

## MEDIA NARRATIVE REGARDING RESTRICTIONS ON SOCIAL LIFE DURING THE COVID-19 PANDEMIC ON GAZETA.PL

Krzysztof Flasiński

 [orcid.org/0000-0003-2977-2752](https://orcid.org/0000-0003-2977-2752)

Instytut Literatury i Nowych Mediów  
Uniwersytet Szczeciński

### ABSTRACT

The aim of this study was to describe how the *gazeta.pl* website newsroom conducted the media narrative regarding restrictions on social, professional and private life based on articles about the COVID-19 epidemic published on the website. The study covered the period from the 14th of January 2020 (publication of the first thematic text related to the epidemic) to the 20th of May 2020 (date of lifting of the requirement to wear face masks in outdoor settings). The research material comprised 16,414 news stories published on the *gazeta.pl* website in which the word *coronavirus* was used. The texts were classified into 12 thematic groups. Firstly, the research results indicate that the subject of the pandemic follows the principles of the life cycle of a news topic. In addition, a more detailed, five-phase version of the news topic life cycle concept was proposed. Secondly, no positive correlation was identified between the number of new stories on COVID-19 and the number of confirmed cases of the disease. Lastly, the correlation between the number and frequency of news stories on specific topics connected with COVID-19 was limited.

**Keywords:** COVID-19, data analysis, journalism, news media, online communication

### *Introduction*

The COVID-19 topic dominated the news in most countries. In the United States, almost 75 percent of adolescents admitted to following media information on the pandemic (Oosterhoff, Palmer 2020, p. 9). The topic's popularity depends not only on the specific situation in the country but also on the source in which the information is sought or shared (Cinelli et al. 2020, p. 5).

Currently, most research concerns the presence of news about COVID-19 on social network sites, such as Twitter or Weibo. There are still no studies on the response to the coronavirus crisis from traditional media, including newspapers operating their own websites. Meanwhile, the data demonstrates that the pandemic is having, and will most likely continue to have, an effect on the entire media system. News consumption through social media, print media and websites increased by 49%, 26%, and 28%, respectively (Casero-Ripollés 2020, p. 5). Delivering news from reliable sources is all the more important at this time, considering that the spreading epidemic means not only fake news but also “rumors and conspiracy theories regarding COVID-19 and the origins of SARS-CoV-2” (Boberg et al. 2020, p. 17).

In Poland, in the analyzed period, following information on restrictions introduced by the government had the most significant impact on the public discourse. The most important events are, in chronological order: March 4, the first COVID-19 patient in Poland; March 10, the government canceled mass events; March 11, schools, universities, and kindergartens were closed; March 12, the first victim of the disease in Poland; March 14, the state of epidemic threat in Poland which means, i.e., closing of shopping malls, restaurants, and fitness clubs; March 20, the ministry of education announced the transition of schools to distance learning; March 24, the first wave of mobility restrictions, only essential outdoor activities were allowed, e.g., going to work, and to store; March 31, the government introduced a second package of rules, including the order to keep a distance of at least 2m from each other in public places, no access to parks and other recreational sites, closing of hotels, hairdressing and beauty salons, limits in stores (three people can stay in shops for one cash desk and only people over 65 are allowed to enter the store from 10 am to 12 am), leaving the house only for a short walk; April 16, the government introduces an obligation to cover the mouth and nose in public; April 20, the first attempt to reduce limits on the number of customers in stores; April 24, the ministry of education announced new school exams dates; May 4, hotels and shopping malls were opened; May 16, small entrepreneurs protested in Warsaw against lockdown; May 18, opening of beauty salons, and restaurants; May 25, primary schools were partially opened; May 30, the obligation to wear masks in public places was canceled.

### *The life cycle of a news topic*

Adaptation to the time cycle has long been indicated as an essential feature and even a crucial determinant of journalists’ professionalism (Schlesinger 1977). The widespread use of the Internet influenced the traditional 24-hour news consumption process, which was based on the rhythm of publishing content in conventional media such as newspapers and TV programs, and “and single daily news cycles are becoming rare” (Chadwick 2011, p. 6). The term *life cycle* is most often used to describe the time when a single news story remains popular in social media, and is based on “the daily rhythms in the news media” (Leskovec, Backstrom, Kleinberg 2009, p. 497), which could be considered patterns in the popularity of topics (Yang 2009).

The authors detected temporal dynamics of threads that were published in various sources. The news cycle's dynamics showed a sudden, significant, and short-term increase in popularity and, in the next phase, a gradual decrease in media interest until the number of publications on a given topic stabilized.

Evidence shows that most news lose popularity within hours or even immediately (Castillo et al. 2014, p. 217). In the case of social network sites one can speak of a "popularity lifecycle", where "the popularity of a story at time  $t$  can be measured as the number of views (or likes or shares) the story gets in a unit time interval around  $t$ " (Chakraborty et al. 2019, p. 453). The popularity of the topic is influenced by publications in various media that act as sources for each other. This process is referred to as the news source cycle (Messner, Distaso 2008, p. 447).

It is difficult to define one model life cycle for a news or news topic. Researchers propose various typologies of media events, e.g., routine events, accidents, scandals, and serendipity events (Molotch, Lester 1974, p. 106–111), contests, conquests, and coronations (Dayan, Katz 1992, p. 25–27) or separate categories such as disaster marathons (Liebes 1998, p. 71–84), conflict-oriented media events (Hepp, Couldry 2010, p. 8) and hybrid media events (Sumiala et al. 2016, p. 97–108). The analysis proposed below concerns the events that were present in the media frequently and constantly and which to a large extent shaped public and private life in Poland in the examined period. However, the pandemic as a media topic was a collection of related events rather than a single story.

