

ORIGINAL ARTICLE

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The media representation of the HPV vaccine in Turkey: A qualitative framing study

 Ozgun Ceylan

Etlik City Hospital, Gynaecologic Oncology Clinic, Ankara, Türkiye

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Abstract

This study aims to explore how the Human papillomavirus (HPV) vaccine is shown in online news in Turkey. It uses a method called "framing theory" to understand the main ideas and messages shared by the media. This is a qualitative research study. A total of 113 news articles about the HPV vaccine were found online in the past year. From these, 31 were chosen as a sample for detailed analysis. The data were examined manually using framing theory. As a result, four main themes and smaller related topics were identified. The four themes found were: (1) Informative Frame, (2) Risk and Fear-Based Frame, (3) Socio-Cultural Frame, and (4) Political and Economic Frame. The most common type was the informative frame. This was followed by news that focused on risk, social values, and political matters. The findings show that the media in Turkey presents the HPV vaccine in different ways, which may affect how people understand and feel about it. This study shows that online news about the HPV vaccine in Turkey can influence public ideas about health, risk, and vaccination. It offers original findings and gives helpful suggestions for public health communication and policy.

Keywords: HPV vaccine, framing theory, media analysis, qualitative research

Introduction

Human papillomavirus (HPV) is one of the most common sexually transmitted infections in the world, with a global rate of about 12% [1]. Out of the 448 known HPV types, 12 are classified as Group 1 cancer-causing viruses. These types can lead to cancers in the cervix and other parts of the genital and throat areas [2]. The World Health Organization (WHO) has a plan to remove cervical cancer as a public health problem. One goal is to reduce the number of cases to fewer than 4 per 100,000 women each year. To achieve this, WHO wants 90% of girls to be fully vaccinated against HPV by the age of 15 [1].

HPV vaccines, developed to protect against this virus, were first approved in 2006 and have been recommended by WHO since 2009 [3]. Research shows that the vaccine works best when given before the age of 15. Today, 172 countries (88% of WHO member states) have added the HPV vaccine to their national immunisation programmes, either fully or partially [4]. Even

though the vaccine has proven protection, in many countries — including Turkey — there are still low vaccination rates [5].

People's attitudes towards the HPV vaccine are shaped not only by science but also by culture, religion, gender roles, and media content. In some Asian and Middle Eastern societies, health topics linked to sexuality can face social resistance. This can make the vaccine seem like a "moral threat" [6]. Social media plays an important role in spreading information and creating public opinion. People share their thoughts about HPV vaccination online, which can influence both personal choices and national policies. For example, a study from China showed that mothers who saw more positive content about HPV vaccination on social media were more likely to vaccinate their daughters [7]. However, social media can also spread misinformation and anti-vaccine content quickly. Studies have shown that many posts about HPV vaccination on social media include fear, doubt, or negative messages [8].

CITATION

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Corresponding Author: Ozgun Ceylan, Etlik City Hospital, Gynaecologic Oncology Clinic, Ankara, Türkiye
Email: dr.ozguncyln@gmail.com

To understand how media affects public opinion, one useful theory is framing theory. According to Entman, framing means choosing certain parts of a topic to highlight — like naming the problem, giving a reason, judging it, or offering a solution [9]. News about the HPV vaccine often uses these kinds of frames, focusing on topics such as public health, freedom of choice, cost, and religious values [10].

This study aims to examine online news about the HPV vaccine published in Turkey over the last year. Using framing theory, the study will explore how these news stories shape the public's understanding of the vaccine and suggest ideas that may help improve public health policies.

Material and Methods

This study aims to understand how the HPV vaccine is shown in online news in Turkey. The news stories were studied using a theory called framing theory and a method called thematic analysis. The goal is to find the common messages and ways the media talks about the HPV vaccine.

Research Design

This study is a qualitative media analysis aimed at examining how online news articles present information about the HPV vaccine. The news content was analyzed through the lens of framing theory to explore how the media shapes public perceptions of health.

Theoretical Framework: Framing Theory

The study is grounded in Entman's framing theory, which focuses on how media define issues, highlight certain aspects, establish causal interpretations, and suggest solutions. According to Entman, framing is "selecting some aspects of a perceived reality and making them more salient in a communicating text." In this context, the study examines four key framing dimensions in HPV vaccine-related news: problem definition, causal interpretation, moral evaluation, and proposed solutions.

Reporting Standards

This research was reported in accordance with the *Standards for Reporting Qualitative Research (SRQR)* guidelines, ensuring transparency and integrity in the presentation of qualitative findings[11].

