

Parents' Intention to Have Their Children Aged 2-11 Vaccinated and Its Influencing Factors

1. Background

Promoting the COVID-19 vaccination programme for youth and children is one of the keys to achieve herd immunity soon. According to the World Bank data (2021), about 12.67% of the population in Hong Kong are aged 0–14. Although children are less likely to develop severe illness after contracting COVID-19 than adults, the harm to children's health from the sequelae and multisystem inflammatory syndrome in children (MIS-C) caused by the infection cannot be ignored (Centres for Disease Control and Prevention, 2021). Hence, Pfizer has been testing its COVID-19 vaccine in children aged 5–11 since June 2021 and the results are expected by September (The New York Times, 2021). Hong Kong has recently approved COVID-19 vaccination for teenagers aged 12–15, in the hope of increasing the vaccination rate to help them resume normal school activities as soon as possible. In the context of promoting vaccination among youth, this study aims to conduct surveys of parents of children aged 2–11 to offer suggestions about promoting the vaccination programme for children and enhancing parents' intention to have their children vaccinated.

2. Research Questions

- If the COVID-19 vaccination programme in Hong Kong is extended to children aged 2–11, would parents intend to have their children vaccinated?

- What are the key factors influencing parents' intention to have their children aged 2-11 vaccinated?
- How does parents' attention to specific types of information about COVID-19 vaccines influence their intention to have their children aged 2–11 vaccinated?

3. Major Findings

- Around 37% of respondents expressed varying degrees of intention to have their children vaccinated.
- Key factors influencing parents' intentions: parents' attitudes towards vaccinating their children, their perceived norms (including descriptive as well as injunctive norms), and self-efficacy.
- There are significant differences between vaccinated and unvaccinated parents in their intentions, attitudes, perceived norms and self-efficacy of having their children aged 2-11 vaccinated.
- Parents' varying levels of attention to different types of information about the COVID-19 vaccine will influence their attitudes towards vaccinating their children aged 2-11 as well as their perceived norms and self-efficacy, which will in turn affect their intention to go ahead with the vaccination.

4. Methods

Surveys were conducted to understand Hong Kong parents' intention to have their children aged 2–11 vaccinated against COVID-19 and its influencing factors. We collected 681 valid questionnaires from primary and secondary schools as well as survey companies in July 2021. The demographic features of the respondents in this study are as follows:

- The respondents: parents of children aged 2-11 (henceforth referred to as “parents” or “respondents”)

- Gender: 259 men (38.0%), 422 women (62.0%)
- Age: 20 to 77 years old, with an average age of 39.73 (Standard Deviation=6.9)
- Education attainment: from primary school to postgraduate/professional degree, with 40% obtaining a bachelor's degree
- Monthly household income: from less than HK\$10,000 to HK\$150,000 and above, with an average income of HK\$60,000–69,000
- Parents' COVID-19 vaccination status: Of the respondents, 238 had received two doses, 134 had received the first dose, 73 had not been vaccinated but had made a COVID-19 vaccine appointment, and 236 had neither been vaccinated nor made a vaccine appointment yet.

5. Results

5.1 Hong Kong parents' intention to have their children vaccinated

If the Government's COVID-19 vaccination programme is expanded to include children aged 2–11, about 37% of the respondents said that they might agree to allow their children to be vaccinated. The remaining 63% of the respondents had varying degrees of reservations about vaccinating their children.

