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Analysis of Anti-Vaccination Discourse on Turkish Alternative News Websites

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Abstract

The media's information and enticement functions have grown increasingly important as a result of the Covid-19 pandemic. The purpose of this research on the anti-vaccination movement in Turkey is to better elucidate the different types of arguments that are deployed by key anti-vaccination actors. This research has analyzed the anti-vaccine movement, particularly in Turkey. More specifically, it analyzes the argument put forward by the alternative Turkish news websites. According to the results of the study, it is understood that news sites are divided on global issues like pandemics. It is concluded that alternative news websites have adopted the anti-vaccination discourse without scientific facts.

Keywords: Anti-vaccination, covid-19, pandemic, alternative news websites, content analysis

Introduction

The flu vaccine is a global health problem. With the emergence of new strains of viruses such as the coronavirus (Covid-19), the debate for or against vaccines is increasingly relevant and present. Beyond the pandemic risks affecting public health, beyond social and economic development at the world level, vaccination remains a local issue that requires, above all, regular and sustained action to combat seasonal outbreaks of the disease. This issue is even more important when it comes to health prevention of populations who are weakened by a health problem and are admitted to health facilities such as city hospitals.

At the start of 2020, the whole world was affected by the virus that was not coped with efficiently, and no serious prediction can be made about its duration. Throughout the period, health members from all around the world accelerated the preliminary stages of inventing an effective vaccine against the pandemic. Vaccination programs prevent vaccine-preventable infectious diseases, therefore aim to prevent deaths or permanent sequelae. Even though it has a hundred years of success, in recent years, anti-vaccination has become widespread among people. The current, known as the anti-vaccine movement, has an important role in terms of vaccine programs and is considered a barrier.

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For this research, we focused on alternative news websites and we analyzed the argument established by these platforms. The methodology used is content analysis (argumentative, among others), all to develop a typology of anti-vaccine arguments.

Research question is structured as follows:

- What are the types of arguments used on the alternative websites?

In light of this question, firstly we discuss the anti-vaccination movement in Turkey and its reflections on different social media platforms, and then the research findings and results are analyzed.

In this study, the news about anti-vaccination from the selected alternative websites are collected and, evaluations are made according to the World Health Organization vaccine hesitancy matrix. This research, therefore, takes as its subject the news discourses on anti-vaccines and the arguments for the refusal of vaccination and/or the criticism of vaccines.

Anti-Vaccination Movement

Invented in 1796 by Edward Jenner (Smith, 2011) the vaccination is one of the most effective inventions of a healthy nature in reducing some diseases. Vaccination prevents several debilitating diseases (deadly or disabling) and thus saves millions of lives each year (World Health Organization, 2014).

Large-scale vaccination has long been the consensus of the general population; vaccination is considered as one of the major advances in public health in many countries (US Department of Health and Human Services Centre for Disease Control, 2011). On the other hand, for some years, although some consensus on the benefits of vaccination may have been built over time, there is a decrease in the practice of vaccination all over the world (World Health Organization, 2018).

Anti-vaccination is emerging today and it is not a new concept. The official history of vaccination scientifically begins when Edward Jenner starts his studies on cowpox in 1796 (Dubé et al., 2015). First, the anti-vaccine movement dates back to Edward Jenner's works on vaccines in England. At that time, a religious man called E. Massey claimed that sickness by god was sent to punish mankind. Therefore, he argued that preventing diseases is tantamount to defying God (Lê, 2021). It can already be argued that religion played an important role in the manifestation of attitudes against vaccination and the relationship between religion and health beliefs. In short, public health professionals at the time were divided on the benefits of vaccination, depending on whether they subscribed against vaccines or in favor of vaccines.

Even though it has a hundred years of success; in recent years, anti-vaccination has become widespread among people. The current, known as the anti-vaccine movement, has an important role in terms of vaccine programs and scope and it is considered a barrier (Kata, 2010).

Today, unlike in the past, anti-vaccine ideas, unless it has a basis mostly in reason and science, have the opportunity to spread through the media and especially social media (Badur, 2011).