## Methods

In the Polish Internet Research report, the *gazeta.pl* website ranks 12th among the most popular websites. The average daily number of internet users visiting the website is estimated at over 1 million 650 thousand, and the average daily number of views is over 8 million 600 thousand (PBI 2020). The website is associated with the *Gazeta Wyborcza* daily. *Gazeta Wyborcza* had a circulation of 67,116 in April 2020, ranking third among dailies, after the *Fakt* tabloid newspaper and *Super Express* (ZKDP 2020). *Gazeta.pl* is the largest website on the Polish-language Internet among those associated with traditional print media, ahead of *fakt.pl* belonging to the *Fakt* newspaper, *naszemiasto.pl* (the website of the regional editions of the *Nasze Miasto* weekly), and *wyborcza.pl* (the second news service of *Gazeta Wyborcza*, with less information; *gazeta.pl* contains texts from *wyborcza.pl*).

Preliminary research showed that the word *coronavirus* was used more often on *gazeta.pl* than the names of the disease, e.g., COVID-19. The research material was news stories on *gazeta.pl* in which the word "coronavirus" was used in various grammatical forms. The study covered the period from January 14, 2020 (publication date of the first text related to the epidemic) to May 30, 2020 (date when the requirement to wear face coverings in outdoor settings was removed, meaning that face masks, a symbol of the pandemic, disappeared from the streets). Over a period of 138 days, 16,414 coronavirus news stories were posted on *gazeta.pl*.

From the research material, the news stories about restrictions on social, professional, and private life were selected. Based on the occurrence of the keywords, they were combined into 12 thematic groups in four thematic sets. Statistical analysis was carried out on the grouped research material, comparing the subject of the published news with the situation in Poland until May 30.

The aim of this study was to describe how the *gazeta.pl* website newsroom conducted the media narrative about restrictions on social, professional, and private life based on articles about the COVID-19 epidemic published on the website. Three research questions were asked in order to achieve the research objective:

- Q1: *To what extent does the news topic life cycle concept apply to the narrative on COVID-19?*
- Q2: *What is the correlation between current events and the media narrative?*
- Q3: *Is there a correlation between the frequency of news on specific topics?*

### *The five phases of the COVID news life cycle*

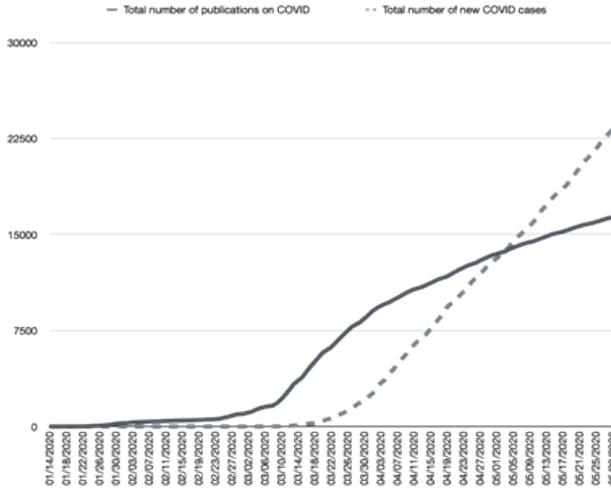
The first article on COVID-19 was published on *gazeta.pl* on January 14, 2020. The first case of the disease in Poland was confirmed on March 4, and the first patient died on March 12. Ten days later, the number of the infected individuals exceeded 100, to go beyond 1,000 on March 25 and 10,000 a month later. A comparison of the number of articles on COVID-19 with the number of confirmed cases shows growth of both figures.

Both the number of COVID-19 news stories and the number of confirmed COVID-19 cases in Poland were on the rise. However, after March we see a negative correlation and differing trends. The daily number of confirmed COVID-19 cases escalated, while the curve showing the daily number of news stories on the subject on *gazeta.pl* decreased at its own pace, which seemed to be completely independent of the disease incidence rate. The data may be used to identify the life cycle of the COVID-19 topic in news.

The first phase was characterized by relatively rare publications about the disease and the coronavirus. The number of articles rose only temporarily when news were published on the problems faced by Polish citizens living abroad: news stories about students from Poland who had to return from China, the possible evacuation of Polish citizens from China, and the first sanitary controls at Polish airports.

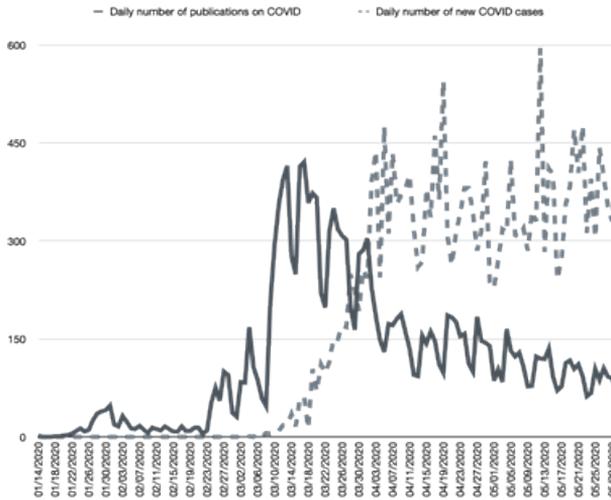
The second phase involved an increased media interest, driven by the developments seen globally and the first incidents in Poland: mass reports of suspected COVID-19 cases published in Poland and around the world on February 27 and 28, and the confirmation of the first COVID-19 case in Poland at the beginning of March. The number of publications on the disease on *gazeta.pl* on those dates was 100, 95, and 168, respectively.