5.2 Factors influencing parents' intention to have their children vaccinated

Four factors were analysed in this study:

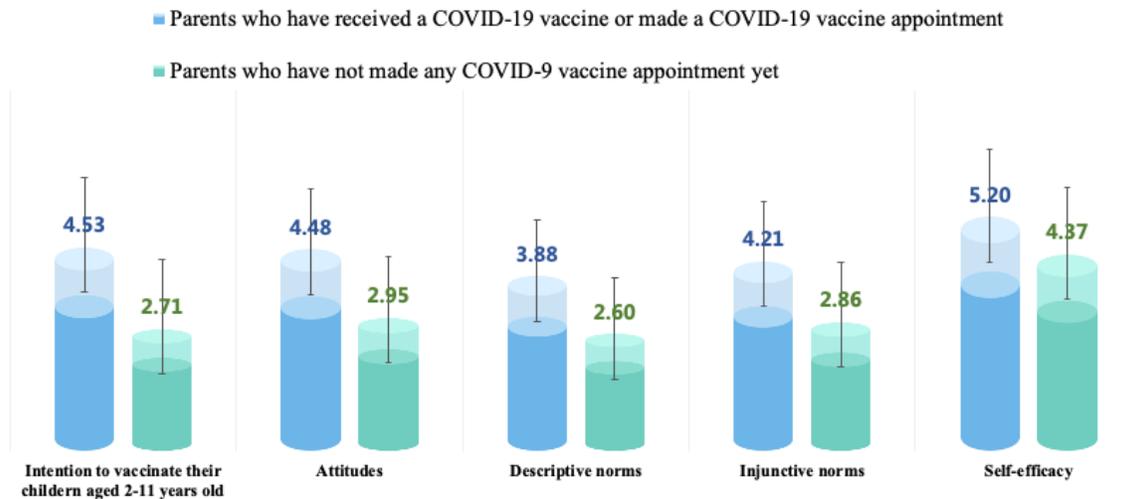
- a. Attitudes: parents' attitudes towards "allowing their children to be vaccinated against COVID-19", i.e., the respondents made value judgement about "allowing their children to be vaccinated against COVID-19", for, e.g., good/bad, important/unimportant, worthy/unworthy.
- b. Descriptive norms: the extent to which parents considered that it is common to "allow their children to be vaccinated against COVID-19" in their social networks. For example, the

extent to which the respondents agreed that “most parents I know would allow their children to be vaccinated.”

- c. Injunctive norms: whether the parents will be supported by people around them if they allow their children to be vaccinated. For example, whether the parents thought that a specific group of people (family members, close friends, etc.) would support them if they decide to get their children vaccinated.
- d. Self-efficacy: parents’ prediction of their capability to assist their children with getting the COVID-19 vaccination. For example, whether they know how to make an appointment for their children and have the capability to fully understand the parental consent form.

In general, parents who had received the COVID-19 vaccine had significantly higher mean values of intention, attitudes, and perceived descriptive norms, injunctive norms and self-efficacy than parents who had not received the COVID-19 vaccine. Figure 1 compares the mean values of intention and other influencing factors between parents who had received the vaccine (including those who had made an appointment) and those who had not received the vaccine.

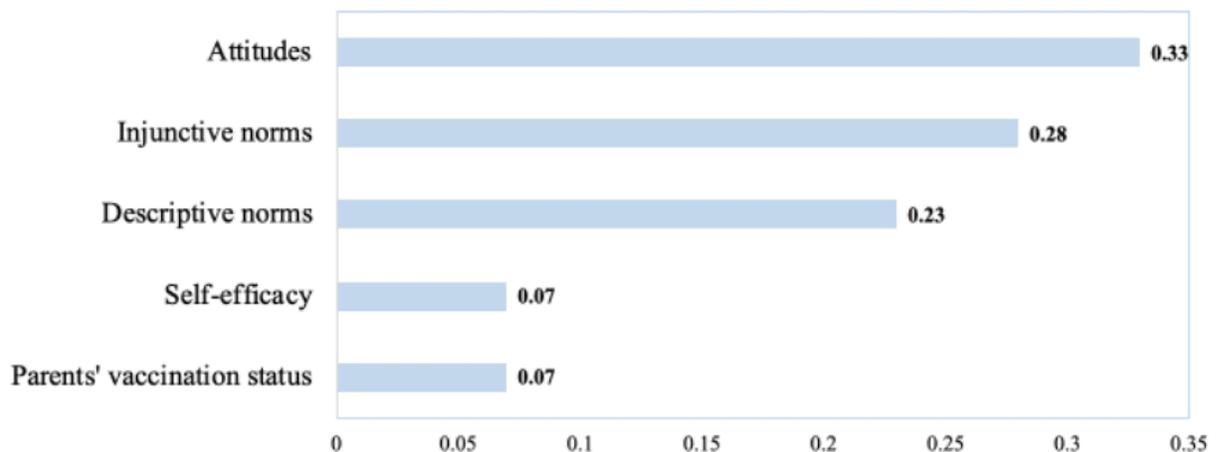
Figure 1:



After controlling for relevant demographic variables including age, gender, educational attainment, and monthly household income, the most influencing factor on parents’ intention was their

attitudes toward vaccinating their children against COVID-19 (influence coefficient: 0.33). The second and third most influencing factors were parents' perceived descriptive norms (influence coefficient: 0.28) as well as the perceived injunctive norms (influence coefficient: 0.23). Finally, it is the parents' perceived self-efficacy (influence coefficient: 0.07) (see Figure 2). Whether parents had received COVID-19 vaccination also significantly influenced their intention to get their children vaccinated (influence coefficient: 0.07).

Figure 2:



Note: The higher the influence coefficient (closer to +1), the stronger the influence on parents' intention.

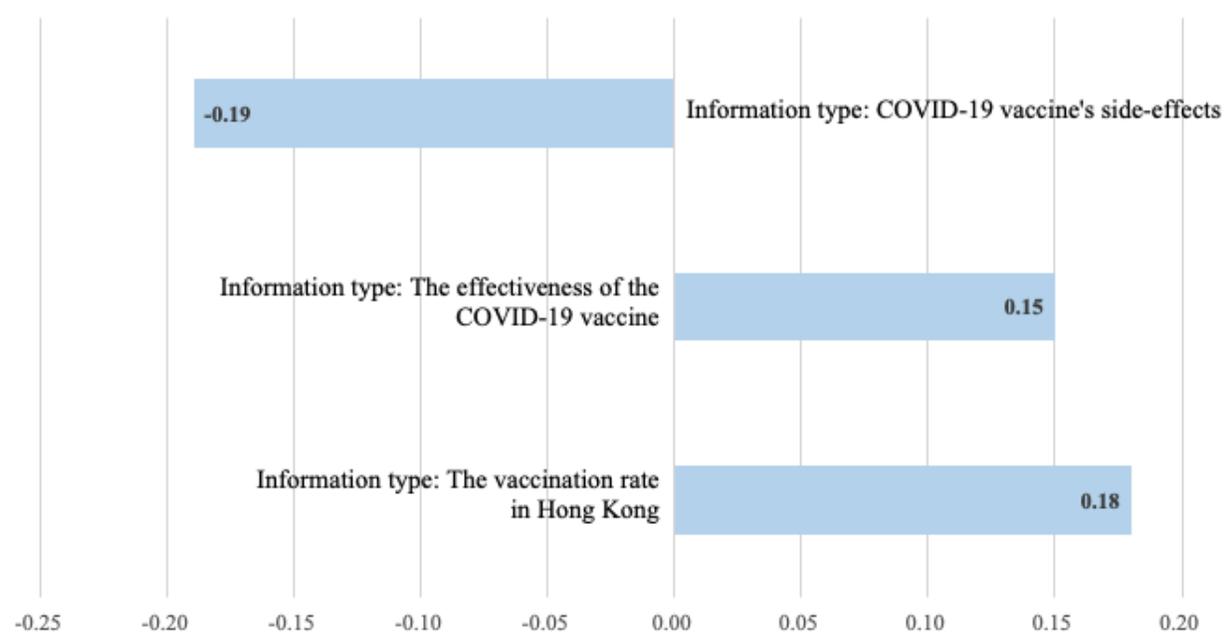
5.3 The attention parents have paid to the information about the COVID-19 vaccine will affect their attitudes and perceived norms

