University of Mary Washington

Eagle Scholar

Student Research Submissions

Spring 4-28-2023

Get the Jab or Else: Examining the role of Fear Appeals in the Herman Cain Award subreddit using Protection Motivation Theory

Julia May

Follow this and additional works at: https://scholar.umw.edu/student_research

Part of the Health Communication Commons

Introduction

When the COVID-19 vaccine was released in August of 2021, it seemed that the horrors of the past year and a half would be over. Nevertheless, the world soon saw that they had only just begun. Now, almost two years later, we have faced new variants, booster shots, and the adamant refusal by many to receive a vaccine. COVID-19 has become new influenza, a virus that some will choose to ignore and likely face consequences, while others vaccinate for precaution every year. In the Fall of 2021, I discovered a Reddit subreddit known to users as "The Herman Cain Award" or "HCA." This was created to encourage unvaccinated users to get vaccinated through fear appeals. These appeals were cultivated by the persistent posts on the subreddit, which portrayed those who refused to get vaccinated and ultimately met their untimely demise. In this paper, I advance the findings from my previous research, in which I determined that the subreddit effectively appealed to the fear of unvaccinated users, convincing them to get vaccinated through the anonymity, influx, and straightforward tone present in the posts on the main forum. In advancing my findings, I examine the Immunized to Prevent Award (IPA) section of the subreddit using Protection Motivation Theory to understand the shift in motivations of those who were previously unvaccinated to receive the vaccine. I argue that the perceived level of threat and coping appraisal among the subreddit's Immunized to Prevent Award section will positively predict their protection motivation to get vaccinated against COVID-19. Specifically, users who perceive a high level of threat from COVID-19 and perceive the COVID-19 vaccine as an effective coping strategy will be more motivated to get vaccinated than those who

perceive a lower threat level and/or do not believe the vaccine is an effective coping strategy.

Literature Review

Extensive research has been conducted on how people behave when under threat, whether that be an injury, environmental hazards, protection of others, or, more recently, COVID-19. Several theories have attempted to define the parameters for how "protective behaviors are initiated or maintained" (Floyd et al., 2000, p. 408). The four main theories regularly used since the early 2000s are the Health Belief Model, the Theory of Reasoned Action, the Subjective Expected Utility Theory, and the Protection Motivation Theory (Floyd et al., 2000). While these four theories share several similarities, such as the idea that a perceived threat and a desire to avoid the threat ultimately motivate a person to take steps to avoid the negative outcome, Protection Motivation Theory is especially unique because it includes self-efficacy as a separate component in its model.

Protection Motivation Theory (PMT) was developed by Ronald Rogers in 1975 as a way to explain how fear appeals impact health attitudes and behaviors (Floyd et al., 2000). Since its development in 1975, its use has expanded outside the health realm for issues concerning politics and the environment (Floyd et al., 2000). This theory can now practically be used for "any threat for which there is an effective recommended response that can be carried out by the individual" (Floyd et al., 2000, p. 409). This theory is organized along two cognitive mediating processes: the threat appraisal process and the coping-appraisal process (Floyd et al., 2000). Threat appraisal refers to the perceived severity and likelihood of the threat (Floyd et al., 2000). Perceived

severity refers to the individual's subjective evaluation of the threat's seriousness and involves assessing the likelihood that they will experience the negative consequences of the threat (Floyd et al., 2000). Perceived vulnerability refers to the individual's evaluation of their susceptibility to the threat. It involves assessing the likelihood that they will experience the negative consequences of the threat, including its potential consequences (Floyd et al., 2000). Together, perceived severity and perceived vulnerability influence the overall level of threat appraisal, which can lead to either a protective or maladaptive response. If individuals perceive the threat as high in severity and vulnerability, they may be more likely to take protective action. On the other hand, if they perceive the threat as low in severity or vulnerability, they may not feel motivated to take action or may engage in maladaptive coping strategies, such as denial or avoidance.

