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COVID-19 Vaccine Related Social Media Fake News in Kazakhstan: Content Analysis

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Abstract

The present article analyzes the content of fake news related to the COVID-19 pandemic and vaccination published in Kazakhstan in 2020-2021. It outlines specific features of fake news, as well as analyzes key topics related to antiviral vaccination fakes posted in social media, mechanisms of their creation and sources generating and disseminating them. The relevance of the research lies in its exploration of the drivers behind the inception and distribution of fake information via social media, linked with the need to study the impact of mass media products on public minds given the lack of fundamental research in this area related to the exploration of audience sentiments specifically in Kazakhstan.

Keywords: COVID-19, Fake News, Politics, Pandemic, Vaccination, Infodemic, Social Media, Disinformation.

Introduction

The year of the COVID-19 global pandemic (2020) could also be defined as the year of fake news because the pandemic, which started at the end of 2019 in China, rapidly spread around the world simultaneously triggering a flurry of fakes around this virus. So far, there is no precise definition in scientific works with regard to what fake is. It could be disinformation or misinformation, a half-truth, manipulation, misinterpretation, false news, inaccurate news, or rumors. According to Collins dictionary, the term “fake news” was popularized by U.S. President Donald Trump in 2017. The dictionary provides the following definition: “If you describe information as fake news, you mean that it is false even though it is being reported as news, for example by the media...False, often sensational, information is disseminated under the guise of news reporting” (Collins, 2017). It is stated that the information is false, although it is presented as true news, e.g., by social media. Fake news, in fact, is the product generated by technological advancement and our current online reality, which is highly digitalized and globalized and allows instantaneous cross-border information dissemination. Fakes are shaping

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the informational flow to pursue certain specific purposes. Fakes that appeared in the post-truth era appeal to human feelings, were highly manipulative, and were intent to cause certain emotions to make readers spread them further. The technology of fake news generation is linked mostly to negative human emotions, to hit the target, it aims to trigger pain points, negatively impacting people's minds and changing their mindsets, reshaping their perception of reality. In many countries, faking is treated as an administrative or criminal offence. In the case of COVID-19 pandemics, an enormous amount of fake news flourished on the fertile ground of permanent stress, panic and massive fear of not knowing what this virus is, what the consequences are, or what can be used for protection, especially during the first stage, when the remedy against it was absent. In a high uncertainty situation with rapid growth in infection and death rates, people not only trusted fakes but spread them as well. The development and introduction of vaccines and inoculation against coronavirus caused another flood of fake news in mass media, especially on social media. It should be (?) in mind that fact-based news generation almost always pursues certain goals, which is not an exception in the case of the coronavirus pandemic either. Based on the critical approach, it is worthwhile analyzing *qui prodest*, as many people (or groups of people) gain popularity, build their image and simply make money by generating and disseminating fake news (Jamil et al., 2024). The number of fakes was so enormous that the World Health Organization (WHO) named it an "infodemic", which developed in line with an actual pandemic, and set up a specific infodemic management procedure (WHO, 2020). According to the WHO, an infodemic is "too much information, including false or misleading information in digital and physical environments during a disease outbreak. It causes confusion and risk-taking behaviors that can harm health" (WHO, 2020). As a counteraction, WHO undertook several steps to restrain fake news' spread, including social listening.

