



Reducing Vaccine Hesitancy in the Philippines

Findings from a Survey Experiment

Executive Summary



- **Vaccine hesitancy is high in the Philippines.** A series of nationwide surveys shows that Filipinos are hesitant to receive COVID-19 vaccines, with almost half of Filipinos not willing or unsure whether they should be vaccinated. The level of hesitancy is higher in the Philippines compared with other countries in the region.
- **Several factors related to information are among the reasons for hesitancy.** Lack of information about vaccines, misinformation about their efficacy or side effects, mistrust, and underestimation of benefits compared to overestimation of risks and costs of vaccination, are among the potential reasons.
- **A survey experiment was carried out, building on a nationwide phone survey, to investigate the underlying factors and identify potentially impactful interventions for improving vaccine acceptance.** As part of the overall monitoring survey, respondents reported whether they had already received the vaccine and were planning to get vaccinated if they had not received it yet. Those who were not vaccinated yet were then invited to participate in the experiment, after which they were asked again about their vaccine acceptance.
- **In the experiment, over 1,800 nationally representative respondents who were unvaccinated, were randomly distributed across the following groups:**
 - o **Control Group (placebo):** respondents were asked to think about a song while washing their hands thoroughly.
 - o **Reverse Endorsement:** respondents were asked to select Filipino celebrities who could make vaccine endorsements.
 - o **Simplified information:** respondents were reminded that regardless of vaccine brands, the vaccine helps reduce severe symptoms and protect frontline health workers.
 - o **Personal Benefit – events missed:** respondents were asked to think about events or occasions that they missed due to COVID-19 and which they looked forward to.
 - o **Social Benefit – protection for others:** respondents were asked to think about people that they would like to protect through vaccination.
- **The results show that highlighting personal and social benefits of vaccination had a significant impact on reducing vaccine hesitancy and increasing vaccine acceptance by almost 15 percent.** The results hold regardless of vaccine brands, even though initial vaccine hesitancy varies by the brand. The impact was greater among those who were unsure about vaccination. In addition, reminding them about protecting their families, particularly if articulated by a popular celebrity, appeared effective.
- **This suggests that communication campaigns that highlight the potential benefits of herd immunity and vaccines by emphasizing the prospect of holding family gatherings again and protecting families** can significantly reduce vaccine hesitancy in the country.

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I. Introduction

Inoculating a high share of the population to achieve herd immunity seems to be the best way to fight COVID-19. One of the biggest challenges in this approach is vaccine hesitancy, which compounds vaccine availability and efficacy issues. Vaccine hesitancy--the reluctance, refusal, or deferment of vaccination--comes from multiple factors, such as fear of side effects, concerns on vaccine effectiveness, perception that vaccination causes inconvenience, and complacency. While the current vaccination challenge in the Philippines appears to be driven by supply issues, as the vaccination rate is moving up, the country will soon need to tackle vaccine hesitancy at scale.

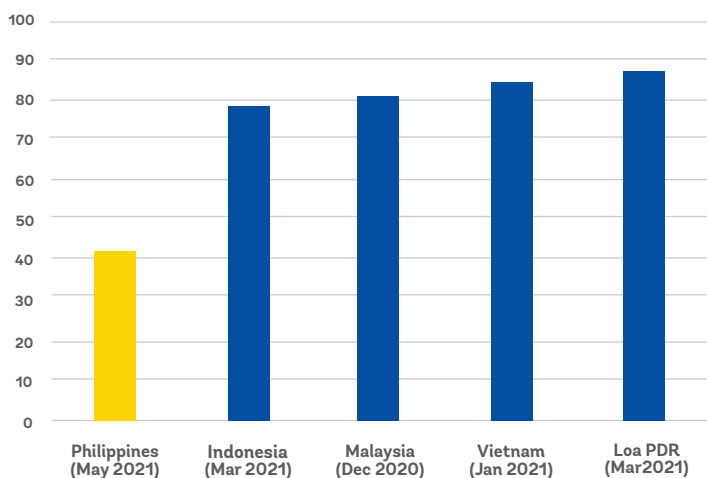
This policy note aims to inform effective information campaigns and interventions to address vaccine hesitancy based on a survey experiment backed by behavioral science. The results suggest that interventions designed to make individuals reflect on events and activities they look forward to, and people that they would like to protect, appear to be effective in reducing vaccine hesitancy. Such interventions are promising, particularly for those who are unsure about getting vaccinated. This finding holds regardless of the vaccine brands and their efficacy levels. The findings suggest that the focus of information and persuasive communication strategies can appeal more to people's 'emotions' by cognitively affecting the individuals' costs and benefits calculation of vaccinations. Such an approach can complement typical vaccine campaigns that focus on delivering 'knowledge' and addressing information gaps with comparisons of different vaccine brands, availability, and efficacy.

