Review Article

# Combating Vaccine Hesitancy in the Philippines: Bridging the Gap Through Visual Communication and Education

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## ABSTRACT

In recent years, data has shown a growth in vaccine hesitancy for families in the Philippines, specifically in regards to the Dengue and COVID-19 immunizations for children. While vaccines remain widely available, strained health systems, poverty, lack of resources, and limited access to health education and functional literacy hinder under-resourced families from understanding and trusting essential childhood vaccinations. In low-income countries where there is a high percentage of people with low literacy rates, visual aids in health education have been proven beneficial by improving health communication and decision-making. This paper examines the roots of vaccine hesitancy in the Philippines, highlighting educational shortcomings, misinformation, and cultural perceptions, and how this can be improved with the use of visual aids.

**Keywords:** Childhood Immunizations; Philippines; Global Health; Dengue Vaccine; Vaccines

## INTRODUCTION

Childhood immunization is critical in low- and middle-income countries like the Philippines, where the rapid spread of infectious diseases in densely populated, poverty-stricken areas is a serious public health risk. The Philippines' Childhood Immunization Schedule, which includes vaccines for measles, polio, and other pressing diseases, is based on the latest scientific data and research. *Figure 1* illustrates the national immunization schedule, demonstrating the urgency for vaccines among infants (1). However, despite the availability of these routine vaccinations for children ages 0-1 that are administered in local barangays (small territorial or administrative districts), UNICEF reports a 25% decline in public trust for vaccines since the pandemic (2). This decline poses a significant public health threat as it may result in lower vaccination rates and potential outbreaks of preventable diseases. This paper explores the cultural and systemic roots of vaccine hesitancy in the Philippines, focusing on low health literacy and past controversies, and proposes the use of visual communication tools.

### Reasons for increased vaccine hesitancy

The increasing vaccine hesitancy can be attributed to a combination of social trauma, cultural factors, misleading information, and doubts stemming from past vaccinations (3). Among these factors, the cultural mindset, stemming from an expression of Catholic

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values, of "*bahala na*" – translated to "*whatever happens, happens*" – often leads to individuals underestimating their risk of illness and overestimating their overall health, diminishing the perceived need for vaccination (4). For example, during the COVID-19 pandemic, this mindset led many Filipino adults to underestimate their risk of illness and resist immunizations, partly due to a persisting distrust in vaccines. This distrust was exacerbated by the 2017 Dengvaxia controversy, where it was revealed that the vaccine increased the risk for an extremely severe form of the disease (5). This controversy not only highlighted gaps in public health communication but also intensified public mistrust, as many felt misled by health authorities. This controversy continues to fuel public mistrust, a situation only compounded by low health literacy and comprehension across the Philippine educational system. This is rooted in two types of literacy: basic literacy - the ability to read and write - and the ability to contextualize society.

Despite high literacy rates in the Philippines, ranging from 97.89% to 99.27% over the past decade, these numbers primarily reflect the ability to read and write basic statements about daily life rather than functional literacy, or the deeper comprehension skills necessary for understanding complex information (6). In fact, over 90% of children still struggle with reading comprehension, meaning many lack the deeper skills essential to understanding critical and complex information (7). Given that 51.5% of adults demonstrate low health literacy, this poses a significant challenge to public health, as many struggle to comprehend health information such as vaccine schedules, medical instructions, and preventable health measures (8).

**The educational system affects comprehension**

These challenges are tightly linked to systemic issues in the Philippine educational system. Unlike better-funded private schools, public schools struggle with insufficient resources, directly impacting the development of critical thinking skills; this leads many more to be susceptible to misinformation surrounding vaccines. The Philippines uses 3.6% of its Gross Domestic Product (GDP) on education compared to the United States, which uses 5.44%, meaning that public school teachers earn an average of only 25,000₱/month ($444.45) (9-11). The low salaries of public school teachers contribute to large class sizes and a lack of educational resources, making it difficult to teach skills beyond fundamental reading, writing, and arithmetic. Consequently, instruction tends to skip comprehension and application learning. These educational shortcomings are reflected in the Philippines' last-place ranking in the PISA (Program for International Student Assessment) exam, where students are tested on reading comprehension necessary for civic participation,

