How Media Affects Perceptions of Covid Vaccines

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November 7, 2022

Table of Contents

I. **Introduction and paper revision, Rodrigo……...3**

II. **Discussion of Issue, Ava…….3**

III. **Knowledge Gap Theory, Haodian……4**

IV. **Two-Step Flow, Rodrigo……6**

V. **Poster Explanation, Ava……8**

VI. **Solution, Ava……...……...8**

VII. **Conclusion, Haodian……..…9**

VIII. **References…….……10**

IX. **Appendix……..…….13**

I. Introduction

When it comes to news and information, there are multiple factors that affect how a receiver processes a message from a sender. While at first one might think that it simply depends on the content of the message, things such as demographics, medium used, and overall social context affect how a receiver interprets the message. The two step flow theory and knowledge gap theory help explain how outside factors play a role in the process of communication. They were both present through the COVID-19 pandemic, an event in which information was crucial and misinformation was all too present.

II. Discussion of Issue

On December 12th, 2019, some residents of Wuhan, China began experiencing symptoms common with pneumonia but did not respond well to typical treatment. By December 31st, the World Health Organization (WHO) Office in China was informed of these several increasing cases (CDC, 2022). On January 7th, 2020, public health officials confirmed that the sickness was coronavirus and just five days later it was found in Thailand (CDC, 2022). COVID-19, or coronavirus, was first reported in the United States on January 20th, 2020 and China was on lockdown by January 23rd, 2020 (CDC, 2022). It didn't take long for coronavirus to spread worldwide and after more than 118,000 cases in 114 countries, WHO declared COVID-19 a pandemic on March 11th, 2020 (CDC, 2022). Two days later, the Trump Administration declared a nationwide emergency and many states began their own lockdowns (CDC, 2022).

Mainstream media has affected how people perceived the pandemic. News reporters with mostly no public health or medical background were assigned to cover the pandemic and had to learn how to vet credible resources and report on these issues (Pazzanese, 2020). According to

the CDC, misinformation is defined as “false information shared by people who *do not intend* to mislead others," and it affected confidence in vaccines throughout the pandemic (CDC, 2021). Some demographics are more likely to be victims of misinformation than others, such as the “elderly, youth, those active on social media and those with fewer years of formal education” (Nelson et al., 2020). Those with a higher education are more likely to be vaccinated and stay informed. Mass media affects vaccination rates as well.

III. Knowledge Gap Theory

The knowledge gap theory, first presented by Phillip Tichenor, George Donohue, and Clarice Olien, proposes that the knowledge and socioeconomic gap is increasing between higher and lower educated people, since socioeconomic status is correlated to education level (Tichenor, Donohue and Olien, 1970). People with higher socioeconomic status tend to have a better ability to acquire reliable information.

With the development of digital technology and the internet came the increased use of mass media. Nowadays, people strongly rely on mass media to acquire information and knowledge. Since the development of the first coronavirus vaccines, the world has debated their effectiveness and trustworthiness on mass media. According to the Understanding Coronavirus in America Tracking survey conducted by USC’s Center for Social and Economic Research, education level has a strong impact on people’s willingness to get the vaccine (Thomas and Darling, 2021). Out of all American adults, 76% of those who have at least a bachelor’s degree had been vaccinated or planned to be, compared to only 53% among those without a college degree (Thomas and Darling, 2021). People with higher socioeconomic status use their known information, knowledge, and experience to analyze different methods available for combatting the pandemic, such as mask wearing, social distancing, and the vaccines themselves. They’ll

view the pandemic and vaccine differently than those with lower socioeconomic status since they have access to more information needed to make educated decisions. Associate Professor Emily Vraga of the University of Minnesota said “understanding what may be driving vaccine rejection or hesitancy among certain populations can help address concerns and tailor communication efforts ”(Kendeou and Vraga, 2021). Unfortunately, the process of understanding is easier said than done. People with less formal education are more likely to believe false information and therefore more likely to spread that misinformation. According to Professor Vraga, “if misinformation has already spread, ‘debunking’ is the next step. However, succeeding at this is difficult, as people already hold a belief that false information is true which, in turn, continues to influence people’s thinking and behavior” (Vragra, 2021). Debunking misinformation is much harder when it comes to people with less formal education since they tend to have less general knowledge and fewer sources of information. Their ability to acquire newer, more accurate information on media is worse than those who have a higher education and have better information integration and critical thinking.

However, like everything in life, there are exceptions. The knowledge gap theory should also be considered through different and diverse angles. Donald Trump earned his bachelor's degree from the University of Pennsylvania's Wharton School in 1968 and is part of America’s wealthiest individuals (Duignan, 2022). He’s a prime example of someone with high socioeconomic status and education level. However, he described the coronavirus as they “Chinese virus” and caused a wave of anti-Asian hate crimes and racism in the US during the pandemic. Tucker Carlson of Fox News publicly praised Trump for this statement (Dicker, 2020). Even though these two opinion leaders have a high education level, they still managed to mislead their followers by spreading false information.