The new concept used in the context of anti-vaccine is the concept of vaccine hesitancy. Vaccine hesitancy includes delaying or refusing vaccination based on suspicions of possible outcomes, despite the vaccination services being offered. Vaccine hesitancy as a concept is born from the dilemma of accepting or not accepting attitudes and behaviors (Dubé et al., 2015).

As anti-vaccination has a long way back history until the vaccination invention; vaccination opponents should not be perceived as a monolithic group. Amongst the causes of vaccine hesitancy, the World Health Organization SAGE (Strategic Advisory Group of Experts on Immunization) working group has indicated the vaccine hesitancy determinants matrix according to which are listed as contextual influences, individual and group influences, and vaccine and vaccination-specific issues.

Table 1: Working Group Determinants of Vaccine Hesitancy Matrix

<p><u>CONTEXTUAL INFLUENCES</u> Influences arising due to historic, socio-cultural, environmental, health system/institutional, economic or political factors</p>	<ul style="list-style-type: none"> a. Communication and media environment b. Influential leaders, immunization program gatekeepers, and anti- or pro-vaccination lobbies. c. Historical influences d. Religion/culture/ gender/socio-economic e. Political f. Geographic barriers g. Perception of the pharmaceutical industry
<p><u>INDIVIDUAL AND GROUP INFLUENCES</u> Influences arising from the personal perception of the vaccine or influences of the social/peer environment</p>	<ul style="list-style-type: none"> a. Personal, family, and/or community members' experience with vaccination, including pain b. Beliefs, attitudes about health and prevention c. Knowledge/awareness d. Health system and providers-trust and personal experience. e. Risk/benefit (perceived, heuristic) f. Immunization as a social norm vs. not needed/harmful
<p><u>VACCINE/ VACCINATION-SPECIFIC ISSUES</u> Directly related to vaccine or vaccination</p>	<ul style="list-style-type: none"> a. Risk/ Benefit (epidemiological and scientific evidence) b. Introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine c. Mode of administration d. Design of vaccination program/Mode of delivery (e.g., routine program or mass vaccination campaign) e. Reliability and/or source of supply of vaccine and/or vaccination equipment f. Vaccination schedule g. Costs h. The strength of the recommendation and/or knowledge base and/or attitude of healthcare professionals

Source: World Health Organization, 2014

As can be seen from the table above, there are different motivations for vaccine hesitancy. While the case is similar in Turkey, especially in recent years during the pandemic process, anti-vaccine movements or vaccine hesitancy has shown an increase among the population.

It is not possible to clarify the anti-vaccine motivations for a single reason to explain these decreases in vaccine coverage yet there is research focusing on this subject (Larson et al., 2015), (Verger et al., 2015). In a study using the concept of vaccine hesitancy (Browne et al., 2015) scholars concluded that vaccine skeptics prefer complementary and alternative medicine as an alternative to modern medicine. In addition to this, for the question of where these people get health care, it has been reported that it is religious knowledge, not scientific knowledge, for the basis of their decisions regarding the issue.

Anti-Vaccine Movement Throughout Internet

Thoughts and opinions on anti-vaccination can quickly disseminate their views through user-created sites such as groups, forums, and blogs. Some studies have shown that social media tools are popular when seeking information on health advice, particularly vaccination (Kata, 2012). The vast majority of work relating to the anti-vaccine phenomenon on the Internet has been made since the new millennium (Rodriguez, 2016). As the latter shows, and what will be explored in chronological order, work on anti-vaccination has focused on the online anti-vaccine rhetoric and argument through various content analyses. The first study mobilizing a content analysis of so-called anti-vaccine websites is that of Nasir (Nasir, 2000). The researcher conducted a random analysis of 26 websites by typing the words “immunization” and “vaccination” into search engines. Nasir (2000), concluded at the time that “the modern anti-vaccine movement seems to share many of the same characteristics as past movements. What is new is the availability of this information to many individuals who would not be able to assess its reliability” (p. 733).