**Figure 1. Total number of COVID-19 news stories on *gazeta.pl* and total number of COVID cases in Poland**



Source: news numbers based on the author’s own research; COVID-19 data based on the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University

**Figure 2. Daily number of COVID-19 news stories on *gazeta.pl* and daily number of COVID cases in Poland**



Source: news numbers based on the author’s own research; COVID-19 data based on the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University

Reports of suspected COVID-19 cases appeared regularly and came from all over Poland. In articles on *gazeta.pl*, representatives of health authorities confirmed these cases or denied the information. The development of the pandemic affected

all areas of social life. There was information about a rapid increase in the incidence of the coronavirus in France, Italy, and Iran, the first cases in Denmark and Estonia, sharp price declines on stock exchanges, the cancellation of sports and cultural events, and the first restrictions on international traffic. On March 4, the Minister of Health confirmed the first case of COVID-19 in Poland. This information was accompanied by press articles containing advice on the symptoms and ways of protection against the disease.

The third phase is a period of escalating, dominant media interest in the pandemic. This part of the news topic life cycle lasted 12 days, from March 9 to March 20. 4,121 journalistic texts were published during that period, with an average of 343 news stories per day. On three days (March 13, 16 and 17), the number of news stories related to COVID-19 exceeded 400 (415, 414 and 421, respectively). Differences in test results on weekdays are associated with the standard weekly newsroom work cycle. The most significant increase in the number of news stories was recorded on Monday, March 9, when it reached 206, compared with 47 on Sunday. This change was also the most substantial percentage increase in the period.

This rapid growth in the number of news stories and sustained interest of journalists in the subject of COVID-19 were caused by the global and national developments. On March 9, Italians were banned from leaving homes; the next day, the Czech Republic announced that the country's borders would be closed; on Wednesday, WHO declared the state of a pandemic; on March 12, stock exchanges saw the largest declines in over 30 years. In Poland, mass events were canceled on March 10; the day after, nursery schools, kindergartens, schools, and universities were closed; on March 12, information about the death of the first coronavirus-infected patient was made public; on March 14, the government announced the state of epidemic emergency.

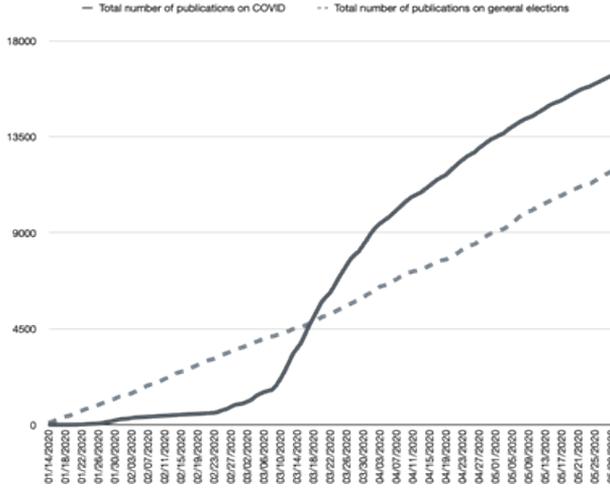
This two-week period was dominated mainly by news related to the local and national consequences of the epidemic and, to a considerably lesser extent, dramatic information on the number of infected people and the number of casualties worldwide. The news stories concerned restrictions in various areas of social life: education, shopping and services, culture and entertainment. The phase with the largest daily number of news stories on COVID-19 was also a period of increased activity of the *Gazeta Wyborcza* local branches. Local information made up most of all national news.

The fourth phase was distinguished by a sharp decline in newsroom interest in the pandemic, while the number of publications was relatively high. Rapid increases and typical decreases in the number of news stories during weekends were still observable. However, there was a clear downward trend over the next two weeks, and the thematic structure of the news was changed. The editors devoted much more space to stories related to restrictions introduced by the government and administrative penalties.

The last phase of the news topic life cycle was a period of a slightly downward trend, which began on April 6. Quantitative research results indicate continued journalistic activity, but an important change is the flattening curve showing a decrease in the number of news stories compared with the previous period.

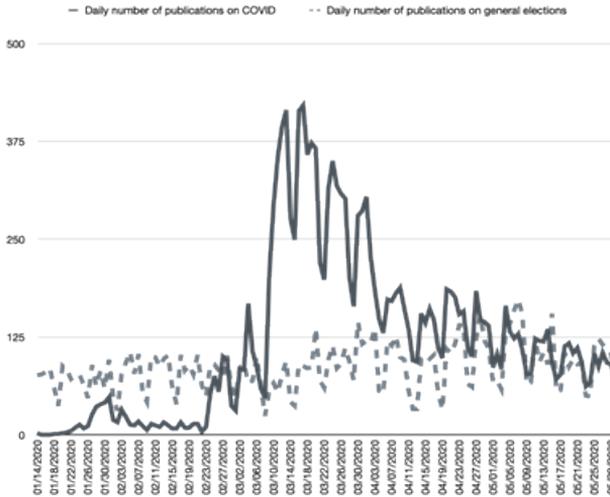
The differences between the weekday numbers of articles and the weekend declines are not as pronounced as in the previous two periods.

