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Letter to the editor

Disparity in Public Perception of Pfizer and Moderna COVID-19 Vaccines on TikTok



Given the fact that the consequences of the COVID-19 pandemic reach far beyond the physical, we decided to explore the potential psychological influence of COVID-19 vaccine misinformation propagation among adolescents on TikTok, a widely used social media platform.

TikTok is immensely popular, having over a billion international active accounts, with almost a third of its users being classified as adolescents [1,2]. Providing its users with an instantaneous capacity to create and share videos, TikTok harbors an enormous ability to facilitate the spread of information. Unfortunately, misinformation is a byproduct of this huge amount of information spread. With such large outreach, TikTok has a responsibility to provide its users with accurate information, especially regarding potentially contentious domains of public health information related to the COVID-19 pandemic.

The Pfizer and Moderna COVID-19 vaccines have demonstrated the ability to reduce hospitalization rates for fully vaccinated individuals by nearly 95% [3]. Despite the amalgamation of robust empirical data supporting their efficacy, public perception of the vaccines, especially among adolescents, is more precarious than many would presume [4].

Public perception of the vaccines on TikTok was quantified by categorizing comments from videos under popular “hashtags.” Using the search function under both “#Pfizer” and “#Moderna,” the 100 “most liked” videos under each “hashtag” were chosen for analysis. For each video, the 10 “most liked” comments were categorized, yielding a total of 2,000 comments. These comments, using predetermined standards for categorization elucidated in Table 1, were labeled as positive, negative, or neutral.

Based on the observed results, it is evident that, among TikTok users, there is a significant disparity between the public perception of the Pfizer and Moderna COVID-19 vaccines. Given the empirical similarities between the vaccines and their efficacy, this disparity is both unexpected and concerning. Fortunately, there are steps that can be taken to attenuate not only misinformation propagation but adolescent vaccine hesitancy as a whole. Better knowledge of vaccine-preventable diseases and higher confidence in vaccines overall both demonstrated a positive relationship with adolescents’ vaccine uptake [5]. These trends should be considered in order to plan specific interventions for the promotion of vaccination among adolescents. We are optimistic that these types of interventions could lessen the psychological burden of the pandemic on children and adolescents and eventually lead to increased vaccination rates.

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Table 1
 “#Pfizer” and “#Moderna” comment categorization

Comment category	Pfizer	Moderna
Positive ^a	20.6%	56.8%
Neutral ^b	35.2%	14.4%
Negative ^c	44.2%	28.8%

^a Comments displaying clear and easily discernible optimism, praise, confidence, and/or pragmatism toward the specified vaccine were assigned to this category.

^b Comments that did not display clear or easily discernible bias regarding the specified vaccine were assigned to this category.

^c Comments displaying clear and easily discernible pessimism, scorn, disdain, and/or sarcasm toward the specified vaccine were assigned to this category.

References

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