The present paper, which shows the results of the content analysis of fakes in Kazakhstan (Central Asia), serves the above purpose as well. The fake news during the COVID-19 pandemic was especially numerous when antiviral vaccines were created and approved by the governments for inoculations. Anti-vaccination propaganda was widely distributed in global mass media, and Kazakhstan was not an exception in this case. Lack of knowledge about new vaccines (how safe they were, what was the risks were in view of the short development time, possible side effects of vaccination, the possibility to inoculate elderly people and children, etc.), as well as high fake generator activity, resulted in overall mistrust towards vaccination in the country. The peak number of fake news stories and the biggest number of fact-checkings took place between June 2020 and December 2021, based on the data of the International Fact-Checking Network (IFCN, Poynter, 2022). According to the Center for Countering Digital Hate (CCDH), which conducted a comprehensive research on the matter, just twelve anti-vaxxers in the US were responsible for almost two-thirds of anti-vaccine content circulating on social media platforms (CCDH, 2021). The content posted or shared on social media grew over 812,000 times between February and March 2021 and demonstrated how a tiny group of determined anti-vaxxers caused a tidal wave of disinformation. Facebook's position during that period of time also had an impact on the public's attitude towards vaccination: in the beginning of February 2021, it claimed it expanded criteria for classifying information as fake, including chipping via vaccination, testing without consent, as well as vaccines being inefficient, poisonous, dangerous, provoking autism, etc. Yet, at the end of February 2021, it started to block posts promoting vaccination.

As for people in Kazakhstan, they were the most skeptical about vaccination (compared to the population in neighboring countries, e.g., in Kyrgyzstan, Tajikistan, and Uzbekistan): about 44% believed that vaccines are not efficient; around 27% of respondents were not sure (based on the

analytical report by the CAREC Institute “Public attitude towards COVID-19 vaccination in some of the Central Asian countries” done in April 2021). Before the survey was conducted by CAREC, there was a massive disinformation campaign in Kazakhstan related to the spread of a new variety of coronavirus and issues related to vaccines and vaccination. As a result, 33% of respondents stated that they do not trust vaccines. Overall, there was a huge amount of fake information linked to COVID-19 during the lockdown on Kazakhstani social media. Anti-vaxxers activity had a significant impact the public opinion with regard to vaccination.

Objective

The objective of the present research is to analyze widely spread fakes about the COVID-19 pandemic and antivirus vaccination in Kazakhstan. The aims of the research are:

- to outline key topics of the fakes related to the anti-COVID-19 vaccination published in Kazakhstan social media;
- to review fake distribution channels and mechanisms.

Methods and Materials

A combination of qualitative and quantitative content analysis methods was applied to a corpus of fakes published on Kazakhstani social media. The following sources of materials were analyzed:

- 1) The Corona Virus Facts/Datos Corona Virus Alliance Database is the data base of fakes collected by Coronavirus Facts, which is updated on a daily basis and unites experts from over 70 countries, articles are published in a minimum of 40 languages (Poynter, 2023).
- 2) Factcheck.kz – non-governmental fact-checking resource in Kazakhstan checks publicly significant and relevant news, facts, and figures, as well as statements made by public persons, with regard to their authenticity. The factchecking is done in accordance with the principles of IFCN (Factcheck, 2023).
- 3) Stopfake.kz – a site supported by the Ministry of Information and public development of the Republic of Kazakhstan, aims to stop the dissemination of fakes in the Internet and reduce the level of confusion and misconception (Stopfake, 2023).

Publications with the verdict “False” (43 in total) and “Misleading Information” (18 in total) were analyzed. The verdict “False” means that the information is misrepresented (place, time, numbers, participants, circumstances of the event) or that the statement is made based on non-existing data. The verdict “Misleading information” means that distorted information was presented on purpose or part of the information is missing, or taken out of context, it is exaggerated or downplayed in order to influence public opinion, to raise or diminish the status of public persons or events, access to the information is limited or the information is withheld.

The research covers the time period from March 2020 until December 2021. **January 2023.** According to The Corona Virus Facts/ Datos Corona Virus Alliance Database 25 factcheckings were done in Kazakhstan during that period of time.