Figure 3. Total number of COVID-19 news stories on *gazeta.pl* and total number of presidential election news stories on *gazeta.pl*



Data source: author's own research

Figure 4. Daily number of COVID-19 news stories on *gazeta.pl* and daily number of presidential election news stories on *gazeta.pl*



Data source: author's own research

Three fundamental factors influenced the statistical results described above. Firstly, the subject of the coronavirus was gradually losing its attractiveness to readers and the newsroom. After a month of intensive coverage of the topic by journalists, readers

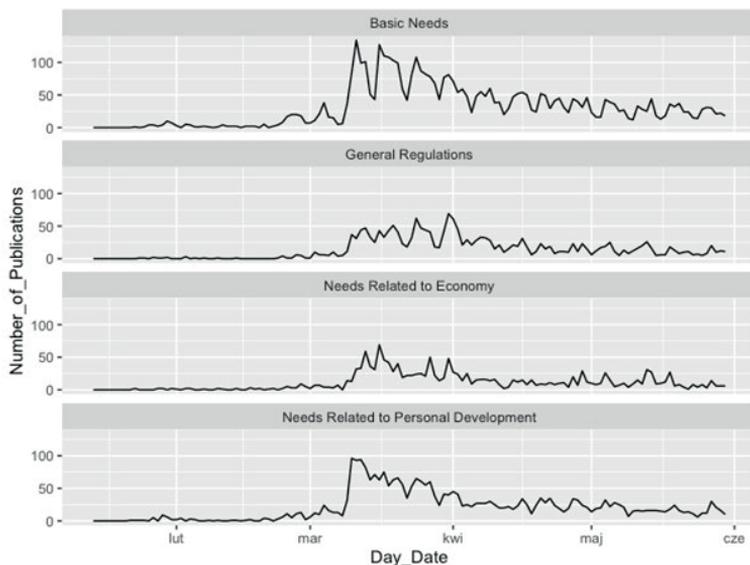
were looking for more thematically diverse information. Secondly, Poland's intense political situation and the debate on the date of the presidential election evolved into a conflict between two political forces. Since *Gazeta Wyborcza* is associated with one side of the political scene, the political situation also had an impact on the selection of news topics. The presence of news related to the election is confirmed by the charts below.

The data indicates that an upward trend in the volume of presidential election news corresponded to a downward trend in the volume of articles on COVID-19 from the end of April to mid-May. The third factor was the normalization of the situation related to restrictions. Despite the introduction of the requirement to cover the mouth and nose when outdoors on April 16, on the same day the Polish Prime Minister announced a four-stage plan for lifting the lockdown. On April 20, the limit of the number of people in stores and churches was increased, public forests and parks were reopened, and the government allowed recreational sports outdoors.

### *Thematic distribution of news stories*

As mentioned in the introduction, the news selected for analysis were assigned to four sets. The distribution of the journalistic texts in the examined period is presented in the chart below.

Figure 5. Quantitative distribution of the main news sets on *gazeta.pl* in the period under examination



Source: author's own research

All data sets show three leading regularities: a small number of news stories before the peak in the second week of March; an increase in the total number of articles in March; a decrease in the amount of news from the beginning of April. The results are consistent with the analysis of the distribution of the total number of journalistic articles. The flattened trend curve and reverse growth in the case of the “General regulations” set reflect the introduction of restrictions by the government with some time lag in relation to the appearance of information about the epidemic. The news sets consist of 12 groups. Descriptive statistics for each group are presented in the table below.

Table 1. Descriptive statistics for the daily number of publications for each topic category

News set	News group	Min.	1st Qu.	Median	Mean	3 rd Qu.	Max.	Total
General regulations	Restrictions	0	1.00	5.00	8.73	12.00	52	1,204
	Penalties	0	0.00	2.00	4.12	6.00	24	568
	Mitigation	0	0.00	0.00	1.14	1.00	12	157
Basic needs	Movement	0	1.00	5.00	6.60	10.00	26	911
	Work	0	2.00	10.50	14.70	21.75	68	2,028
	Education	0	1.00	7.00	9.33	12.00	97	1,288
Economy-related needs	Retail	0	1.00	3.00	6.06	8.00	39	836
	Services	0	0.00	2.00	2.73	4.00	20	377
	Food services	0	0.00	1.00	2.27	3.00	23	313
Personal development needs	Religion	0	0.00	3.00	4.28	6.00	32	590
	Culture	0	1.00	6.00	7.84	11.00	51	1,082
	Sports	0	1.00	6.00	8.69	12.00	45	1,199

Source: author’s own research

The number of articles in the different categories varies widely and ranges from 157 texts on the mitigation of restrictions during the entire period under analysis to 2,028 news stories on work-related restrictions. The “Movement” and “Retail” categories are the closest to the average of 879 news stories.

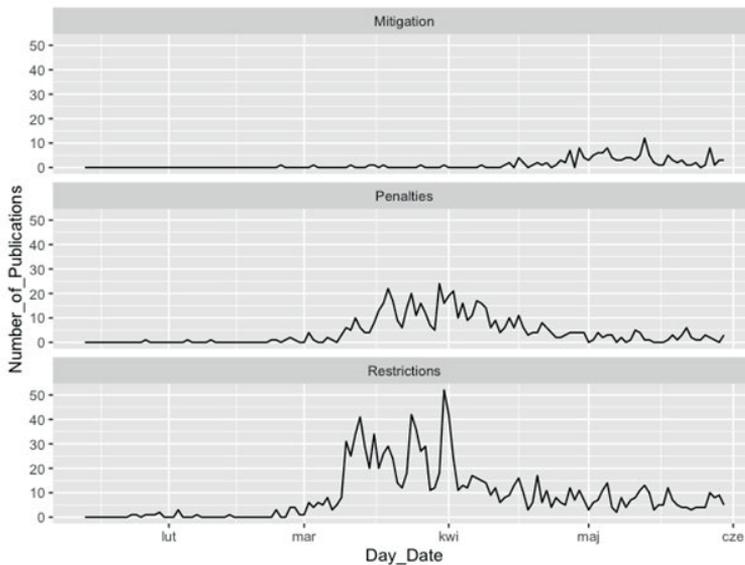
Moreover, descriptive statistics indicate that there were long periods when no texts belonging to a specific thematic category were published. In five thematic categories no text appeared for at least a quarter of the period under analysis. Only in the case of the “Work” category the average daily number of published articles reached a two-digit level. The levels of the statistical indicators reflect the journalists’ late interest in the subject of COVID-19, as described earlier.

