

**An exploration of the challenges to and enablers of
parental HPV vaccination decision for adolescent daughters
among South Asian ethnic minorities in Hong Kong**

Executive summary

BACKGROUND

Human papillomavirus (HPV) infections account for most cases of cervical cancer. HPV vaccines are safe and effective in preventing HPV infections and also in preventing cervical cancer. The WHO recommends girls aged 9 to 14 receive HPV vaccinations. In Hong Kong, HPV vaccinations are approved for administration in girls from the age of 9 onwards. Although HPV vaccines have been registered since 2006 for preventing cervical cancer in Hong Kong, the uptake of HPV vaccinations among adolescent girls in Hong Kong remains low (12%), according to a report from the Family Planning Association of Hong Kong (2017). The uptake of HPV vaccinations among adolescent girls of ethnic minorities in Hong Kong is expected to be even lower than in the general population as they face multiple barriers to the access of health services. Ethnic minorities constitute 8% of Hong Kong's total population and South Asians constitute the largest ethnic minority population. Studies have shown that ethnic minorities face multiple barriers to the access of health services because they may possess insufficient knowledge and language skills, have limited ability to attend services, and maintain specific health beliefs.

To improve HPV vaccine uptake, the Government of Hong Kong added the HPV vaccine to the Hong Kong Childhood Immunisation Programme at the start of the 2019 school year. This allowed female students who were of suitable age—typically at the Primary 5 and 6 school levels—to receive the HPV vaccine on a voluntary basis and at no charge. However, there has not been any conclusive evidence to suggest that inclusion of the HPV vaccine in immunisation programmes have improved HPV vaccine uptake. Studies have suggested that the uptake rates of the HPV vaccine remain lower than that of other childhood vaccines included in the school-based immunisation programme. According to the latest press release made by the Government in January 2021, a total of 24,200 Primary 5 female students from 594 participating primary schools had received HPV vaccine (first dose), resulting in an uptake rate of 85%.

The uptake could be affected by several factors such as the disease burden on society, vaccine safety and efficacy, and vaccine acceptance by the public. Apart from these, to understand the factors influencing the uptake of HPV vaccines among adolescent girls, it is essential to investigate parents' intention to vaccinate their children. As presented in previous research, in Hong Kong, parents significantly influence the HPV vaccine uptake rates of their daughters. Despite the availability of this information, no studies have been conducted to investigate the factors (from the perspectives of South Asian parents) affecting HPV vaccine uptake by ethnic minorities in Hong Kong.

To improve the HPV vaccine uptake among ethnic minorities in Hong Kong, it is vital to understand the barriers that hinder South Asian parents (in this study, South Asians refer to Indians, Pakistanis and Nepalese) from allowing their adolescent daughters to be vaccinated. By comparing the factors that correlate with HPV vaccinations among South Asian and Chinese mothers in Hong Kong, the unique needs of South Asian ethnic minorities can be better understood. The findings of the study can also guide the development of appropriate interventions and healthcare policies for improving HPV vaccine uptake by South Asians in Hong Kong. Such efforts will ultimately help enable equal access to health services for Hong Kong's ethnic minorities and the general population.

The main purpose of this study was to explore the perceptions of South Asian mothers in Hong Kong towards their adolescent daughters' HPV vaccinations. The perception of Chinese mothers was also explored to reveal any differences between two groups of mothers. The specific research questions were as follows:

1. What do South Asian and Chinese mothers in Hong Kong perceive to be the challenges and enablers of having their adolescent daughters vaccinated against HPV?
2. Do these perceived challenges and enablers differ between mothers from different ethnic backgrounds?

METHOD

A qualitative exploratory study design was used. Semi-structured focus group interviews were conducted and moderated by the investigator(s) and trained South Asian interpreters when required. In this study, both South Asian and Chinese mothers were our target participants. To be eligible, they should meet the following inclusion criteria: 1) be a mother of at least one 9–17-year-old adolescent girl; 2) be of South Asian (Indian, Pakistani or Nepalese) or Chinese ethnicity; 3) be able to complete the interview in English, Hindi, Urdu, Nepali or Cantonese; and 4) be of age 18 or older.