Subsequently, Wolfe et al. (2002) somehow reproduced the findings performed by Nasir with his content analysis of anti-vaccine websites. The aforementioned research in turn has done a content analysis of 22 websites then identified as being anti-vaccine in an attempt to identify different types of comments (2002). It concluded that these sites are based on emotional arguments rather than scientific ones, as well as the attributes relating to the design of these websites such as the layout or the presence of images fortified distrust in medicine (Wolfe et al., 2002). For their part, still in 2002, Davies et al., searched the anti-vaccination activists on the World Wide Web. They were able to analyze the rhetorical content of 100 anti-vaccine websites after having used keywords like “vaccination” and “immunization” on 7 different search engines. They found that almost half (43%) of the websites available that talked about vaccination were anti-vaccine; the first 10 results on Google were all categorized as anti-vaccine. Kata’s study (2010), came to analyze in depth the misinformation related to vaccination on the Internet. Still recurring were the themes of major issues such as the efficacy and safety of vaccines, alternative medicine, conspiracies, individual freedoms, morality, religion, and ideology, as well as misinformation. Kata (2012) would then contextualize these observations by explaining that the comments anti-vaccine persuasions arise in a specific social context, that of postmodernity. This is characterized in particular by the emphasis on skepticism

and relativism where “several truths and realities coexist” (Kata,2012). Postmodernity, as Kata (2012) and Wynne (1991) show, promotes the emancipation of individuals in making medical decisions where there is a particular redefinition of the concept of expertise, and they encourage people to do their research in the quest for a different way of knowing. It should be known that the emancipation of individuals and the distrust of classical authorities are nowadays concerns with a renewed importance in the study of science and society (Ottinger, 2013).

Scientific-looking guiding messages can cause question marks in minds. It can adversely affect the decision of many people about vaccination by causing changes in risk perception regarding vaccine-preventable diseases and side effects of vaccines. Yet scientific research is taken out of its original context and can be published via the Internet in a way that creates a sensation (Dubé et al., 2015). Internet anti-vaccine ideas create a wide platform for them to spread and make themselves heard more loudly. In addition, Dubé et al. (2013) offered a summary of the phenomenon, accusing on one hand, the Internet for the development of the anti-vaccine phenomenon, which is later supported by Stahl et al. (2016): “social networks and the web play a major role in disseminating information about vaccination. They have modified the vaccination decision-making process”.

Anti-Vaccine Movement in Turkey during Covid-19

The first intensive vaccination expanded immunization program in Turkey was launched in 1981 (Bozkurt, 2016). Although there has been an increase in vaccination rates in Turkey as in many countries, debates about the risks and dangers of vaccination are continuing. Besides, although the success of childhood vaccination programs is quite high; in recent years, increasing concerns about vaccine applications and their effects have attracted attention (Stahl et al., 2016). Although it is known to be a successful application, it was the first vaccine, albeit for various reasons, from its use to the present, opposition appears.

In recent years, the pandemic process has made discussions on anti-vaccination widespread. In Turkey, the first examples of anti-vaccination campaigns are seen in the 2010’s (Yüksel &Topuzoğlu, 2019; Bozkurt, 2018) and are brought back to the agenda with the rise of the pandemic.

Amongst the most popular reason for vaccine hesitancy, the common thought of the fact that the vaccination modifies our DNA structure and the claim that defends the idea of the placement of microchips into the human body can be listed (BBC, 2020). According to the research of the website Teyit.org allegations made over vaccines are various and can be enumerated as follows (Teyit, 2021):

- Claims that RNA vaccines alter human DNA
- Claims that microchips are implanted in people with the Covid-19 vaccine
- Claims that Covid-19 vaccines contain enough metal to cause the magnetization
- Claims of Covid-19 vaccine causing heart inflammation in some young people
- Claims that Covid-19 vaccines produce poison in the human body
- Claims that humans are injected with monkey and pig genes with the Covid-19 vaccine

- Claims that people are injected with fetal cells with Covid-19 vaccines
- Claims that the vaccine does not work because the coronavirus is constantly mutating
- Claims that the Covid-19 vaccine does not work on those who cannot produce interferon
- Claims that the vaccine is ineffective because 12 vaccine volunteers are infected with the coronavirus