Study Population and Sampling

The population of the study consisted of online news articles related to the HPV vaccine published between January 1, 2024, and January 1, 2025, on Turkish news websites. A purposive sampling method was used to select news items that shaped public opinion or had potential policy impact. During the data collection process, internal search engines of five major online news platforms with the highest circulation in Türkiye were queried using keywords such as "HPV vaccine," "cervical cancer vaccine," "free HPV vaccine," and "mandatory vaccine."

A total of 113 news articles were identified, among which 39 were directly relevant to the HPV vaccine (Figure 1). After removing duplicates and advertorials, 31 original articles were included in the final analysis (Figure 2).

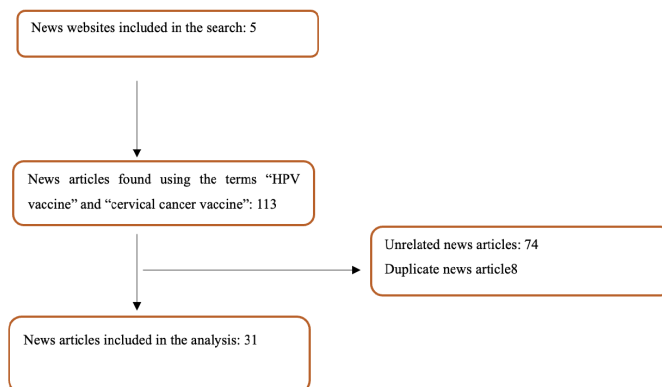


Figure 1. Search strategy flowcart

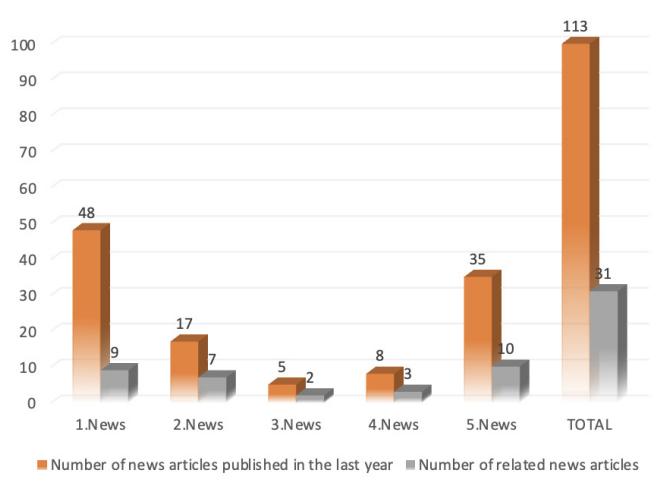


Figure 2. Number of news articles found in the study

Data Collection Tools

The news articles were archived in PDF format from digital sources and transferred into Word documents suitable for qualitative data analysis. Each article was standardized to include key details such as publication date, source, headline, and full text.

Data Analysis

This study examined online news content about the HPV vaccine using a qualitative research design and thematic analysis method. Manual coding was employed to ensure in-depth engagement with the data, without the use of qualitative software

The thematic analysis followed the six-phase approach proposed by Braun et al. First, the data were read carefully to ensure familiarity [12]. Then, meaningful expressions were identified and open codes were generated. These codes were grouped based on similarity and content characteristics to form themes.

Each theme was defined based on the nature and framing of the messages presented in the news texts.

Both inductive (data-driven) and deductive (theory-driven) approaches were applied during coding. Guided by framing theory, the study aimed to identify the dominant frames used in the presentation of HPV vaccine news. Relationships between codes were examined, leading to the identification of four main themes and twelve sub-themes. These themes were supported by sample quotations from the data.

The findings reveal how media discourse on the HPV vaccine in Türkiye reflects specific social, cultural, and political contexts.

Scientific Trustworthiness and Validity

Standard principles of reliability and validity commonly used in qualitative research were observed throughout the study. Coding consistency was assessed by two independent researchers, and discrepancies were resolved through consensus. To enhance transparency and trustworthiness, direct quotations were included, and the coding process was reported clearly.

Ethical Considerations

As this study analyzed only publicly available digital news content, no human participant data were involved; thus, ethical approval was not required. Academic ethical standards were observed, news sources were properly cited, and no value judgments were made about any individual or institution.