The second cognitive mediating process is the coping appraisal process, which refers to the perceived effectiveness of various coping strategies (Floyd et al., 2000). Perceived efficacy is the belief that the recommended protective action will be effective. In contrast, self-efficacy is the belief that one can perform the recommended protective action (Floyd et al., 2000). Perceived response efficacy refers to the individual's evaluation of the effectiveness of the recommended coping strategy (Floyd et al., 2000). This can involve assessing the likelihood that the coping strategy will successfully reduce or eliminate the threat. Perceived self-efficacy refers to the individual's evaluation of their ability to perform the recommended coping strategy (Floyd et al., 2000). This can involve assessing their skills, knowledge, resources, and motivation to carry out the coping strategy. Together, perceived response efficacy and self-efficacy

influence the overall level of coping appraisal, which can lead to either a protective or maladaptive response. If individuals perceive the coping strategy as effective and believe they can perform it, they may be more likely to take protective action. On the other hand, if they perceive the coping strategy as ineffective or feel they lack the ability to perform it, they may be less motivated to take action or engage in maladaptive coping strategies such as denial or avoidance.

PMT has been recognized as an effective framework for understanding and promoting vaccination behaviors. Numerous studies have examined the usefulness of PMT in understanding vaccination behavior, providing evidence for its potential in informing interventions to increase vaccine uptake. A systematic review by Brewer and Fazekas (2007) found that perceived susceptibility to and severity of HPV infection were strong predictors of vaccine acceptability, indicating that the threat appraisal component of PMT may be a useful framework for understanding HPV vaccine uptake. Similarly, Liu et al. (2016) used PMT to analyze the factors affecting Hepatitis B vaccination behavior in Chinese migrant workers. The researchers created a questionnaire to which 1684 workers from 6 different provinces responded, allowing them to collect vital information on their vaccination behaviors. The researchers found that perceived vulnerability and response efficacy were the most influential components of the PMT cognition factors for those who were already vaccinated. For those who were previously unvaccinated, they determined that perceived vulnerability and self-efficacy were the most influential components.

Beyond HPV and HB, PMT has also been used to explore influenza vaccine attitudes and behaviors. Ling et al. (2019) applied PMT to understand how it could best

be used to predict intentions to receive a seasonal vaccine for influenza. To conduct the study, the researchers conducted a cross-sectional study of 547 US residents, ultimately discovering that the findings were comparable to past research that had similarly applied PMT concerning influenza vaccination. They hypothesized that one's intention to receive an influenza vaccine would have a positive relationship with each of the components of PMT and was ultimately supported.

Furthermore, the COVID-19 pandemic has brought the issue of protection motivation to the forefront of public health discussions. Protection Motivation Theory (PMT) has been identified as an effective framework for understanding and promoting protective behaviors during pandemics. Yeom et al. (2021) conducted a study at the beginning of the pandemic on the varying issues of social distancing compliance in a community setting. They found that PMT impacts individual behavior, especially when surrounded by a vulnerable population. However, they also found that "actions to protect individual health are made within the context of economic concerns and priorities" (p. 303).

Similarly, Scholz and Freund (2021) applied PMT to understand COVID-19-related protective behaviors such as social distancing, hygiene behaviors, and adherence to recommended behaviors in case of exposure or symptoms in Switzerland. They surveyed with questions to evaluate the participant's response efficacy, self-efficacy, intentions, and risk perception. They concluded that response efficacy and self-efficacy were the most important predictors of complying with protective behaviors. In contrast, risk perceptions in the surveyed participants appeared

moderate, which meant that the general population seemed to be only moderately alert to COVID-19.

Regarding the COVID-19 vaccine, Li and Sun (2021) conducted a cross-sectional online survey of 1,000 Chinese participants to investigate the relationship between media trust, threat appraisal, coping appraisal, and vaccination motivation. The results showed that media trust had a significant positive effect on threat appraisal and coping appraisal, positively influencing vaccination motivation. In addition, the researchers found that threat appraisal had a stronger effect on vaccination motivation than coping appraisal. Eberhardt and Ling's (2022) also conducted a survey in which they recruited 568 participants aged 18-35 in Germany through social media platforms. They aimed to investigate the predictors of COVID-19 vaccination intention in younger adults using the Protection Motivation Theory (PMT). The study showed that threat and coping appraisal significantly influenced COVID-19 vaccination intention in younger adults. Specifically, threat appraisal was positively associated with vaccination intention, indicating that individuals who perceived COVID-19 as a severe and threatening disease were more likely to intend to receive the vaccine. Coping appraisal was also positively associated with vaccination intention, suggesting that individuals who believed the vaccine could effectively reduce the threat of COVID-19 were more likely to intend to receive it.