Another important research on vaccine hesitancy has been realized by the Institut Public de Sondage d'Opinion Secteur (IPSOS) research company on April 2021 (Institut Public de Sondage d'Opinion Secteur, 2021). The research is carried out with online interviews with 800 individuals over the age of 18 at Statistical Region Units Classification level 1, representing Turkey. Concerning this research, the rate of those who recommend their relatives to be vaccinated is 44%. At the end of January 2021, this rate was 38%. The rate of those who are against the vaccine is found to be quite low. Only 4% claim that they shouldn't get vaccinated. A larger majority, on the other hand, takes a more neutral stance and does not give any direction to promote or oppose the vaccine (Institut Public de Sondage d'Opinion Secteur, 2021). The report of Institut Public de Sondage d'Opinion Secteur (2021) has given important outcomes regarding anti-vaccination or yet about vaccine hesitancy. When asked whether they get vaccinated to those who have not yet been vaccinated, 61% stated that they intended to do so. The rate of those who refused the vaccine decreased to 16%, but the rate of those who are still undecided is quite high (23%). Although 3 months have passed since the start of vaccination in Turkey, it seems that this issue has not been clarified in a part of society. Yet the report has concluded that one of the factors preventing vaccination is seen as education. However, when the education levels of both vaccinated and unvaccinated populations are examined, it is seen that they are similar (Institut Public de Sondage d'Opinion Secteur, 2021).

The media play a major role here. During the Covid-19 pandemic period, the growing influence of the Internet in our lives may have allowed anti-vaccinator contemporaries to take refuge in online forums and private groups to discuss issues that unite them, as explained by Dubé et al. (2013). The Internet creates a wide platform for anti-vaccine ideas to spread and make themselves heard more loudly. Many studies have been conducted about social media platforms and anti-vaccination discourse (Institut Public de Sondage d'Opinion Secteur, 2021), (Mitra et al., 2021), (Kata, 2012). Yet the news about Covid-19 vaccines on the online news websites with different publication policies and conditions are examined and concluded that news sites are not in agreement even when it comes to global health and it is seen that they reflect their broadcasting policies to their news content (Tılıç & Özcan, 2021). During the Covid-19 pandemic, alternative media websites also created an unconventional platform for the public to follow virus-related news. Especially these channels by their nature, try to show the other aspects of vaccination or coronavirus news.

In its simple definition, the main feature of the alternativeness of media discussed in comparison to mainstream media is in the context of political economy. Traditional media owners take advantage of the Internet opportunity and at the same time, they continue their journalism activities digital by transferring and adapting existing news to digital media for journalism. Publishing organizations such as Gazete Oksijen, Medyascope, 5G Virus News, Gazete Duvar, and Diken, which are discussed within the scope of the study, are also among the alternative media websites examples in Turkey.

Gazete Oksijen is the national weekly online newspaper and its first issue is published on January 15, 2021. Zafer Mutlu is the editor-in-chief. Medyascope is a media platform that is founded by journalist Ruşen Çakır in August 2015 and broadcasts mainly on politics via YouTube and podcast channels. Gazete Duvar is an online newspaper that start its broadcasting life in August 2016. Diken is an online newspaper whose editor-in-chief is Erdal Güven and Emrah Temizkan. The founder of the newspaper, which goes live on January 27, 2014, is Harun Simavi. 5G Virus News is a platform created by vaccine opponents. This platform has a Twitter account that they actively use under the same name. This account is opened in April 2020. Although it is not clear when the platform is established, it is thought to be established at the beginning of the pandemic period. Among its authors, Abdurrahman Dilipak, Muammer Karabulut, Dr. Omer Celen, Dr. Yalçın Koçak, and Vedat Çalık are seen.

Research and Methodology

To better analyze alternative websites' position in terms of anti-vaccination, content analysis is applied by implementing the World Health Organization's Report of the SAGE Working Group (2014) on vaccine hesitancy.

The report has categorized the reasons for anti-vaccination under 3 titles: contextual influences, individual and group influences, and vaccine/vaccination-specific issues. Under these categories, there are listed subcategories with an explanation. Tablo 1 in the previous section has shown the subcategories which are clearly defined the reasons for anti-vaccination. Overall 47 news has been published on the mentioned alternative websites during the research period. They are collected and categorized according to the World Health Organization's Report of the SAGE Working Group on vaccine hesitancy.