More significant differences are seen in the results of the third quartile. For over a quarter of the period under analysis, at least 21 news stories in the “Work” category were published daily. Significant numbers were also observed for the following categories: ”Restrictions”, ”Education”, and ”Sports” (12), “Culture” (11), and “Movement” (10). These findings indicate that the topics that attracted the most

interest from journalists were the restrictions relating to basic needs of everyday life, such as work, mobility, and education.

The small number of news stories in the “Mitigation” category is natural considering that the gradual lifting of restrictions occurred only in the phase when the number of articles on the pandemic was much lower than in the peak period. In addition, at the end of the research period many restrictions still existed and were being only gradually removed. Detailed data for the individual thematic groups is presented below. The situation in the “General regulations” set is illustrated by the detailed distribution of the number of news stories in individual groups.

Figure 6. Quantitative distribution of the thematic groups in the “General regulations” set



Source: author's own research

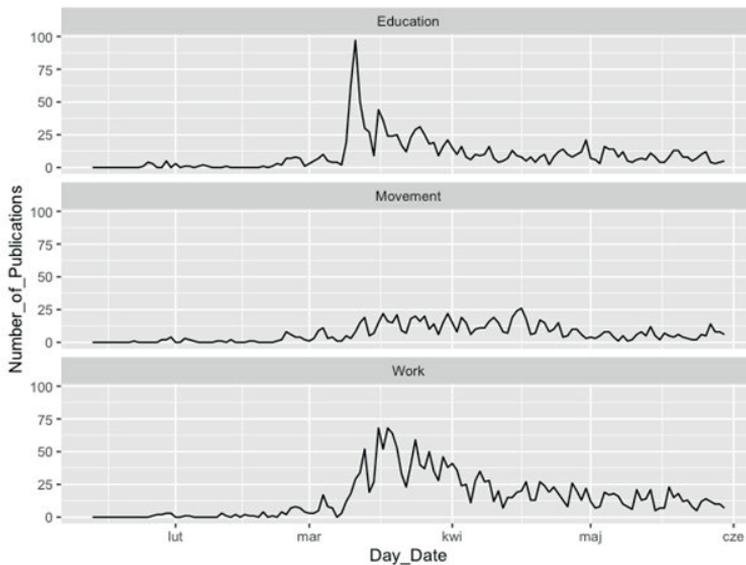
None of the groups corresponds with the distribution curve of the total number of news stories. Most stories appeared in the second half of March. It is natural that the volume of news on the lifting of restrictions grows as the number of texts on restrictions and penalties goes down. These changes in the number of stories were directly related to three announcements of severe restrictions on social life. Schools were closed on March 10 and 11, and mass events were canceled. On March 24, significant restriction measures were imposed on people's mobility, including the prohibition on leaving home except for work and most important reasons, the requirement to move only in two-person groups, and a total ban on gatherings, except for workplaces. On March 31, new restrictions on mobility, shopping, and services were announced: the number of customers in stores, at marketplaces and at post offices was limited; hotels, beauty and hairdressing salons, parks, boulevards and beaches were closed; persons under 18 years of age were forbidden to go out alone;

the two-meter social distancing rule was imposed. All those dates had a strong reflection in the number of published news stories.

The curve illustrating the number of articles in the “Mitigation” group corresponds to the general trend of restriction removal. There is an apparent disparity between that group and other thematic groups in this set. There is a visible trend indicating that the introduction of restrictions aroused much more interest from readers than their removal. Also, the language of the statements quoted on *gazeta.pl* was milder. The activities related to the lifting of restrictions occurred in the Polish public discourse under the terms “gradual defrosting” and “new normality”.

The second set of news stories includes journalistic articles on the restrictions affecting basic social life activities. As indicated above, this set was the largest, with 4.227 news stories. Clearly, in this set, the group with the largest number of articles and the greatest differences was news about education.

Figure 7. Quantitative distribution of the thematic groups in the “Basic needs” set



Source: author’s own research

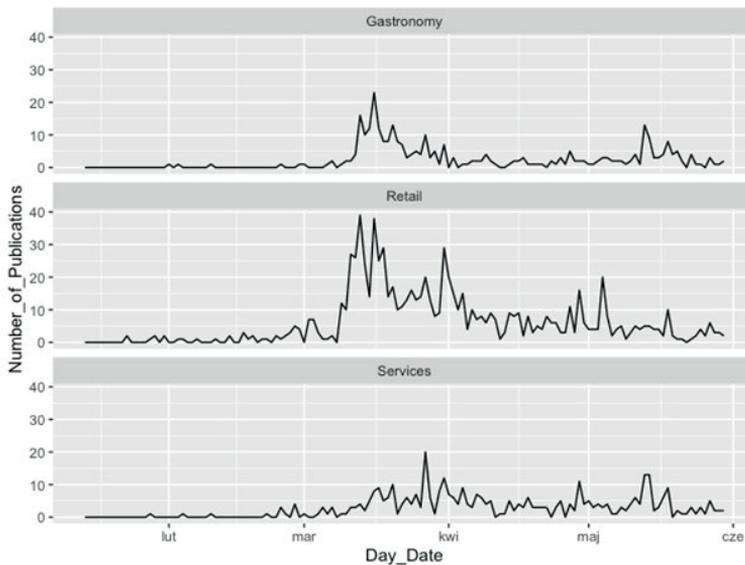
The high numerical score in the “Education” category is attributable to two factors. First and foremost, restrictions in this area were introduced as one of the first. At the time of the most significant interest in the epidemic, all restrictions were widely reported and described. That was also the period when the activity of the *Gazeta Wyborcza* local branches was the highest.

