

# 1 **Agenda Setting by Korean Public Broadcasting (KBS,** 2 **MBC) regarding Medical Reforms:** 3 **Focus on Topic Modeling** 4

5 *This study, using a keyword-centered topic modeling method, analyzed which sub-*  
6 *issues Korea's public broadcasting companies, <KBS> and <MBC>, set as*  
7 *major agendas in their news reporting related to medical reform. The research*  
8 *analyzed news topics related to healthcare reform reported on national evening*  
9 *news broadcast by <KBS> and <MBC> from October 19, 2023 to September 18,*  
10 *2024. Data collection was done using Bigkinds, a database-gathering tool,*  
11 *covering 350 instances of pertinent news items while LDA Topic Modeling was*  
12 *used for methodology. The results showed that the optimal number of topics in*  
13 *which keywords could meaningfully be classified was 4. The four major topics*  
14 *could be described as "the president's medical reform," "the response of the*  
15 *medical community," "political issues," and "consequences of medical reform,"*  
16 *indicating that the public broadcasters' attempt to convey various news aspects*  
17 *in a balanced manner. While <KBS> reported more on specific conflicts and*  
18 *opposing forces to the reform occurring in the medical field, <MBC> tended to*  
19 *focus more on policy procedures and processes as stated by the government and*  
20 *its officials. The result could point to the different approaches the two public*  
21 *broadcasters may have taken in reporting on medical reform issues.*  
22

23 **Keywords:** *Agenda Setting, Public Broadcaster, Topic Modeling, Network*  
24 *Agenda, Medical Reform*  
25

## 26 **Introduction**

27  
28  
29 Since the South Korean government's (Ministry of Health and Welfare)  
30 announcement on October 19, 2023 of the need for a comprehensive plan to expand  
31 the number of doctors as a necessary precondition for implementing the 'Essential  
32 Medical Innovation Strategy' and to strengthen essential medical services, the  
33 medical reform situation in South Korea has been on a prolonged drift. Mired in a  
34 stalemate since the announcement, the government's plan – principally a large  
35 increase in enrollment of medical school students - is not even being discussed  
36 between the government and its supporters and the opposition forces including  
37 medical associations and residents. The medical reform, meanwhile, enjoys a  
38 sizable support from the majority of the population. The near-collapse of essential  
39 regional medical services that directly impact the health and lives of the people and  
40 the gap in the quality of services between metropolitan and regional medical  
41 facilities are justification enough for trying to rectify the current service and  
42 utilization scheme. The medical reform's comprehensive plan consists of four major  
43 reform tasks: 1) expanding the medical workforce, 2) strengthening regional  
44 medical care, 3) safeguarding against medical accidents, and 4) ensuring fair pay to  
45 medical personnel so that citizens can safely enjoy the highest level of services  
46 anytime and anywhere (Office of the President, Policy Briefing, 202310.19).

47 With most of the public supporting the medical reform, the government could

1 have focused on the details of the plan and on persuading the medical community,  
2 but instead it obsessed over ‘increasing the number of medical school students by  
3 2,000’, the result being a prolonged conflict between the medical community and  
4 the government, and the medical reform issue going from the highest-approved  
5 policy by the public to becoming an obstacle (JoongAng Ilbo, 2024.09.19). The  
6 conflict between the medical community and the government - the two sides have  
7 not even met for a discussion - has become a major agenda and is being reported as  
8 important news by various media outlets.

9 In a democratic society, when conflicts arise, the media continuously provide  
10 the public with various information related to that issue, while also mediating  
11 opposition and conflicts or providing solutions (Ban Hyeon, Choi Won-seok, & Shin  
12 Seong-hye, 2004). Reporting by media about medical reforms can have a positive  
13 or negative effect on the public's opinion about the increase in the number of medical  
14 students. In particular, near-daily news reports from terrestrial broadcasters can  
15 garner the attention of viewers on specific issues and, above all, affect the perception  
16 of salience on the issue (Mutz 2000).

17 According to a survey on domestic media viewer perception (Korea Press  
18 Foundation, 2023), the public's trust in broadcast media's news and current affairs  
19 was higher than that of internet media, SNS messengers, and online video platforms,  
20 with KBS ranking first and MBC ranking second as the most influential media outlet.  
21 Such a finding implies that KBS and MBC, both public broadcasters, may have a  
22 greater influence on public agenda setting than general print or internet media. In  
23 particular, broadcast news has been regarded as an important mechanism for shaping  
24 various public opinions in Korean society in that directly influence viewers (Lee  
25 Seung-hee and Song Jin, 2014; 9). It also serves to construct the reality of thought  
26 through its reporting language, presents a system of meaning, and furthermore,  
27 highlights the subject responsible for the thought (Lee Wan-soo and Choi Myeong-  
28 il, 2022; 428). Against this context, this study aims to compare and analyze  
29 broadcast content on medical reform sub-issues by public broadcasters <KBS> and  
30 <MBC>, an issue which have had the biggest effect on Korean viewers in the past  
31 year, and analyze what key figures and institutions were used as information sources,  
32 what attributes were emphasized by each broadcaster to construct the agenda, and  
33 how network agenda setting was differentiated and provided using keywords.

