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AUDIENCE RESPONSES TO MEDIA MESSAGES ON HPV VACCINE UPTAKE IN ENUGU STATE, NIGERIA

Victor Chibueze Nwogbo[1]* & Unoma Oluchi Okafor[2]

[1.2]Department of Mass Communication, University of Nigeria, Nsukka, Nigeria

*victor.nwogbo@unn.edu.ng

ABSTRACT: Lack of awareness of the Human Papillomavirus Vaccine (HPV) and cultural responses toward its acceptance continue to generate a significant burden in combating cervical cancer in low- and middle-income countries such as Nigeria. Consequently, the study examines the audience's responses to media messages on HPV vaccine uptake as a strategy for combating cervical cancer in Enugu State. The Two-step flow theory and the Health Belief Model underpinned the study. Utilizing a survey research design, 385 participants were surveyed to assess the influence of media exposure, cultural beliefs, and social norms on HPV vaccine uptake. Findings reveal that while media exposure raises awareness and motivates individuals to learn more about the HPV vaccine, it does not directly translate into increased vaccination uptake. Participants reported moderate exposure to HPV-related information through various media outlets, and there was a positive correlation between media exposure and motivation to seek further information. However, cultural beliefs were identified as the most significant factor influencing individuals' perceptions and decisions regarding vaccination, followed by social norms. Barriers to vaccine uptake include logistical issues, concerns about vaccine safety, and familial or peer influence. The study concludes that while the media play a pivotal role in increasing awareness, their impact on vaccine adoption is limited without addressing the underlying cultural and social factors that shape health decisions. Based on these findings, the study recommends developing culturally tailored media campaigns, increasing community engagement, and improving access to the HPV vaccine to enhance uptake.

Keywords: Media messages, Cervical cancer, HPV vaccine, Adoption, Cultural belief

INTRODUCTION

The World Health Organization (WHO) has extensively discussed human papillomavirus (HPV) and its link to various cancers, first in its maiden report in 2002 and most recently in March 2024. HPV is a common sexually transmitted infection that is the major cause of cervical cancer, and also responsible for other cancers affecting the vulva, vagina, mouth, throat, penis, and anus. The immune system clears most HPV infections without causing harm (WHO, 2024; Centers for Disease Control and Prevention CDC, 2021; National Cancer Institute, 2022). However, persistent infections with high-risk HPV strains can lead to cancerous changes in cervical cells.

On a global scale, the World Health Organization (2024) reports that cervical cancer is the fourth most common cancer among women, with 660,000 new cases and around 350,000 deaths reported in 2022. About 90% of these deaths occur in low- and middle-income countries. Similarly, Biriowo (2025) opines that Nigeria ranks Seventh in cervical cancer mortality worldwide, with 12,000 new

cases and over 8,000 cervical cancer-related deaths annually. Nwabichie, Rosliza, and Suriani (2016) had expressed fear that Nigeria has an estimated 14,943 new cases and 10,403 deaths occurring annually among women aged 15 years and above, with late-stage diagnosis and limited treatment options being significant contributors to these mortality rates. In addition, Sung, Ferlay, Siegel, et al. (2021) posit that Nigeria has the highest number of incident cases and deaths from cervical cancer in Africa, with 12,075 new cases and 7968 deaths, making it one of the eight countries with the largest number of incident cases in the world.

Consequently, the introduction of the HPV vaccine in Nigeria since October 2023 is a step in the right direction towards nipping the scourge of HPV in the bud. The Human Papillomavirus (HPV) vaccines are shots that help prevent infections caused by certain types of HPV. These vaccines can protect against nine types of HPV. The HPV vaccines can prevent about 70% of cervical cancers, 80% of anal cancers, 60% of vaginal cancers, and 40% of vulva cancers. They are also over 90% effective at preventing certain HPV-related throat cancers. Additionally, these vaccines can prevent some genital warts, especially those caused by HPV types 6 and 11. According to the World Health Organization (2022), all countries should include HPV vaccines in their routine vaccination programmes, alongside other prevention measures. Depending on age and health, the vaccine is given in two or three doses. It is typically recommended for girls aged 9 to 13. The vaccine protects for at least 5 to 10 years, but women still need regular cervical cancer screenings after vaccination.