Research has also been conducted on high-risk populations, with AlHefdhi et al. (2021) focusing on COVID-19 vaccine hesitancy in pregnant women. The study used an online survey to collect data from 530 participants in Saudi Arabia, which showed that about 64% of the participants had received at least one dose of the COVID-19 vaccine,

while 36% reported vaccine hesitancy. The perceived threat of COVID-19 was a significant predictor of vaccine uptake, with those who perceived a higher threat being more likely to get vaccinated. Perceived and response efficacy were also significant predictors of vaccine uptake, indicating that those who believed in the vaccine's effectiveness and its ability to protect them were more likely to get vaccinated. In contrast, response costs were found to be a significant predictor of vaccine hesitancy, with those who perceived higher costs, such as fear of vaccine side effects, being more likely to be hesitant.

These studies all recognize the significance of fear as a key component of PMT, which ultimately plays a significant role in the motivation of individuals to take preventative measures against HPV, Influenza, and COVID-19 by increasing their perceived susceptibility to the disease, the perceived severity of the disease, and their perceived self-efficacy in taking the recommended action, such as getting vaccinated.

Method

The method that I used to conduct my research was Participant Observation. My role as a researcher was as an observer as a participant, meaning I became a forum member and observed the group interactions. I selected this method because I wanted to use a qualitative research approach, as I was examining how the participants in the "Immunized to Prevent Award (IPA)" section were responding to the fear cultivated in the "Nominated" and "Awarded" sections. In my past research, I had only studied the forum over two 45 minutes periods on two separate days. This meant that I did not have the opportunity to look in depth at any particular section of the forum, more so gain a basic knowledge of the entirety of it. To implement my current research method, I

focused on the IPA section of the forum, examining it through the framework of PMT. I made a list of questions to guide my analysis: What rules are in place in the IPA section? How much involvement has the IPA section gotten since the subreddit started? Was there a period in time when it was most active? If so, when? What are the common themes of the captions? How do they reference the subreddit as a whole? What are some of the reasons they have for getting vaccinated? Are there images? If so, what do they depict, and how do they supplement the caption?

<div align="center">**Findings**</div>

In conducting my research, I noticed that a few changes have occurred to the subreddit since I conducted my previous research on it in the Fall of 2021. First, the subreddit had gained close to 100,000 more subscribers, rising from 417,000 in the fall of 2021 to 498,000 in the spring of 2023. The moderators also changed the formatting of the subreddit. Pinned at the top of the page is now a "Daily Vent Thread," which, when you click on it, takes you to a post with several notes from the moderators, those being:

- Why is it called the Herman Cain Award?
- History of HCA Retrospective Parts 1-6
- HCA has raised over $65,000 to buy vaccines for countries that cannot afford them.
- Our swag store donates all proceeds to the Gavi Vaccine Alliance

There is also a new tab on the top of the subreddit titled "Hall of Cain," which takes you to a detailed list of public figures who have "earned" the award, stretching from early 2020 to May 2022.

In my previous paper, I examined the various rules and regulations in place on the subreddit; however, for this paper, I am only focusing on those that apply to the IPA section. To qualify for this "award" or to post in this section, the candidate must submit their post to the moderators for review, along with a photo of their vaccination card with their first dose from within the last 24 hours. The moderators also require the submission to be anonymous, so real names must be covered with the candidate's Reddit username and provide a supplemental caption with the story and reasoning behind a shift in beliefs surrounding the vaccine due to the HCA subreddit.