## 34 35 36 **Literature Reviews**

### 37 38 *Media Agenda Setting Effect and Keyword Agenda Setting*

39  
40 Media agenda refers to news item covered by a news outlet, while ‘public  
41 agenda’ refers to important issues in the mind of the people (Jeong In-sook, 2012).  
42 Media agenda setting research is divided into three areas: public agenda setting,  
43 intermediary agenda setting, and policy agenda setting (Rogers, Dearing &  
44 Bregman, 1993). Traditionally, the agenda setting effect theory assumed that the  
45 sheer amount of coverage that occurs, regardless of the direction of the media's news  
46 reporting, changes the degree of salience that people feel about an issue, and thus

1 the hierarchical ranking of the importance of the target or attribute set by the media  
2 is correlated with the target or attribute that the public thinks about (McComb &  
3 Shaw, 1972). With an interest in how news media contribute to the process of  
4 shaping public opinion, McComb and Shaw's (1972) study on agenda-setting effect  
5 led to a conclusion that news media determine the major issues and important events  
6 of the day.

7 News media also organizes and reconstructs news in various patterns through  
8 language and images. The news language can provide an associative effect that  
9 gives meaning to events or objects and interprets them, causing people pay more  
10 attention to specific agendas or reinforces their memories (Fowler, 2013). In  
11 particular, broadcast news can influence the audience's construction of reality by  
12 providing key words and images, and key words used in the media can also be  
13 reused in everyday conversation. When the public recognizes and uses words and  
14 expressions disseminated by news media in talking about a specific issue, this  
15 phenomenon is called key-word agenda setting (Corbu & Hosu, 2017).

16 The keyword agenda-setting model reveals the subtopics that are composed of  
17 keywords and the way in which the media transmits them to the audience. Keywords  
18 are the basic elements that media use to compose news or information, which the  
19 public base for discussing current events and issues. As they signal the type of  
20 reporting and from which perspective it is presented, the meaning composition  
21 system is completed when news is presented with specific keywords or keywords  
22 are connected to each other to form a context (Corbu & Hosu, 2017; Lee Wan-soo  
23 and Choi Myeong-il, 2022; requoted, 430). Among existing studies that analyzed  
24 the agenda-setting effect of media keywords, Lee Jong-hyeok and Gil Woo-young's  
25 (2019) research looked into news agenda classification and media diversity using  
26 topic modeling on news related to the President's New Year's press conference,  
27 while Lee Sae, Yoo Seung-ui, and Ahn Soon-jae (2020) conducted word frequency  
28 analysis, word cloud, and LDA topic modeling analyses on Naver online news  
29 articles and blog posts on the issue of 'mask-wearing' related to the COVID-19  
30 situation to identify the agenda of mass media and social media (Lee Sae-mi, Yoo  
31 Seung-ui, & Ahn Soon-jae, 2020). Jeong Jin-myeong and Park Young-ho (2018)  
32 also analyzed social media effects using topic modeling, focusing on keywords  
33 related to education policies and conducted a study on the Sewol ferry disaster that  
34 analyzed the agenda-setting effects of media keywords (Hwang Yu-na, Jeon Mi-  
35 hyeon, and Yoo Rae-joong, 2016), identifying differences in keywords used by  
36 progressive- and conservative-leaning newspapers (Kim Young-wook, Ham Seung-  
37 gyeong, and Kim Young-ji, 2017). Based on these and other existing research, this  
38 study aims to discover which major keywords were used by public broadcasters  
39 <KBS> and <MBC> in setting news agendas on topics of 'medical reform' and  
40 'increased number of doctors.' Accordingly, following research questions were  
41 asked. Research question 1: What keywords did <KBS> and <MBC> use in relation  
42 to the issue of medical reform, and how were they different?