However, a major barrier to HPV vaccine uptake in Nigeria is the lack of awareness. Awareness of the Human Papillomavirus (HPV) vaccine in Nigeria remains relatively low, particularly when compared to global standards. While there is growing recognition of HPV as a leading cause of cervical cancer, the knowledge about the vaccine's preventive benefits is still lacking in many communities (Nwabichie, Rosliza, & Suriani, 2016). While previous studies (Lawson et al., 2023; Nyiramana, 2024; Lawal, Lawal, Carter, & Khan, 2023) were concerned more about knowledge, perception of cervical cancer screening, treatment, and other preventive measures, there are no home empirical studies on media audience awareness of and cultural barriers to HPV vaccine uptake in Nigeria. The need to intensify HPV vaccine media awareness creation in Nigeria is quite germane since its introduction in the country is barely 2 years. This entails that not many people would have been aware of it, especially those in rural areas. Also, in instances where awareness is appreciable, what is the adoption rate? What are the major cultural barriers to adherence to HPV vaccine media messages? These and more are what the current study aims to examine.

The role of media in shaping public perception is pivotal in addressing these hesitations and cold response towards HPV vaccines. As noted by Larson et al. (2014), positive portrayals of HPV vaccination in the media can significantly enhance public acceptance, while harmful or misleading representations can perpetuate fear and skepticism. This interplay underscores the urgent need for effective communication strategies that directly confront conspiracy theories while promoting evidence-based messaging about the HPV vaccine.

However, in Enugu State, Nigeria, there is growing concern that media messages promoting the adoption of the HPV vaccine are not effectively resonating with the target audience. Given the high mortality rate associated with cervical cancer and the proven effectiveness of the HPV vaccine, it is critical to understand why media messages are failing to elicit the desired positive response

among the residents of Enugu State. The rationale for choosing Enugu State hinges mainly on the fact that more than 12 of the 17 local government areas in Enugu State are considered rural. If the vast majority of residents in Enugu State are rural dwellers, exposure to and responses to HPV vaccine media messages could be hindered by certain factors. Thus, this study seeks to address this gap by examining the media audience's responses to media messages HPV vaccine uptake, with the goal of identifying the factors that influence public perception and adoption of the vaccine. The specific objectives of the study are to;

1. Assess the awareness level of the HPV vaccine media messages among residents of Enugu State.
2. Find out the effectiveness of various media messages in influencing public perception and acceptance of the HPV vaccine among residents of Enugu State.
3. Examine the role of cultural and social factors in shaping the audience's response to HPV vaccine media messages in Enugu State.

LITERATURE REVIEW

The Media and Health Communication

The media play a pivotal role in shaping public awareness and perception of health issues. Through its reach to a vast and diverse audience, the media serves as a critical channel for disseminating public health messages, particularly during health crises and vaccination campaigns. The importance of media in health communication has been widely recognized, as it not only informs the public but also influences their behavior and decision-making process regarding health-related matters. In the context of vaccination campaigns, media outlets, ranging from traditional platforms such as television, radio, and newspapers to digital spaces like social media, are instrumental in educating the public about the significance of vaccines and in addressing misinformation. Media-based communication is an essential strategy for influencing both individual and community decisions regarding health. According to Parvanta (2011), health communication uses communication strategies to encourage changes in health behavior that enhance health outcomes, and the media is a key player in this process.

Public health messages are often crafted to provide accurate information, correct misconceptions, and encourage positive health behaviors. The role of media in disseminating these messages is particularly crucial in vaccination campaigns, as it addresses public concerns, conveys the benefits of vaccination, and motivates action. In the case of the HPV vaccine, which has the potential to reduce cervical cancer rates significantly, media communication is vital for fostering awareness and addressing barriers such as fear, stigma, and misinformation. Ahmed and Bales (2016) noted that the media define health and illness for many individuals by showcasing services and products that assist in managing health, and by representing others with specific health conditions. This representation helps shape public attitudes toward health interventions, such as vaccination. For HPV vaccines specifically, media campaigns have the power to reshape the narrative from one of fear or skepticism to one of understanding the importance of preventing cervical cancer.

