



Misinformation on the HPV Vaccine on Instagram

Isabella Khan SON'22, Michaella Mancuso SON'22, Gabriella Nguyen SON'22, Hannah Pinheiro SON'22
Mentor: Melanie L. Kornides, ScD, RN, FNP-BC, School of Nursing, Department of Family and Community Health



Introduction

This annotation project focused on identifying and classifying misinformation about Human Papillomavirus (HPV) and the HPV vaccine found on Instagram, the social media platform. The study contained a collection of posts identified by a list of search terms, which dated from 2015 to 2020. Misinformation was classified in a set of predefined categories based on the information in the posts. The study expanded to also capture information in posts reflecting supportive information regarding HPV or HPV vaccination. The content analysis is still being conducted. Once completed, the findings will be compiled into a list of common themes and entered into tables for publication. One of the goals of this study is to target pro-vaccine research in order to combat the misinformation found online.

Background

Human Papilloma Virus can be spread through sexual contact including vaginal, anal, and oral sex. The virus is overwhelmingly common, infecting around 80% of people. Although most cases of HPV will clear on their own a few strains can last longer and eventually lead to genital, anal, and throat cancers in both men and women. The CDC recommends two doses of HPV vaccine be given to children at 11-12 years old and three doses for those years 15 to 45 after speaking with a health professional. The vaccine can be given to girls and was newly approved in males in 2009. Although HPV is a sexually transmitted infection, the vaccine is given to children because it is most effective before the individuals are exposed to the virus or sexually active. The vaccine has been shown to offer protection from HPV strains for around 10 years. Gardasil 9 is the only HPV vaccine licensed in America, and it has been studied in a trial with 15,000 males and females. The HPV vaccine has been continuously monitored on the market by the CDC and FDA, without evidence of causing infertility or other serious adverse reactions. However, the HPV vaccine remains highly controversial, with 51% of teens noncompliant, despite full support from both the CDC and FDA and over 12 years of safety testing.

Methods

This research took a qualitative content analysis approach on misinformation about the HPV vaccine in Instagram posts. For a post to be included in the analysis, it must:

- Be in English
- Be related to the HPV infection or vaccine (excludes posts with HPV-related hashtags but contains unrelated text)
- Have been posted in 2015 or later
- Must be available on the date of review

Only posts from 2015 and later were included because an observational study on the HPV vaccine in Youtube videos discussed the shift in tone towards the vaccine from primarily positive to primarily negative over the years since the release of the vaccine in 2006 (Ekram et al., 2019).

Prior to real data collection and coding, a codebook with potential codes was developed from a sample of Instagram posts and was refined throughout the research process. Along with the development of the codebook, REDCAP was used to generate a coding survey to collect the research data.

After coding sample data to refine the codebook and ensure reviewer agreement, a data capture tool was used to pull Instagram posts under numerous HPV vaccine-related hashtags such as:

- #hpvvaccination
- #gardasil9
- #cervarix
- #gardasilvaccine
- #hpvvax
- #hpvvaccine
- #gardasilgirls
- #gardasilboys
- #gardasilkills
- #gardasilispoison
- #gardasilinjured
- #gardasilvictim
- #gardasilalmostkilledme
- #gardasilrecovery
- #gardasilsideeffects
- #hpvvaccineeducation
- #injectingaluminum

Each Instagram post was double-coded to ensure agreement between the reviewers, especially on subjective categories.

Discussion

• Throughout many of the Instagram posts, there were a common set of hashtags that reoccurred through anti-HPV vaccine posts, including hashtags such as #gardasilgirls, #gardasilispoison, #vaccineinjured.

• Some common misinformation conspiracy theories that posts included were Toxic Ingredients, Denies Safety of the Vaccine, and Denies Effectiveness of the Vaccine.

• There were common users that posted frequently about the negative side effects or health outcomes, often in the form of a personal narrative, as a result of receiving the HPV vaccine.

• A strength of this project is that since posts were double-coded, there is a higher ability to have agreement among the information in the posts.

• A limitation on this project is that any posts not in English were excluded, therefore some posts that included information on HPV or the HPV vaccine could not be used as a result of the possibility of misinterpreting posts after translations.

• As a result of time constraints, the data set is not complete, and the project is ongoing.

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