

Article

# In Whose Best Interest? Parental Hesitancy toward the COVID-19 Vaccine for Children in Japan: A Literature Survey Study

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**Abstract:** In early February 2022, the Japanese government sent COVID-19 vaccine vouchers to children ages 5–11. Using keywords obtained from the voucher, the frequently asked questions section, and experts, we descriptively analyzed the advantages and disadvantages of vaccination for children and their parents through a web-based literature survey of media articles and government homepage statements in Japan. For children, vaccination helps prevent severe symptoms and may be particularly beneficial for children in low-income families by lowering the rate of suicide and at-home child abuse. For parents, not vaccinating their child allows them to fulfill a more traditional role as a parent (mothers in particular), reduces the gender gap for mothers, and provides greater peace of mind about their child's future fertility. We also examined the governmental vaccination campaigns targeting children from public health perspectives. We argue that the letter accompanying the vaccine voucher should clearly emphasize that further transmission will be prevented, reducing domestic infection. In addition to the biological dimensions of COVID-19 in Japan, we emphasize cultural issues and hope that these can be useful for other countries as they create their own vaccination strategies. Public health in Japan could be promoted if all citizens, regardless of age, acquired fundamental knowledge and skills, the motivation to learn, and the ability to utilize knowledge and skills and think, judge, and express personal ideas.

**Keywords:** public health; vaccination; campaign strategy; children; parent; cultural aspect; bullying; Japanese encephalitis; mumps; Japan



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## 1. Introduction

*"I am hesitant to vaccinate my children because who knows what the impact would be on their future fertility? Protecting that is our fundamental responsibility as parents."*

*"Who wants to have their kids vaccinated when the long-term effects are unknown? After all, COVID-19 symptoms are mild and not fatal in children."*

These are some of the typical voices of Japanese mothers towards the vaccine vouchers distributed to their children aged 5–11 years in February 2022. To keep pace with other developing countries and the sharp uptick in cases in this age group (an increase from 5% to 21% in just one week in January) [1], the Ministry of Health, Labor, and Welfare (MHLW) made COVID-19 vaccinations available for this age group. However, it stopped short of strongly recommending the vaccine, since evidence was only available for the Delta variant at the time [2]. Now, several months after its formal introduction, only 16.6% of the so-called "long-awaited" subject population has received the first dose of the vaccine [3]. What happened? Half a year ago, Japanese parents and children seemed

eager to get the vaccine. The survey conducted last September 2021 by the National Center for Child Health and Development (NCCHD) showed that more than 70% of guardians of elementary school-aged and younger children either wanted or were leaning toward vaccination for their children, with only 20% still undecided. In addition, more than half of these children expressed that they wanted to get the vaccine when it became available [4]. In whose best interest is this vaccine being promoted? The child's? The parents'? All people in the country?

Vaccine hesitancy has been associated globally with (1) the risk–benefit of vaccines; (2) knowledge and awareness issues; and (3) religious, cultural, gender, or socio-economic factors [5]. Although several studies have been performed on vaccine hesitancy in adults in Japan, none have focused on parents and children after the COVID-19 vaccine became available for children. In addition to the medical aspects of the COVID-19 issue, the cultural aspects were evaluated to consider a more effective vaccination strategy. Ultimately, we conclude that increased competency in compulsory education is imperative for everyone in society to acquire fundamental knowledge and skills; the motivation to learn; and the ability to utilize knowledge and skills and think, judge, and express one's own ideas.