#### 43 44 *Secondary Agenda Setting and Network Agenda Setting*

45  
46 The agenda setting theory says that the media influences people's perception of

1 reality by the topics emphasized in the news. In other words, the media influences  
2 people in ‘what to think about’ and leads them in certain directions regarding social  
3 news (Cohen, 1963). Furthermore, the agenda setting theory states that not only the  
4 subjects emphasized by the media but also the ‘way in which the media interprets  
5 the attributes’ of the subjects influences the recipients. This means that the way in  
6 which the specific attributes of an issue are interpreted and introduced affects the  
7 way in which the recipients think about specific issues (Ghanem, 1997; Cha Min-  
8 kyung and Kwon Sang-hee, 2015; 92 requoted).

9 The secondary agenda setting theory analyzes the attributes of an issue and  
10 focuses on the media’s way of expressing it, emphasizing that the types of  
11 information provided in news reports, opinions about the information, and word  
12 choices used to describe it can all influence the recipients’ judgment and inference  
13 of the issue. However, the subject of the issue (primary agenda setting) or the  
14 attribute of the issue (secondary agenda setting) provided by the media is not  
15 presented separately but is connected to each other and organized as a news item,  
16 meaning the news reported by the media is structured as a bundle of connecting  
17 agendas or attributes about a specific issue. The theoretical framework that the  
18 subject of the issue or its attribute is organized by the media and is connected to each  
19 other and functions as agenda- setting is the foundation for the network agenda-  
20 setting model (Guo, 2016; Guo & McCombs, 2016; Vu et al., 2014).

21 The network agenda-setting model starts from the assumption that the agenda  
22 is transferred from the media to the public when the correlation between the agendas  
23 and its attributes is significant. It is different from the traditional agenda setting  
24 theory in that it says that people do not perceive information linearly or  
25 hierarchically in apprehending social reality but that they tend to process  
26 information more dynamically via nonlinear connection such as through a network  
27 (Kaplan, 2005). Here, a network represents a picture in which numerous nodes are  
28 interconnected to provide viewers with a cognitive understanding of social reality.  
29 In other words, information nodes related to a specific topic form a network related  
30 to the issue, and each agenda presented in the media has keywords associated with  
31 it and has a structure that is interconnected with major subtopics (Corbu & Hosu,  
32 2017). Therefore, when interpreting content, news consumers automatically connect  
33 related information and accept it associatively rather than focusing on just one piece  
34 of information (Vu et al., 2014; Lee Wan-soo & Choi Myeong-il, 2022; cited in 431-  
35 432).

36 The network agenda-setting model simultaneously explains agenda-building,  
37 intermediary agenda-setting, and other media effects. In addition to individual  
38 media agendas, it can also show the process by which the salience of the network  
39 relationship between the target and agenda attributes is transferred from the news  
40 media to the public (Guo, 2021). When an agenda is set by a media network, it is  
41 very likely to become an offline public agenda as well (Seol Jin-ah & Kim Ok-tae,  
42 2024; 159). For example, since medical reform news on TV is also connected to  
43 various other subtopics, each issue can raise additional related subtopics via the  
44 network of major keywords. In particular, in analyzing issues such as the conflict  
45 between the medical and political sectors or the ‘increasing the number of medical  
46 students,’ news attributes and the network structure connected to each agenda can

1 be examined using the secondary agenda-setting theory. These attributes are sub-  
2 elements that constitute the characteristics of the target, which refer to connection,  
3 network, direction of evaluation or opinion, and solutions for the issue (Kim,  
4 Scheufele, & Shanahan, 2002).

5 Since the network model provides an analytical framework for measuring the  
6 co-occurrence and distance between information nodes such as keywords, if the  
7 network agenda-setting model is utilized, it can convey not only what and how  
8 broadcast media such as <KBS> and <MBC> view various issues, but also show  
9 what they are and how they are related (Guo, 2016; Guo & McCombs, 2011). As  
10 such, following research questions were raised to examine how public broadcasters  
11 construct network agendas in their reporting of healthcare reform.

12 Research question 2: What are the attributes of the network agenda that <KBS>  
13 and <MBC> emphasize in their reports on healthcare reform, and how do the two  
14 broadcasters differ?

## 17 Methodology

18  
19 This study analyzed news topics related to medical reform reported on the  
20 evening news of public broadcasters <KBS> and <MBC> between the dates of  
21 October 19, 2023, when the Korean government (Ministry of Health and Welfare)  
22 announced the Essential Medical Innovation Strategy related to medical reform, and  
23 September 18, 2024. Analysis subject consisted of news titles or headlines as shown  
24 on the broadcast news screen, analysis of people and institutional representatives  
25 appearing in the broadcast, and network analysis of keywords in the news related to  
26 medical reform in examining the agenda properties of broadcasters.

