Polish deputies support to the anti-vaccination movement in social media. The case of Confederation leaders[1]

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Abstract: The coronavirus crisis showed that politicians may use their official fan pages in social media to spread misleading information promoted by anti-vaccination movements. The research analyses the phenomenon taking into account the accountability of deputies as representatives of the nation. To verify the research hypothesis, I choose cases of two Confederation's (Konfederacja) deputies, and formulate the following questions: How followers of fake news about COVID-19 vaccines use deputies' profiles to promote such content? What is the motivations behind the phenomenon? and Who was involved in sharing fake news? Based on the questions, I formulated a hypothesis that anti-vaccination information is spread by some Polish deputies using their profiles in social media. Fake news about COVID-19 vaccines have been disseminated by publishing on social media profiles and using comments to posted by users. Further in the article, I refer to essential papers discussing the use of social media to spreading misinformation about COVID-19 and vaccines. This explains the purpose of selecting sources and cases analysed. The article finally shows results of my quantitative and qualitative analysis of the sources. Comparative studies draw on qualitative and quantitative analyses of two types of social media content, i.e. posts on Facebook and users' comments during the first half-year of mass vaccination. The selection of sources is based on the following criteria: Konfederacja deputies were the only in the Polish Parliament who manifested their doubts about COVID-19 vaccination. The caesura started on December 26, 2020 with the beginning of the vaccination program in Poland. It ends on June 26, 2021, with the end of the first half-year of vaccination, when the government started mass vaccination for all adults in Poland.

Keywords: anti-vaccination movements, Konfederacja, Polish political parties, anti-vaccination content, COVID-19

Introduction

Vaccination is one of the most outstanding achievements of the modern medicine. At the same time, an anti-vaccination rhetoric has become part of the mainstream discourse regarding the public health practice. This applies in particular to children vaccination, and in 2019, the World Health Organization named vaccine hesitancy as one of the top 10 threats to global health (Megget, 2020). Such an attitude undermines trust to health institutions and programs, although vaccination has become a real measure to halt the progressing COVID-19 pandemic. In 2020, at the Munich Security Conference, Tedros Adhanom Ghebreyesus, WHO's director general said: "We're not just fighting a pandemic; we're fighting an infodemic". The phenomenon of infodemic is boosted by social media which strengthen and promote anti-vaccination discourses (Smith, Graham, 2017, 1) by misinformation campaigns (Kim, Yalcin, Bestvater, Munger, Monroe, Desmarais, 2020, 952; see also see Davies, Chapman, & Leask 2002; Kata, 2010, 2012).

The coronavirus crisis showed how politicians may use their official fan pages in social media to spread misinformation promoted by anti-vaccination movements. It is the leading research assumption discussed in this paper. I decided to analyse the phenomenon while taking into account that deputies are elected representatives of the nation. To verify the

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research hypothesis, I choose cases of two Confederation's (Konfederacja) deputies, and formulate the following questions: How followers of fake news about COVID-19 vaccines use deputies' profiles to promote such content? What is the motivations behind the phenomenon? and Who was involved in sharing fake news? Based on the questions, I formulated a hypothesis that anti-vaccination information is spread by some Polish deputies using their profiles in social media. Fake news about COVID-19 vaccines have been disseminated by publishing on social media profiles and using comments to posted by users. Further in the article, I refer to essential papers discussing the use of social media to spreading misinformation about COVID-19 and vaccines. This explains the purpose of selecting sources and cases analysed. The article finally shows results of my quantitative and qualitative analysis of the sources.

Literature review

Before analysing anti-vaccination content published on selected Facebook profiles, it is worth discussing leading literature on the subject. This section refers to studies of anti-vaccination content in the media and essential features of ant-vaccination movements. Scholars have been dealing with the research problem before the coronavirus crisis. Most of them were alarmed about the threat of anti-vaccination rhetoric in the second decade of the 21st century when children vaccination rapidly declined in Western states. This led, among other things, to growing cases of new measles in the US.