IV. Two-Step Flow Theory

During the early 1900s, the hypodermic needle theory was widely accepted in the field of sociology. It states that media has a strong effect on anyone exposed to it. Among its many implications, one of them is that audiences are passive and don't question the content they're exposed to.

During the 1948 US presidential election, Democrat Harry Truman beat Republican Strom Thurmond. Austrian-American sociologist Paul Lazersfeld conducted a study during this election cycle to see what factors affect voting patterns and what the effects of those factors were. Lazersfeld deductively thought that media would have powerful effects on people's voting patterns, as stated by the hypodermic needle theory. However, the results of his study contradicted what he hypothesized, and his study became part of what debunked the now outdated theory.

Lazersfeld's study went on to become the foundation of the two-step flow theory of communication. The two-step flow theory states that instead of media directly affecting audiences, media is consumed by opinion leaders, who in turn influence audiences (Katz 1957). Essentially, it adds a middleman in the process of how people consume information. Not anyone can be an opinion leader though. According to the theory, opinion leaders are "respected sources of information who are connected to novel ideas and possess sufficient interpersonal skills to exert influence on others' decision making" (Carpenter 2010). Opinion leaders have a following that can be digital, like influencers, or tangible, like a hometown priest. Those opinion leaders consume media, process it, and give audiences their interpretation of it.

The coronavirus pandemic serves as a great example for understanding two-step flow. Prior to COVID-19, most people hadn't lived through any sort of pandemic, so there was little information available on how to deal with it. In the early stages the CDC promoted social distancing and facemasks, and when vaccines became available the CDC urged people to get vaccinated for their safety and the safety of others. In theory, it makes sense for people to follow the CDC's guidelines. However, that's not what happened in practice. The pandemic somehow became politicized and clouded with controversy, with some people protesting masks mandates as "human rights violations" and vaccine requirements as control tactics from the government. To fight misinformation, the CDC used a variety of tactics, including those leveraged by the two step flow theory of communication.

Influencers are a contemporary example of opinion leaders. They create content within a particular niche and have a following that considers them credible in a certain topic. For example, Anthony Fantano's "The Needle Drop" music channel has more than 2,500,000 subscribers on YouTube and is considered a good source for music content.

PR Daily states that "91% of people between 16 and 24 in the U.S. and U.K. credited influencers with motivating their purchase behavior." The CDC took advantage of this and got celebrities, influencers, and professionals to spread information on precautions and safety measures. Steve Martin and Martha Stewart both spoke out in favor of getting vaccinated. Joe Biden and Kamala Harris hosted the press for their vaccination so everyone could not only hear it, but also see it. The White House also launched a "We Can Do This: Live" campaign, which was aimed towards younger Americans and relied on using celebrities through social media, which proves two-step flow theory's effectiveness (Berkeley, 2021).

V. Poster Explanation

This is a poster that educates people on the knowledge gap theory and encourages staying informed and educating yourself on the COVID-19 vaccine, therefore encouraging the vaccine. The two maps on the poster represent the percentage of college graduates per state and the percentage of people who have a completed primary series of the COVID-19 vaccine. By looking at the map, it is noticeable that there is a strong correlation between the two graphs, as people who have a higher level of education are more likely to make more educated decisions leading to a higher vaccination rate. The poster encourages people to stay informed by listening to reputable sources when making their decisions regarding the COVID-19 vaccination. For poster image, refer to Appendix for Figure 1.

VI. Solution

Mass media plays a big role in the lives of people. Although the media can play a negative role in how people perceive coronavirus vaccines, it can also play a positive role for the vaccine as well. In regards to the knowledge gap theory and the two step flow theory, education is the solution.

Many different trends have occurred on social media that have had a positive impact as they have educated society. The ALS ice bucket challenge in 2014 raised $115 million in donations. The Black Lives Matter Movement created the #BlackLivesMatter which took off and was used “nearly 30 million times on Twitter” which helped “organize, mobilize, and improve its visibility, eventually becoming an organization with more than 40 chapters” (Maryville University, 2020). Media platforms, such as Twitter, have a major impact on education, as they provide professionals in different fields with a platform they can use to educate people

(University of Arizona Global Campus, 2021). Andrew Campbell is an educator who blogs about technology in the classroom and Steven W. Anderson is the Director of Instructional Technology for the Winston-Salem/Forsyth County Schools in Winston-Salem, NC, who blogs about the "web 2.0 connected classroom" (University of Arizona Global Campus, 2021). These blogs created by professionals have helped properly educate society. Professionals recommend that when you do come across information in the media, you educate yourself and fact check. "Assess the provenance, credibility and authority of the source" before believing what you read on the internet and always double check (Gersema, 2020). Those who have a higher socioeconomic status tend to have a better ability to acquire information making them more educated. To close that knowledge gap we need to increase education rates across the country, which, if done right, can be aided by the media. We also need to be aware of the two step flow theory, and acknowledge that although the media can encourage education we need to be wise and double check that information we are receiving online.