27 The news items for analysis were selected as those containing the words  
28 ‘medical reform’ and ‘increased number of medical students’, and the data was  
29 collected through Big Kinds ([www.bigkinds.or.kr](http://www.bigkinds.or.kr)), a news database of the Korea  
30 Press Foundation. Data collection was also done by searching for ‘medical reform’  
31 and ‘increasing the number of medical students’ as keywords, and collecting all  
32 news items that contained these words in the title and reporting. Out of a total of 504  
33 items, 350 were analyzed after excluding duplicates. The number of broadcast items  
34 by the two companies over the course of a year was 222 for <KBS> and 128 for  
35 <MBC>, indicating that KBS covered approximately 1.73 times more related news  
36 than MBC.

37 This study utilized the topic modeling analysis method, which is useful for  
38 deriving keywords and topics. Topic modeling is a text mining technique and also a  
39 probabilistic model algorithm that extracts potential topics from an unstructured  
40 document set (Blei, Ng and Jordan, 2003; Blei, 2012). Topics derived  
41 probabilistically through data mining allows the examination of major issues  
42 surrounding ‘medical reform’ and how public broadcasters made them into issues.  
43 The derived topic results have aspects similar to agenda-setting, but they are closer  
44 to issues in that they do not reveal arguments or partisanship. There is also the  
45 problem of how issues or controversies are described, but the selection of issues or  
46 topics themselves is likely to have significant agenda-setting and partisanship (Park

1 Seung-jeong, Jeon Jin-oh, Kim Seon-woo, and Kim Seong-tae, 2017;28).

2 The study used the Latent Dirichlet Allocation (LDA) that enables the  
3 identification of network agenda-setting through visualization, a widely-used news  
4 topic analysis technique that clusters and classifies major keywords by topic  
5 according to their occurrence probability in a large document set (Han Song-i, Kim  
6 Tae-jong, 2021). This study is significant in that it examined the issues that appeared  
7 in the news reports of public broadcasters <KBS> and <MBC> and identified the  
8 differences between the two broadcasters using LDA. In addition, we were able to  
9 confirm how the network agenda was set through overall network analysis and  
10 visualization.

11 The analysis program used for this study was Konlpy, a software package for  
12 extracting Korean nouns, a Korean natural language processing library for Python  
13 3.10.12. After analyzing the morphology of each document in the document set,  
14 only the nouns were chosen, and the natural language processing software Genism  
15 and other keyword software for network(co-occurrence) identification were used.  
16 In order to determine the appropriate number of topics for the study, eigenvalues  
17 were calculated through K-mean clustering, with the results showing that the  
18 optimal number of topics with the lowest degree of keyword duplication and  
19 meaningful keyword classification by subject was 4. Based on this, keywords for  
20 each topic and the context in which the keywords were used in the actual news were  
21 reviewed, and topic names were assigned for performing analysis. Also, an overall  
22 network analysis between keywords was performed.

## 23 24 25 **Results**

### 26 27 *Agenda Setting of Keywords Related to 'Medical Reform'*

28  
29 Research question 1 is about keywords public broadcasters <KBS> and <MBC>  
30 used to emphasize medical reform issue-related agendas and the differences between  
31 the two entities. First, keyword analysis as related to the broadcasters was conducted  
32 to target those with high appearance frequency (Figure 1). The ones appearing most  
33 often were 'Yoon Seok-yeol', 'health', 'medical', 'reform', and 'increase', evidence  
34 that the government's role in the medical reform drama, changes needed in the  
35 healthcare delivery system, and policy changes such as increasing the number of  
36 medical school students were all important factors. That the term 'Yoon Seok-yeol'  
37 appeared so prominently in the Word Cloud below likely means that the media  
38 considered the President's role as an important element in the news cycle, especially  
39 with him being so visible and personally announcing and promoting reform policies.  
40 Keywords such as 'health', 'medical', and 'reform' suggest that discussions are  
41 centered on reforms across the medical system and changes in health and medical  
42 care policies, more evidence that the public broadcasters are interested in the subject  
43 and direction of the medical reform effort.







1 healthcare reform from a more macroscopic perspective by covering the public  
 2 discussions and procedures as part of the policy decision process. In summary, KBS  
 3 emphasized more the specific conflicts and opposition from the medical field, while  
 4 MBC focused more on the policy procedures and processes as discussed by the  
 5 government and its committees. The two public broadcasters seem to have taken a  
 6 different approach to covering the matter of Korea's medical reform.