In this study, information about the COVID-19 vaccine was divided into three categories: the side effects of the vaccine, the efficacy of the vaccine, and the vaccination rate in Hong Kong. Such classification aims to examine the influence of different types of information on parents' attitudes towards and perceived norms (including descriptive and injunctive norms) of vaccinating their children.

a. The influence of parents' attention to specific types of information on their attitudes

Information about the COVID-19 vaccine's side effects had a negative effect on parents' attitudes (influence coefficient: -0.19), i.e., the more attention parents had paid to information about the side effects of the vaccine, the more negative their attitudes were towards vaccinating their children. The information on the efficacy of the COVID-19 vaccine (influence coefficient: 0.15) and the vaccination rate in Hong Kong (influence coefficient: 0.18) had a positive effect on parents' attitudes, i.e., the more attention was paid to these two types of information, the more positive parents' attitudes towards vaccinating their children (see Figure 3).

Figure 3:



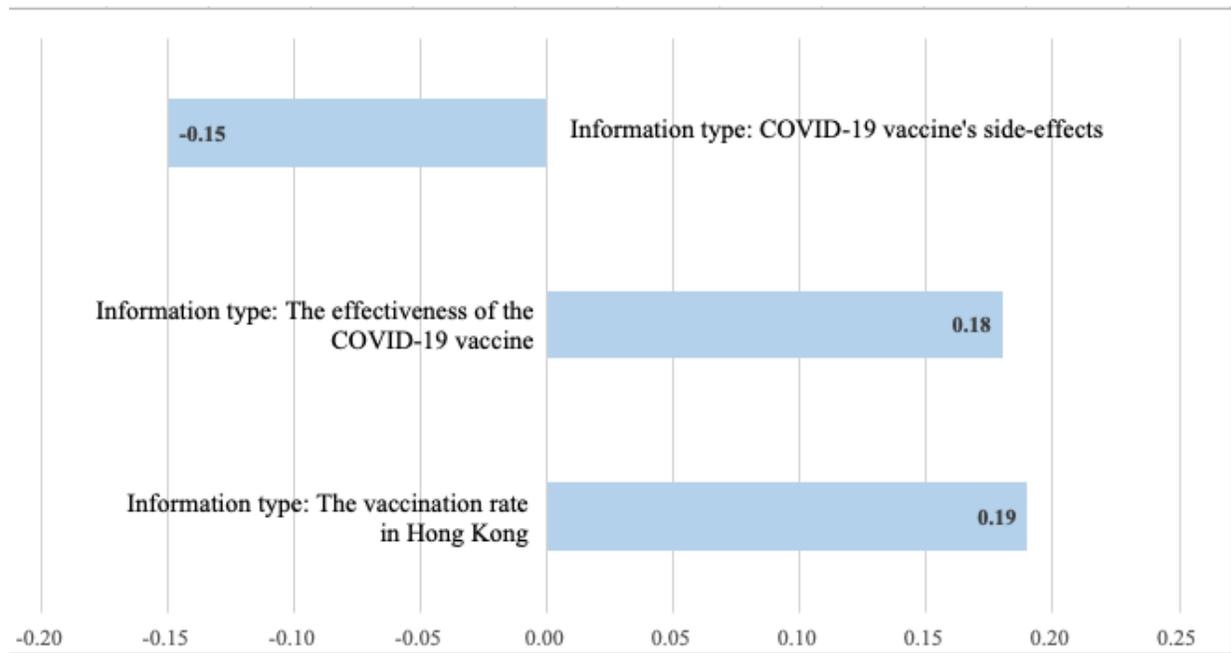
Note: The higher the influence coefficient (closer to +1 or -1), the stronger the influence of this type of information on parents' attitudes towards vaccinating their children.