The research has taken these categories and subcategories as the basis for the content analysis. During January and February 2022, 5 alternative websites are being observed and anti-vaccination news is being collected. Selective sampling has been applied to the choice of alternative websites. As explained in the previous chapter, the 5 alternative news websites are Gazete Oksijen, Medyascope, Gazete Duvar, Diken, and 5G Virus News.

Findings

The findings of the research are given separately for each examined website. News headlines, dates and related matrix tables are created and explained. It has been interpreted how it is used in the news content of the alternative news sites with the anti-vaccine/hesitation matrix determined by the World Health Organization.

Table 2: Gazete Oksijen online news

Headline	Date	Vaccine Hesitancy Matrix
Why do we vaccinate if Omicron doesn't kill?	1/07/2022	Vaccine/ Vaccination Specific Issues/ reliability and/or source of supply of vaccine and/or vaccination equipment)
The most stubborn number one: Djokovic	1/14/2022	Individual/group influences/ personal, family, and/or community members' experience with vaccination, including pain
They (Uğur Şahin and Özlem Türeci) don't have a TV, I've never seen them waste a single moment	1/21/2022	Vaccine/ Vaccination Specific Issues/ the strength of the recommendation and/or knowledge base and/or attitude of healthcare professionals
Quarantine in England, mask in USA are removed	2/11/2022	Contextual effects / Politics
In France, anti-vaccines receive fake covid documents from social media	2/14/2022	Contextual effects / influential leaders, immunization program gatekeepers, and anti- or pro-vaccination lobbies.
Aziz Sancar's call to vaccine	2/19/2022	Contextual effects / influential leaders, immunization program gatekeepers, and anti- or pro-vaccination lobbies.
The only precaution against the BA.2 virus is vaccine	2/26/2022	Vaccine/ Vaccination Specific Issues/ Risk/ Benefit

Gazete Oksijen website has published 7 news about anti-vaccination between the determined research dates. The titles, dates, and related anti-vaccine matrix of these news are given in table 2. It is seen that there are negative statements about vaccination in the news content related to the headlines. These negative contents were separated to cover all 3 matrices. While some headlines give a positive impression about the vaccine at first glance, it is seen that critical and questioning comments stand out in the content of the news. The word threat was frequently used in news content and the possible positive effects of the vaccine were criticized.

Table 3: Medyascope online news

Headline	Date	Vaccine Hesitancy Matrix
Vaccine recommendations chart from the Turkish Medical Association Pandemic Working Group: Turkovac and Sinovac are not in the chart	1/07/2022	Vaccine/ Vaccination Specific Issues/ Reliability and/or source of supply of vaccine and/or vaccination equipment)
Actress Brigitte Bardot, 87: "I'm not vaccinated, I'm allergic to all chemicals"	1/06/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
Coronavirus investments of anti-vaccine tennis player Novak Djokovic revealed	1/20/2022	Vaccine/ vaccination specific issues/ Reliability and/or source of supply of vaccine and/or vaccination equipment
The Bogdanoff brothers, who were not vaccinated, died of coronavirus six days apart	1/05/2022	Contextual effects /immunization as a social norm vs. not needed/harmful
US hospital refuses to transplant heart to unvaccinated patient	1/26/2022	Individual/group influences/ Personal, family, and/or community members' experience with vaccination, including pain
Fourth dose vaccine mess – Vaccination appointments closed soon after opening	2/12/2022	Vaccine/ vaccination specific issues/ vaccination schedule
Istanbul Medical Chamber: "Immunization should be mandatory for those working in closed and crowded environments"	1/25/2022	Contextual effects / influential leaders, immunization program gatekeepers, and anti- or pro-vaccination lobbies.
Novak Djokovic told the BBC: "I'm not anti-vaccine, but I believe people have free will about their body"	2/16/2022	Individual/group influences/ beliefs, attitudes about health and prevention
Interim results of the study comparing the domestic vaccine Turkovac and Sinovac have been announced, the protection rate of Turkovac is still not shared with the public.	1/13/2022	Vaccine/ vaccination specific issues/ introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine
Novak Djokovic, who refuses to be vaccinated, will not be able to attend the Indian Wells Masters	2/23/2022	Individual Group effects / Immunization as a social norm vs. not needed/harmful