7  
 8 *Topic Agenda Setting related to 'Medical Reform'*

9  
 10 Topic modeling of the broadcasters' news content resulted in four main topics  
 11 being derived. The topics were 'Reporting on change', 'Reporting on medical staff',  
 12 'Reporting on politics' and 'Reporting on issues', representing the broadcasters'  
 13 main focus in the coverage of medical reform. First, the 'Reporting on change' topic  
 14 can be interpreted as news that focuses on the specificity of medical reforms and the  
 15 resulting changes. This topic mainly covered changes in the government's medical  
 16 policy, the direction of reform in the medical system, and increasing the number of  
 17 medical school students. The second topic, 'Reporting on medical staff', represents  
 18 news that focuses on the reactions and actions of medical staff to the reform effort.  
 19 The positions of medical staff such as doctors, nurses, and medical school professors,  
 20 as well as their collective actions, such as strikes and protests, were highlighted. The  
 21 third, 'Reporting on politics' topic was focused on political issues surrounding  
 22 medical reform, the government's position, and politicians' statements. The main  
 23 contents included news about official statements issued by the president and  
 24 government officials, discussions in the National Assembly, and political deadlocks.  
 25 Finally, 'Reporting on issues' topic covered problems that have arisen or are  
 26 expected to arise due to medical reform. It included matters such as the deterioration  
 27 in the quality of medical services, inconvenience caused to patients, and gaps in  
 28 treatment due to disagreements between medical professionals and the government.  
 29

30 **Table 1. Results of Topic Modeling of Medical Reform Coverage**

Keywords	Topic 1 Reporting on Change	Topic 2 Reporting on Medical-Staff	Topic 3 Reporting on Politics	Topic 4 Reporting on Issue
1	medical treatment	Medical school	government	medical treatment
2	President	Government	medical treatment	President
3	Reform	Reinforcement	president	Yoon Seok-yeol
4	Yoon Seok-yeol	medical treatment	Yoon Seok- yeol	Reform
5	Representative	Professor	people	Discourse
6	Medical school	Doctor	doctor	Government
7	government	Hospital	General election	Medical school
8	people	Sidewalk	sidewalk	Presentation
9	Reinforcement	Group	Reform	Reinforcement
10	discussion	resignation	meeting	Emergency

				room
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As a result of topic modeling on KBS and MBC's reports on medical reform, different topics were derived from each public broadcaster. From KBS topics about 'reform content', 'collective action of professors', 'impact on the medical community', and 'conflict between decision makers and practitioners' were extracted, while from MBC 'impact on medical schools', 'statement of position of the Office of the President', 'medical community group meeting and discussion of countermeasures', and 'participation of professors and residents in medical reform' were extracted.

KBS reporting focused mainly on the specifics of the medical reform and the resulting conflict structure. The 'reform content' topic emphasized the details of the administration's proposed medical reform, especially the increasing of medical school enrollment. 'Collective action of professors' highlighted the group opposition and actions by medical school professors who were against the government's attempt to increase the medical school enrollment quota. The topic 'Impact on the medical community' dealt with the direct impact of the reform has had on the field of medicine field and the health system, while 'Conflict between decision makers and practitioners' focused on the disagreement and confrontation between the government's policy makers and health practitioners, and the resulting impact on patients.

On the other hand, MBC's report focused on the social impact of the medical reform, the interaction between the government and the medical community, and the response strategies within the medical community. The topic 'Impact on medical schools' analyzed the impact of increasing the number of medical school enrollment across the country and the consequences to the public. 'Presidential Office's Position Statement' emphasized the official position of the Presidential Office with regards to the reform. The topic 'Medical community group meeting and discussion of countermeasures' reported on the process of collective meetings and countermeasure preparation within the medical community in response to the government's medical reform policy, and 'Professors and residents' participation in medical reform' focused on the active participation of professors and resident doctors and the roles they played in the reform process.

**Table 2.** Results of Topic Modeling of KBS 's Medical Reform Coverage

Keywords	Topic 1 Reform Contents	Topic 2 Collective-action by Professors	Topic 3 Impact on The Medical Community	Topic 4 Decision- Makers and Practitioners
1	medical treatment	Medical school	Medical school	Professor
2	government	government	medical treatment	medical treatment
3	president	medical treatment	Reinforcement	Hospital
4	Reform	professor	government	Government
5	Reinforcement	Group	president	Medical school

6	Medical school	Reinforcement	hospital	Patient
7	Yoon Seok-yeol	Sidewalk	Yoon Seok-yeol	Sidewalk
8	sidewalk	Reform	sidewalk	Han Deok-su
9	garden	Treatment	Reform	Decision
10	organization	resignation	doctor	Treatment