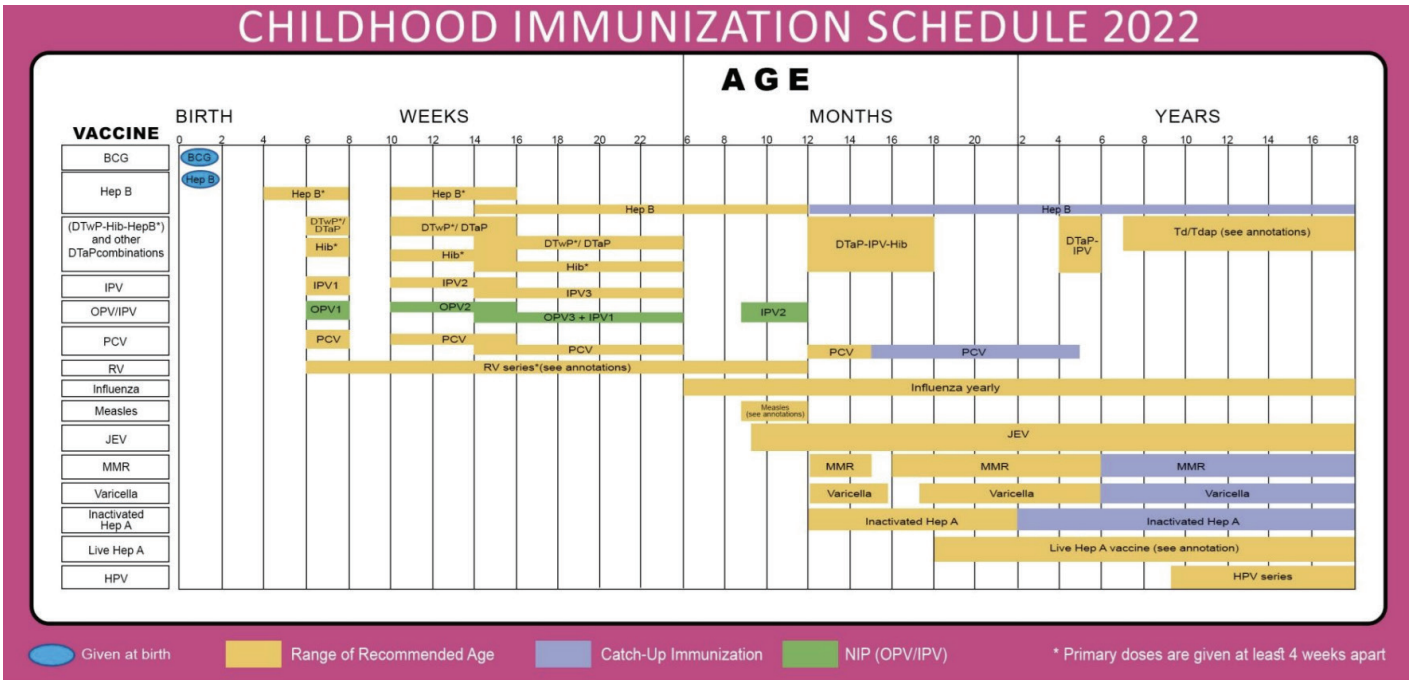


**Figure 1.** Philippines childhood immunization schedule (@ the Philippine Foundation for Vaccination)

including healthcare decisions (12). Along with the underfunded educational system, as many as 5 million Filipino children are still living in poverty, and 18.6% of children are not attending school, further hindering the development of comprehension skills (13).

**Visual aids in public health**

Given the country's struggles with health literacy, visual communication tools are a powerful resource in bridging information gaps. Visual aids have been effectively utilized in public health campaigns in the Philippines and have been pivotal in educating individuals on preventing highly contagious diseases. For example, during the COVID-19 pandemic, a Facebook page called "Family Smarts Keep COVID Away" was launched, gaining over 160 million followers by presenting information in simple and culturally relevant visual forms (14). This campaign communicated critical prevention measures – such as handwashing, social distancing, and mask-wearing – through a conversational and visual manner, encouraging families to make critical health-related decisions. *Figure 2* shows the Family Smarts visual campaign, demonstrating how culturally tailored visuals can effectively promote mask-wearing, handwashing, and social distancing (14). Public health campaigns with visual aids are essential in the Philippines, where health literacy is below average, as they make complex health concepts – such as safety and disease progression – more accessible even for those with limited access to critical thinking education.

Similarly to the Philippines, India struggles with high poverty rates, as well as an underlying issue of comprehension, with 60.4% of individuals demonstrating low health literacy levels (15). However, there have been many successful signage campaigns that play a crucial role in simply conveying important information. For example, India was certified polio-free in 2014, by virtue of a polio eradication campaign that used signage to not only inform citizens about polio vaccination camps but also to guide parents to get their children vaccinated (16). While India successfully eradicated polio, the Philippines' additional challenges to public health literacy and management were highlighted by the COVID-19 pandemic, which included the spread of misinformation. Although both countries continue to grapple with this underlying issue, India's successful polio eradication serves as a powerful example of what can be achieved for the future of the Philippines. Incorporating similar visual strategies into the Philippine context can strengthen the country's capacity to reduce vaccine hesitancy and improve health outcomes.

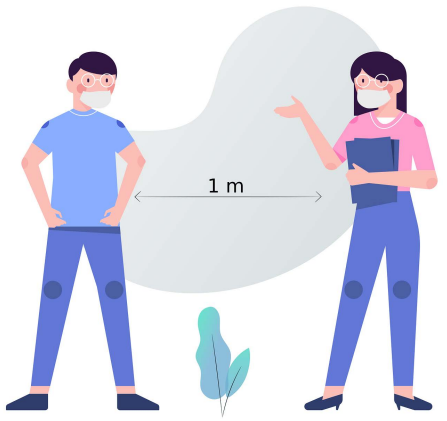


**Figure 2.** Family Smarts Keeps COVID away campaign (illustration).

## CONCLUSION

Visual aids can bridge the knowledge gap by simplifying health information, being culturally tailored, and making it more accessible to people with low literacy. By using visuals for information, the need for high literacy rates to disseminate critical information is lessened. To address vaccine hesitancy in the Philippines, both now and in the future, a strong effort should be made to utilize visual aids to rebuild trust in the public health department. Visual aids can effectively counter misinformation by presenting accurate and simple information about vaccine safety.

However, though a powerful tool, there are limitations, such as unequal access to digital infrastructure, making it difficult for these aids to reach rural or under-resourced communities. Additionally, visuals that are not carefully designed could potentially lead to a misinterpretation or rejection. Lastly, the long-term effectiveness of these visuals heavily relies on sustained government support, which would require significant coordination and investment.

To ensure a long-term impact, visual aids should be implemented alongside broader systemic efforts. This can be achieved through national public health campaigns, specifically in conjunction with educational reforms, which together can create a more informed and health-conscious society. By tailoring these visual aids to reflect cultural context and delivering them through national public health campaigns, it can effectively reach communities that are otherwise skeptical of vaccines. In addition, by focusing on critical thinking skills in schools, future generations will be able to understand complex health problems, ultimately resulting in an overall increased health literacy rate.

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## DECLARATION OF CONFLICT OF INTEREST

The author declares that there are no conflicts of interest regarding the publication of this article.

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