10 news about the vaccine of Medyascope online news site were examined. When looking at the distribution of news according to the Vaccine hesitancy matrix, it is seen that there are news covering all three matrices. The media site, which brings international celebrities such as tennis player Novak and cinema artist Bardot to its news, also featured the opinions of specialist organizations such as the Istanbul Medical Chamber and the Turkish Medical Association on vaccines. It has been observed that in the news content, it highlights the issues that will raise doubts about vaccination and vaccination.

Table 4: 5G Virus News

Headline	Date	Vaccine Hesitancy Matrix
10 million people are running to their death!	1/5/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
Covid-19 murder!	2/12/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
Alas, "vaccines" don't have a safety study!	2/08/2022	Individual/group influences/ immunization as a social norm vs. not needed/harmful
Cyprus sacrificing its children	2/03/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
mRNA is a terrorist weapon!	1/12/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
mRNA is a population reduction weapon!	1/11/2022	Individual/group influences/ risk/benefit (perceived, heuristic)
Provided 90% protection before emergency use authorization	1/21/2022	Vaccine/ vaccination specific issues/ risk/ Benefit (epidemiological and scientific evidence)

Among the news sites examined, the 5G Virus site included the most speculative news. The negative aspects of the vaccine were emphasized and a negative language was used in all 7 news articles reviewed. Looking at the news headlines, this negative language can be seen. It is observed that conspiracy theories are included in these titles from time to time.

Table 5: Gazeteduvar online news

Headline	Date	Vaccine Hesitancy Matrix
Covid investment of anti-vaccine tennis player Novak Djokovic exposed	1/20/2022	Contextual effects /influential leaders in the community
Turkovac' statement from Turkish Medical Association: There is no vaccine, there is a solution that is claimed to be a vaccine	1/05/2022	Vaccine/ vaccination specific issues/ Reliability and/or source of supply of vaccine and/or vaccination equipment
Turkey does not follow transparency in vaccine policies	1/30/2022	Vaccine/ vaccination specific issues/ Reliability and/or source of supply of vaccine and/or vaccination equipment
Vaccination obligation statement from Turkish Medical Association: It is possible due to public health	1/26/2022	Vaccine/ vaccination specific issues/ risk/ Benefit (epidemiological and scientific evidence)
New domestic vaccine being tested in humans: can be administered orally	1/27/2022	Vaccine/ vaccination specific issues/ introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine
Steaua Bucharest President: I will let vaccinated footballers play in the team	2/23/2022	Contextual effects/ political
Again Welfare Party's Facebook page was closed due to 'anti-vaccine'	2/19/2022	Contextual effects/ political
The singer, who was caught in Covid on purpose to get a vaccination certificate, died	1/19/2022	Contextual effects/ political
Turkish Football Federation introduced a 3rd dose vaccination requirement at the entrance to the stadiums.	1/05/2022	Vaccine/ vaccination specific issues/ introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine
BioNTech sends container factories to Africa for vaccine production	2/16/2022	Vaccine/ vaccination specific issues/ Reliability and/or source of supply of vaccine and/or vaccination equipment

Attacked the doctor who said he had to wait until he got vaccinated	1/01/2022	Individual/group influences/ health system and providers-trust and personal experience.
Nurse who 'pretended to vaccinate' to anti-vaccine protesters arrested	1/17/2022	Vaccine/ vaccination specific issues/ the strength of the recommendation and/or knowledge base and/or attitude of healthcare professionals
A fourth dose of vaccine recommended for risk groups in Germany	2/03/2022	Vaccine/ vaccination specific issues/ vaccination schedule

Gazete Duvar news site is the one that makes the most news about the vaccine within the specified date range. In the 13 vaccine news analyzed, Gazete Duvar has included similar news with other news sites. However, the news site included more vaccine news from abroad than other news sites. It was seen that the developments in different countries related to the vaccine were also carried to the news headlines.

