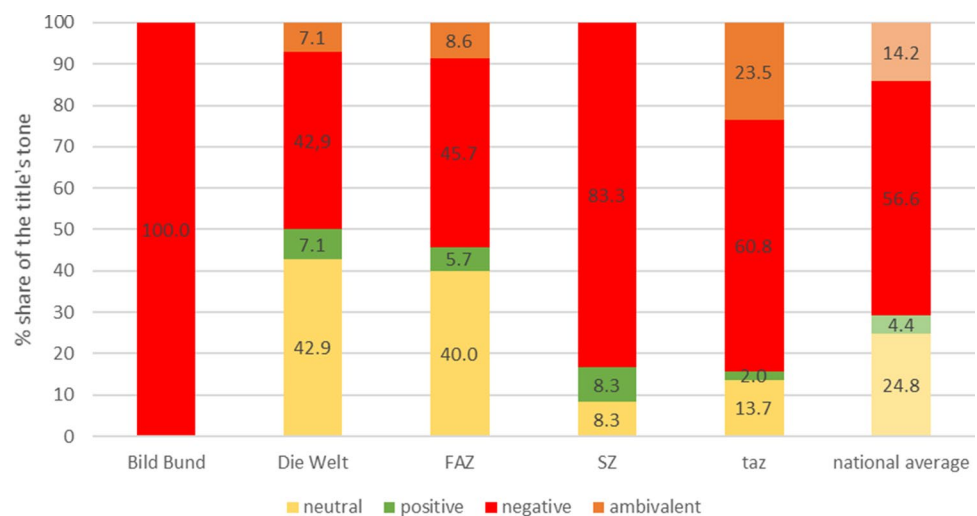
Within regional newspapers, there was a large variation in the tone of the titles. Some regional newspapers, mostly those with a smaller coverage, show higher shares of negative framing in their titles (Hamburger Morgenpost, Bild regional, Darmstädter Echo) compared to newspapers with higher coverage (Nordwest-Zeitung, Mitteldeutsche Zeitung, Stuttgarter Zeitung). The latter also depicted the topic more often in a neutral tone compared to regional newspapers, which did not cover the topic on a regular base. The same pattern arises within national newspapers: Newspapers with lower coverage (SZ, Bild) show a higher share of negatively depicted titles.

The same picture emerges when analysing the tone of coverage in the main text (Figs. 10 and 11). Again, the majority of articles in national newspapers (66.9%) had a negatively depicted main text, whereas this was only the case for 40.4% in regional newspapers. Similar to the titles, the national

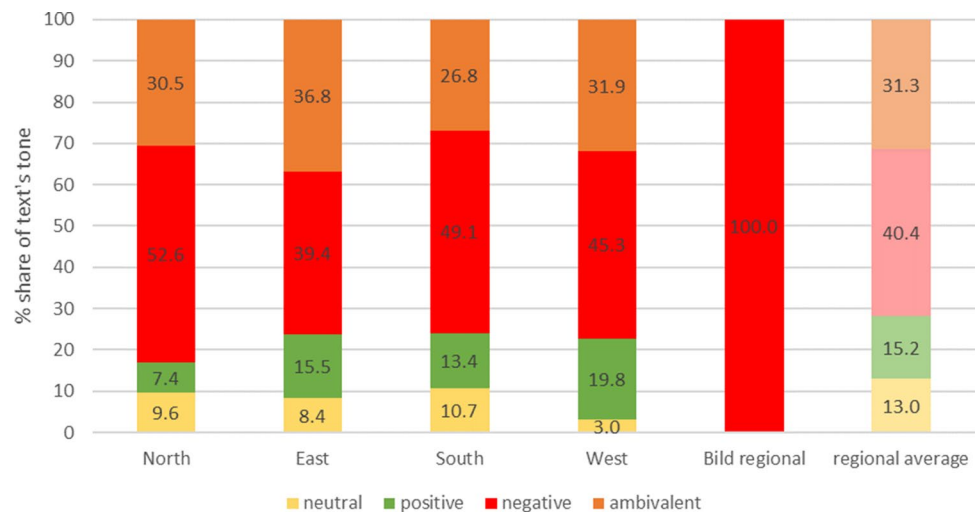
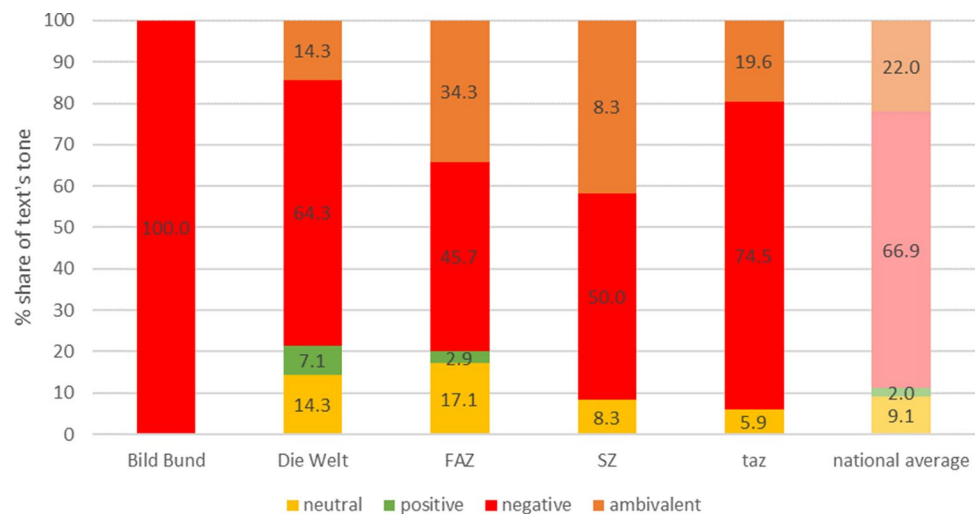
**Fig. 8** Tone of title in regional newspapers