Different media platforms have varying levels of influence on audience behavior, especially in vaccination campaigns. Traditional mass media, such as television and radio, have a broad reach, especially in developing regions like Enugu State, where not everyone has access to digital technology. These platforms can quickly disseminate information to large audiences, ensuring that critical health messages, such as the benefits of the HPV vaccine, reach those who need it most.

However, digital and social media have also emerged as powerful tools in health communication. They offer a more interactive form of communication, allowing for engagement between public health institutions and individuals. This interaction is crucial in addressing specific concerns and misconceptions about vaccines, including the HPV vaccine. Moreover, social media enables targeted messaging, ensuring that health information is tailored to specific audience groups based on demographics such as age, gender, and location. This is particularly important for the HPV vaccine, which is often targeted at the younger female population.

The effectiveness of media in vaccination campaigns is largely dependent on how audiences respond to the messages. Audience responses can range from acceptance and positive behavioral change to skepticism and rejection of the message. As noted by Thomas (2006), theories such as the Health Belief Model and the Theory of Planned Behavior suggest that individuals' perceptions of disease susceptibility, perceived benefits of vaccination, and social influences shape their response to health messages. In Enugu State, cultural and social factors play significant roles in shaping audience responses to HPV vaccine messages, as misinformation, myths about vaccine safety, and societal attitudes toward vaccines can all influence how media messages are received. This highlights the importance of designing culturally sensitive, context-specific health communication strategies. The role of the media in health communication, particularly in vaccination campaigns, is crucial for disseminating accurate information and encouraging health-promoting behaviors. In the fight against cervical cancer, the HPV vaccine can save countless lives, and media messages are essential for increasing awareness and acceptance of this vaccine in Enugu State. By utilizing both traditional and digital media and engaging directly with communities, one can significantly influence the adoption of the HPV vaccine, ultimately contributing to a reduction in cervical cancer cases in the region.

Factors that Shape HPV Vaccine Perception and Acceptance

Knowledge plays a crucial role in shaping the acceptance and perception of the HPV vaccine. When individuals are well-informed about the human papillomavirus (HPV), its transmission, and its link to cervical cancer, they are more likely to understand the importance of vaccination. A lack of awareness or misconceptions can lead to hesitation or refusal to receive the vaccine. For instance, many people may not be aware that HPV is one of the most common sexually transmitted infections and that persistent HPV infections can lead to serious health issues, including cervical cancer. Educating the public on these facts, alongside the vaccine's benefits, often correlates with higher acceptance rates. People who understand that the vaccine prevents not just cervical cancer but other HPV-related conditions (such as genital warts and cancers of the throat and anus) tend to have a more favorable perception of the vaccine. Perception plays a significant role in influencing an individual's decision to accept the HPV vaccine. How people perceive the risk of contracting HPV, the severity of the disease, and the effectiveness of the vaccine can either encourage or hinder

vaccine uptake. Several studies highlight how perception shapes attitudes toward vaccination and its acceptability.

Despite increased exposure to HPV vaccine marketing campaigns and information from healthcare providers, many eligible young women do not perceive themselves as likely to receive the vaccine. Confidence in their ability to be vaccinated is also lower than expected. A key factor contributing to this is the perception of barriers, such as vaccine affordability and insurance coverage, which can affect the decision to get vaccinated.

Ziarnowski, Brewer, and Weber, (2009) note that a significant proportion of young women eligible for HPV vaccination lack the confidence that they will receive the vaccine, underscoring the impact of economic and systemic barriers on perception, this further supports the influence of perception by suggesting that individuals who perceive themselves to be at higher risk of HPV infection are more likely to accept the vaccine. Interestingly, the perceived severity of HPV infection, while important, was found to be largely unrelated to vaccine acceptability, indicating that personal risk assessment may play a more critical role. Additionally, the perceived effectiveness of the HPV vaccine in preventing infection is a key predictor of vaccine acceptability. Individuals who trust the vaccine's ability to prevent cervical cancer or genital warts are more likely to accept it.

However, perceived barriers, such as beliefs about the potential negative consequences of vaccination, also play a role. For example, a minority of parents express concern that vaccinating their children against HPV might implicitly condone or encourage adolescent sexual behavior. Though this belief is not widespread, it has been highlighted in qualitative studies, demonstrating how certain perceptions can shape attitudes toward vaccination.