Previously, anti-vaccination movements and their ideology in the 19th and 20th centuries were based on the following slogans: vaccines cause idiopathic illnesses, a protest against vaccines is a sign of "search for the truth", producers of vaccines are afraid to admit their errors, mandatory vaccination is an insult to every human, immunity gained after vaccination is temporary, and healthy lifestyle, personal hygiene, and diet are alternatives to vaccination and measures that produce better effects (Tafuri, Gallone, Cappelli, Martinelli, Prato, Germinario, 2014, 1). In recent years, anti-vaccination activists referred to Andrew Wakefield, who suggested credence to the debunked claim of a connection between the measles, mumps, and rubella (MMR) vaccine and the development of autism in young children in his publication in The Lancet. Several studies which followed disproved a causal association between the MMR vaccine and autism. The misinformation about vaccines among adults increased leading to low trust in medical experts (Stecula, Kuru, Jamieson, 2020, 2). By using by social media, anti-vaccination movements targeted parents taking care of their children. Moreover, it had been scientifically proven that personal experience, value systems, and trust in health professionals are essential to parental decision-making about immunization and these could be more important than official information from professional sources (Hussain, et al., 2018, 5). Tanushree Mitra, Scott Counts, and James Pennebaker noted that anti-vaccination supporters linked these concerns for health and personal experience with beliefs in conspiracy theories (Mitra, Counts, Pennebaker, 2016, 277). In the paragraphs that follow, I present how conspiracy thinking spread by using digital platforms.

In 2015, Gabriele Sak, Nicola Diviani, Ahmed Allam, and Peter J. Schulz pointed out the role of digital communication in promoting mass vaccination. Their comparative analysis confirmed that pro-vaccination webpages had higher quality than anti-vaccination sites, which they explained by the higher professionalism of web portal owners. However, anti-vaccination websites were often operated by anti-vaccination activists (Sak, Diviani, Allam, Schulz, 2015, 8). However, the differences in quality was not decisive regarding the popularity of the site. Thus, the authors of the paper are alarmed by the growing risk of encountering anti-vaccination content. This can be the result of the growing role of the Internet as a source of common knowledge (Sak, Diviani, Allam, Schulz, 2015, 10). Naomi Smith and Tim Graham suggested that despite high levels of users' activity, anti-vaccination

networks function as small, close-knit communities. The size issue is the result of the "filter bubble effect". The analysis of anti-vaccination Facebook pages confirmed that the structure of the "small world" provides for fast and easy dissemination of information (Graham, Smith, 2017, 15). Despite their limited size, thanks to the Facebook algorithm, anti-vaccination movements may reach outside of their bubble by targeting people who are unsure about vaccination, particularly parents (Megget, 2020). Such movements can play the main role in cementing anti-vaccination beliefs (Graham, Smith, 2017, 14). The interest in analysing the use of the Internet to spread anti-vaccination content increased after the outbreak of the coronavirus crisis in March 2020, and it remained higher in comparison to the period before the pandemic (Pullan, Mrinalini, 2021; Küçükali, Ataç, Palteki, Tokaç, Hayran, 2022). Scholars who analysed this phenomenon were alarmed about "infodemic", which was yet another pandemic to fight with. Its scale was unprecedented in the history of the discussion on public health. The discussion on vaccination engaged nearly 100 million users "partitioned into highly dynamic, interconnected clusters across cities, countries, continents, and languages" (Johnson, et al., 2020, 230). In the opinion of The Lancet, a significant role in spreading the "infodemic" was played by mistakes made by governments and the process was initially guided by political interest. Moreover, some governments fell victim to misinformation and shared fake news about COVID-19 themselves (see: Neto, et al., 2020). As a result, incoherent messages and recommendations led to chaos in communication and strengthened conspiracy theories. Thus, governments failed to comfort people and offer explanation in times of uncertainty and anxiety (The Lancet Infectious Diseases, 2020). The "infodemic" may lead to psychological distress and panic, fear, depression, and fatigue (Rocha, et al., 2021).

