



Trends in the parents' intention to vaccinate their children against COVID-19: A comparative study in Peru

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Background

- Although COVID-19 vaccination has shown to be clearly beneficial in children and adolescents to reduce hospitalization and potentially transmission, there is still a lot of hesitation among parents due to concerns about vaccine safety and efficacy, especially in children under 12 years of age.[1,2]

Methodology

- **Study Design:** We conducted a comparative study in Peru to evaluate the trends in parents' intention to vaccinate their children under 12 years of age against COVID-19 during two periods: 11/25/2021 to 12/06/2022 (Period 1) and 01/16/2022 to 01/24/2022 (Period 2).
- **Study population:** Parents of children under 12 years of age who met the following inclusion criteria: 1) Peruvian nationality, 2) current residence in Peru, and 3) parent of at least one child under 12 years of age.
- **Instrument:** We created an online survey that consisted of 38 questions aimed at assessing general data and sociodemographic characteristics, parents' perception of the risk of COVID-19 infection in their children, parents' perception of the need for vaccination, and finally the perception of adverse effects related to COVID-19 vaccines. The survey was distributed through social networks (Facebook, Twitter, etc.).
- **Statistical Analysis:** Data analysis was performed using R v4.0 (R Foundation for Statistical Computing, Vienna, Austria). The factors associated with vaccination intention in children under 12 years of age were evaluated using Poisson regression with robust variances, obtaining crude (RPC) and adjusted (RPa) prevalence ratios with their 95% confidence intervals (95% CI).

Results

- During period 1, there were 673 participants (69.7% women). In period 2, we had 1139 respondents (77.7% women). Regarding intention to vaccinate, 83.5% of parents intended to vaccinate their children under 12 years of age during period 1. This percentage was almost the same during period 2 (83.3%).
- During period 1, the factors associated with a decrease in this intention were to believe that the vaccine was not necessary (aPR: 0.65; 95% CI 0.44 – 0.94, p=0.022), that it would not protect (aPR: 0.14; 95% CI 0.03 – 0.63, p=0.011), that it would not be safe (aPR: 0.80; 95% CI 0.70 – 0.92, p=0.001), that it could cause long-term side effects (aPR: 0.92; 95% CI 0.85 – 1.00, p=0.037), and to think it should not be mandatory (aPR: 0.89; 95% CI 0.80-0.99, p=0.038).
- During period 2, besides the factors identified in period 1, not knowing about COVID-19 infection risk in children (aPR: 0.92; 95% CI 0.85-1.00, p=0.042) was also associated with a decrease in the intention. Living on the highlands or jungle was associated with an increase in the intention in both periods.

Table 1. Comparison between Period 1 (11/25/2021 to 12/06/2022) and Period 2 (01/16/2022 to 01/24/2022)

Variable	Total N=1812	Period 1 N=673	Period 2 N=1139	p
Parents' intention to vaccinate their children				0.967
I would definitely vaccinate them	1073 (59.2%)	405 (60.2%)	668 (58.6%)	
I would probably vaccinate them	438 (24.2%)	157 (23.3%)	281 (24.7%)	
I would probably not vaccinate them	95 (5.24%)	36 (5.35%)	59 (5.18%)	
I am not going to vaccinate them	98 (5.41%)	36 (5.35%)	62 (5.44%)	
I don't know	108 (5.96%)	39 (5.79%)	69 (6.06%)	



Results

Table 1. Comparison between Period 1 (11/25/2021 to 12/06/2022) and Period 2 (01/16/2022 to 01/24/2022) [continuation]

Variable	Total N=1812	Period 1 N=673	Period 2 N=1139	p
Perception of the need of vaccination				
How soon would you vaccinate your children under 12 years of age against COVID-19?				0.113
I would vaccinate my child immediately	951 (52.5%)	376 (55.9%)	575 (50.5%)	
I would wait a while to know if the vaccine is safe	662 (36.5%)	219 (32.5%)	443 (38.9%)	
I would only vaccinate if it were mandatory	79 (4.36%)	30 (4.46%)	49 (4.30%)	
I would never vaccinate	71 (3.92%)	28 (4.16%)	43 (3.78%)	
I do not know	49 (2.70%)	20 (2.97%)	29 (2.55%)	
Perception of Safety				
How safe do you think the vaccine would be for COVID-19 in children under 12 years of age?				0.803
It would be very safe	740 (40.8%)	278 (41.3%)	462 (40.6%)	
It would be moderately safe	575 (31.7%)	219 (32.5%)	356 (31.3%)	
It would be unsafe	233 (12.9%)	81 (12.0%)	152 (13.3%)	
I don't know	264 (14.6%)	95 (14.1%)	169 (14.8%)	
Do you think children under 12 years of age may develop dangerous adverse events from the COVID-19 vaccine?				0.004
It is unlikely or definitely will not have	640 (35.3%)	209 (31.1%)	431 (37.8%)	
I do not know	462 (25.5%)	199 (29.6%)	263 (23.1%)	
Probably	592 (32.7%)	216 (32.1%)	376 (33.0%)	
Definitely	118 (6.51%)	49 (7.28%)	69 (6.06%)	

IQR=interquartile range

Fisher's exact test; Welch Two Sample t-test

Conclusions

- A high rate of intention to vaccinate children under 12 years of age was noted among parents in Peru, which was maintained until the end of January of 2022, right before COVID-19 vaccination started for this age group.
- There was a perception in some parents that the vaccine might not be necessary or safe, leading to a lower intention to vaccinate their children.

References

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2. Urrunaga-Pastor D, Herrera-Añazco P, Uyen-Cateriano A, Toro-Huamanchumo C J, Rodriguez-Morales A J, Hernandez A V, et al. Prevalence and factors associated with parents' non-intention to vaccinate their children and adolescents against COVID-19 in Latin America and the Caribbean. *Vaccines (Basel)*. 2021; 9 (11): 1303. doi: 10.3390/vaccines9111303.