Parents' level of education significantly influences their attitudes and decisions regarding the HPV vaccine. Research consistently shows that higher educational attainment among parents correlates with better understanding and acceptance of vaccines, particularly the HPV vaccine, which is crucial in preventing cervical cancer and other HPV-related conditions. Education enhances parents' ability to access, process, and evaluate health information, which affects their perceptions of both the risks and benefits of vaccination.

Parents with higher education levels tend to have greater awareness of HPV and its implications. They are more likely to understand the virus's modes of transmission, its link to cervical cancer, and the protective role of vaccination. This knowledge positively impacts their decision-making process. According to a study by Brewer et al. (2010), more educated parents were more likely to vaccinate their children against HPV because they were better informed about the vaccine's benefits and had fewer concerns about its safety. This study highlighted that well-educated parents also tend to trust healthcare providers and public health campaigns, which further increases vaccine uptake.

Conversely, parents with lower educational attainment are often less informed about HPV and may not fully understand the importance of the vaccine, leading to hesitancy. For instance, they might hold misconceptions about the safety or necessity of the vaccine, or they may fear that vaccinating their child against a sexually transmitted infection could implicitly encourage sexual activity. A lack of access to reliable health information often amplifies these beliefs. As a result, parents with

lower education levels may rely on misinformation or anecdotal evidence, which can lead to vaccine refusal.

Further, educational attainment impacts how parents engage with healthcare providers and public health campaigns. Educated parents are more likely to trust medical experts and take advice from healthcare professionals regarding vaccinations. This trust enhances their confidence in the vaccine's effectiveness and reduces concerns about potential side effects. For instance, educated parents are more likely to recognize that the HPV vaccine prevents not only cervical cancer but also other HPV-related diseases, which strengthens their commitment to vaccination. Increasing parents' education about HPV and the vaccine is essential to improving acceptance rates. Public health campaigns should focus on reaching parents with lower education levels by providing clear, accessible, and culturally relevant information that addresses common misconceptions and fears. Targeted educational interventions could bridge the knowledge gap and lead to more widespread vaccine acceptance.

Empirical Review

Cervical Cancer and Need for HPV Vaccine Awareness

Chakraborty, Pal, Banerjee, Saha, and Mukherjee (2023) explain that Human Papillomavirus and its mode of transmission are responsible for various health issues, including cancers of the cervix, vagina, anus, penis, oropharynx, head, neck, and lungs, as well as benign and malignant warts. Additionally, HPV is linked to respiratory papillomatosis and epidermodysplasia verruciformis, a rare condition known as "tree man disease." Looking at the virus's structure, genomic organization, and transmission methods, it is believed that HPV spreads primarily through direct skin-to-skin contact, including sexual transmission. Chakraborty et al (2023) also categorize different types of HPV infections, noting that low-risk strains cause warts while high-risk strains can lead to cancer.

Consequently, in order to build up preventive measures against this dangerous virus, a vaccine called the HPV vaccine was developed. According to Yousefi, Aria, Ghaedrahmati, Bakhtiari, Azizi, Bastan, and Eskandari (2022), the HPV (Human Papillomavirus) vaccine is designed to protect individuals from infection by specific strains of the human papillomavirus, particularly those linked to cervical, anal, throat, and other cancers. It is typically administered in a series of injections to prevent HPV-related diseases. The HPV vaccine is a preventive vaccine that helps reduce the risk of infection by the human papillomavirus, which is a major cause of cervical cancer and other HPV-related diseases. This vaccine is recommended for adolescents and young adults to be administered before any sexual activity occurs (Wang, Pan, Jin, Huang, Li, Wu, & Liao, 2020). Arguably, HPV vaccines have demonstrated considerable success in reducing infection rates, while surgeries and adjuvant therapies, including radiation and chemotherapy, are proving effective in treating HPV-related cancers.

Regrettably, Otorkpa, Onifade, and Otorkpa (2024) identified misinformation, religious beliefs, and cultural barriers as major drivers of vaccine rejection, despite the vaccine's proven safety and efficacy in preventing HPV-related cancers, particularly cervical cancer. Communities often view the vaccine as conflicting with traditional and religious values, with some labeling it as a promoter

of promiscuity among young girls. This cultural resistance is compounded by misinformation spread through social media and other informal channels. These noticeable impediments to HPV vaccine acceptance highlight the strategic importance of effective communication in shaping public attitudes and improving HPV vaccine uptake.