Rafael P. Curiel and Humberto G. Ramírez pointed out that anti-vaccination narratives offer a wide range of attractive and seductive explanations. It could attract undecided individuals, with genuine doubt about vaccination, into their anti-vaccination views (Curiel, Ramírez, 2021, 10). Dominik A. Stecula, Ozan Kuru, and Kathleen H. Jamieson conducted surveys in the US before the mass vaccination program started. According to their survey, eighteen percent of their respondents agreed that vaccines cause autism, fifteen percent agreed that vaccines were full of toxins, twenty percent reported that it made no difference whether parents choose to delay vaccination instead of relying on the official CDC vaccine schedule. Moreover, nineteen percent of respondents held that immunity should be developed by contracting the disease rather than by vaccination (Stecula, Kuru, Jamieson, 2020, 1). The surveys confirmed that the knowledge of US citizens was based on fake news and non-scientific content. Scholars confirmed that people sought information primarily in social media and web portals. Literature includes papers which discuss essential features of the anti-vaccination communication style and its role in spreading non-scientific content. Since social media were polarized, people-oriented, first person narratives combined with emotional language and conspiracy theories were essential success factors (Germani, Biller-Andorno, 2021, 11). Therefore, social media became a natural environment for contradictory messages addressed to various users with the request to share the content. Moreover, another study confirmed that anti-vaccination activists felt under threat and excluded from the vaccination-related decision-making, which that turned them into passive objects (Küçükali, Ataç, Palteki, Tokaç, Hayran, 2022, 15). How does social media deal with anti-vaccination content? This may be examined based on Youtube, where administrators added information links to anti-vaccination videos. This had a moderate effect on decreasing attention to misinformation. In fact, it decreased engagement rate and detracted user attention (Kim, Yalcin, Bestvater, Munger, Monroe, Desmarais, 2020, 952).

Other articles discuss the use of anti-vaccination rhetoric and fake news about COVID-19 during the pandemic by political actors. The phenomenon originates in the

economic crisis of 2008, which triggered a global narrative based on uncertainty and fear. It was further strengthened by the 2015 migration crisis and the coronavirus pandemic (Bieber, 2022). Since governments failed to deal with the pandemic, the socio-economic crisis and panic led to increased anti-elite rhetoric and resentments. To describe the phenomenon, Ulrike M. Vieten introduced the term of "pandemic populism" (Vieten, 2020). It was characteristic of far-right movements. Anti-vaccination and far-right coalitions developed in the US and expanded onto Europe by the end of summer 2020 (Hotez, 2020, 506). Arthur J. Jipson pointed out that the American Alt-Right and White Nationalist movement used the anti-vaccination attitude to recruit members, promote their causes, and create social and cultural discord to legitimize their racist and white supremacist attacks on the community (Jipson, 2021). In turn, Jakub Wondreys and Cas Mudde's analysis showed that far-right rhetoric during the pandemic mainly depended on the position of such actors in the political system. Ruling far-right parties used a strong nativist narrative and linked the pandemic to immigration and requested to close borders. Opposition far-right parties were among the first and loudest to criticize lockdown in their countries. They used blunt populist rhetoric against anti-pandemic measures (Wondreys, Mudde, 2022, 97). The case of Polish deputies from Konfederacja confirmed the above.

Research into the spread of anti-vaccination content in digital media and social platforms has been relatively well developed and it is represented in modern studies on social communication. Moreover, the pandemic stimulated scholars to reflect on the use of non-scientific slogans by politicians. Therefore, this paper contributes to the discussion on this coronavirus-related issue. On the one hand, I propose to expand the discussion and focus on the use of anti-vaccination content by members of parliament on their official profiles. On the other hand, I think the analysis of fake news spread by users in comments to posts is intriguing and shows how anti-vaccination activists used popular profiles to share their ideas.

Methodology

Comparative studies are based on qualitative and quantitative analyses of two types of social media content: posts on Facebook and user comments to them during the initial six months of mass vaccination. The selection of sources is based on the following criteria: Konfederacja's deputies was the only party in the Polish parliament which *in gremio* manifested their doubts about COVID-19 vaccines. Moreover, their social media profiles were used to spread anti-vaccination content. For practical reasons, I decided to analyse two of Konfederacja leaders' profiles[2]. The caesura started on December 26, 2020, with the beginning of the COVID-19 vaccination program in Poland. It ended on June 26, 2021 after the initial six months of vaccination, when the government started mass vaccination for all adults in Poland. In general, in the period concerned, I analysed all 995 posts on two Facebook profiles and 1287 comments which included anti-vaccination content. Facebook was selected on purpose as, apart from YouTube, it was the most popular social media platform in Poland. In 2021, Facebook had more than 18 million users (Social Media w Polsce 2021…). Moreover, it is the most effective medium for political communication in social media. Facebook has been used by Polish politicians to attract the largest audience through intensive political campaigns. The analysis focuses on two most prominent profiles of Konfederacja's deputies and leaders, namely Krzysztof Bosak (former candidate in Polish presidential election) and Grzegorz Braun (leader of monarchy grouping and Rzeszów-based candidate in local election).