Fake News Definition (Literature Review)

The main peculiarity of the false information is not in truth distortion, but in presenting a reality, that is set up in line with the images it generated. False news has the dangerous power to trigger global consequences by presenting its own alternative reality. There are many definitions of fake

news. According to A. Mecacci, the word ‘fake’ in relation (Mecacci 2016). Fake news is news material that was intentionally created and proved to be false and misleading the readers (Alcott 2017). Based on a Reuters research report, fake news is defined as fully false or misleading content, that looks like information put together in accordance with journalistic principles” . Alcott and Gentzkow believe that fake news is intentional lies that have been proven to be lies, and might mislead people. They believe that fake news has two main reasons behind: financial and ideological. According to Farkas and Schou (Farkas, Schou 2019), fake news nowadays is a key tool in political fights and a hegemonic instrument used by politicians to discredit their opponents and delegitimize their actions.

In order to have a better understanding of what constitutes fake news, one should review the concept of disinformation, which includes falsified information. The etymology of the word “disinformation” is rooted in the Latin prefix “dis” and means “alteration or destruction of information”. According to B.C.Stahl, disinformation is information which is intentionally created and distributed (Stahl 2006). The Oxford dictionary defines disinformation as “false information that is given deliberately” (Oxford dictionary URL). This view is shared by Çınarlı (Çınarlı 2004), Stahl (Stahl 2006, and Wardle (Wardle 2017), who believe that disinformation is a deliberate delivery and distribution of false information. Lazer et al. (D.Lazer, 2017) state that propaganda and disinformation have been used to impact public opinion since ancient times.

Many research papers review the disinformation phenomenon together with propaganda. This is also due to the fact that fake news is significantly more widely spread today thanks to digital technologies and social media development. Wardle (Wardle 2017) prefers to use the terms “disinformation” and “fake news” jointly since the concept of fake news is not comprehensive enough and also due to the fact that fake news impacts the overall information ecosystem. By sharing disinformation and fake news, mass media users enable disinformation to reach its target audience. And this is due to the specifics of social media, which have specific algorithms. Thus, involuntarily, social media users might generate propaganda.

One of the media technologies used to create fake news is ‘emotionalization’ of public and political processes, in other words, the information disseminated by them is delivered via emotions and senses. They create a dramatic atmosphere that impacts people’s feelings. Individual emotions and feelings, especially fear, become tools to achieve ideological power.

The number of scientific works related to COVID-19 significantly increased during the above period of time, while fake news became one of the most important and extensively discussed topics in mass media and in scientific discourse. Kazhakh’s research also shows interest in exploring this topic. The research paper “Kazakhstan and COVID-19: mass media, culture, politics” by the Friedrich Ebert Foundation analyzed the content, discourse, and rhetoric of Kazakhstan’s mass media during COVID-19 within the framework of media, culture, and politics. Another study dedicated to this topic is “Content analysis of fakes about COVID-19 in the mass media of Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan”, which was done by the Institute of War and Peace Reporting in Central Asia (IWPR). It analyzed widely spread fakes related to coronaviruses and their key features. Kazakh people’s attitudes towards COVID-19 vaccination were studied based on the initiative of the Institute of Central Asian Regional Economic Cooperation (CAREC). The main goal of this sociological research was to identify the dominant public opinion towards vaccination and to develop a number of recommendations to the government.

Distribution of Fake News in Kazakhstan

The fact of refuting disinformation about the first vaccine against COVID-19 in Kazakhstan was revealed on December 3, 2020. This timing correlated with the consensus of the global scientific community about vaccines being one of the most important tools to overcome pandemics. Since then, 394 fake news directly related to vaccination against COVID-19 have been found and debunked. The fake news distribution shown in Figure 1 proves that it was not even.



Figure 1: Fake News About COVID-19 Vaccination Published in Kazakhstan (2020-2021).

The chart shows that there were 3 waves of fake news: in March 2021, the number of fakes increased, and in April, the first wave was at its peak (and the highest one across all waves). Then it went down in May, grew again in June, and reached its second peak in July. In August, there were a smaller number of fakes; in September, there was another increase, reaching the peak of wave 3.