No doubt, effective media messaging can play a significant role in increasing awareness about the risks associated with HPV and the benefits of vaccination. By detailing the types of cancers linked to HPV and the potential for serious health consequences, this study supports the need for robust educational campaigns in Enugu State. Such campaigns could aim to inform the public not only about the existence of the HPV vaccine but also about the severe health risks associated with HPV infections, thereby influencing attitudes and behaviours toward vaccine adoption. The discussion of modern treatment approaches reinforces the urgency of preventive measures like vaccination. If media messages can effectively communicate the link between HPV and cervical cancer, as well as the availability of vaccines, they can help to foster a more informed audience that is more likely to respond positively to HPV vaccination initiatives (Ojomo, & Ukangwa, 2023).

Similarly, Abdelaliem, Gadallah, Elmokadem, Soliman, and Hafez (2023) found a significant correlation between knowledge and attitudes, suggesting that increasing public knowledge through media campaigns could positively influence vaccine adoption. Suppose media messages are designed to improve understanding of the risks of HPV and the benefits of vaccination. In that case, they are likely to lead to more favorable attitudes and greater acceptance of the HPV vaccine in Enugu State.

Theoretical Framework

Two-Step Flow Theory

Two-Step Flow Theory is a communications theory that explains how media messages are not directly consumed by the general audience but are filtered through influential individuals, known as "opinion leaders." These opinion leaders, who are more engaged with media content, interpret and spread the messages to others, thereby influencing their beliefs and behaviors. This theory, developed by Paul Lazarsfeld and Elihu Katz in the 1940s, suggests that the mass media's effects are indirect, operating primarily through interpersonal communication.

In relation to the research topic, "Audience response to media messages on adoption of HPV vaccine in combating cervical cancer in Enugu State," the Two-Step Flow Theory helps explain how media messages about the HPV vaccine can reach and influence the target population. Rather than the audience in Enugu State directly absorbing media content, it is likely that opinion leaders within the community, such as healthcare workers, community leaders, religious figures, or well-respected individuals, first receive and interpret the information about the HPV vaccine. These opinion leaders can then relay the information through discussions, recommendations, or endorsements, thereby shaping the attitudes and behaviors of the broader community toward adopting the vaccine.

The role of opinion leaders is crucial in this process. For example, if trusted healthcare professionals in the community support and advocate for the HPV vaccine, their endorsement could significantly increase the public's willingness to accept it. Similarly, if influential figures spread skepticism or misinformation, it could hinder vaccine adoption. The theory also emphasizes that interpersonal communication is often more persuasive than media messages alone, making it important to understand the dynamics of community influencers in Enugu State to effectively promote HPV vaccine uptake.

The Health Belief Model (HBM)

The Health Belief Model (HBM) is a psychological framework that explains and predicts health behaviors by focusing on individuals' beliefs and perceptions. In the context of the research topic, "Audience response to media messages on adoption of HPV vaccine in combating cervical cancer in Enugu State," HBM offers valuable insights into how people's beliefs about HPV, cervical cancer, and the HPV vaccine influence their reactions to media messages. Glanz et al. (2015) explain that key concepts within the HBM, such as perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, play a significant role in shaping individuals' health decisions.

Perceived susceptibility refers to how vulnerable a person feels to contracting HPV, while perceived severity deals with their understanding of how serious cervical cancer can be if left untreated. Glanz et al. (2015) further suggest that perceived benefits, such as the belief that vaccination can effectively prevent HPV and cervical cancer, can motivate positive health actions. However, perceived barriers, like concerns about vaccine safety or accessibility, may hinder someone from getting vaccinated. These factors work together to determine whether or not an individual adopts preventive health behaviors, such as deciding to receive the HPV vaccine.

Media messages can play a crucial role in shaping these health beliefs. For example, suppose media campaigns effectively communicate the risks of contracting HPV and the seriousness of cervical cancer. In that case, they can enhance the public's perceived susceptibility and severity, prompting a stronger motivation to get vaccinated. Additionally, media messages that emphasize the benefits of the HPV vaccine in preventing cervical cancer can positively influence public perception, while addressing common concerns such as cost, safety, or side effects can help reduce perceived barriers to vaccine adoption.