1  
2**Table 3.** Results of Topic Modeling of MBC's Medical Reform Coverage

Keywords	Topic 1 Impact on Medical Schools	Topic 2 Statement from the Office of the President	Topic 3 Discussion of Collective Measures in the Medical Community	Topic 4 Participation of Professors and Residents in Medical Reform
1	government	President	medical treatment	medical treatment
2	medical treatment	government	government	Medical school
3	Medical school	representative	doctor	Reinforcement
4	Reinforcement	Yoon Seok-yeol	Medical school	government
5	people	medical treatment	group	president
6	Nationwide	Office of the President	Reinforcement	Reform
7	doctor	Reform	Meeting	professor
8	Reform	Position	Discussion	Yoon Seok-yeol
9	university	Doctor	Countermeasures	specialty
10	argument	People	Essential	discourse

3

4 Through this analysis, we were able to confirm the difference in reporting  
5 inclination of KBS and MBC. KBS focused on the details of the medical reform,  
6 the conflicts that followed, and the direct impact on the field of medicine, choosing  
7 to highlight to the viewers real problems with the government's medical reform  
8 policy, the medical community's response, and the disagreements occurring in the  
9 field of medicine. On the other hand, MBC emphasized the social impact of medical  
10 reform, the interaction between the government and the medical community, and  
11 the response strategies within the medical community. This can be interpreted as  
12 MBC reporting from a more macroscopic perspective, covering the reform's wide-  
13 ranging ripple effects on society, the government's official position, and the  
14 collective response process of the medical community.

15

#### 16 *Network Agenda Attributes related to 'Medical Reform'*

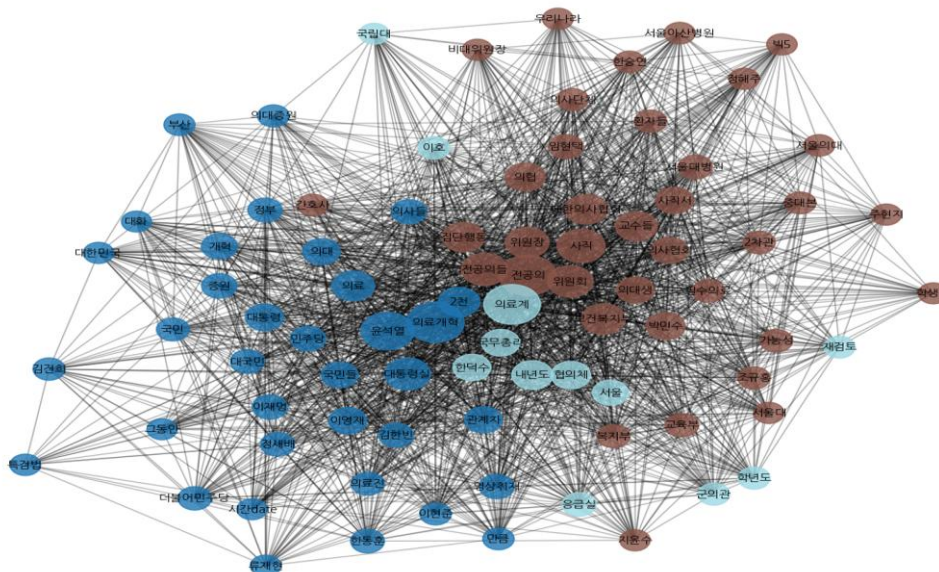
17

18 This study conducted a keyword network analysis to visualize the relationships  
19 between main keywords extracted from each media outlet's reports and to identify  
20 the semantic network structure formed by them. The result from analyzing all media  
21 outlets was that the entire network was divided into three major communities with

1 each community being composed of closely related keywords. First the blue  
 2 grouping, one with the largest number of words, was mainly centered on keywords  
 3 related to political context. For example, it included descriptions of political actors,  
 4 their positions and related institutions, such as ‘president’, ‘government’, ‘citizen’,  
 5 ‘Democratic Party’, ‘national’, and ‘Yoon Seok-yeol’. This suggests that this  
 6 grouping mainly reflects the flow of political discussions and public discourse.

7 The brown grouping, which appears similar in size, was composed of keywords  
 8 related to health and medical issues and medical professionals. Keywords such as  
 9 ‘medical association’, ‘doctors’, ‘medical community’, ‘resident’, ‘treatment’, ‘strike’,  
 10 ‘emergency room’, and ‘collective action’ are included, showing that the medical  
 11 community’s collective actions, institutional conflicts, and responses to health  
 12 policies were mainly reported. Lastly, the light blue grouping is composed of  
 13 keywords that focus on the process of consultation and persuasion between the  
 14 medical community and the government. Keywords such as ‘Han Deok-soo’, ‘prime  
 15 minister’, ‘national university’, ‘meeting’, ‘review’, ‘next year’, and ‘Seoul’ are located  
 16 at the center, reflecting the media’s coverage of the process by which the government  
 17 attempts to communicate and coordinate against the medical community’s collective  
 18 actions. In particular, reports that Prime Minister Han Deok-soo tried to coordinate  
 19 policies by meeting with university hospitals and medical schools and that he  
 20 suggested reexamining the medical school enrollment increase seem to have  
 21 contributed to the formation of this keyword cluster.