**Fig. 9** Tone of title in national newspapers





**Fig. 10** Tone of the main text in regional newspapers**Fig. 11** Tone of the main text in national newspapers

newspapers had a smaller amount of positively depicted texts (1.8%) compared to articles in regional newspapers (15.2%) and an even smaller amount compared to the titles in the national newspapers. A neutral display could be seen in 13.0% (regional) and 10.6% (national) of all articles. While 31.3% of all texts in regional newspapers were ambivalent, this was the case in 25.7% of articles in national newspapers.

Still, the differences in the tone of text between national and regional newspapers were not statistically significant ( $p$ -value 0.053). Importantly, variation between title and text in terms of the coverage context was highly statistically significant for both regional and national newspapers ( $p$ -values 0.000).

## Discussion

The comparison between regional and national coverage shows that the topic of hospital closures, reforms and mergers is highly relevant at the regional level and, on the

other hand, national daily newspapers are comparatively rarely devoted to the topic. This underpins the relevance of including regional newspapers when analysing how the media reports on these issues, which is an important notion for future studies addressing the media coverage of hospital reforms. Remarkably, the tabloid press rarely covers the topic, meaning that an agenda-setting effect is missing for a certain part of the population. As the circulation of print media continues to decrease (Informationsgemeinschaft zur Feststellung der Verbreitung von Werbeträgern e. V. (IVW) 2023), other media, such as regional television programmes might have that agenda-setting effect for this part of the population, which should be addressed in further research.

The highest coverage was observed in the East and North. However, looking at actual hospital closures between 2003 and 2013, the Western and Southern regions had a much higher share of all hospital closures in Germany (36.6% and 44.6%) compared to the Eastern and Northern regions (8.3% and 10.9%) (Preusker et al. 2014). Assuming this pattern of

hospital closures has continued in the study period, reporting on single events in the East and North was much more exhaustive compared to the other regions with more events.

Concerning the main topics, national newspapers focused on the system level, mostly covering the hospital reform and nursing staff. In contrast, regional newspapers mostly reported on the closure of obstetric departments, single hospital closures and hospital mergers. Together with the overall higher coverage in regional newspapers, this fits well with the emotional character of hospital closures, mergers and reforms. It is remarkable, that the tone of coverage in both text and title does not significantly differ between national and regional newspapers. Not surprisingly, the hospital reform in NRW was the most important topic in the West. However, it did not result in higher coverage compared to other regions, where reporting on single closures or mergers was higher. This might be due to the current theoretical character of the reform proposal, which might change once it affects the local situation.

That the closure of obstetric departments and single hospital closures are the main themes covered in other regions indicates their regional as well as emotional importance. This is also reflected by the fact that the hospital commission's first recommendation focused on paediatrics and obstetrics (see S1 for more information), which indicates the link between the media's coverage of a topic and the MSA's problem stream. However, especially as births are a highly sensitive topic, better information efforts for the public on the quality aspects instead of accessibility only taking their concerns into account seems necessary, which could be addressed with a targeted media strategy. This also applies to other topics related to the current reform discussions and could help to counteract political stances and the feared further increase in right-wing votes as a result of hospital closures (Nyholt 2023).