Table 6: Diken online news

Headline	Date	Vaccine Hesitancy Matrix
Going for the vaccine, attacked the doctor at the health center	1/1/2022	Individual/group influences/ personal, family, and/or community members' experience with vaccination
Turkish Medical Association: Compulsory vaccination is possible for the protection of public health	1/25/2022	Vaccine/ vaccination specific issues/ vaccination schedule
According to Turkish Medical Association, Turkovac is a solution, not a vaccine.	1/05/2022	Vaccine/ vaccination specific issues/ introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine
Vaccinated 11 times Covid-19 vaccines in 10 months	1/07/2022	Vaccine/ vaccination specific issues/ mode of administration
Court decision: Man who did not get vaccinated cannot see his son for this reason	1/13/2022	Contextual influences/ politics
Vaccine warning for 'fragile groups' from Turkish Medical Association	1/25/2022	Vaccine/ vaccination specific issues/ the strength of the recommendation and/or knowledge base and/or attitude of healthcare professionals
Professors talked about Turkovac, people get more confused	1/12/2022	Vaccine/ vaccination specific issues/ introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine)

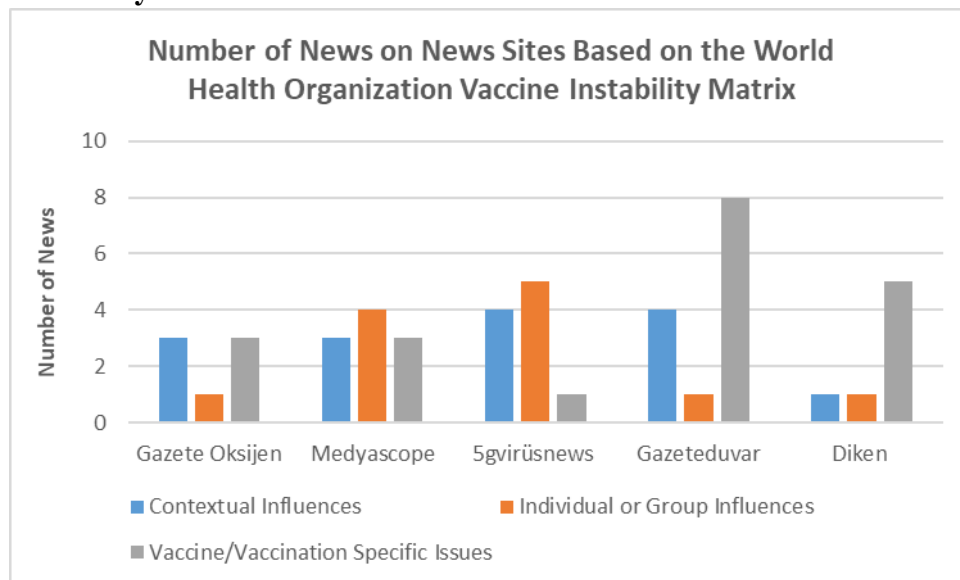
The Diken news website touched on negative issues in vaccine news and made headlines that triggered suspicions about the vaccine. In the 7 news analyzed, news about the Turkish vaccine Turkovac were realized. These news mostly questioned the reliability of Turkovac and created the headlines in this way. Diken news site, by including doctor's opinions in this questioning, fictionalized the news with a biased scientificness.

Concluding Remarks

Vaccination will remain up-to-date as an issue that directly affects both individuals and the society in which they live in. However, those who oppose vaccines or question their benefits should respond to anti-vaccine messages not in a vacuum, but in a social and cultural context (Topsakal & Ferik, 2021). They are exposed to this context, moreover, it should be kept in mind that the context is constantly changing. That’s why there will always be discourses supporting or opposing the vaccine.