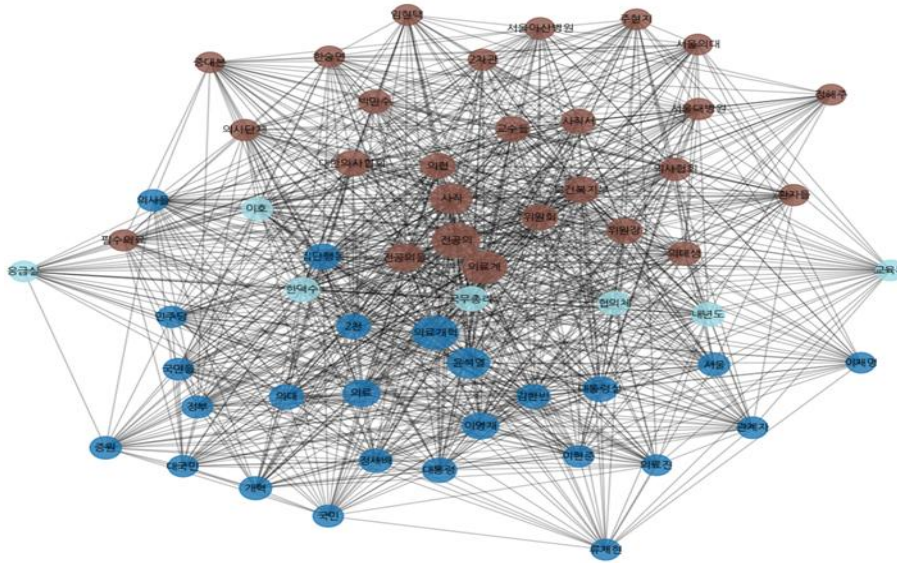
22  
 23 **Figure 4.** Keyword network of Medical Reform Issues



24  
 25  
 26 In case of KBS’s key words network, three groupings were formed, which were  
 27 ‘networks of politics’, ‘the medical community’, and ‘consultation and coordination’.  
 28 The blue grouping is composed of keywords related to politics and policy responses.  
 29 Keywords such as ‘Yoon Seok-yeol’, ‘government’, ‘president’, ‘policy’, ‘People  
 30 Power Party’, ‘healthcare reform’, ‘citizens’, ‘national people’, ‘medical rights’, and  
 31 ‘medical school’ are located at the center, indicating that healthcare issues are no

1 longer simply healthcare issues but one requiring more macro-level discussions over  
 2 such topics as political responses, differences in positions between political parties,  
 3 and policy adjustments. This grouping reflects the axis of public discourse and  
 4 political conflict surrounding healthcare policy. Brown grouping keywords are  
 5 centered around the medical community’s internal constituents. Keywords such as  
 6 ‘medical association’, ‘resident’, ‘doctors’, ‘medical students’, ‘professors’,  
 7 ‘collective action’, ‘resignation’, ‘Seoul Asan Medical Center’, and ‘refusal to treat’  
 8 are included, suggesting such issues as the collective response of medical  
 9 associations, refusal to treat by doctors, national medical examination, and training  
 10 system occupied an important position in its reporting. This grouping reveals KBS’s  
 11 inclination to focus on the collective actions and internal dynamics of the medical  
 12 professionals. Finally, the light blue grouping was organized around the content  
 13 related to consultation and coordination between the government and the medical  
 14 community. Keywords such as ‘Han Deok-soo’, ‘prime minister’, ‘emergency  
 15 room’, ‘meeting’, ‘review’, ‘Ministry of Education’, ‘next year’, ‘Seoul’, and  
 16 ‘national university’ are included, which are reflective of news reports that spotlight  
 17 the government’s efforts to resolve the conflict through dialogue with national  
 18 universities and key officials following a political backlash.

