

Introduction

In the fight against the COVID-19 pandemic, vaccines have emerged as a critical tool in mitigating the spread and severity of disease. Central to this effort is the vaccination of children, which is heavily influenced by the attitudes of their caregivers. COVID-19 pediatric vaccine hesitancy has proven to be a major hindrance to its delivery, thus, identifying and addressing caregiver concerns is crucial to improving vaccine uptake. Vaccine hesitancy is not uniform across racial and ethnic groups, reflecting a complex interplay of cultural, historical, and socioeconomic factors. Studies on Black, Spanish-speaking, and rural white communities in the US have shown increased parental COVID-19 vaccine hesitancy¹. Additionally, parental vaccine hesitancy has been found to be significantly associated with lower education level, lower household income, and the absence of personal COVID-19 vaccination². Prior studies have demonstrated hesitancy stemming from concerns of vaccine safety, limited long-term data on side effects, rushed vaccine development, inconsistent recommendations from healthcare professionals, and lower morbidity and mortality rates associated with COVID-19 related illness in children³. Additionally, misinformation, particularly through social media, has contributed significantly to parental vaccine hesitancy. Parents expressing hesitancy have often been found to rely on anecdotal evidence and narrative accounts encountered on social platforms, unlike their more confident counterparts who seek information from public health agencies (FDA, CDC) and healthcare providers⁴. Recognizing these barriers to vaccine acceptance opens pathways to address them directly. This research project aimed to deepen our understanding of the factors fueling parental vaccine hesitancy, by examining the influence of parental demographic characteristics, the impact of social media, and perceptions about vaccine efficacy and safety.

Methods

This was a cross-sectional research study completed at the Crozer-Chester Medical Center Pediatric Primary Care office to investigate factors contributing to COVID-19 vaccine hesitancy among caregivers of pediatric patients. The study utilized a comprehensive 19-question COVID-19 Vaccination Hesitancy survey tailored to address the primary objectives. Questions covered a range of topics including demographics, parental COVID-19 vaccination status, social media usage, and attitudes towards vaccination. 262 caregivers accompanying healthy children aged 5-18 for well child checks were recruited. Descriptive statistics were utilized to analyze demographic data. Multivariate regression analysis was conducted to examine the relationships between independent and dependent variables, controlling for relevant demographic factors. Analyses were performed using the R statistical software package (R Core Team, Vienna, Austria). The significance level was set at $p < 0.05$.

Results

The study identified statistically significant positive associations between child vaccination status and caregiver age, vaccination status, and social media use ($p < 0.0001$ for all). No

significant associations were observed between caregiver gender, race, or education level and child vaccination status. Caregivers' primary reasons for not vaccinating their children included concern for potential long-term side effects (35.9%), distrust in the vaccine (14.9%), procrastination (14.2%), rapid vaccine development (11.7%), and child reluctance to get vaccinated (11.3%). They reported greater comfort in vaccinating if there was evidence of an absence of long-term side effects (26.2%), at their child's insistence (8.9%), by school requirement (7.4%), if they received trusted answers to questions (6.4%), or by doctor recommendation (5%).

Conclusion

This study's findings illuminate several aspects of COVID-19 vaccine hesitancy among caregivers, indicating a multifaceted challenge influenced by demographics and information sources. A statistically significant association was identified between caregiver vaccination status and child vaccination status, with vaccinated caregivers being more likely to vaccinate their children. For caregivers of unvaccinated children, hesitancy largely stemmed from concerns of long-term side effects of the vaccine, mistrust, and concerns that it was made available too quickly. This highlights the need for clear information about vaccine safety, efficacy, and long-term side effects, made easily available and shared from trusted sources, such as healthcare providers. Additionally, both social media and caregiver age were found to play statistically significant roles in child vaccination status. These findings reveal the profound role social media plays in vaccination decision-making and more broadly, public health, and emphasizes the importance of disseminating scientifically-accurate, credible information on these platforms.

Citations

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