Results

In this study, news articles related to the HPV vaccine were examined using thematic analysis based on framing theory. The analysis of the data revealed four main themes, each including a set of twelve sub-themes. In addition, the types of frames used in the news content were presented in a separate table. Each identified theme reflects how the message is shaped and delivered to the audience in line with the principles of framing theory (Table 1).

Table 1. Thematic codes and example quotes

Theme	Codes	Example Quote
Informative Frame	Definition of vaccine, effects, vaccination age group, vaccine effectiveness	“HPV* vaccine is an effective way to protect against cervical cancer.”
Risk and Fear-Based Frame	Cancer threat, death rates, emphasis on early diagnosis	“HPV* virus is one of the most common causes of cancer in women.”
Socio-Cultural Frame	Moral panic, association with sexuality, conservative discourse	“We do not want our children to think about sexuality at an early age.”
Political and Economic Frame	Health policies, free vaccination, government responsibility	“The Ministry of Health should make the HPV* vaccine free of charge.”

HPV: Human Papilloma Virus

Informative Frame

In this theme, news articles emphasised the definition, effects, protective benefits, and target age group of the HPV vaccine. The codes included “vaccine definition,” “effects,” “target age group,” and “vaccine efficacy.” Example: “The HPV vaccine is an effective method of protection against cervical cancer.” Such messages are considered a positive framing strategy aimed at enhancing public health literacy.

Risk and Fear-Based Frame

This theme highlighted the link between the HPV virus and cancer, underlining death rates and the importance of early diagnosis. The main codes were “cancer threat,” “mortality rate,” and “early detection emphasis.” Example: “HPV is one of the most common causes of cancer among women.” This frame aims to raise awareness but may also trigger fear or panic in the audience.

Socio-Cultural Frame

This theme included social norms, moral values, and conservative viewpoints. Frequently observed codes were “moral panic,” “association with sexuality,” and “conservative discourse.” Example: “We don’t want our children to think about sexuality at an early age.” Such statements reflect value-based concerns that may influence the public’s acceptance of the vaccine.

Political and Economic Frame

This theme covered topics such as public health policies, funding of the vaccine, and government responsibility. The codes included “health policies,” “free vaccination,” and “government responsibility.” Example: “The Ministry of Health should make the HPV vaccine free of charge.” This frame questions the stance of public authorities and aims to apply pressure for policy change in public health.

While the informative frame was the most frequently used theme, socio-cultural and political frames were less commonly observed (Table 2). The most frequently coded theme was “Informative Frame” identified 28 times across 12 news articles. This indicates that most of the analysed content aimed to provide factual information on the HPV vaccine, particularly its definition, effectiveness, and age-specific recommendations.

Table 2. Themes ve codes frequency

Theme	Number of Code	Number of News Articles Mentioned
Informative Frame	28	12
Risk and Fear-Based Frame	22	10
Socio-Cultural Frame	17	8
Political and Economic Frame	14	6

The second most common theme was the “Risk- and Fear-Based Frame,” with 22 codes in 10 articles, focusing on cancer-related

threats and mortality risks. This finding suggests that fear is often used in public health communication. The “Socio-Cultural Perspective” appeared 17 times in 8 articles, often linking the vaccine to moral panic, sexuality, and conservative values. These narratives highlight the moral concerns that shape vaccine hesitancy.

Lastly, the “Political and Economic Frame” was observed 14 times in 6 articles, addressing issues like access to free vaccination and governmental responsibility. Though less frequently featured, this theme provided critical insights into structural challenges within public health policy.

Among the analysed news articles, the most frequently used framing type was the “Informative Frame,” while moral framing also appeared significantly (Table 3). According to the classification based on framing theory, the “Informative Frame” was identified in 12 articles. This frame highlighted descriptive elements such as the definition of the vaccine, its protective function, and the vaccination process. The “Risk and Fear-Based Frame” followed, observed in 10 articles, mainly using emotional messages by emphasising the threat of disease and the risk of death. The “Socio-Cultural Frame” appeared in 8 articles and reflected how the vaccine was questioned within the context of moral and traditional values. The least used type was the “Political and Economic Frame,” which was found in 6 articles. It focused on structural issues such as governmental responsibility and public access to the vaccine.

Demands for free access to the HPV vaccine reflect public expectations towards state health policies.