Secondly, news stories about closed nursery schools and kindergartens were classified into this group. Problems relating to childcare were one of the main topics of news published on *gazeta.pl* in various phases of the research period. It should be noted that restrictions on schools’ operation concern not only students and teachers but also all families. The participation of a child in online learning

resulted in adults' presence at home and difficulties or even lack of professional work opportunities. The aspects mentioned above affected the number of texts in the "Education" group.

Likewise, high results were seen in the "Work" category. Unlike articles on education, this group shows no clear peaks in the number of publications. Restrictions in this area were significant but more spread over time. As in the case of the "Work" category, the restrictions on people's movement are characterized by a smaller and stable number of published news stories. The chart below presents a set consisting of news stories related to restrictions on economic activity.

Figure 8. Quantitative distribution of the thematic groups in the "Economy-related needs" set



Source: author's own research

In this set, the largest group is news stories on restrictions in retail trade, affecting customers shopping in stores and at marketplaces. As in the "Education" group, the high number of articles coincides with the time when further restrictions were introduced. Additionally, as customers purchased large amounts of food products with long expiration dates, food stores experienced shortages of many goods, and many local reports on *gazeta.pl* featured photos of empty shelves.

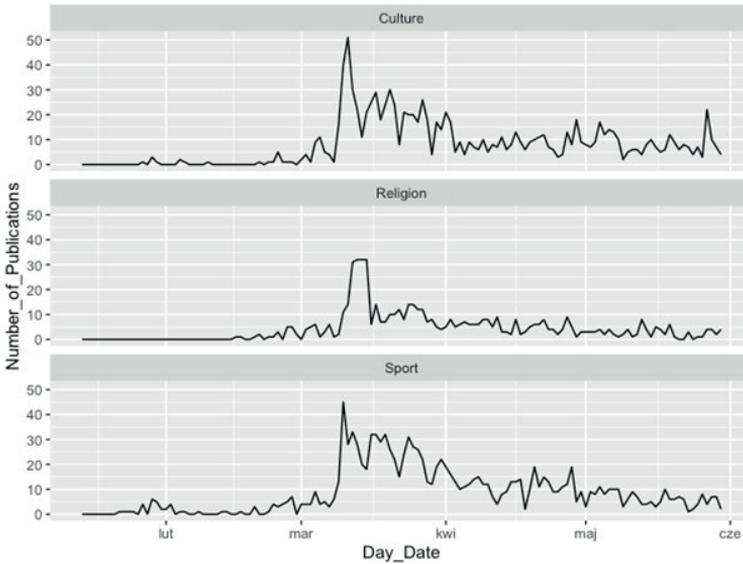
The small peaks across all categories at the end of the research period reflect the gradual easing of restrictions for businesses, employees, and customers in retail, food, services and other sectors, which involved the re-opening of department stores and shopping centers and the announcement of the re-opening of hairdressing and beauty salons as well as cafes and restaurants. The last set consists of news stories on restrictions related to personal development needs.

The significant increase in the volume of publications in the "Culture" thematic group at the end of May was connected with the Prime Minister's announcement

of the permission to open cinemas and theaters. At that time, news stories covered not only the lifting of restrictions but also opinions on the profitability of operating cultural facilities with the imposed audience size limits.

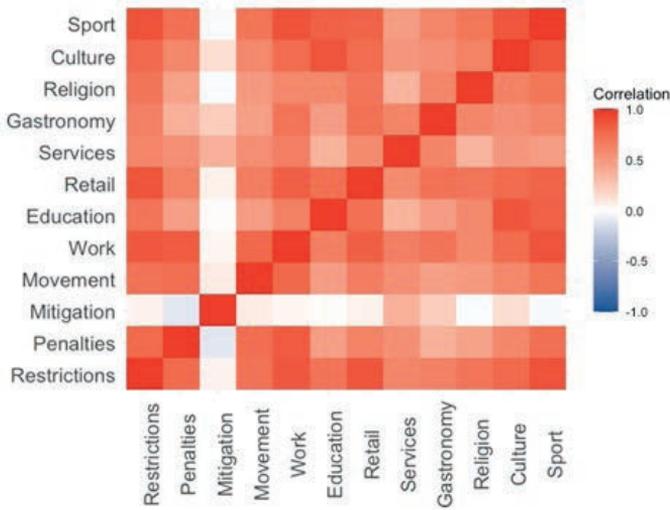
The lack of a marked weekend drop in the news volume in the “Religion” category in the first half of March was caused by the introduction of limits on the number of people participating in masses and other church ceremonies, reports of the first masses with the social distancing rule, and discussion on the fulfillment of epidemiological safety principles.

Figure 9. Quantitative distribution of the thematic groups in the “Personal development needs” set



Source: author’s own research

Figure 10. The topic groups heatmap plot



Source: author's own research

ARTICLES

The high numbers of news stories persisting in March in the “Sports” category resulted from problems with practising sports and recreation in public space due to social quarantine and social distancing. In comparison with the “Culture” category, there was no increase in the number of sports news stories at the end of May. These statistical results could have been influenced by the fact that the possibility of satisfying the needs in this area in public space and the government’s decision to permit walking, running, and cycling had already been reported on by journalists. Correlation coefficients for the separate topic groups show a relatively substantial similarity in the distribution of the number of news stories. The similarities and differences are illustrated in the chart (Figure 10) and the table below.