My research is based on the following questions: 1) What were the essential communication features of the profiles? 2) What type of content dominated? 3) What was the

[2] Facebook profile of Janusz Korwin-Mikke, the third leader of the grouping, was banned in November 2020.

frequency of anti-vaccine posts and anti-vaccination comments? 4) What were the essential features of anti-vaccination content at these profiles? 5) Did the administrator of the profiles moderate the discussion and comments? and 6) What was the level of engagement for posts with anti-vaccination news? It is worth highlighting that in my research I used the engagement rate index with slight modification (latter: ERm). The index assigns different values to any form of interaction with posts and takes into account the impact on content positioning. I use the coefficient of 1 for any types of reactions (like, love, etc.); 3 for user comments; 9 for post sharing. These values are summed up and divided by the number of profile followers and results are expressed in percentage values. This operationalized tool was applied to answer Question 6.

$$ER_m = \frac{\left[\left(comments^N*3\right)+\left(reactions^N*1\right)+\left(shares^N*9\right)\right]*100\%}{profile's\ fans^N}$$

Results

Styles of communication in social media by Krzysztof Bosak and Grzegorz Braun on their Facebook profiles

As Facebook informed at the end of the research period (September 2021), Krzysztof Bosak's profile had 357,307 fans, which was the best result among Konfederacja's deputies. During the period analysed, administrator published posts at his Facebook profile which created Bosak's image as an active member of Polish parliament during plenary sessions and discussions. He was also presented as a frequent participant to media discussions involving politicians from other parties, especially in private TV stations. That social media coverage presented the presidential candidate as an expert and leading politician of the Polish far-right. While referring to the vaccination issue, Bosak profile's admins refrained from posting information and contested compulsory vaccinations and pandemic restrictions in general. Finally, admins of Bosak's fan page did not moderate comment, especially to combat fake news or interact with users. This promoted disinformation campaigns by anti-vaccination activists. In turn, communication on Grzegorz Braun's Facebook profile focused on news about local elections in Rzeszów[3]. Apart from post about elections, Braun's profile shared the content of far-right and radical Christian portals, i.e. 154 posts from MagnaPolonia.pl (17% of all posts). Braun used his Facebook profile to build his image of a member of parliament active in Rzeszów during presidential campaigns and during winter/spring lockdown. He also presented himself as a guardian of small entrepreneurs interests. Unlike Bosak, Braun profile admins used Facebook to distribute anti-vaccine content. This is discussed in detail in paragraphs below. An interaction with users was limited primarily to communication about elections. In a similar vein to Bosak's profile, admins did not moderate comments.

The anti-vaccination content in social media - comparative analysis

During the first six months of the mass vaccination program, we observed increased activity at Braun's profile, where admins published 867 posts. For comparison, Bosak's profile

[3] Grzegorz Braun announced his running in the election on March 4, 2021. The election campaign ended on June 13, 2021.

included 128 posts. The higher Braun's activity should be explained by his running for the position of a mayor in Rzeszów. Before and after the election campaign Braun's posting frequency was similar to that of Bosak. However, Braun's posts played a significant role in spreading anti-vaccination content. This has been presented in detail in paragraphs below.

Table 1. Posts published on Facebook (December 26 2020 - June 26 2021)

Facebook profile	Number of posts on Facebook	Percentage of posts analysed
Krzysztof Bosak	128	12.86%
Grzegorz Braun	867	87.14%

Source: own studies.

Among 955 posts published on Bosak's and Braun's Facebook profiles, I could find 230 where users expressed anti-vaccination comments. The table below shows that despite a similar percentage of posts with anti-vaccination comments, nearly seven times more comments were published under Braun's posts. Moreover, Tab. 2 shows that the average anti-vaccination comments per post are higher on Braun's profile. There, users shared twenty-six times more fake news about vaccination. The data show that Braun's fan page was an excellent platform for anti-vaccination activists to reach new audience with their slogans. It was favored by the Facebook algorithm which promoted content that had high user engagement.

Facebook profile	Number of posts with anti-vaccination comments	Percentage of all posts
Krzysztof Bosak	30	23.44%
Grzegorz Braun	200	23.07%

Table 2. Number of posts with anti-vaccination comments

Source: own studies

Table 3. Number of anti-vaccination comments under Bosak and Braun's posts

Facebook profile	Number of anti-vaccination comments	Percentage of all anti-vaccination comments
Krzysztof Bosak	47	3.65%
Grzegorz Braun	1240	96.35%

Source: own studies.

