

Understanding how to boost elderly vaccination rate

Since the start of the pandemic in 2020, Hong Kong has recorded over 7,000 deaths involving COVID-19¹, nearly 90% of whom are unvaccinated or have received only one dose of a COVID-19 vaccine². Most of them are the elderly. In Hong Kong, the vaccination rate of the elderly is still rather low³. The percentage of people aged 60 to 69 who have received at least one dose is 90%, while the rates for the age groups of 70-79 and 80 or above are 80% and 57%, respectively.

Mr Nip Tak-kuen⁴, Secretary for the Civil Service, and Dr Law Chi-kwong⁵, Secretary for Labour and Welfare, said on different occasions that some elderly citizens' family members opposed vaccination among the elderly, while some elderly people refused to get vaccinated in fear of their family members' opposition. Professor Yuen Kwok-yung, Chair Professor of the Department of Microbiology at the University of Hong Kong and member of the Government's Advisory Panel on COVID-19 Vaccines, also said on 24 March⁶ that efforts must be made to increase the vaccination rate among the elderly before the sixth wave of the pandemic in Hong Kong. The Chief Executive, Mrs Carrie Lam⁷ even said that the high COVID-19 fatality rate among the elderly was due to their low vaccination rate, which was unfortunate for the city.

To understand the reason why the vaccination rate of the elderly remains low, this study addresses the following research questions:

1. How does adult children's vaccine hesitancy affect the willingness of their parents in all age groups to get vaccinated?
2. How does adult children's vaccine hesitancy affect the willingness of their parents aged 60 or above to get vaccinated?
3. What are the factors that contribute to parents' delay in vaccination?

Methods

Stephanie Jean Tsang, Assistant Professor of Department of Communication Studies at Hong Kong Baptist University, conducted an online survey of 1,614 Hong Kong citizens aged 18 or above between 16 March 2022 and 21 March 2022. The survey was designed to gather information on respondents' perceptions of the pandemic and attitudes towards the Government's anti-pandemic measures. A stratified sampling method was adopted to select participants based on gender and age. The sample involves 827 women (51.2%), with an average age of 40, ranging from 18 to 78 years old. A majority (70%) of the respondents held a post-secondary degree or above. The average salary of the respondents ranged from HK\$20,000 to HK\$39,999.

Key Findings

1. The survey collected the information of COVID-19 vaccination status of 1,614 respondents and their parents. (1,078 respondents reported their father's status and 1,254 respondents reported that of their mother.) It is found that the respondents' vaccine hesitancy has a direct impact on their parents' vaccination status. Among the 2,332 parents of the respondents, 21.7% were not yet fully vaccinated (who were either unvaccinated or received only one dose). The survey shows that as for the respondents who were not fully vaccinated, the proportion of their parents being not fully vaccinated (36.4%) was significantly higher than that of those who were fully vaccinated (9.7%). A similar pattern can be observed among the 383 parents aged 60 or above. In contrast, as for the respondents who had received a third dose, the proportion of their parents being not fully vaccinated (22.6%) was significantly lower than that of those who were vaccinated (44.7%). Again, a similar pattern can also be observed among the group of parents aged 60 or above.

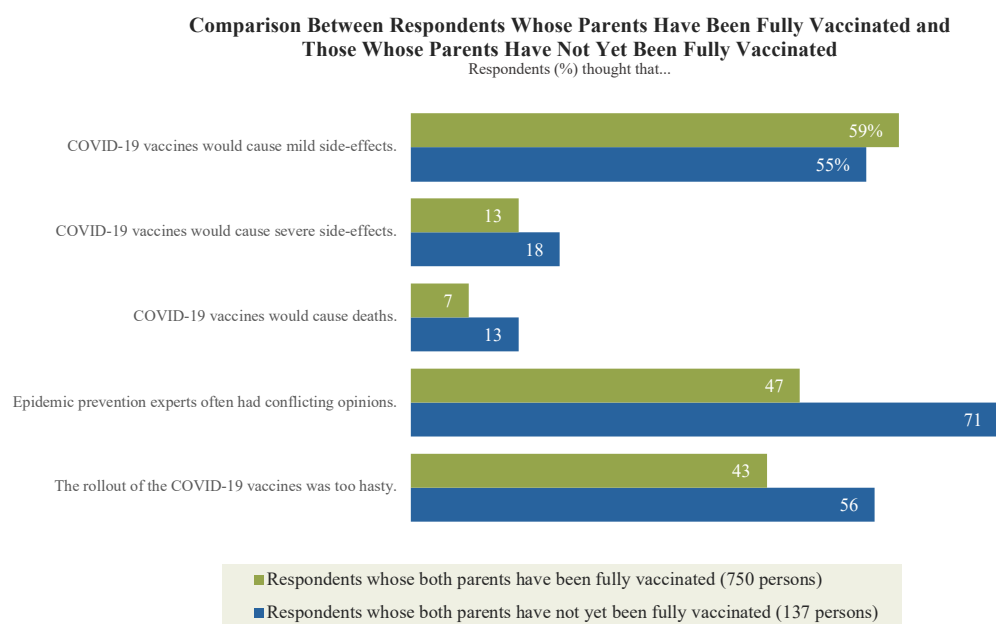
Figure 1: COVID-19 vaccination status of the respondents and their parents