The following groups: “Restrictions”, “Work”, “Sports”, and “Retail” are the most compatible with other thematic categories. There were two reasons for the high correlation coefficients for these groups (from 0.69 to 0.71 on average): the coverage of these topics with other subjects in the same news stories, and announcement of new restrictions simultaneously in various fields.

Table 2. The topic groups correlation matrix

News group	Restrictions	Penalties	Mitigation	Movement	Work	Education	Retail	Services	Food services	Religion	Culture	Sports
Restrictions	1.00	0.76	0.05	0.72	0.85	0.70	0.86	0.61	0.63	0.70	0.77	0.87
Penalties	0.76	1.00	-0.10	0.74	0.83	0.47	0.62	0.56	0.37	0.44	0.59	0.73
Mitigation	0.05	-0.10	1.00	0.08	0.04	0.02	0.05	0.37	0.22	-0.02	0.14	-0.03
Movement	0.72	0.74	0.08	1.00	0.78	0.47	0.65	0.56	0.46	0.49	0.59	0.70
Work	0.85	0.83	0.04	0.78	1.00	0.64	0.82	0.65	0.70	0.59	0.76	0.87
Education	0.70	0.47	0.02	0.47	0.64	1.00	0.73	0.35	0.48	0.59	0.87	0.81
Retail	0.86	0.62	0.05	0.65	0.82	0.73	1.00	0.58	0.72	0.70	0.76	0.80
Services	0.61	0.56	0.37	0.56	0.65	0.35	0.58	1.00	0.61	0.35	0.51	0.48
Food services	0.63	0.37	0.22	0.46	0.70	0.48	0.72	0.61	1.00	0.61	0.56	0.61
Religion	0.70	0.44	-0.02	0.49	0.59	0.59	0.70	0.35	0.61	1.00	0.63	0.69
Culture	0.77	0.59	0.14	0.59	0.76	0.87	0.76	0.51	0.56	0.63	1.00	0.86
Sports	0.87	0.73	-0.03	0.70	0.87	0.81	0.80	0.48	0.61	0.69	0.86	1.00

Source: author’s own research

Particularly visible is the small distribution similarity of the “Mitigation” group with other news groups (with average correlation coefficient of 0.18). These results indicate a more frequent occurrence of a specific topic in journalistic texts when the restrictions were introduced than when they were removed. These findings demonstrate that the above-mentioned phenomenon occurs when events later on the timeline have less potential to attract journalists’ and readers’ attention than the earlier ones.

### Conclusions

The results of the research provide grounds to answer the questions raised in the introduction.

*Q1: The data on the number of news stories indicates that the concept of the life cycle of a news topic applies to the narrative on the COVID-19 pandemic.*

Moreover, a more detailed proposal of this concept was presented. It assumes the presence of five phases: no interest, pre-accumulation phase, rapid growth and persistence of maximum interest from media outlets, rapid decline, and slow disappearance. Additionally, each topic has its own life cycle. In most cases it is consistent with the main concept. However, it is necessary to point out that the research period does not cover the entire period of the pandemic. It is likely that next phases may be identified after the COVID-19 topic completely disappears from the media.

*Q2: The correlation between current events and the media narrative was limited. There was even a surprising negative correlation between the number of news stories and the number of confirmed COVID-19 cases.*

The statements made by decision-makers, in this case mainly politicians and the government officials, had more influence on the volume of media coverage than actual events. The increases in the number of news stories coincided with announcements of new restrictions rather than the dates of their coming into effect. However, actual events related to the epidemic had an impact on the number of publications, but on a local scale. The development of the epidemic in cities and regions reflected the way the narrative was conducted by the local branches of *Gazeta Wyborcza*.

It should be emphasized that the lack of a positive correlation between the number of COVID-19 cases and the number of news stories may result from the specific nature of the medium. Studies in China have shown that “there appears to be a positive correlation between the number of COVID-19-related Weibo posts from Wuhan and the number of cases officially reported in Wuhan during the early stages of this outbreak. This effect size was larger than what was observed for the rest of China excluding Hubei Province” (Li et al. 2020, p. 7). Additionally, surveys of Twitter users’ activity showed an immediate increase in the number of published messages in response to coronavirus-related events (Chen, Lerman, Ferrara 2020, p. 8).

*Q3: The correlation between the number and frequency of news on specific topics related to COVID-19 existed to a limited extent.*

The quantitative features of the narrative on particular topics show that it is possible to identify a strong correlation as well as moments when the correlation is close to zero. However, there are topic groups that were strongly correlated with others (for instance, “Restrictions”), and categories that appeared in news stories

in a different configuration than the others (e.g. “Mitigation”). Occasionally there were cases of a negative correlation.