Key Topics and Key Features of Fake News

Based on the content analysis of the selected publications, it is possible to divide the topics of the fakes into the following groups:

1. Direct impact and/or severe side effects of anti-virus vaccination on human health:
 - getting sick with COVID-19
 - death in 2 years after vaccination
 - poisonous, death-provoking reactions
 - DNA modification
 - infertility, miscarriages
 - autism
 - tongue tumors
2. Composition of anti-virus vaccines (dangerous substances or drugs):
 - Active coronavirus
 - Skopolamin
 - Graphene oxide

3. Lack of antiviral vaccine efficacy evidence:

- Short approbation period
- Lack of proven results

4. Ban of anti-virus vaccination in some European countries:

- Switzerland
- Sweden

5. Global conspiracy:

- Chipping conspiracy
- Bill Gates
- Jewish conspiracy (Soros, Rockefellers)
- Big Pharma conspiracy
- 5G technology

6. Compulsory anti-virus vaccination:

- Coercion into vaccination
- Fascists vaccination
- Compulsory vs. voluntary vaccination
- Compulsory vaccination to get Schengen visas or visas to EU countries

7. Overall vaccination trust issues:

- Professor Amanzholova's experiment on vaccination effects on 5 generations of rabbits

These topics could be grouped into six key themes of fake news related to c COVID-19 in social media: medical, political, criminal, religious, entertaining and other. Medicine-related fake news amounts to 58,7%, followed by political ones at 28,1%. Criminal, religious, entertaining, and other topics account for just 13,2%, as shown in Table 1.

#	Theme	Quantity (Items)	Share in Total, %
1	Medicine	231	58.7%
2	Politics	111	28.1%
3	Criminal	11	2.8%
4	Religious	5	1.2%
5	Entertaining	4	1.1
6	Other	32	8.1
	TOTAL	394	100

Table 1. Key Themes Of COVID-19 Fake News In Kazakhstan.

In the overwhelming majority of cases (99.3%) the fake news was negative.

The fake news was distributed in various formats: text, audio, video, photo formats, and their various combinations; the key data are presented in Table 2.

#	Type	Quantity (Items)	Share in Total, %
1	Text	190	48.2
2	Text+video	71	18
3	Video	67	17
4	Text+photo	24	6
5	Text+photo+video	23	5.8
6	Audio	16	4
7	Photo		
	TOTAL	394	100

Table 2. Key Formats of Fake News in Kazakhstan.

The dominant format of fake news is text (almost 50% of all cases), followed by a combination of text+video (18%) and video (17%).

Cross-Country Antivirus Vaccination Fakes Overlap Analysis

Based on the data from the Corona Virus Facts/Datos Corona Virus Alliance Database, one can see cross-country fakes overlap; the top 3 countries publishing the same fakes as Kazakhstan are Russia, Kyrgyzstan and Ukraine; see figure 1 for reference. The analysis of the content shows that the biggest number of fakes in Kazakhstan are imported from Russia. This could be partially explained by the fact that Russian language is used in Kazakhstan as the official language of intercultural communication. In the majority of cases, these are the fakes translated into Russian from other languages (e.g., English) and originating from other countries (e.g., the USA – QA non conspiracy theories, graphene oxide case, etc.).