It is worth analysing the percentage of all comments that included anti-vaccination content. It may indicate the scale of the issue in comparison with other news shared by users. Data in Tab. 4 surprisingly show that the percentage of such comments was lower on Braun's profile. This allows us to conclude that event a large number of anti-vaccination comments may not stand out among other comments posted. However, it does not mean that fake news about vaccination had lower engagement. Most users who posted anti-vaccination content discussed and shared another fake news. The discussion lacks any pro-vaccination comments, which confirms that the spreading of non-scientific content strengthens the "filter bubble" in social media.

Table 4. Percentage of anti-vaccination content in comments section

Facebook profile	Number of anti-vaccination comments	Percentage of all comments under posts with anti-vaccination content
Krzysztof Bosak	47	4%
Grzegorz Braun	1240	0.58%

Source: own studies.

Why did Braun's profile include a higher number of anti-vaccination comments? In my opinion, it can be explained by the number of anti-vaccination posts on both profiles. On Bosak's fan page, admins published posts that undermined the mass vaccination program, for which ER_m was 0.6. On Braun's profile, I found 42 anti-vaccination posts. Among them the highest ER_m per one post was 13.12[4]. Therefore, the large number of posts attract anti-vaccination activists to his profile, activists who actually run a misinformation campaign. For better understating the role played by the Facebook algorithm in spreading fake news about vaccination, it is worth analysing ER_m for all posts where users share anti-vaccination content. Data from Tab. 5 show that Bosak's post had a lower ER_m than that of Braun.

Moreover, Braun's anti-vaccination posts had higher ER_m than other posts where users shared fake news about vaccination. The higher ER_m of Braun's posts was very interesting, considering that Bosak's official fan page was followed by more fans.

Table 5. Average ER_m for Bosak and Braun's posts

Facebook profile	Number of posts with anti-vaccination comments	Average ER_m
Krzysztof Bosak	30	1.14%
Grzegorz Braun	200	3.29%

Source: own studies.

To conclude the presentation of research results, it is worth to discuss shortly kinds of fake news shared by users in their comments. As I indicated above, since Grzegorz Braun's posts attracted the largest number of comments, I further examine these comments. Based on qualitative analysis of the source, I can distinguish three types of fake news about vaccination: 1) mass vaccination presented as a modern Holocaust, and the Polish government compared to the Nazis; 2) vaccination shown as Jewish conspiracy against the overpopulated world; and 3) Bill Gates's plan to take control of people using microchips hidden in vaccines. Most of them were presented in the form of visual memes that have stronger impact on the audience than textual comments. In summary, there is a visible disproportion between anti-vaccination posts and comments on fan pages analysed. Misinformation dominated Braun's profile, which was crucial for having different impacts and spreading fake news. Moreover, admins of Braun's fan page initiated anti-vaccination discussions, except during the mayor's campaign in Rzeszów, when Braun avoided the subject. In summary, the number of anti-vaccination textual comments were marginal on both profiles and fake news was shared using memes.

Discussion and Conclusions

The main question discussed in the paper is "Why do social media play such an important role in spreading anti-vaccination theories? According to the literature, the phenomenon can be explained by declining trust in the official coverage in newspapers, television, and radio. Moreover, based on comments under Braun's posts, it was clear that followers of anti-vaccination content believed the pandemic was a product of the media designed to spread fear and control citizens by governments worldwide. People chose social media based on the conviction that Facebook and Twitter are free from official propaganda.

As regards the communication style in social media, it is worth noting that Grzegorz Braun reduced the number of anti-pandemic/anti-vaccination posts during his local campaign in Rzeszów. Most fake news about COVID-19 and vaccination was shared from external

[4] This post on June 21, 2021, had anti-vaccination comments.

websites, such as Pro-Kapitalizm and Gloria.tv, Magna Polonia, or in the form of memes, and online posts. Moreover, Krzysztof Bosak's profile posts focused on undermining anti-pandemic restrictions and requesting lockdown to be discontinued. Additionally, admins of Bosak's fan page shared information about his participation in TV debates as an expert on international affairs, EU, and domestic politics. Firstly, on these two profiles, almost every fourth post (23%) contained anti-vaccination comments. Secondly, moderators of the profiles did not remove or challenge anti-vaccination entries. Thirdly, in the analysed period, none of the posts promoted the campaign of universal vaccination against COVID-19. Finally, the higher the ERm of G. Braun's posts meant that the anti-vaccination content under his posts reached a larger group of recipients - apart from the followers of the profile. This transformed his official fan page into a misinformation platform open to all Facebook users.

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