II. Vaccine Hesitancy

Vaccine hesitancy is not unique in the Philippines, but the level of hesitancy in the country is higher than other countries (Figure 1). The World Bank's High Frequency Monitoring (HFM) Surveys, conducted in multiple countries at various time periods, suggest that the share of respondents who "will get vaccine when it becomes available" is significantly lower in the Philippines than other countries in the region. This observation is consistent across other surveys even though slightly different indicators are used. For instance, the Global COVID-19 Trends and Impact Survey¹ shows a similar picture of greater vaccine hesitancy in the Philippines than in neighboring countries.

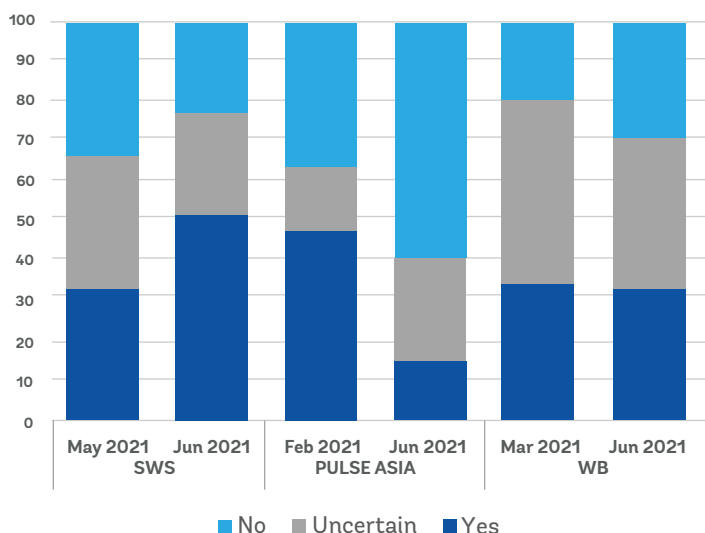
Level of hesitancy and trends over time varies by survey (Figure 2). In June 2021, according to the nationwide Social Weather Station (SWS) survey, one out of four respondents was uncertain whether to get vaccinated or not, in addition to close to 20 percent of those who outright said no to the vaccines. The results are not very different from the World Bank survey, whereas Pulse Asia finds significantly higher hesitancy. Some argue that vaccine hesitancy is diminishing in part due to fears about new variants of the virus and potential limitations of economic activities and prolonged quarantine measures. Others observe increasing hesitancy among those who have not been vaccinated yet. The bottom line is that quite a significant level of hesitancy still exists in the country even though the exact share may vary.

Figure 1. Share of respondents willing to receive vaccines



Source: World Bank High Frequency Monitoring Survey

Figure 2. Willingness to receive vaccines over time by survey



¹ Survey and results are available at: <https://covidmap.umd.edu/>

To inform policy measures in effectively combatting vaccine hesitancy, a survey experiment that built on the HFM nationwide phone survey² was conducted from May 7 to June 4, 2021. The final sample included data of 2,122 observations, and results were weighted to be nationally representative. Respondents were asked about their willingness to receive vaccines as part of the overall survey that asks various aspects of life under COVID-19 such as their employment and income status, health care behavior, food security, and safety net and coping mechanisms. After the regular part of the survey, a survey experiment on vaccine hesitancy was carried out, and at the end of the experiment, respondents were asked again about their willingness to receive vaccines. Although the entire process was carried out by phone, the survey experiment was conducted in a way that respondents were asked to reflect and articulate their thoughts on certain issues as if it were an open and interactive conversation.

At the time of the survey, about 10 percent of respondents reported having received at least one dose of a COVID-19 vaccine. Out of the remaining respondents who had not received the vaccine, only a little over 40 percent of respondents said they had plans to be vaccinated, whereas about 28 percent were unsure, and another 29 percent were not planning to get vaccinated. The main concerns about vaccines were their side effects (59 percent) and safety (24 percent).