The most recent post in this section was from four months ago and the subreddit's 131st IPA. The post also gained much traction; 9,000 upvotes from Redditors following the subreddit and 331 comments. In terms of how this post compares in traction, having been posted close to three years after the start of the subreddit, it is consistent with the typical interaction of previous posts. The "OG IPA Recipient," from September 16, 2021, received 6,300 upvotes with 556 comments. In comparing the comments from the first post in this section to those in the most current post, I found that the general tone in both sections was benevolent and celebratory. Although the most recent post was from December, meaning that the vaccine had been available for two years before the user got vaccinated, there was very little judgment present. One user commented, "At least we're still seeing people getting vaxxed, which makes it all worth it."

September and October of 2021 received the highest number of posts. In reading through the posts, I saw a variety of different reasons for people's vaccine hesitancy ranging from those who had been pregnant or breastfeeding and were worried about

the effects of the vaccine on their newborn to others whom their family members had threatened, those who were scared of needles and those who had truly been convinced by misinformation that the vaccine was dangerous and contained heavy metals or data chips. Ultimately, what all these people had in common was they had come across the subreddit one way or another; a friend sent it to them, or they found it scrolling randomly at 2 am, or they lost someone close to them to COVID-19 and were looking for a final push to get vaccinated. Many posts referenced the severe "consequences" they realized could await them if they continued avoiding the vaccine. Others claimed that the "deaths after deaths" they saw when scrolling through the subreddit made the severity of COVID-19 finally real to them.

Another interesting reason for getting vaccinated, present on several of the posts, especially during the height of the action in the IPA section, was fear avoidance of eventually getting posted in the "Awarded" section. This language appeared as examples such as "out of this competition," "this award is one that I do not ever want," "disqualifying myself," and "I remove myself from this race."

Additionally, according to the rule of the IPA section, all posts were accompanied by an image displaying the vaccination card. While some posts simply had the card on a blank background, others posted it with their faces or an image beside their arm where they received the vaccine.

Discussion

In my previous research in the Fall of 2021, I identified three ways the forum effectively reinforced fear: the anonymity of the nominees/awardees, the influx of these posts daily, and the blunt, straightforward tone present in the captions of these posts. In

combining these findings with my current analysis of the IPA section of the subreddit, the participants in the IPA section are displaying high levels of perceived severity of the threat of COVID-19, as well as high levels of perceived vulnerability. The threat's high levels of perceived severity can be attributed to the influx of daily posts, particularly present during the height of the pandemic. As discussed in my findings, the fear expressed in the IPA came from the "death after death" appearing on their feed. This is further cultivated by the anonymity of the HCA posts on the forum, so the next post could be you as an unvaccinated individual. High levels of perceived vulnerability are cultivated through the tone of the captions on the main forum. In my previous research, I identified a common example of that tone: "Get vaccinated." This reinforces the fear that you will likely end up in the same position as the unvaccinated awardees if you aren't vaccinated. These findings were consistent with my background research on vaccines, specifically high-threat appraisals and the COVID-19 vaccine.

Regarding coping appraisal, I determined that the users in the IPA section demonstrated high levels of perceived self-efficacy and low-moderate levels of perceived response efficacy. Since all of the users in the IPA section had received the vaccine, they demonstrated that they believed that they could access the vaccine, which they did, and overcome any barriers in the process.

In my background research on perceived response efficacy and COVID-19, the consistent response would involve the belief that getting vaccinated would effectively reduce the risk of getting infected or transmitting the virus to others. However, this was not the case for many users in the IPA section. There was a collective belief that getting vaccinated would prevent them from appearing and being ridiculed on the main forum.

Many users were still very skeptical about getting the vaccine, referencing a hope that it wouldn't hurt them and showing doubts about a "man-made vaccine." These users ultimately decided to get vaccinated to protect themselves from online ridicule instead of protection from bodily harm or harm to others, which appeared as more of a sub-thought. This is particularly interesting, as in my background research, nothing represented this sort of mentality. Most of the research on fear appeals in health communication, as discussed in my previous paper, stems from appeals in mass media. Very little exists on the use and effectiveness of these appeals on social media platforms in a health sense. Furthermore, the COVID-19 pandemic is incredibly historic because it was the first pandemic to occur during the digital age.