## 2. Methods

We conducted a literature survey that evaluated media articles and government homepage statements. Vaccine hesitancy was descriptively analyzed by first examining the advantages and the disadvantages of vaccinating children as presented in the MHLW vaccine voucher (Supplementary File S1) for children and parents. Then, to obtain a more complete view of the voucher statements, we personally communicated with the district ward COVID-19 vaccine department in Bukyo-ku, Tokyo to discuss the frequently asked questions after the vaccine became available for children ages 5–11. Since COVID-19 vaccination for children ages 5–11 was only recently authorized in Japan, the academic studies on this population remain limited. To obtain a more generalized perspective toward the vaccine, we used Microsoft Bing as the search engine and conducted a web-based search using the following keywords: “preventing severe COVID-19 symptoms”, “bullying and COVID-19 vaccine”, “children's response to COVID-19 vaccine availability”, “parental response to COVID-19 vaccine for children”, “COVID-19 vaccination rates for children 5–11 years”, “impact of COVID-19 on families”, and “COVID-19 and school closure/re-opening”. The keywords were obtained from the voucher and the frequently asked questions. We also asked experts from various fields, e.g., medicine, sociology, psychology, and ethics, for guidance on possible keywords. Moreover, we analyzed the governmental COVID-19 vaccination campaigns targeting children from a public health perspective using the results from surveys conducted by the NCCHD, private sectors, and statistics from MHLW. Given these methods, this study can be characterized as an exploratory descriptive study. Since only used publicly available resources were used, no International Review Board approval was needed. The searches were conducted in Japanese and English.

## 3. Results and Discussion

A total of 61 articles were retrieved; the full list can be found in Supplementary File S2. All the resources were accessed on 17 June 2022.

### 3.1. *The Best Interests of the Child*

#### 3.1.1. Preventing Severe COVID-19 Symptoms

We retrieved information from official Japanese government websites, Pediatric Society reports, and news reports on children's deaths from COVID-19 and the effect of the vaccine preventing severity of symptoms. In July 2021, when the vaccine became available to children over 12 years of age, the MHLW indicated that its aim is to prevent COVID-19, decrease the number of cases, and loosen the limitations on social activities [6]. Meanwhile, the letter that the Ministry sent to households with children ages 5–11 in early February

2022 indicated that vaccination would “prevent the severity of COVID-19 (based on the effectiveness on the Delta variant, prior to Omicron)”. It further added that “children should not be discriminated against or bullied (*‘ijime’*) for not being vaccinated”. No mention was made of social activities or school events. The data show that the severity of COVID-19 has not significantly intensified among Japanese children in this age group, specifically with regard to the Omicron variant. As of 12 April 2022, there were 750,000 confirmed cases of COVID-19 among those aged 1–9 years, with only four deaths reported [7,8]. Notably, these deaths were in the younger age group (1–4 years), which was not subject to vaccination [9]. Japanese children seem to be less vulnerable to COVID-19 than their American counterparts, as demonstrated by the death rates of 0.0005 and 0.007, respectively [10]. For some added perspective, 46 children in this age group (1–9 years) died from the seasonal flu in 2019 in Japan, which then ranked as the fifth highest cause of death. For this reason, preventing the occurrence of severe COVID-19 symptoms is not a highly convincing argument for many individuals.

### 3.1.2. Benefits for Children in Low-Income Families

Although the Ministry does not specifically state this in the voucher, the vaccination may be of particular benefit to children in low-income families, as schools can remain open. Japan has become increasingly indifferent to income-based educational disparity [11]. As in many other countries, Japan has also observed a disproportionately negative impact of COVID-19 on low-income families hit hard by school closures, many of which rely on the public school’s nutritious lunches; in the past few years, these families have struggled to obtain food and access to other social services [12]. In addition, as Japan has been very slow to introduce information and communication technology (ICT) into education, when all public schools closed down in March 2020, most children had to study at home with printed materials and textbooks [13]. Private institutions were quick to adopt online schooling early on, and now, private primary and secondary schools have become more competitive than ever. Cram schools to assist students in preparing for entrance exams are packed, with long waiting lists. Some parents have opted to vaccinate their older children to attend cram school while opting against this for their younger children. The total cost of preparing for entrance exams runs around 2,500,000 yen (approximately 20,000 USD), which is prohibitively expensive for lower income families and leads only to further income-dependent educational disparity [14].

### 3.1.3. Reducing Child Abuse

For children in the West, staying home and not being able to go outside may have felt like a punishment, but this was less true for Japanese children. In Japan, instead of teaching independence, the mother’s primary focus is to keep the child dependent, and the predominant relationship for the child, carefully nurtured from infancy, is that with his or her mother. It is common for a mother to sleep with their children until they reach the teenage years, and most children do not have their own room. With many decisions made for them, children learn to value their parents’ choices over their own. While independent thinking is not encouraged, living harmoniously with society is. Therefore, ‘grounding’, a practice common in countries like the U.S., would never serve as a punishment for a Japanese child due to this extreme attachment with their mother. A recent internet survey of mothers showed that more than half of those with school-aged children have experienced their children not wanting to go to school [15]. That said, while staying home may be comfortable for most children, a strong uptick in child abuse cases has also been observed, possibly due to the fact that discipline is typically administered privately at home and corporal punishment is not illegal in Japan [16]. In fact, a record high of 205,029 cases were reported in 2020 [17]. In addition, while vaccination may benefit these children, abusive parents may be less inclined to get them vaccinated twice (the voucher sent was for two shots).