Moreover, the Health Belief Model emphasizes the importance of cues to action and self-efficacy. Media messages can serve as these cues, prompting people to take action by providing information on where to get the HPV vaccine or by featuring endorsements from trusted local figures. Increasing self-efficacy through media messaging—by empowering individuals with confidence in their ability to access and receive the vaccine—can also improve vaccination rates. Overall, HBM helps explain how media campaigns can shape audience perceptions and behaviors regarding HPV vaccination, contributing to the fight against cervical cancer in Enugu State.

METHODOLOGY

The survey research design was employed, particularly the use of questionnaire, which was considered suitable for this research as it allowed for the efficient collection of standardized data from a large sample, enabling the researcher to measure perceptions, knowledge, and experiences. Residents of Enugu State formed the population for this study. The population of Enugu State was recorded to be 3.2million as of the 2006 population. Hence, a projected population was made to adequately predict the current population of the state using the United Nations Development Programme (UNDP) projection formula (3.2/100x n/1) at the assumed growth rate of 3.2% annually. To calculate the projected population using the UNPF projection formula: N1=N0(1+r)tN_1 = N_0(1 + r)^tN1=N0(1+r)t Where:

N0 (initial population) =3.2N0 = 3.2N0=3.2 million (population in 2006)

r= (annual growth rate) 2.6%=0.026r = 2.6\% = 0.026r=2.6%=0.026

t= (number of years into the future) 18t = 18t=18 years (from 2006 to 2025). The projected population for Enugu state, therefore, is 5,039,547. To ensure the study's findings are representative of the entire population, the Australian Sample Size Calculator was used to determine an appropriate sample size of 385.

The researchers adopted a cluster sampling technique, a probability sampling method where the population is divided into distinct groups, known as clusters – in this case, Enugu East, Enugu West, and Enugu North Senatorial districts. To ensure that the sample is representative of the population, minimizing bias in the selection process, simple random sampling, a probability sampling method, was used to select Local Government Areas and communities from these districts, while purposive sampling, also known as judgmental or selective sampling, a non-probability sampling technique, was used to select individual participants for the study. A test-retest reliability assessment of the research instrument was conducted using the Guttman Scale formula: 1 - (Total Error/Total Responses). The result showed a reliability coefficient of 85%.

RESULTS

Table 1: Demographic details of the respondents

Age	**N**	**%**
18-25	339	86.01
26-35	26	6.61
36-45	17	4.31
46 and above	12	3.05
Educational level		
Primary	15	3.96
Secondary	43	11.16
Tertiary	327	84.93

Marital status		
Single	309	80.26
Married	61	15.84
Divorced	11	2.86
Widowed	4	1.04
Occupation		
Employed	106	27.53
Unemployed	126	32.77
Self-employed	153	39.48

The demographic details of the respondents reveal that the majority are aged 18-25 (86.01%) and hold a tertiary education (84.93%). Most respondents are single (80.26%) and primarily self-employed (39.48%), followed by those who are unemployed (32.77%) and employed (27.53%). Additional insights show that a small percentage have primary (3.90%) or secondary education (11.16%), while marital statuses include married (15.84%), divorced (2.86%), and widowed (1.04%). Overall, the data highlights a youthful, educated, and predominantly single population among the respondents.

Table 2: Mean and standard deviation of the awareness level of the HPV vaccine media messages among residents of Enugu State

Item statements	N	Mean	SD
I access HPV vaccine information through the mass media	385	3.02	1.216
Media messages have increased my awareness of HPV vaccine	385	3.22	1.242
I now know more about the importance of HPV vaccine through mass media messages	385	3.87	1.116
I access HPV vaccine media messages often	385	3.26	1.143
Social media is the dominant channel through which I access HPV vaccine messages	385	3.66	1.102

Regarding awareness of accessing information about the HPV vaccine through mass media, the mean score was 3.02 (SD = 1.216), indicating a moderate level of access to this information. Similarly, the mean score for the statement "Media messages have increased my awareness of HPV vaccine" was 3.22 (SD = 1.242), suggesting a positive influence of media messages on awareness. The highest mean score was 3.87 (SD = 1.116) for the statement "I now know more about the importance of HPV vaccine through mass media messages." This result suggests that the media messages effectively increased knowledge about the importance of the HPV vaccine among the respondents.