Table 3. Types of frames used in the study

Type of Frame	Definition	Number of News Articles Used
Informative Frame	A frame that gives information about the vaccine's definition, scientific effects, and vaccination proces	12
Risk and Fear-Based Frame	A frame that highlights the risk of disease, death, and cancer threat	10
Socio-Cultural Frame	A frame with statements claiming the vaccine conflicts with moral or religious values	8
Political and Economic Frame	A frame that presents the government and health system as responsible	6

Highlights of the Themes

Informative content focuses on the scientific definition of the vaccine and its importance for health. These texts aim to raise awareness in the reader. Fear-based content creates emotional impact through negative outcomes such as the threat of cancer and death. These frames are often used to stress the necessity of the vaccine. Socio-cultural content shows a perspective that links the vaccine to sexuality and shapes it through social values. This situation reflects the reasons for hesitation about the HPV

vaccine. Political content focuses on the lack of health policies or the responsibility of the state, and includes demands for the vaccine to be provided for free.

Discussion

In this study, the news texts about the HPV vaccine were analysed based on the framing theory, and four main themes were identified: Informative Frame, Risk and Fear-Oriented Frame, Socio-Cultural Frame, and Political and Economic Frame. When these themes are compared with similar studies in the literature, similarities and differences can be seen.

The most common frame type in the research was the "informative Frame". Most of the news focused on the definition of the vaccine, its protection, target age groups, and effectiveness. This finding is similar to the study by Teoh et al. [13]. Teoh reported that informative content in HPV vaccine campaigns on social media received more interaction and built trust. This shows that the news has a role that supports public health literacy. Kim et al. [14] stated that the use of social media is related to HPV awareness and knowledge level, but this relation became weak when demographic variables were controlled. In the campaign "HPV Vaccination NOW" by Sundstrom et al. [15], concerns about safety, anti-vaccine messages, and moral judgments related to sexual behaviour were among the most common false information. This shows that informative content must be suitable and accessible for the target audience's health literacy. However, giving information may not be enough. In a national-level study by Liebermann et al. [16], it was shown that uncertainty about the accuracy of HPV vaccine messages on social media caused vaccine hesitation in parents.

The second most common theme in the news was the "risk and fear-oriented frame". Emphasising cancer and death risks may attract the public’s attention. But emotional effects of this frame are also open to discussion. The fear and threat-oriented frame in our study is based on the link between HPV and cancer and the emphasis on death rates. This may be seen as an effort to increase vaccination behaviour by showing health risks through media. But this kind of frame can cause panic or anti-vaccine feelings if overused [13]. In the content analysis study by Ikeda et al. [17] in Japan, negative side effect news about HPV vaccine increased, and after 2013, fear-based framing became dominant in the news. Especially health problems claimed to appear after the vaccine were shared in a dramatic way, and this made public fear and distrust stronger. In an analysis of 1138 HPV vaccine news in large Japanese newspapers, 86.8% of the news focused on side effects, which shows fear and distrust frames became dominant in the media [18]. In this context, our findings support the idea that risk communication should be built carefully, and overuse of fear may have a negative effect on society.

The theme "socio-cultural Frame" in the research showed that vaccine refusal can be explained with moral panic, linking the vaccine to sexuality, and conservative values. Especially, parents see the vaccine as something that encourages early

sexual activity, which negatively affects vaccine acceptance. In the social media analysis by Rai et al. [19], sexuality and parenting themes were also seen as cultural factors that affect vaccine acceptance. In the context of Türkiye, such value-based frames may affect how society sees vaccination programmes. It can be said that media language in Türkiye is shaped with similar cultural codes.

The "political and economic frame" mainly focused on weak state policies, the vaccine not being free, and criticism of the health system. The Ministry of Health's responsibility was often highlighted in the news. Gollust et al. [20], in a media analysis study in the United States, said that HPV vaccine was often discussed in a political way in the news, and this affected both public opinion and how decision-makers saw the issue. Similarly, in our study, the demand for the state to provide the HPV vaccine for free created a political frame. In this context, not only the message content but also the source of the media message is important for its effect on public health. Our findings show that media messages are used to increase public pressure on such policies.

Conclusion

This study showed how the framing of HPV vaccine news can affect public attitudes towards vaccination. The results showed that informative frames were the most common, followed by risk-fear, socio-cultural, and political-economic frames. It was concluded that the messages in the media may directly affect individuals' awareness, perceptions, and decisions about the vaccine. Therefore, media content should be prepared in a way that supports public health and builds trust. In conclusion; Future research could explore how audience interpretation of these frames affects vaccination behaviour, especially among parents and young adults.

Limitation

This study is limited by its focus on online news articles within a specific one-year timeframe and excludes content from social media and televised broadcasts.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

As this study analyzed only publicly available digital news content, no human participant data were involved; thus, ethical approval was not required.

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