#### 3.1.4. An Increase in Bullying but a Decrease in Suicide

Some children may not see a clear benefit from getting vaccinated. As mentioned in the voucher, many surveys found that some children were concerned about getting bullied if they opted out of vaccination. Would vaccination help reduce bullying? Those living in relatively heterogeneous cultures in the West may find it difficult to conceive the high prevalence of bullying in Japan, a highly homogeneous country where being different or nonconforming is often frowned upon; in 2019, surveys revealed approximately 610,000 cases of bullying [18]. A study of 9000 students in the Tokyo Metropolitan area found that 66.2% experienced bullying; this percentage has been increasing rapidly over the past ten years in elementary schools [19,20]. However, last year, bullying decreased by 15.6%, down to 517,163 cases with social distancing, closer follow-ups, and better support for students [20]. While the vaccine may promote socialization among students, it may simultaneously increase bullying. Since the pandemic has helped initiate online learning, it has become a lifeline for those who dread returning to school, and most (85%) have been able to attend school online [21]. The benefit of vaccination for this group of children may be small, since they would stay home anyway without much social contact, and the vaccination option may simply create one more reason to discriminate against other students. As vaccination permits students to become more social, bullying is expectedly increased.

The solution to bullying may not be so simple as rejecting vaccines: compared to last year, the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) reported that there were approximately 35,000 more elementary and junior high school-aged children who missed more than 30 days of school [22]. While the number of absences from sickness decreased, there were an additional 15,000 absences from truancy and 21,000 more from fear of being infected by the SARS-CoV-2 virus last year [23]. According to this report from MEXT, the number of those who sought counseling and advice from the school or elsewhere did not increase but rather decreased by 5%. In addition, compared to 2019, loss of motivation and irregular life habits increased as reasons for truancy [23]. Restrictions on school activities, such as eating lunch silently, using partitioning in some schools, constant masking, and discouraging socialization amongst students, have been attributed to the increase in missing school [24]. The number of suicides among school-aged children, especially girls, increased from 317 in 2019 to 499 in 2020 [25]. Even after school reopened, children have reported feeling more isolated and unable to seek help. As in previous years, the primary causes of suicide were poor academic performance, future career concerns, and relationship issues with parents; however, a sharp rise was seen in the increase in mental health issues such as depression [25]. A December 2021 survey conducted by the NCCD showed that 15% of school age children had mild depression or worse and 40% of children and 20% of parents were unable to seek help when the child is in a depressive state [26]. Vaccination is expected to alleviate social restrictions and benefit those who are unable to seek help.

#### 3.1.5. Summary for Children

The main benefit of vaccination among children is the prevention of severe symptoms of infection, although there seem to be some other benefits, as stated above. That said, the COVID-19 vaccine could be heightening other risks for children, calling into question whether the net effect is, in fact, beneficial. For example, some reports have emerged concerning accidental administration of the wrong vaccine and/or the wrong dosage (e.g., a full adult dosage) [27,28]. Additionally, amid Japan's relative obsession with COVID-19 vaccination, concerning shortages have developed for vaccines for mumps and Japanese encephalitis (JE), and insufficient attention has been directed toward the paucity of these important vaccines [29]. Instead of actively working to secure these vaccines from other sources, the government has been fixated on the COVID-19 vaccine alone, even though the delayed administration of these vaccines is putting children at higher risk for developing these other illnesses. The mumps vaccine is categorized as not mandated in