The willingness to get vaccinated varies by the characteristics of respondents. Individuals with some college education, internet access, and elderly relatives residing with them were more likely to express willingness. Also notable is that vaccine hesitancy is higher among lower income households. For instance, over 35 percent of respondents from the lowest income quintile express hesitancy, but the share drops to below 25 percent for the highest two quintiles. Urban respondents tend to have better vaccine acceptance than their rural counterparts, and having relatives who have been vaccinated or expressing skepticism toward the government's timely response to the pandemic crisis was also positively correlated to the greater willingness for vaccination. It is interesting to note that vaccine hesitancy was significantly more prevalent among women than men (33 percent for women versus 22 percent for men). As will be discussed in this study, the willingness to get vaccinated varies with the vaccine brand.

III. Design of Survey Experiments

There are three potential reasons for vaccine hesitancy: (i) individuals may not have access to sufficient information about vaccines; (ii) even when necessary information is widely available, individuals may not fully trust the information or the authority based on their prior experience (Mendoza et al. 2021); and (iii) even when information is available and trusted, individuals may incorrectly assess the relative benefits of vaccines by overestimating risks and underestimating benefits. Given that much of social media and information campaigns focus on disseminating relevant information about vaccines, this experiment focuses on tackling mistrust and addressing cognitive bias toward benefits and risks assessment.

For the survey experiments, the respondents were randomly assigned to five groups.

- **The Control Group** received a placebo treatment where respondents were asked about hand-washing practices. The question is related to COVID-19 but not with the vaccines.



Many countries have used popular songs to indicate the length of time for proper hand-washing to help stop the spread of viruses. For example, singing the Happy Birthday song to meet the 20-second-rule. What would you suggest as the Filipino version of such a song? I'll read you a list of choices, and you can also let me know if you think of a different song.

- **In Reverse Endorsement**, mistrust was tackled by asking the respondents to think of someone who could endorse and exert positive influence on the vaccination campaign. Respondents were reminded of Filipino celebrities, but the intention was not to vote for their celebrity of choice, but to think about reinforcement messages on vaccines coming from the person of trust.



There are many celebrities in other countries who volunteer to have their vaccinations broadcast on TV to endorse the vaccine. Whose vaccination would you want to see aired on TV to encourage other people to get vaccinated in our country? I will read to you a list of Filipino celebrities who have been very supportive of COVID efforts, please choose from this list.

²This is building on the 3rd round of the World Bank's High Frequency Monitoring Survey for households. See the background and methodology of the survey at: <https://www.worldbank.org/en/country/philippines/brief/monitoring-covid-19-impacts-on-firms-and-families-in-the-philippines>

- **In Simplified Information**, respondents were reminded that regardless of vaccine brands, vaccines are effective in providing protection for individuals, especially frontline workers, from the worst symptoms of COVID-19.



Do you know any doctors, nurses, medical personnel, or anyone that works in a hospital? Doctors, nurses, and hospital workers are at high risk and hospitals have been pushed to capacity. One thing they say will help is if enough people get vaccinated. This is because even though there are differences in the vaccines approved for use in the Philippines, they are all effective in protecting you from the worst symptoms of COVID—the ones that can lead to hospitalization. So all vaccines can help our hospitals.

- **In Personal Benefit**, the benefits of vaccination to the individual were highlighted by prompting the respondents to think about activities that they look forward to when life returns to normal.



As more people become vaccinated in our country, we expect that we will be able to gradually return to normal life. Some people are looking forward to family reunions, celebrations, or simply being able to gather together. What are you looking forward to the most?

- **In Social Benefit**, respondents were reminded of the social benefits of vaccination by asking them to identify who they want to protect and who they think about when making the decision to be vaccinated.



This past year, we've made a lot of sacrifices and we've changed so many things about the way we live our lives. We've worn masks. We stopped shaking hands and greeting people with a kiss, and now we are being asked to get vaccinated to protect our communities. People have said that they're choosing to be vaccinated for their kids, grandparents, neighbors or elderly relatives who are at risk, or their friends and family members who are frontline workers. When you're making your decision about whether to be vaccinated, who do you think about? Who do you want to protect?

At the end of the experiment, respondents were asked again about their vaccine acceptance about all five vaccine brands available in the Philippines at the time of the survey. The order of vaccine brands asked was randomized so there is no bias introduced due to the order. This was intended to help researchers dissociate the effects of intervention by vaccine brand.