b. Influence of parents' attention to specific types of information on their perceived descriptive norms

Information about the side effects of the COVID-19 vaccine had a negative effect on parents' perceived descriptive norms (influence coefficient: -0.15) i.e., the more parents were concerned about information on the vaccine's side effects, the more likely they were to consider vaccinating their children as inappropriate. Information on the efficacy of the vaccine (influence coefficient:

0.18) and the vaccination rate in Hong Kong (influence coefficient: 0.19) positively influenced parents' perceived descriptive norms, i.e., the more attention given to these two types of information, the stronger the parents' tendency to consider it appropriate for their children to be vaccinated (see Figure 4).

Figure 4:



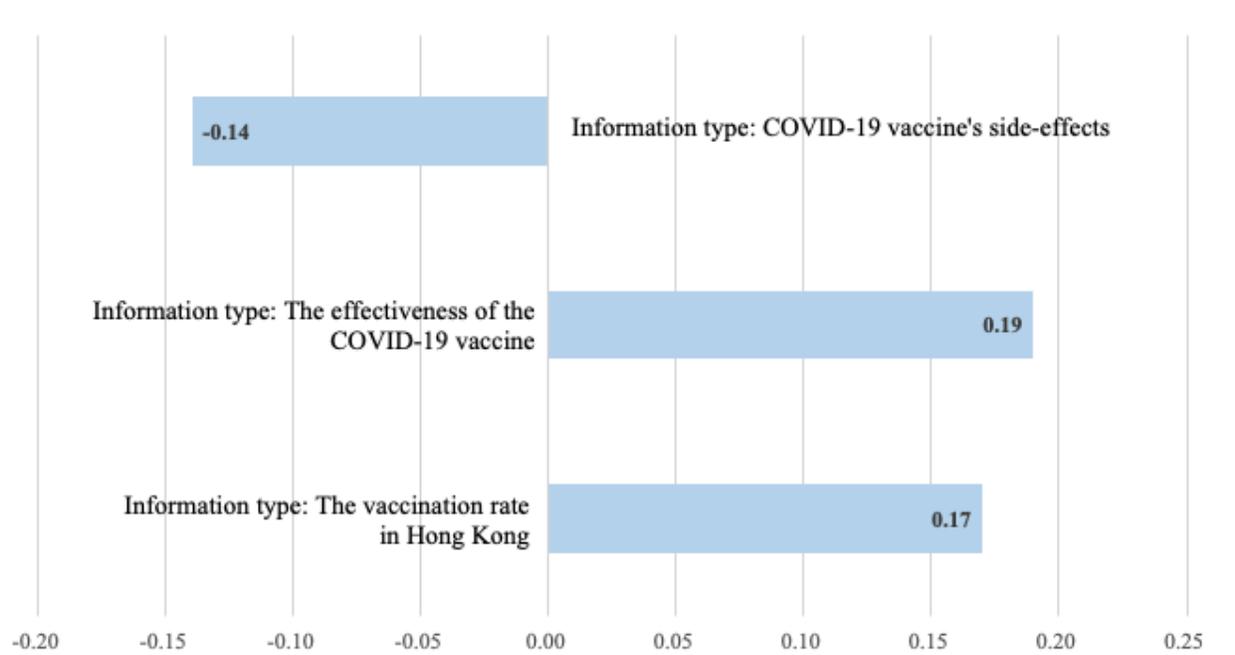
Note: The higher the influence coefficient (closer to +1 or -1), the stronger the influence of parents' attention to this type of information on their perceived descriptive norms.

c. Influence of parents' attention to specific types of information on their perceived injunctive norms

Information about the side effects of COVID-19 vaccine had a negative effect on parents' perceived injunctive norms (influence coefficient: -0.14), i.e., the more parents were concerned about the information on the vaccine's side effects, the more likely they were to believe vaccinating their children would lead to other people's opposition. Information on the efficacy of the vaccine (influence coefficient: 0.19) and the vaccination rate in Hong Kong (influence coefficient: 0.17) had a positive effect on parents' perception of injunctive norms, i.e., the more attention parents

had paid to these two types of information, the more likely that they would agree that others would support the decision to have their children vaccinated (see Figure 5).