Japan, although 15,152 cases were reported in Japan in 2019 [30]. Major complications of mumps include orchitis, which can lead to infertility (reported in 30% of post-pubertal males), aseptic meningitis (10%), and sensorineural hearing loss (4%) [31]. Sensorineural hearing loss, while usually transient, can sometimes be permanent. The mumps vaccine has a complication rate of less than 1%. The vaccine for Japanese encephalitis is required to be administered in Japan; yet, it has been in short supply for the past year. While infections are mostly mild, 1 in 250 infections result in severe clinical illness with a case fatality rate of 30% [32], which is 2.4 times higher than the COVID infection mortality rate in the 5–11 age group (0.12% vs. 0.05%). Vaccination can fully prevent Japanese encephalitis infection, and some scientists have even claimed that it may be effective in the cross-prevention of COVID-19 infection [33]. If the delayed administration of “arbitrary” and “mandatory” vaccines such as those for mumps and JE is acceptable, then what justification is there for deeming the COVID-19 vaccine as “strongly recommended”? The point here is that children face significant risk when they lack timely access to other vaccines.

### 3.2. *The Best Interests of the Parents*

#### 3.2.1. Maintaining a More Traditional Role in Parenting

Parents in Japan, especially mothers, play more traditional roles. After the vaccine became available to children ages 5–11, the Japanese Pediatric Society issued the following statement: “The responsibility lies in the adults getting the COVID-19 vaccine first to protect the children from getting infected. The pros (not getting infected) and cons (adverse effects) need to be discussed prior to consenting to vaccination” [34]. Not surprising for Japan, one-third of parents have not discussed the vaccine with their children [35]. Indeed, the majority of parents feel that this decision is theirs and not their child’s, since “children are too young to make an informed choice” [35]. Japan has a history and culture of not disclosing information (even bad news) to children to protect them [36]. Dominant parenting values in Japan center on harmony rather than on self-determination [37]. In a manner that many Westerners would perceive as negative, independence among children is discouraged from infancy, and Japanese parents, especially mothers, will often rear children to value obedience, often sharing the child’s mindset (a child’s opinion is taken the same as that of the parent) when making decisions. This is fostered further by extreme attachment, exemplified by co-sleeping and co-bathing with their children, even beyond the preschool age. In any case, the decision to vaccinate children in Japan will be made by parents, and in most cases, by the mother. Deciding in the best interest of the child whether to vaccinate fulfills one of the traditional responsibilities afforded to mothers.

#### 3.2.2. Decreased Gender Gap for Mothers

Although the pandemic exacerbated the gender gap worldwide, extending the gap to closure by a generation [38], vaccination may help narrow the divide. The pandemic brought about even more setbacks and stress for Japanese women, in part because women tended to work jobs with a more vulnerable status but also because their caregiving demands grew [39]. Pre-pandemic, women did 90% of the household chores; post pandemic, with the male partner staying home, household chores simply increased since traditional males do not do chores [40]. This has certainly increased the gender gap. There was a 15% increase in suicide rates for working women [41]. Last year, of the 70% of Japanese women in the labor force, only 15% held management positions [42]. Therefore, when a positive COVID-19 case is confirmed in a school classroom, women find themselves in charge of picking up the children. While the MHLW attempted to reduce the impact on the labor force in January 2022 by further shortening the isolation period of a contact person from ten to seven days [43], this made little difference in the amount of caregiving required of mothers. If vaccination were to have more marked benefits, such as a shortened isolation period for both infected and close contact persons, parents may be more motivated to vaccinate their children.



### 3.2.3. Peace of Mind about the Future Fertility of the Child

Many parents have been fairly hesitant to vaccinate their children. According to a preliminary survey done by Horiuchi et al. in May to June of 2021 targeting parents with children aged 3–14 years, 35.3% reported no intention of getting their child vaccinated. Approximately 16.2% of parents who wanted to get vaccinated themselves did not intend to vaccinate their child [44]. The survey showed that parental hesitancy toward vaccinating one's child was especially high among mothers with lower social relationships [44]. This tendency among mothers was contrasted against that in fathers, who showed more consistent intentionality toward vaccinating their child regardless of the level of satisfaction with social relationship. Some have speculated that this hesitancy toward vaccination among women may be related to a concern about infertility as an adverse effect, as rumors of this have been circulating [45,46]. Some parents have voiced their apprehension, particularly about menstruation issues and future fertility [47,48]. Roughly 30,000 cases of menstrual cycle changes and irregular bleeding have been reported in the UK [49]. However, according to the MHLW in Japan, there is no association between vaccination and menstrual irregularities [50]. Although precise data are not available, many women seem to experience abnormal menstrual cycle changes shortly after vaccination. Increasingly, more women in Japan have reported these adverse effects [51], so perhaps their concerns for their child's well-being are rational.