Purposive sampling was used. All the eligible participants were recruited from various community centres and non-government organisations (NGOs) that served South Asians or

local Chinese mothers. After written consents were obtained from the participants, between May and September 2021, 20 semi-structured focus group interviews were conducted using appropriate language. Seventy-three South Asian mothers (22 Indian, 24 Pakistani and 27 Nepalese mothers) and 12 Chinese mothers participated in the focus group interviews. All the interviews were audio-recorded and transcribed verbatim. All the collected data were analysed using content analysis, in accordance with the study objectives.

SOCIO-DEMOGRAPHIC INFORMATION OF PARTICIPANTS

The monthly household income was generally lower among the South Asian mothers when compared to the Chinese mothers. The education level of the Chinese mothers was generally higher than the South Asian mothers, with more Chinese mothers received tertiary education. The HPV vaccination uptake was similar between South Asian and Chinese groups, despite a comparatively lower uptake observed among the Pakistani group.

KEY FINDINGS FROM THE FOCUS GROUP INTERVIEWS

Key findings on the perceived challenges faced by South Asian mothers in vaccinating their daughters

1. Lack of awareness and knowledge of cervical cancer, HPV or the HPV vaccine

A majority of participants had not heard of the terms ‘human papillomavirus’, ‘cervical cancer’ or ‘HPV vaccine’ (or ‘cervical cancer vaccine’). The South Asian mothers were also found to have poor knowledge of cervical cancer and the HPV vaccine.

2. Low level of perceived susceptibility of their daughters to HPV and low level of perceived need for their daughters to receive HPV vaccinations

Indian and Pakistani mothers reported a low level of perceived susceptibility of their daughters to an HPV infection or cervical cancer. Only Pakistani mothers reported a significantly lower level of perceived need for vaccinating their adolescent daughters. In three South Asian groups, the mothers’ perceived susceptibility of their daughters to cervical cancer and the perceived need for their daughters to be vaccinated were generally linked to their daughters’ age and sexual activity.

3. Concerns about the safety and side effects of the HPV vaccine

The Indian mothers generally perceived the HPV vaccine to be safe and had fewer concerns regarding the side effects. Even though some Nepalese mothers perceived the side

effects of the HPV vaccine to be mild, over one quarter of all Nepalese mothers refused to vaccinate their daughters. The Pakistani mothers had concerns about the side effects of the HPV vaccine and questioned the vaccine's safety. Several Pakistani mothers questioned the safety of the HPV vaccine as they were worried about 'hidden' side effects (i.e., side effects that had not been reported to the public or that had not yet been discovered).

4. Concerns about the cost of the HPV vaccine

The high cost of the vaccination and lack of available financial subsidies were the main barriers to their intention to vaccinate. More Nepalese and Pakistani mothers reported that they did not plan to vaccinate their daughters as they could not afford the financial expenses of HPV vaccination. Indian mothers viewed the high cost of HPV vaccination as a burden to their families. Although they regarded the cost of vaccination to be high, most Indian mothers were willing to vaccinate their daughters at their own expense if required.

5. Lack of recommendations for the HPV vaccine from the healthcare professionals

All the South Asian mothers regarded healthcare professionals to be the most trustworthy source of health information, including information about the HPV vaccination. However, none of them had received recommendations from healthcare professionals about HPV vaccinations when they accompanied their daughters to medical consultations.

6. Consideration of family support for their daughters to receive HPV vaccination

Family members had a significant influence on South Asian mothers' decisions to vaccinate their daughters against HPV. In Indian and Nepalese families, decisions about vaccinating daughters were the results of joint decision-making involving both mothers and fathers. Although joint decision-making by both parents was observed in Pakistani families, Pakistani mothers felt the obligation to seek consent from their husbands on the decision to vaccinate their daughters against HPV.

7. Religious and cultural factors

All the South Asian mothers reported that their religious beliefs did not restrict their vaccination practices. Nonetheless, the perceptions of HPV vaccination held by Muslim mothers were indirectly affected by their Islamic religion. Discussing cancer-related information, especially in public, is considered to be inappropriate among South Asians. Therefore, they did not actively seek cancer-related information from their doctors.