Alternative online news sites have the ability to instantly communicate the accessed information and attract visitors. Vaccines; production, approval, implementation process, and experts’ statements also found a place for themselves on news sites. The research on the news about anti-vaccination on alternative websites have shown that vaccine and vaccination-specific issues that are directly related to vaccine or vaccination are the most common category that has been referred to the anti-vaccine news. 20 news out of 47 has been published by applying the subcategories of vaccine-specific issues. Amongst the subcategories, 2 of them are far more referred to than the others. These are risk/benefit (epidemiological and scientific evidence) and the introduction of a new vaccine or new formulation or a new recommendation for an existing vaccine. However, the 5gvirusnews platform, which happens to be more radical in terms of anti-vaccination, has got 1 news published by using the arguments of that category.

Table 7: Number of News on News Sites Based on the World Health Organization Vaccine Instability Matrix



As can be seen from the table above, for each website, the number of the news and its related cause have been marked. To better give meaning, each web sites anti-vaccination news has been analyzed according to subcategories.

Table 8: Number of News by World Health Organization Vaccine Indecision Matrix

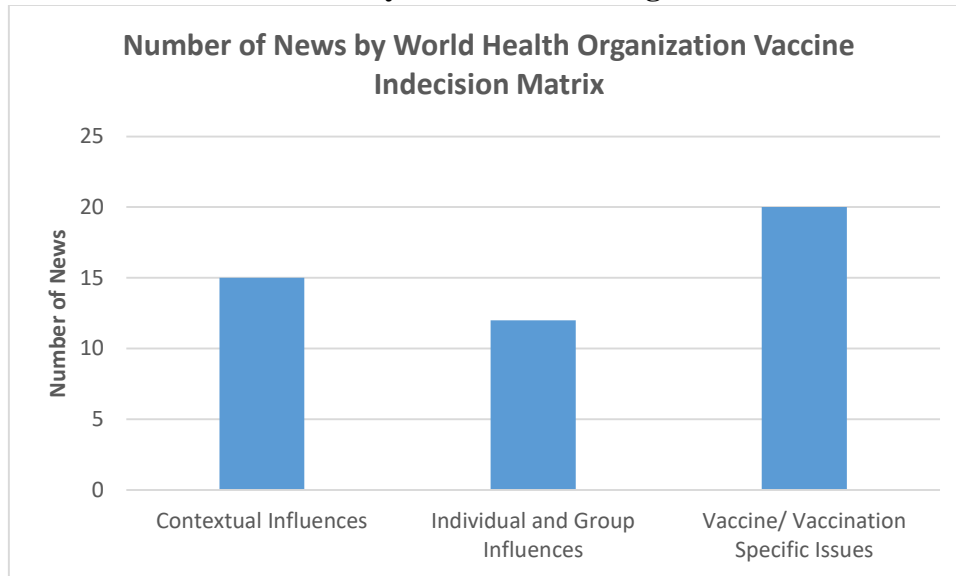


Table 8 above shows the news’s overall number and categories. As can be seen, contextual influences are in second place followed by individual and group influences. Contextual influences are described as influences that are arising due to historic, socio-cultural, environmental, health system/institutional, economic or political factors. There are also significant differences in the usage of these categories where 5G Virüs News and Gazete Duvar referred to argumentations of contextual influences more often than the other websites. Individual and group influences are described as influences that are arising from the personal perception of the vaccine or influences of the social/peer environment. The argumentations for this category have been mainly used by Medyascope and 5G Virüs News.

When it comes to a common problem of all humanity, such as a global pandemic, it is expected to see more science-based information about vaccination. Although the analyzed websites have given opinions from experts’ conspiracy theories around the vaccination have also been produced. It is important to act on objective data rather than prejudices or presuppositions on an issue related to public health. Nonetheless, it is searched that alternative news websites have adopted the discourse of anti-vaccination without truly basing their arguments on scientific facts. The attitude of the media is important in terms of the reliability of the vaccine and public health. The findings from the alternative news websites show that the news is considered to be rather subjective and much confusing information on the choice of the vaccine brand has been discussed. Further research could be done to better understand the contextual effects of anti-vaccination in society. Yet this research mainly analyzed the Turkish online news websites, described as alternative media. Searching the causes and consequences of the anti-vaccination movement and the media effect on this movement from different countries could also shed light on different perspectives on the issue.

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