Additionally, the mean score for frequent access to HPV vaccine media messages was 3.26 (SD = 1.143), indicating regular consumption of this type of media. Furthermore, the respondents recognized social media as a significant channel for accessing HPV vaccine messages, with a mean score of 3.66 (SD = 1.102).

These findings collectively indicate that media messages, particularly through social media, play a crucial role in increasing awareness of the HPV vaccine among residents of Enugu State. The results of this study provide evidence supporting the use of media campaigns to disseminate health information and promote public awareness of the HPV vaccine.

Table 3: Mean and standard deviation of the effectiveness of the various media messages in influencing public perception and acceptance of the HPV vaccine in Enugu State

Item statements	N	Mean	SD
I find the media messages about the HPV vaccine very clear and informative.	385	3.06	1.158
The media has effectively raised my awareness about the HPV vaccine.	385	3.26	1.334
I trust the information provided by media messages about the HPV vaccine	385	3.73	1.124
Media campaigns have influenced my opinion on the importance of the HPV vaccine.	385	3.85	1.143
The media has effectively addressed concerns or misconceptions about the HPV vaccine.	385	3.86	1.155

The effectiveness of media in addressing concerns or misconceptions about the HPV vaccine was underscored by a mean score of 3.86 (SD = 1.155), suggesting that media messages are perceived as crucial for clarifying misunderstandings about the vaccine.

All told, the findings demonstrate that media messages have the potential to positively influence public perception and acceptance of the HPV vaccine in Enugu State. However, while there is a foundation of understanding and trust, opportunities exist for enhancing the clarity and effectiveness of these communications to improve public awareness further and address remaining concerns.

Table 4. Mean and standard deviation of the roles of cultural and social factors in shaping the audience's response to HPV vaccine media messages in Enugu State

Item statements	N	Mean	SD
Cultural beliefs in my community influence my attitude toward the HPV vaccine.	385	3.72	1.074
Social norms in my community affect the decision to take the HPV vaccine.	385	3.02	1.244
I feel that social acceptance plays a significant role in deciding whether to take the HPV vaccine.	385	3.43	1.1792
Cultural factors influence how I interpret media messages about the HPV vaccine.	385	3.57	1.163
The influence of family or peer opinions affects my view on the HPV vaccine.	385	3.03	1.018

From Table 4, participants indicated that cultural beliefs in their community notably influence their attitudes toward the HPV vaccine, with a mean score of 3.72 (SD = 1.074). This suggests that entrenched cultural perspectives play a critical role in how individuals view vaccination, potentially impacting their willingness to adopt it. Social norms also emerged as a factor affecting decisions to take the HPV vaccine, albeit to a lesser extent, with a mean score of 3.02 (SD = 1.244). Data suggest that social acceptance also contributes significantly to individuals' decisions regarding the HPV vaccine, reflected in a mean score of 3.43 (SD = 1.1792). This underscores the importance of community attitudes and peer influence in shaping decisions about vaccination. Cultural factors' influence on the interpretation of media messages about the HPV vaccine was also emphasized, with a mean score of 3.57 (SD = 1.163). This highlights how cultural contexts can filter and shape the reception of health information, potentially altering its effectiveness.

Additionally, the influence of family or peer opinions on views about the HPV vaccine was noted, resulting in a mean score of 3.03 (SD = 1.018). This indicates that interpersonal relationships and community ties play a role in shaping health choices. Understanding these dynamics is vital for designing effective media campaigns and interventions that resonate with the community's values and beliefs. Future efforts to promote HPV vaccination should consider these cultural and social dimensions to ensure greater acceptance and uptake among the target population.