8. Language barriers to accessing health services

South Asian mothers faced some language barriers when they tried to access health services. The Indian mothers reported that not all the healthcare staff could speak English. They experienced problems in communicating with the Chinese speaking healthcare staff when arranging vaccination for their daughters. Most Pakistani mothers had a poor grasp of the English language, they needed their husbands to accompany them or needed to use an interpreter when visiting health services. Although an interpreter service was available at the clinics, most of the South Asian mothers expressed that they needed to request this service at least one week prior to their appointments. Furthermore, the availability of an interpreter service was not guaranteed, the mothers had to cancel their medical appointments if interpreter services could not be arranged.

Key findings on the perceived enablers of South Asian mothers for vaccinating their daughters

1. Trustworthy sources of HPV vaccine information

The South Asian mothers shared a common preference for receiving health information from health talks, community centres, healthcare professionals, their daughters' teachers or school and health centres. With respect to the type of speaker in conducting the health talk, they trusted the information if it was conducted by healthcare professionals.

2. High level of perceived benefit of HPV vaccination

Many South Asian mothers thought that HPV vaccine could protect their daughters from cervical cancer. The perceived protection offered by the HPV vaccine was the major factor that elicited the mothers' intention to vaccinate their daughter for those who considered the benefit of HPV vaccine outweighing the potential side effects.

3. High level of perceived severity of HPV infection and cervical cancer

Many South Asian mothers regarded cancer as being a scary, life-threatening and dangerous experience for their daughters. Infertility was a frequently reported physical concern. Indian and Pakistani mothers expressed worries of an HPV infection eliciting problems with trust in their daughters' future marital relationships. Nepalese mothers specifically expressed their worries that their daughters would be stigmatised as cancer patients.

4. Provision of subsidised vaccination

Most of the South Asian mothers expressed that providing the vaccination free of charge would encourage them to vaccinate their daughters. Especially for mothers who experienced

financial constraints, offering the vaccination free of charge could help to remove a major financial barrier to vaccinating their daughters.

5. School- or Government- arranged vaccination programme

The South Asian mothers placed their trust in vaccinations that were arranged either by the schools or the Government. Moreover, such arrangements helped address mothers' knowledge deficiencies on where and how to arrange vaccinations for their daughters. They also helped overcome the practical barriers when arranging for vaccinations, such as language barriers and time constraints.

Key findings on the perceived challenges faced by Chinese mothers in vaccinating their daughters

1. Lack of knowledge about cervical cancer or the HPV vaccine

All the Chinese mothers were aware of cervical cancer and the HPV vaccine. However, they did not have enough knowledge on the level of efficacy of vaccine, side effects and the age for HPV vaccination.

2. Concern about the cost of the HPV vaccine

Although most Chinese mothers claimed that the cost of HPV vaccine would not stop them from vaccinating their daughters provided the vaccine was effective, some mothers revealed that the cost could be a factor that delayed their vaccination decisions for their daughters.

Key findings on the perceived enablers of Chinese mothers for vaccinating their daughters

1. Recommendation from healthcare professionals

One-third of the Chinese mothers had received recommendations from their doctors to vaccinate their daughters. The recommendations from the doctors positively affected the mothers' intention to vaccinate their daughters.

2. Trustworthy sources of HPV vaccine information

Chinese mothers preferred to receive health information from the following sources: doctors, government websites and printed materials issued by schools or the Government. Chinese mothers were confident of the trustworthiness of the information and they considered these sources to be important enablers of parental decisions.

3. High level of perceived susceptibility to the disease and needs of vaccination

Many of the Chinese mothers perceived their daughters to be susceptible to HPV infections. These mothers also perceived a need to vaccinate their daughters during the daughters' adolescence. The perceived susceptibility to the disease and the need for vaccination were generally linked with the daughters' age and sexual activity status. The most frequently reported reasons were that mothers were more open to sexual relationships or complicated social lives of their daughters.