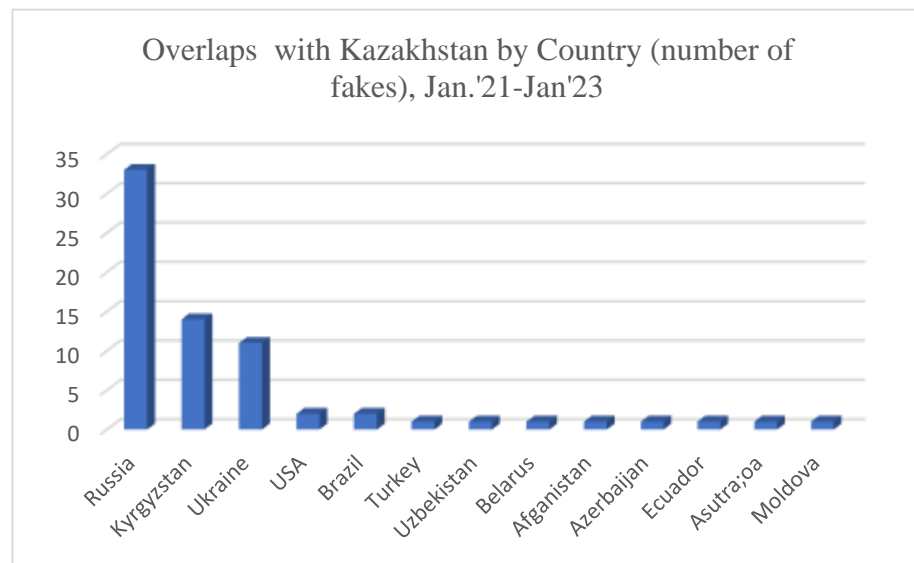


Figure 2: Overlaps Of Kazakhstan with Other Countries in Terms of Fake Publications

In addition to international fake cases, anti-vaxx propaganda in Russian is widely spread by Russian celebrities Nikita Mikhalkov, Alexei Pimenov, Maria Shukshina and physicians professor Pavel Vorobiev and surgeon Alexander Red'ko and others. Their fakes are widely spread in the Russian-speaking online environment and reposted and referred to in Kazakhstan

as well. As for the local Kazakhstan celebrities, one should mention Shokan Maratylu (a popular singer), who protested against the Health Code introduction in Kazakhstan and vaccination as well, Aliya Abidinova (a lawyer linked to the Scientology church), and Anatoly Kim (a founder of MMA in Kazakhstan). Also, some of the public communities or organizations, such as “Kazakh Parents Union” or “The Unity of Consciousness”, are actively publishing fake news about vaccination. There is some difference in terms of tone of voice used in Russian and Kazakh: anti-vaccination posts in Russian convey a certain degree of accuracy and use some logical arguments in support of their statements, whereas in Kazakh, fakes are a lot more emotionally charged.

The research conducted by UNICEF on fake disinformation spread in Kazakhstan in 2020-2021 revealed that over 50% of anti-vaxx disinformation on Kazakhstan’s social media was generated and/or disseminated by no more than twenty Kazakh accounts. Despite the fact that the owners of these accounts declare and pursue different goals (political, religious, monetary, and personal enrichment), they are united into an informal network, which enables them to exchange disinformation content. The reach of this network is estimated at 1 million Kazakhs, with a loyal core of a dozen thousand (UNICEF, 2021).

Technologies of Fake Generation

As for technologies of fakes related to antiviral vaccination creation, several ones were applied in Kazakhstan:

- 1) Search algorithm modification: using clickbait to get to the top of the search (e.g., on YouTube). This is the most frequently used mechanism for creating fakes.
- 2) Message distortion:
 - via fully fake content creation
 - via truth distortion
 - via re-coding of the content of the message
- 3) Fake channels and account creation

Writing strategies for fake creation are also versatile:

- Mimicking the language of scientific reports (e.g., fact-based to some degree, using medical terms, doctors’ lexis, etc.), which look very convincing.
- Using conversational style to close the distance and build trust with the audience – addressing the audience by the first and second address forms, sharing some personal author’s experiences, expressing emotions, using informal lexis;
- Amplification – blowing up (over exaggerating) the message.

It is worthwhile mentioning that a combination of several writing strategies and several content themes in posts against vaccination were frequently used. The formats mostly used for fake news creation are event-driven articles with pictures or videos, a clickbait title, and a short text. As for the visual content, quite often pictures and videos do not exactly correspond with the text of the article, yet they cause readers or viewers to feel the intended sentiments.