19  
 20 **Figure 5.** *KBS’s Medical Reform Issue Keyword Network*



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 22  
 23



## 1 Discussion and Conclusions

2  
3 This study tried to ascertain if there are differences in network agenda-setting  
4 of topics by broadcasters by examining keywords used in news reports about  
5 'medical reform', its key players and institutions, and the correlation between those  
6 keywords. To this end, this study analyzed keyword agenda setting, topic agenda  
7 setting, and network agenda attributes by utilizing the topic modeling analysis  
8 method, a very useful tool for deriving keywords and topics. First, the main  
9 keywords, ones that appeared in the word cloud related to 'medical reform',  
10 revealed that policy changes, the medical community's response to them, and the  
11 government's role were mainly dealt with in the news about the medical reform.  
12 Specifically, four main topics were derived as a result of topic modeling on the news  
13 content. Named 'reporting on change', 'reporting on medical staff', 'reporting on  
14 politics' and 'reporting on issues', they revealed the main aspects that public  
15 broadcasters focused on when covering matters related to the medical reform.

16 Different topics were derived from each broadcasting station. From KBS,  
17 topics of 'reform contents', 'collective action of professors', 'impact on the medical  
18 community', and 'conflict between decision makers and practitioners' were  
19 extracted, while from MBC topics about 'impact on medical schools', 'statement of  
20 position of the Office of the President', 'medical community group meeting and  
21 discussion of countermeasures', and 'participation of professors and residents in  
22 medical reform' were extracted. This analysis allowed us to confirm that there were  
23 differences in the two broadcaster's reporting tendencies. KBS focused most on the  
24 details of the medical reform, the resulting conflicts, and the direct impact on the  
25 field of medicine, highlighting real problems of the medical reform to viewers by  
26 conveying in detail the specifics of the government policy, the medical community's  
27 response to it, and the conflicts evidenced in the field.

28 On the other hand, MBC emphasized the social impact of the medical reform,  
29 the interaction between the government and the medical community, and the  
30 response strategies within the medical community. This can be interpreted as MBC  
31 trying to report on the matter from a more macroscopic perspective by citing the  
32 medical reform's wide-ranging ramifications on the society, the government's  
33 official position, and the collective response process of the medical community.

34 Next, keyword network analysis was conducted to visualize the relationships  
35 between main keywords and to identify the semantic network structure formed by  
36 these keywords. As a result, the entire network was divided into three major  
37 groupings with each grouping being composed of keywords with close relationship.  
38 First, the grouping with the largest number of words was mainly centered on  
39 keywords related to political context, which suggests that the community mainly  
40 reflects the flow of political discussions and public discourse. The second grouping,  
41 which was similar in scale, was composed of keywords related to health and medical  
42 issues and medical professional groups, indicating that the medical community's  
43 collective actions, institutional conflicts, and responses to health policies were well  
44 covered on the news. Finally, the third grouping was composed of keywords focused  
45 on the process of consultation and persuasion between the medical community and  
46 the government.

1 Both KBS and MBC indicated their network agenda characteristics with three  
2 groupings, but the words constituting the networks were different. MBC's were  
3 centered on keywords that focused on policy and institutional consultation structures,  
4 which can be interpreted as being formed around institutional responses, policy  
5 proposals, and committee composition within the medical community. This implies  
6 that MBC was more focused on aspects such as the formation of a consultative body  
7 for policy promotion and conflict resolution and solidarity across the medical  
8 community.

9 In conclusion, the study showed that Korea's public broadcasters attempted to  
10 convey various aspects of the medical reform policy in a balanced manner. The  
11 results also suggest that public broadcasters considered various factors such as  
12 policy content, medical staff's response, political situation, and potential problems  
13 when reporting on complex issues such as the medical reform. Although the  
14 influence of broadcasting has weakened in the multi-platform era compared to the  
15 past (Yoon et. al, 2012), KBS and MBC can be seen as still playing an important  
16 role by their agenda-setting in daily news reporting for the public's consumption.  
17 As public entities, they are also serving to provide their viewers an impartial forum  
18 for public debate that is independent of political pressure or market influence by  
19 reporting diverse and unbiased content on 'medical reform'. Therefore, it is the  
20 conclusion of this study that support of public broadcasting companies is necessary  
21 as they can help to enhance both plurality and diversity of opinions through their  
22 news reporting and help induce fairness regarding society's various issues among  
23 diverse social classes and political leanings. Finally, this study only analyzed the  
24 agenda setting of the two public broadcasting companies in Korea by comparing  
25 topic modeling and network agenda attributes, so it could not compare the topic  
26 network semantics of Korea's commercial broadcasting entities, and thus is limited  
27 from generalization. Therefore, for future studies, it is recommended that the target  
28 of the analysis and coverage period for investigation be expanded. A study on  
29 whether there are differences in the topic network agenda setting between public  
30 and commercial broadcasters regarding the same agenda would also be beneficial.

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