4. High level of perceived benefits of HPV vaccination

Most mothers thought that the vaccine can protect their daughters from HPV and cervical cancer.

5. Perception of the vaccine as being safe

In general, Chinese mothers regarded the HPV vaccine as being safe. Some of the mothers had concerns about the side effects of the vaccine, such as effects on puberty. However, concerns about the side effects did not hamper their vaccination intention.

6. School- or Government- arranged vaccination programme

The Chinese mothers reported that the inclusion of the HPV vaccine in the Hong Kong Childhood Immunisation Programme by the Government improved their confidence in the safety and efficacy of the HPV vaccine and increased their perceived need for vaccinating their daughters. The school-arranged vaccination programme also reduced the time constraints for Chinese mothers in arranging vaccinations for their daughters.

Key findings on the similarities and differences in the perceived challenges and enablers of South Asian and Chinese mothers for vaccinating their daughters

1. Five challenges and enablers were common across the ethnic groups: 1) lack of knowledge about cervical cancer, HPV or the HPV vaccine; 2) concerns about the cost of the HPV vaccine; 3) trustworthy sources of HPV vaccine information; 4) high level of perceived benefits of receiving the HPV vaccination; and 5) vaccination programmes arranged by the school or the Government.
2. Some challenges and enablers that were only applicable to South Asians were 1) lack of awareness about cervical cancer, HPV or the HPV vaccine; 2) concerns about the safety and side-effects of the HPV vaccine; 3) lack of recommendations from healthcare professionals; 4) consideration of family support for their daughters to receive HPV

vaccination; 5) religious and cultural factors; 6) language barriers experienced when accessing health services; 7) high level of perceived severity of HPV infections and cervical cancer; and 8) provision of subsidised vaccinations.

RECOMMENDATIONS

Based on the study's findings, the following recommendations are made:

1. Health promotional campaign on cervical health and HPV vaccination should be conducted. These can be conducted through community-based educational interventions and in schools through lecture presentation and educational videos with content on the link between cervical cancer, HPV and HPV vaccination and detailed information on the HPV vaccine, such as eligibility and dosage.
2. Health promotional campaign should be delivered by healthcare professionals such as nurses or doctors to enhance mothers' confidence in the trustworthiness of the information delivered. In addition, schoolteachers should be made knowledgeable of cervical health and the HPV vaccine.
3. The school immunisation team of the Department of Health should organise school-based health talks half a year before implementation of the vaccination programme for each study year for the mothers of Primary 4 and 5 students. This can better prepare the mothers and allow time for them to ask and search for more information.
4. Health promotional materials such as videos, posters and leaflets should be prepared in relevant South Asian languages (e.g. Hindi, Urdu, and Nepali) to facilitate the South Asian mothers' understanding of HPV vaccine-related information.
5. To ensure equal access to health-related information, linguistically appropriate health promotional materials such as videos and leaflet should be disseminated via platforms commonly used by South Asian mothers (for example, YouTube, Facebook and WhatsApp).
6. To ensure equal opportunity in receiving recommendation for HPV vaccination, healthcare professionals should be encouraged to make use of health or disease consultations with South Asian mothers and offer advice on HPV vaccinations for mothers with daughters aged 9-17.

7. Unvaccinated adolescent girls studying in secondary schools are currently not eligible to receive the vaccine through the Hong Kong Childhood Immunisation programme. We recommend the implementation of a catch-up HPV vaccination programme for all adolescents till age 18 if they are not adequately vaccinated.
8. To overcome the concerns about the cost of the vaccine and the ineligibility of adolescent girls aged under 18, we recommend that the Government resume the Community Care Fund and provide subsidised HPV vaccinations to low-income families to alleviate financial difficulties, especially those from South Asian groups.
9. In view of religious and cultural factors that hamper South Asian mothers' intention to vaccinate their daughters, healthcare professionals should be more culturally sensitive when offering advice. Training should be offered to enhance healthcare professionals' cultural sensitivity.
10. In view of the language barriers experienced by South Asian mothers, resources should be allocated to improve the provision of interpretation services. These include the training of additional medical interpreters and the provision of 24-hour onsite interpretation services.