The major concern for parents seems to be the long-term effects of the vaccine that may extend to future offspring of their children. Since the 11th century, up until the end of World War II, the Japanese family system has long been based on *ie*, a community related by blood, typically comprising a household of grandparents, the son and his wife, their children, and sometimes the offspring of their children [52]. *Ie* formed the basis of the Japanese nation, and while the Confucian principles underlying the *ie* concept have faded gradually, they are still followed to some degree by many in contemporary Japanese society. The patriarchal nature of *ie* may have lost legal power with the abolishment of the law, yet the couple's fertility—particularly that of the woman's—allowing for the household to be passed down to the next generation, remains essential [53]. It is not difficult to understand then, how a mother may be more reluctant to get her daughter vaccinated. Accordingly, information on the long-term safety of the vaccine is required, along with the specific effects of COVID-19 infection on fertility, to promote informed decision-making among mothers regarding vaccination.

## 4. Implications for the Future

In the present paper, we analyzed some potential benefits of vaccination for both children and parents in Japan. With these in mind, how do we as a society approach this issue from the perspective of public health? Even though studies have demonstrated that children are effective vectors of COVID-19 and the emerging variants, little discussion has proceeded on this matter in Japan [54,55]. This may be due to the Japanese belief that children are brought into the world as innocent and virtuous, with external influences being the primary reasons to blame for a child straying from this nature at birth [16]. Even the MHLW's letter that accompanied the vaccine voucher emphasized self-protection but failed to mention the importance of preventing transmission to others. In fact, the MHLW has never mentioned the possibility that children may be potential vectors of disease, even for the seasonal flu [56]. Even before the national emergency statement was made on 2 March 2020, Prime Minister Abe noted that school closures were issued “to prioritize children's health and safety” [57,58], never once mentioning that children could serve as vectors of COVID-19. It would be markedly more helpful if the letter that accompanied the vaccine voucher had clearly emphasized the need to prevent the spread of COVID-19 to others via children, which is absolutely plausible from a public health perspective. If people knew the likelihood of children bringing the virus home and spreading the infection to other family members (domestic infection), parents would be far more motivated to vaccinate their children.

We would also advocate for a more effective way to motivate children and their parents to vaccinate that does not treat children as “disease vectors”; to this end, we propose more open discussions about COVID-19 and vaccines, both at school and at home. Relative to what is available in Western countries, very few Japanese books and other resources have been published for children on this matter. Accordingly, many children’s experiences with COVID-19 in Japan have been that it causes sudden school closures. By the time schools reopened, COVID-19 had become a term that was used to bully and discriminate against others, and most children came to avoid talking about it altogether. However, a children’s book about COVID-19 was published in August 2020 and introduced in the national media [59,60]. It was written in the hopes that children could make self-determined choices with regards to protection measures by offering them proper information on COVID-19, as well as the implications for themselves and others. After all, the aim of compulsory education in Japan is to develop a basis for lifelong learning through three elements: fundamental knowledge and skills; motivation to learn; and the ability to utilize knowledge and skills and think, judge, and express one’s ideas [61].

## 5. Conclusions

This exploratory literature study has uncovered numerous sociocultural issues in Japan and offers important lessons to be learned from the COVID-19 pandemic. Even today, shockingly little is being discussed in Tokyo schools about mask-wearing or vaccines. Almost all children in Japan wear a mask even when walking outside, even when alone in the countryside. Most adults wear a mask when driving alone. Aside from incessant disinfection, mask-wearing, and partitioning various spaces, schools must provide more information and hold discussions on the prevention measures for children to perceive COVID-19 as manageable in some respect. Everyone, regardless of their age, must re-claim these elements in an effort to promote public health. We would even go so far as to argue that this pandemic offers the perfect opportunity to reevaluate and execute all three of these elements.

**Supplementary Materials:** The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/covid2070060/s1>, Supplementary File S1 (vaccine voucher), Supplementary File S2. (literature list).

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