Respondents		Respondents' parents (2,332 persons in all ages)		Respondents' parents (383 persons aged 60 or above)	
		Not fully vaccinated [#]	Fully vaccinated [^]	Not fully vaccinated [#]	Fully vaccinated [^]
Unvaccinated / Those who have received the first dose	255 persons 15.8%	36.4% ¹	9.7% ¹	31.3% ²	6.7% ²
Those who have received the second dose	691 persons 42.8%	41.0%	45.6%	39.1%	31.7%
Those who have received the third dose	668 persons 41.4%	22.6% ³	44.7% ³	29.7% ⁴	61.6% ⁴

[#] "Not fully vaccinated" refers to those are unvaccinated or have received only the first dose of a COVID-19 vaccine.
[^] "Fully vaccinated" refers to those who have received the second or third dose of a COVID-19 vaccine.

2. The respondents' risk perceptions of COVID-19 vaccination have a significant impact on their parents' delay in vaccination. The more the respondents believed that the vaccines could cause severe side effects (such as facial paralysis, severe allergies, and blood clots) or deaths, the more likely their parents were to delay vaccination. However, the respondents' risk perceptions for mild side effects of the vaccines did not influence their parents' vaccination decision.

Figure 2. Comparison between respondents whose parents have been fully vaccinated and those whose parents have not yet been fully vaccinated



3. The more the respondents thought that the vaccines were developed too quickly, and that the advice given by infectious disease experts was conflicting, the greater tendency their parents had to delay vaccination.

4. Concerning the mechanisms of the vaccines, the respondents' basic knowledge of the vaccines did not affect their parents' delay in vaccination. Moreover, respondents with not-yet-fully-vaccinated parents paid more attention to information from different sources than those who had fully-vaccinated parents. It is probably because those with not-fully-vaccinated parents need to keep themselves updated with latest policies, necessity, and risks of vaccination. In contrast, respondents and their parents who were fully vaccinated did not need to keep track of the latest information about COVID-19 vaccines.

5. The more the respondents thought that they had a good understanding of the current anti-pandemic situation in Hong Kong, the greater tendency their parents had to delay vaccination.

6. In addition, the more the respondents agreed that the government officials could make appropriate vaccination policies, the higher tendency their parents had to delay vaccination. Overall, the results did not show a significant impact of the respondents' political inclination on their parents' vaccine hesitancy, regardless of whether the sample was divided by political affiliations or political colours.

7. Consistent with the current vaccination situation of the elderly in Hong Kong, the results showed that the older the parents of the respondents were, the greater tendency their parents had to delay vaccination. The older their parents were, and the more severe chronic diseases they had, the more the respondents worried that their parents would develop complications related to the vaccine.

Conclusion

The survey has revealed that the citizens' vaccine hesitancy has a significant impact on their (elderly or non-elderly) parents' delay in getting vaccinated. The earlier people have chosen to receive a COVID-19 vaccine, the more likely their parents would be fully vaccinated. The survey has also found that the not-yet-fully-vaccinated respondents generally believe that the vaccines are more likely to cause severe side effects or even deaths, when compared to the respondents whose parents are fully vaccinated. Although the respondents with not-fully-vaccinated parents and the respondents with fully vaccinated parents have different risk perceptions of the vaccines, there is no difference in their basic knowledge of the vaccines.

When explaining the importance of vaccination to the elderly's family members, the healthcare teams should focus on the safety of the vaccines, in order to alleviate their concerns about the vaccines' severe side effects. We believe that the healthcare teams will encounter resistance from the elderly's family members, who may have vaccine hesitancy themselves and be concerned about the vaccine's negative effects on the elderly as well as the overall population. Moreover, the continuous receiving of anti-pandemic information from different channels among the citizens with not-yet-fully-vaccinated parents, along with the long-lasting promotion of the COVID-19 vaccination, leads to their stereotypic impressions about the vaccines. At the same time, they think they already have a fair understanding of the anti-pandemic situation in Hong Kong, therefore, their attitudes towards vaccination cannot be altered easily.

Since the elderly's family members already have a basic understanding of the vaccines, we suggest that the healthcare teams should try to explain to them the history and background of the vaccines, rather than the importance and basic mechanisms. This will help them understand why the vaccines can be developed in such a short period of time. On the other hand, the healthcare teams can also explain why the anti-pandemic experts have different views. The Government departments should also keep an eagle eye that the vaccination rate of the elderly is affected by the inconsistency among experts' opinions, the imbalanced anti-pandemic policies, and the suspicion of science⁸. These factors will also affect the progress of other related issues of health sciences in the future.

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