IV. Results and Implications

All treatments had a positive impact in reducing vaccine hesitancy regardless of the indicators used: number of vaccine brands and willingness to be vaccinated.³ However, the strongest impact was among the groups that were reminded of the Personal Benefit and Social Benefit of vaccination.⁴ Activities that people looked forward to the most post-pandemic included spending time with families, followed by celebrations (Figure 3). Many respondents expressed a strong desire to protect children and grandchildren as well as parents and grandparents (Figure 4).

Figure 3. Activities that respondents looked forward to the most

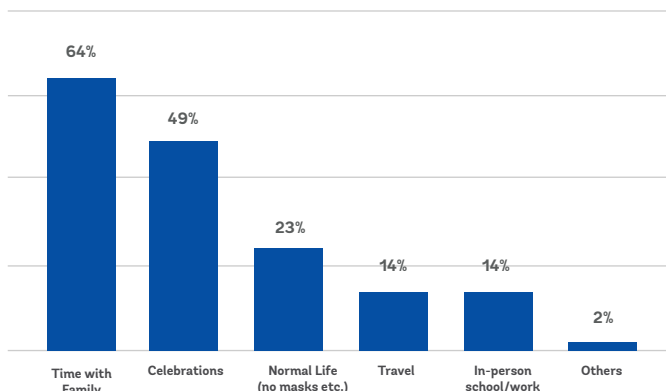
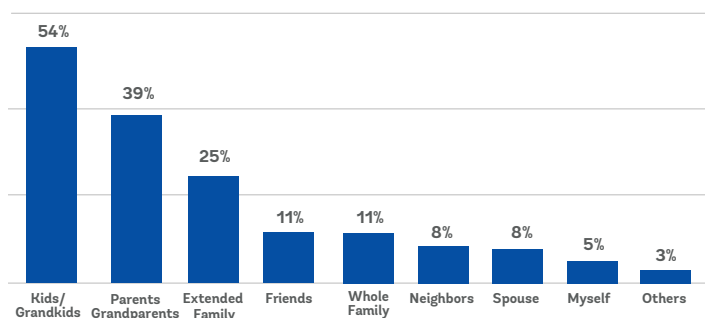


Figure 4. People that respondents would like to protect



³ The overall number of vaccines respondents are willing to be vaccinated with increases by 0.241 (p-value=0.004) from the control group mean of 2.72.

⁴ The point estimates of the Personal Benefit and Social Benefit groups are 0.42 and 0.24, respectively.

After being reminded of the personal benefits and social benefits of vaccination, respondents were around 15 percent more likely to report a willingness to get vaccinated compared with the control group. The role of these interventions in reducing hesitancy was particularly strong among those who were hesitant and unsure at the baseline (i.e., prior to being exposed to the survey experiment). There was a slight difference in the magnitude of the impact across vaccine brands, but no strong variations were observed across gender, education level, internet access, and income levels.

The results suggest that highlighting personal and social benefits, specifically the opportunity to hold gatherings and celebrations with family members, can be powerful in tackling vaccine hesitancy. The Department of Health has, in fact, begun framing similar messages in its campaigns (Figure 5). More information and marketing campaigns with a strong and clear message featuring families (e.g., “Let’s get vaccinated for a Christmas get-together”) can be implemented.

Figure 5. Government vaccination campaigns⁵



V. Conclusion

Regardless of the source of vaccine hesitancy, interventions to encourage vaccination by simplifying messages and emphasizing benefits can be effective. This is in line with a recommendation from behavioral science to promote behavioral changes by reducing the cognitive burdens and bias of people. The messaging around social benefits is particularly important: even in the group that focused on the personal benefits to the individual, most respondents cited events and activities centering around family or friends as the ones that they looked forward to the most. Quite notably, these interventions were most effective in the group where communication efforts should be concentrated: those who were uncertain about whether they should get vaccinated.

The findings support an opportunity for government to innovate and try various approaches in reducing vaccine hesitancy. While there were differences in the effectiveness of the interventions, none of them had any negative effect, suggesting that there is no harm in trying different combinations of messages and information campaigns, at least when these messages focus on the positive aspects of vaccination. It is particularly encouraging to see similar impact regardless of the vaccine brands that respondents were hypothetically given despite the initial differences in vaccine acceptance by brand.

⁵ Image 1: BECAUSE?! TELL OTHERS WHY YOU'LL GET VACCINATED. Do you want life back to how it used to be? Protect yourself and your family? Travel again? Let them know and help them find their own motivation for vaccination. Image 2: For a long life together...I will get vaccinated [Res-Bakuna is a contraction of wrest back and vaccine]