DISCUSSION OF FINDINGS

Data indicate moderate exposure to media messages about the HPV vaccine, with a mean score of 3.53. This suggests that while media have reached a significant portion of the population, there is still potential for broader exposure. This is because media exposure can increase motivation to learn more about the HPV vaccine, as reflected by a higher mean score of 3.76. This aligns with the Health Belief Model (HBM), which posits that increased awareness can generate a desire to seek further information. Also, this finding is consistent with the views of Ojomo, and Ukangwa (2023), who found that media messages can effectively communicate the link between HPV and cervical cancer, as well as the availability of vaccines, and they can help to foster a more informed audience that is more likely to respond positively to HPV vaccination initiatives.

However, while social media was identified as a major platform for disseminating information about the HPV vaccine to the public, it was also found to be readily used to spread incorrect information and misinformation about infectious diseases and vaccines. This influence of social media has also been reported by Gabarron and Oyeyemi (2021), who showed a significant relationship between social media use and vaccine hesitancy. Nonetheless, exposure to media messages could have heightened individuals' perceived susceptibility to HPV-related health risks, thereby motivating them to learn more about the vaccine.

Despite increased motivation, the mean score of 3.06 regarding the media's influence on participants' decisions to take the vaccine shows a more ambivalent response. This indicates that while media messages may spark interest and awareness, they do not necessarily lead to action. By implication, it suggests attitudes, subjective norms, and perceived behavioral control influence intention (to vaccinate). Here, while attitudes might shift due to media exposure, barriers such as access, cost, or trust may prevent vaccine uptake.

Furthermore, data show that cultural beliefs significantly influence attitudes toward the HPV vaccine, with a mean score of 3.72. This aligns with the findings of previous studies, which suggest that deeply rooted cultural values shape how individuals perceive health risks. Cultural beliefs about gender roles, perceived vaccine safety, or social taboos related to sexual health may be barriers to vaccination (Otorkpa, Onifade, & Otorkpa, 2024; Njemanze & Nwosu, 2024). Another development is cultural beliefs of not subscribing to HPV vaccination; for instance, some religious organizations do not subscribe to modern medicine in general, and vaccinations in particular, as these medicines are perceived as dangerous and causing diseases and deaths. The negative perceptions of vaccines are embedded in the religious beliefs that associate their use with a lack of trust in God. These beliefs filter the information people receive from the media and affect their interpretation of health messages. To address this, media campaigns should incorporate culturally relevant narratives that resonate with local values.

Similarly, social norms, with a mean score of 3.02, indicate that societal expectations do play a role in shaping vaccination decisions, though less significantly than cultural beliefs. Additionally, family or peer opinions (mean score: 3.03) were identified as influencing vaccine decisions, which aligns with the Two-step flow theory. Interpersonal relationships and social networks play a significant role in shaping health behaviors. Therefore, incorporating peer and family endorsements of the HPV vaccine into media campaigns could be effective.

Finally, findings indicate that while the media plays a significant role in increasing awareness and motivating individuals to learn about the HPV vaccine, it is less effective in driving uptake due to deep-rooted cultural beliefs, social norms, and structural barriers. To overcome these limitations, media campaigns should be tailored to reflect the target population's cultural values and beliefs, leverage trusted community figures for endorsements, and address barriers to vaccine access and trust.

Conclusion and Recommendations

This study examined how the audience responds to media messages on the adoption or acceptance of the HPV vaccine in Enugu State, Nigeria. This is against the backdrop of the current menace of cervical cancer, which continues to claim numerous lives, primarily due to late-stage diagnoses and the lack of preventive measures such as vaccination. Undoubtedly, the mass media have been found to have the potential to increase coverage of information about the HPV vaccine, thereby facilitating mass awareness of its availability and acceptance.

However, cultural beliefs and social norms have a significant influence on how individuals perceive the vaccine and decide whether to respond favourably to it. Cultural factors, in particular, act as a filter through which media messages are interpreted, and they can either facilitate or hinder HPV vaccine adoption. The barriers to this vaccine uptake identified in the study suggest that efforts to promote HPV vaccination in Enugu State need to go beyond simply disseminating information.

Interventions must consider the cultural and social dynamics that influence vaccination decisions. Therefore, media messages should be culturally sensitive and tailored to resonate with the target population's values, beliefs, and norms. Using trusted community figures and influencers to endorse

the vaccine may help reduce cultural resistance and increase acceptance. Additionally, addressing practical barriers, such as access to the vaccine and concerns about vaccine safety, will be crucial to increasing uptake.

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