Compared to our own analysis of media coverage related to the Danish hospital reform (Eriksen et al. 2023), the present study shows a higher share of episodic framing, especially within regional newspapers. This is in line with other research showing that topics related to healthcare are mostly episodically framed (Collins et al. 2006; Major and Jankowski 2020). Journalists often use episodic frames to portray broader issues in a manner that humanizes their subjects (Boukes 2022). In light of the importance of informed citizenship (Arnstein 2019), as stressed in the introduction, episodic framing might be deemed undesirable as it could potentially hinder the public's ability to comprehend the connections to abstract political subjects (Iyengar 1991; Boukes 2022). This, in turn, results in a lower likelihood of attribution of responsibility to policy-makers but to the individual featured in the story, thereby conserving the status quo (Iyengar 1991; Boukes 2022). On the contrary, thematic framing prompts the

audience to see issues within a broader context, leading them to consider societal conditions as problems demanding societal solutions, such as public health policies (Iyengar 1991, Major 2011). Although there was no statistically significant difference between regional and national newspapers, the higher share of thematic framing in national newspapers matches their focus on system-level topics, as described above. In light of their own agenda-setting role for other media (Blöbaum 2011), a higher than the current coverage of the topic in national newspapers could be useful to increase problem awareness among the public. According to our results, their coverage increased over time and had a higher share of thematic framing compared to regional newspapers, which could, therefore, be seen as a good sign towards raising problem awareness.

The tone of the title and text was mostly negatively expressed, with national newspapers showing higher shares of negative depictions. Remarkably, both regional and newspapers with smaller coverage more often chose a negative frame for their headlines and texts. Notably, an analysis of comparable frames (gain-frames = frames that emphasize the benefits of a particular option, e.g. lives saved; loss-frames = frames that highlight the negative consequences linked to not selecting a specific option) related to lung cancer and obesity has been shown for gain-frames to diminish the reader's consideration of societal factors (Major 2011). Consequently, this lack of consideration could result in public inaction and a lack of policy support concerning health-related subjects. The author concluded that a gain-framed story might not be the most effective strategy if policy-makers attempt to inspire the public to support a certain policy or reform (ibid.). Taking this into account, current reporting of national newspapers, as shown in our study, can again be deemed as a facilitator for change if coverage increases further.

Typically, the structure of a newspaper article follows an inverted pyramid format, wherein the most crucial information is presented at the article's outset (Pöttker 2003). Showing statistically significant differences between the title and text, our study's results, however, suggest that it is also important to look at the main text.

Our study has several limitations. Firstly, we only analysed print media and thus only a part of the coverage across the media landscape. Further research should examine the coverage online as well as social media. Secondly, we focused on a quantitative analysis and did not provide an in-depth qualitative analysis. However, this is being done with the second part of our study. Thirdly, we included the *Mitteldeutsche Zeitung* despite its limited coverage in the used databases. Hence, the regional comparisons are biased and must be interpreted with caution. Finally, our study period did not cover recent developments, including two recommendations of the government

hospital commission and negotiations on the hospital reform. An update of the study with an extended observation period could be useful to get more insights on the media's reporting during the reform process.

Despite its limitations, the study contributes to current research in several aspects. With the application of agenda-setting and framing in the context of a hospital reform, the study adds to the methodological discussion and facilitates a comprehensive understanding of the dynamics involved in restructuring the hospital landscape. To our knowledge, it is the first study analysing the media's perspective on hospital closures, mergers and reforms in Germany, thus contributing to the current political discussion.

## Conclusion

Having Kingdon's MSA (Kingdon 2014) and the ladder of citizen participation with information as a crucial step (Arnstein 2019) in mind, our analysis provides important information for decision-makers and raises the question of whether a media strategy for the current reform plans is necessary to raise problem awareness among the public in order to succeed. Denmark might again be a role model here, where the slogan "Quality over proximity" was used to convince the public of why change was necessary.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s10389-024-02271-6>.

**Authors' contribution** Elke Berger initiated the study and had the main role in writing the manuscript. Robert Caglar supported screening; Len Ortlepp supported coding of the articles. Astrid Eriksen, Annemarie Wiedicke, Len Ortlepp, Reinhard Busse and Robert Caglar supported the study design and methods selection, methodologies and contributed to the writing of the article. All authors read and approved the final manuscript.

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**Data availability** Data and material can be shared after reasonable request.

**Code availability** Not applicable.

## Declarations

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