VII. Conclusion

With the outbreak of coronavirus, the strong debate of the media occurred towards this pandemic. The global impact of covid has captured global attention and is being discussed by everyone, from national leaders to celebrities. Public's ideas towards covid and their perceptions of whether they should accept covid vaccine will be affected by their academic qualifications and knowledge reserve. The mass media and opinion leaders on the internet will also affect people's thoughts and perceptions towards covid and vaccination. The decisions of whether people are willing to accept vaccinations or not should be considered carefully after learning more about relevant information online and finishing fact check, instead of blindly following influencers and misinformation.

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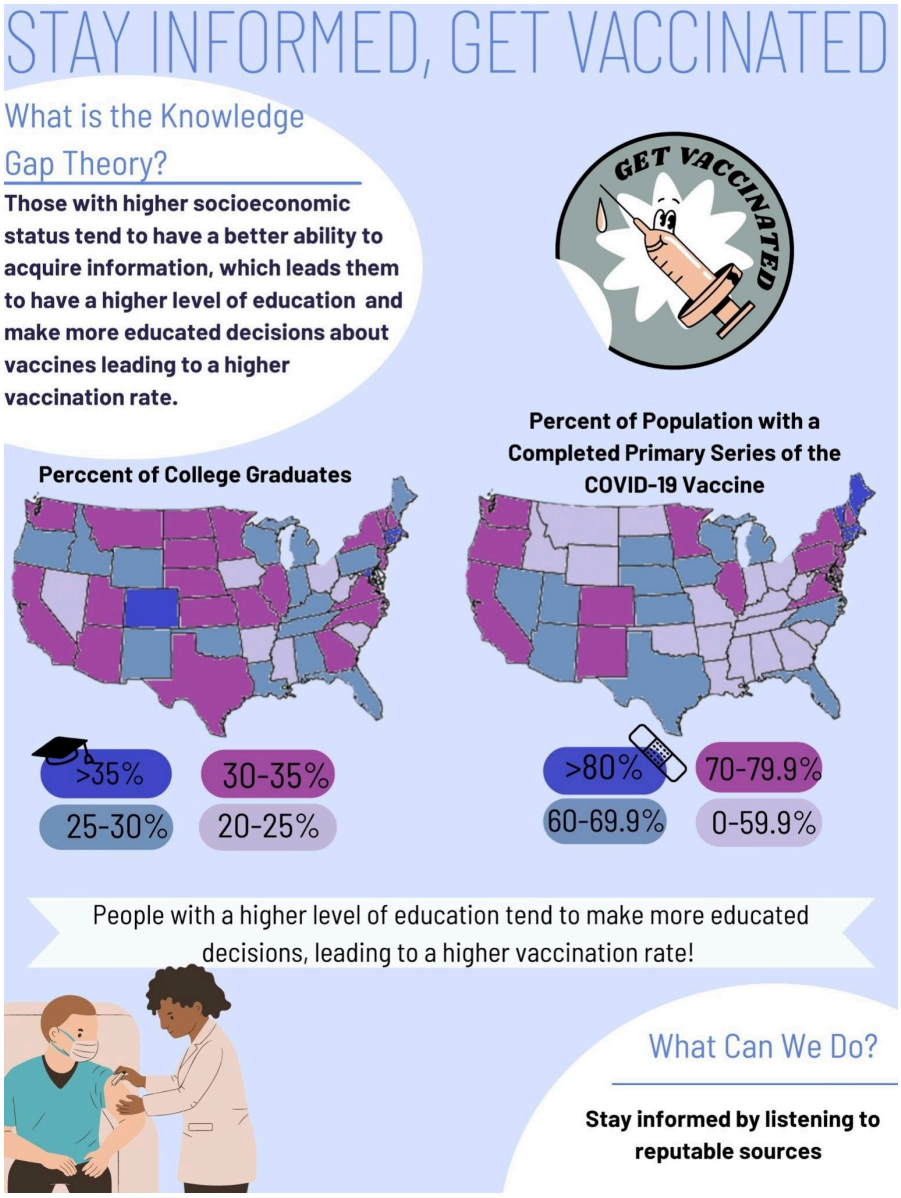
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IX. Appendix

Figure 1

The Knowledge Gap Theory in Regards to the COVID-19 Vaccine



Note. Data is gathered from multiple sources. Centers for Disease Control and Prevention (2022, November 8). *Maps of COVID-19 Vaccinations by Age and Sex Over Time.*

https://covid.cdc.gov/covid-data-tracker/#vaccination-demographics-maps and Dhillon, K. *Blue States Barack Obama Won In 2012 Are More Educated Than Red States*. Time. https://time.com/101697/blue-states-barack-obama-won-in-2012-are-more-educated-than-red-states/