### Bibliography

- Boberg S., Quandt T., Schatto-Eckrodt T., Frischlich L. (2020). Pandemic Populism: Facebook Pages of Alternative News Media and the Corona Crisis. A Computational Content Analysis [https://arxiv.org/abs/2004.02566; 10.06.2020].
- Casero-Ripollés A. (2020). Impact of COVID-19 on the Media System. Communicative and Democratic Consequences of News Consumption During the Outbreak. *El Profesional de la Información*, vol. 29(2) [https://doi.org/10.3145/epi.2020.mar.23; 10.06.2020].
- Castillo C., El-Haddad M., Pfeffer J., Stempeck M. (2014). Characterizing the Life Cycle of Online News Stories Using Social Media Reactions. In: *Proceedings of the 17th ACM conference on computer supported cooperative work & social computing*, p. 211–223 [https://dl.acm.org/doi/abs/10.1145/2531602.2531623; 10.06.2020].
- Chadwick A. (2011). The Political Information Cycle in a Hybrid News System: The British Prime Minister and the “Bullygate” Affair. *The International Journal of Press/Politics*, vol. 16(1), p. 3–29 [https://doi.org/10.1177/1940161210384730; 10.06.2020].
- Chakraborty A., Ghosh S., Ganguly N., Gummadi K.P. (2019). Optimizing the Recency-Relevance-Diversity Trade-Offs in Non-Personalized News Recommendations. *Information Retrieval Journal*, vol. 22(5), p. 447–475 [https://link.springer.com/article/10.1007/s10791-019-09351-2; 10.06.2020].
- Chen E., Lerman K., Ferrara E. (2020). Tracking Social Media Discourse About the COVID-19 Pandemic: Development of a Public Coronavirus Twitter Data Set. *JMIR Public Health Surveill*, vol. 6(2) [https://publichealth.jmir.org/2020/2/e19273; 10.06.2020].
- Cinelli M., Quattrocioni W., Galeazzi A., Valensise C.M., Brugnoti E., Schmidt A.L., Zola P., Zollo F., Scala A. (2020). The COVID-19 Social Media Infodemic. *New Media* [https://arxiv.org/abs/2003.05004; 10.06.2020].
- Dayan D., Katz E. (1992). *Media Events: The Live Broadcasting of History*. Cambridge.
- Hepp A., Couldry N. (2010) Introduction: Media Events in Globalized Media Cultures. In: N. Couldry, A. Hepp (eds.). *Media Events in a Global Age* (p. 1–20). London.
- Leskovec J., Backstrom L., Kleinberg J. (2009). Meme-Tracking and the Dynamics of the News Cycle. In: *Proceedings of the 15th ACM SIGKDD international conference on Knowledge discovery and data mining*, p. 497–506 [https://dl.acm.org/doi/abs/10.1145/1557019.1557077; 10.06.2020].
- Li J., Xu Q., Cuomo R., Purushothaman V., Mackey T. (2020). Data Mining and Content Analysis of the Chinese Social Media Platform Weibo During the Early COVID-19 Outbreak: Retrospective Observational Inveillance Study. *JMIR Public Health and Surveillance*, vol. 6(2) [https://publichealth.jmir.org/2020/2/e18700; 10.06.2020].
- Liebes T. (1998) Television’s Disaster Marathons. A Danger for Democratic Processes? In: T. Liebes, J. Curran (eds.). *Media, Ritual and Identity* (p. 71–84). London.
- Messner M., Distaso M.W. (2008). The Source Cycle: How Traditional Media and Weblogs Use Each Other as Sources. *Journalism Studies*, vol. 9(3), p. 447–463.

- Molotch H., Lester, M. (1974). News as Purposive Behavior: On the Strategic Use of Routine Events, Accidents, and Scandals. *American Sociological Review*, vol. 39(1), p. 101–112 [<https://doi.org/10.2307/2094279>; 10.06.2020].
- Oosterhoff B., Palmer C. (2020). Psychological Correlates of News Monitoring, Social Distancing, Disinfecting, and Hoarding Behaviors among US Adolescents during the COVID-19 Pandemic [<https://doi.org/10.31234/osf.io/rpcy4>; 10.06.2020].
- PBI (2020). Polski internet w maju 2020. Badanie Gemius PBI [<http://pbi.org.pl/badanie-gemius-pbi/polski-internet-w-maju-2020>; 10.06.2020].
- Schlesinger P. (1977). Newsmen and Their Time-Machine. *The British Journal of Sociology*, vol. 28(3), p. 336a350 [<https://doi.org/10.2307/589998>].
- Sumiala J., Tikka M., Huhtamäki J., Valaskivi K. (2016). #JeSuisCharlie: Towards a Multi-Method Study of Hybrid Media Events. *Media and Communication*, vol. 4(4), p. 97–108.
- Yang J. (2009). Analyzing the Temporal Dynamics of the News Cycle [[http://snap.stanford.edu/class/cs224w-2010/proj2009/Memetracker\\_final.pdf](http://snap.stanford.edu/class/cs224w-2010/proj2009/Memetracker_final.pdf); 10.06.2020].
- ZKDP (2020). Kwiecień 2020. Dane dzienników [<https://www.teleskop.org.pl/zkdp>; 10.06.2020].

## STRESZCZENIE

### **Narracja medialna na temat ograniczeń życia społecznego podczas pandemii COVID-19 w serwisie gazeta.pl**

Celem badania był opis sposobu prowadzenia narracji medialnej dotyczącej ograniczeń w życiu społecznym, zawodowym i prywatnym na przykładzie artykułów na temat epidemii COVID-19 w serwisie internetowym gazeta.pl. Badanie obejmowało okres: od 14 stycznia 2020 r., (data ukazania się pierwszego tekstu związanego tematycznie z epidemią) do 20 maja 2020 r. (data zniesienia obowiązku zakrywania twarzy w otwartej przestrzeni). Materiał badawczy stanowiło 16 414 publikacji w serwisie gazeta.pl, w których występowało słowo *koronawirus*. Teksty zostały zaklasyfikowane do 12 grup tematycznych. Po pierwsze, wyniki badań wskazują, że temat pandemii podlega regułom cyklu życia tematu medialnego. Ponadto zaproponowana została bardziej szczegółowa, pięciofazowa wersja tej koncepcji. Po drugie, nie występowała korelacja pozytywna między liczbą newsów powiązanych tematycznie z COVID-19 a liczbą potwierdzonych przypadków zachorowań, a w pewnych okresach wręcz przeciwnie, stwierdzono korelację negatywną. Po trzecie, korelacja między liczbą i częstotliwością publikowania newsów dotyczących poszczególnych tematów związanych z COVID-19 występowała w ograniczonym zakresie.

**Słowa kluczowe:** COVID-19, analiza danych, dziennikarstwo, media informacyjne, komunikacja online