Conclusion

Fear appeals have existed as a means of persuasion for a long time, from over 2,000 years ago in Ancient Greece. They have been used throughout history, such as political propaganda, environmental campaigns, and health communication. Despite their long existence, there is still a lot left to learn about the potential uses and effectiveness of fear appeals in different settings, namely social media platforms. In my previous research, I determined that using fear appeals in the HCA subreddit was ultimately effective in convincing previously unvaccinated individuals to take the necessary steps to get vaccinated. My current research applied PMT to the findings in my past research. In my analysis of the IPA section of HCA, I found that although the high level of threat appraisal was consistent with the findings present in my background research on vaccinations, the perceived response efficacy of the users in the IPA section was not of a belief of the effectiveness of the vaccine, but rather that in getting

the vaccine that they would prevent themselves from being posted as an awardee. Social media tremendously impacted the pandemic and how people reacted to it. This is an impact that we're only just beginning to understand and interpret. There is certainly a pressing need for further research in examining the existence of this sort of fear and the purpose that exists behind it. While this research is helpful in beginning to understand the existence of this fear in health communication, I think that participant observation alone does not completely provide a representative sample of individuals and perspectives and rather than a survey method, which is the method that several of the researchers in my background research used, could allow for a more comprehensive understanding of this topic.

Works Cited

AlHefdhi, Mahmood, S. E., Alsaeedi, M. A. I., Alwabel, H. H. A., Alshahrani, M. S.,

    Alshehri, E. Y., Alhamlan, R. A. O., & Alosaimi, M. N. (2023). COVID-19 vaccine

    uptake and hesitancy among pregnant and lactating women in Saudi Arabia.

    Vaccines (Basel), 11(2), 361. https://doi.org/10.3390/vaccines11020361

Brewer, N. T., & Fazekas, K. I. (2007). Predictors of HPV vaccine acceptability: A

    theory-informed, systematic review. *Preventive Medicine*, 45(2-3), 107-114.

    https://doi.org/10.1016/j.ypmed.2007.05.013

 Eberhardt, & Ling, J. (2022). Explaining COVID-19 vaccination intention in younger

    adults using protection motivation theory. *Health Psychology*.

    https://doi.org/10.1037/hea0001231

Floyd, D. L., Prentice-Dunn, S., & Rogers, R. W. (2000). A meta-analysis of research on

    protection motivation theory. *Journal of Applied Social Psychology*, 30(2),

    407-429. https://doi.org/10.1111/j.1559-1816.2000.tb02323.x

 Li, Z & Sun, X. (2021). Analysis of the impact of media trust on the public's motivation

    to receive future vaccinations for COVID-19 based on protection motivation

    theory. *Vaccines (Basel)*, 9(12), 1401. https://doi.org/10.3390/vaccines9121401

Ling, Kothe, E. J., & Mullan, B. A. (2019). Predicting intention to receive a seasonal

    influenza vaccination using Protection Motivation Theory. *Social Science &

    Medicine (1982)*, 233, 87–92. https://doi.org/10.1016/j.socscimed.2019.06.002

Liu, Li, Y., Wangen, K. R., Maitland, E., Nicholas, S., & Wang, J. (2016). Analysis of

    hepatitis B vaccination behavior and vaccination willingness among migrant

    workers from rural China based on protection motivation theory. *Human Vaccines*

& Immunotherapeutics, 12(5), 1155–1163.

https://doi.org/10.1080/21645515.2015.1123358

Scholz, & Freund, A. M. (2021). Determinants of protective behaviours during a

nationwide lockdown in the wake of the COVID-19 pandemic. *British Journal of*

Health Psychology, 26(3), 935–957. https://doi.org/10.1111/bjhp.12513

Yeom, Stewart, F., & Stewart, A. (2021). The impact of social distancing on community

case count in the United States: Testing the efficacy of protection motivation

theory during early stages of the COVID-19 pandemic. *Risk, Hazards & Crisis in*

Public Policy, 12(3), 303–327. https://doi.org/10.1002/rhc3.12232