Key Distribution Channels of Fakes in Kazakhstan

As far as the distribution channels of fakes are concerned, almost 70% of fakes in Kazakhstan originate from social media and messengers, and 30% from websites. The most popular social media in Kazakhstan in 2021 were YouTube (26%), Instagram (21%), TikTok (8%) and WhatsApp (5%), which are also widely used for the spread of fake news (Kcell, 2021). Also, potential organic sources of fake content distribution are such Russian sites as Yandex.Ru, Mail. Ru or Google. It is also worthwhile mentioning the site Asia-times.org, which is rather frequently used as a source of fake news. It is a Russian language site of unclear origin that covers subjects such as politics, public life, safety, security, economy, religion, and migration in Central Asian countries. In addition, there are some sites in Kazakhstan that repost fakes from Russian sites with reference to the Russian original post and put the wrong article title, or sometimes they keep only a clickbait title and nothing else.

Findings and Discussion

The present research investigated key features of the fake news related to COVID-19 vaccination spread via social media (394 cases in total in Kazakhstan during December 2020–October 2021). The findings of the research show that the first wave of fake news has the fastest growth rate from February to April 2021, in line with the start of massive vaccination in Kazakhstan. There were two waves of fakes, reaching their peak in September. This was due to the spread of information linked to the vaccination of schoolchildren.

The fake news analyzed within the framework of the current paper was grouped into six key themes, with the vast majority linked to medicine (58%) and politics (28%). The overwhelming number of fakes are negative (99.3%) and contain false or misleading information about drugs, medical institutions, or deaths, which inevitably leads to public unrest. Since the health care system in Kazakhstan is less effective compared to developed countries, negative fake news prevents to enable proper medical servicing in Kazakhstan. Political fake news is widely spread, aiming to impact people's emotions and feelings; it causes fear. False information (e.g., installation of chips via vaccination) is used to provoke mistrust towards the state authorities in Kazakhstan, trigger hatred, and polarize the society.

As for the formats of fake news related to the COVID-19 vaccine, the most frequently used one is a text. Such false news often represents subjective opinions and thoughts; it is not fact-based. Besides, they might have several formats simultaneously (e.g., text + video, text + photo).

The vast majority of fake news is spread via social media. It means that social media is a more important source of information compared to online media, as far as COVID-19 is concerned. False news analysed in this paper was mostly published and distributed on social networks.

One more finding of the present research shows that international fake news are more widely spread compared to national fake news, as COVID-19 is a global pandemic in the era of the Internet and social media.

Conclusion

The infodemic accompanies COVID-19 pandemics, when people need to adapt to a new and sometimes unpredictable reality, experiencing emotional instability and stress. If people live under stress for a relatively long period of time and do not get any specific answers to their questions, then they are going to look for controlling mechanisms and try to find the answers themselves. Thus, the infodemic is one of the obvious and natural processes, that happened

during the crisis situation, as it is an expression of people's reaction to stress and serves the purpose of filling gaps. The core of any infodemic is fake news, which spreads with enormous speed now thanks to the Internet. The key fake generators and disseminators are social media (often using celebrities and opinion leaders for these purposes).

The example of Kazakhstan shows that the fakes are mostly borrowed from Russian sources, sometimes even without adaptation. As far as the vaccination against COVID-19 is concerned, there are several formats used (from full fake or falsification to information distortion and misrepresentation). There is a whole spectrum of topics linked to the vaccination, from vaccines containing active Corona virus to global conspiracy theories.

In view of the powerful infodemic's impact on public minds and behaviour it is worthwhile to fight against it on the governmental level, as it might have pretty severe consequences for people's lives. In Kazakhstan, there are already several portals (e.g., factcheck.kz and stopfake.kz), which serve this purpose. Promotion of vaccination against COVID-19 and its positive effects is to be inspired and conducted by the state to convince people about the benefits of inoculation and block the spread of fake news. Also, educating people on how to identify fakes and critically evaluate them might have a positive impact. Another problem worthwhile exploring and resolving is social media, as the vast majority of fakes are distributed predominantly through this channel. The social media themselves might take an active stand and start fighting against fakes without waiting for some legislative changes to be imposed by the state.

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