Figure 5:

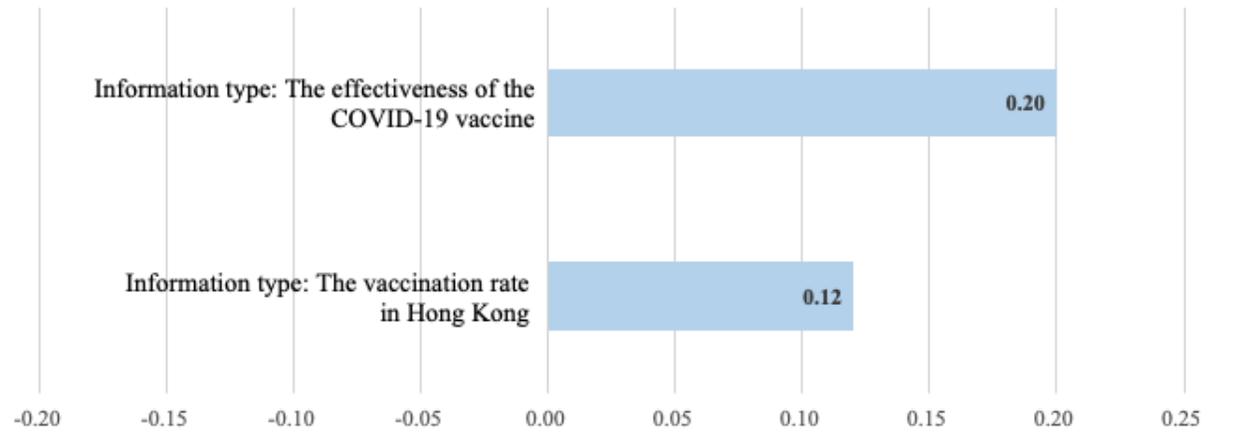


Note: The higher the influence coefficient (closer to +1 or -1), the stronger the influence of parents' attention to this type of information on parents' perceived injunctive norms.

d. Influence of parents' attention to specific types of information on their perceived self-efficacy

Among the three types of information about the COVID-19 vaccine, information on the efficacy of the vaccine (influence coefficient: 0.20) and vaccination rate in Hong Kong (influence coefficient: 0.12) had significant effects on parents' perceived self-efficacy, i.e., the more parents were concerned about these two types of information, the more confidence they would have in vaccinating their children (see Figure 6).

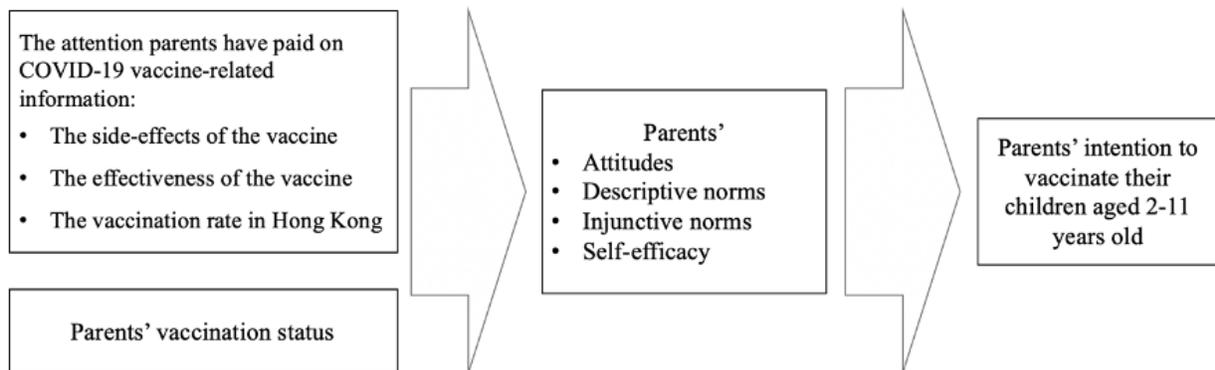
Figure 6:



Note: The higher the influence coefficient (closer to +1 or -1), the stronger the influence of this type of information on parents' perceived self-efficacy.

In summary, parents' attention to information about the COVID-19 vaccine will influence their attitudes towards vaccinating their children and their perception of descriptive norms, injunctive norms, and self-efficacy, which will in turn affect their intentions to have their children vaccinated (see Figure 7).

Figure 7:



6. Research Implications

6.1 Improving parents' attitudes towards vaccinating their children

As documented in the findings, holding a negative attitude is the most influential reason why parents refuse, delay, or are hesitant to have their children vaccinated against COVID-19. To improve their attitudes, the Government, health authorities, and medical professionals need to address parental concerns over the vaccine, including its safety and effectiveness. Once such clinical research findings are released to the public, the information needs to be translated into lay language and then effectively delivered to the parents.

6.2 Utilizing normative influence to promote COVID-19 vaccination for children

Normative influence has been documented as an influential factor in people's adoption of health behaviour, and such an influence has been found to be more powerful in Asian than in Western countries (Lapinski & Rimal, 2005). Likewise, the current findings show that parents' perceived norms, including "what other people are doing" and "whether others will support my behaviour", significantly affected their intention to have their children vaccinated against COVID-19.

However, it should be noted that perceived norms are different from the "real" norms in society, which means that people usually have their own judgment about the norms regarding a specific behaviour, regardless of the "true" situation in society (Lapinski & Rimal, 2005). Although informing parents about the increasing vaccination rate in Hong Kong could help improve their normative perceptions, targeting people who are important in their close social networks could also help. In other words, besides persuading parents directly, promotion efforts should also target those people who are close to and able to wield influence on them, such as opinion leaders in parental associations and teachers in schools.

6.3 Handling information about side effects with caution

So far, no information about side effects of COVID-19 on children aged 2–11 has been officially released, since the clinical trials are still under way. However, as documented by our findings, paying attention to the side effects of the COVID-19 vaccine in general negatively affects parents' attitude towards and perceived norms of vaccinating their children, which could further decrease their intention to do so.

It indicates that information about the side effects of the COVID-19 vaccine should be handled with extreme caution. The authorities and medical professionals should not hold any such information from the parents, as parents need to be fully informed of the potential side effects to make an informed decision. In the meantime, information about potential side effects should be explained by medical professionals to ensure that it has been accurately delivered, instead of being exaggerated. As stated in one of our earlier reports, side effects of the COVID-19 vaccine are one of most frequently mentioned topics in the misinformation about the vaccine (HKBU FactCheck Service, 2021). Here, the current findings offer more reasons to debunk such misinformation timely and effectively—it could negatively affect parents’ intention to have their children vaccinated against COVID-19.

6.4 Persuading parents who received the vaccine first

Although parents’ vaccination status does not directly impact their intention to have their children vaccinated, it does influence their attitude and perceived norms regarding vaccinating their children, which serves as the key antecedents of their behavioural intention.

Compared to parents who have not received the vaccination yet, those who have got the jabs themselves show a more positive attitude towards vaccinating their children and supportive norms for them to do so. Thus, this group of parents may be less resistant to promoting information about vaccinating children against COVID-19 and are also more likely to accept the vaccine for their children. Once the COVID-19 vaccination programme is expanded to children aged 2–11, the promoting effort could have a relatively easy start if it intends to persuade the vaccinated parents first.

References

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