

Caregiver Hesitancy Toward Childhood COVID-19 Vaccination Among 5 to 17- year-old patients seen at Tertiary Hospital Pedia OPD: A Cross-Sectional Study

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Background

- **Severe Acute Respiratory Syndrome Corona Virus Disease (COVID-19)** started a pandemic in 2020. After about one year into the pandemic, COVID-19 vaccines were approved for compassionate use.
- Vaccination rates in the Philippines have grown but greatly affected after the 2017 Dengue vaccine dispute. This hesitancy is likely driven by a number of factors, including concerns about the safety and efficacy, as well as a lack of information and education about the vaccines.
- Local data from Davao Region as of November 9, 2022 reported that 54.9% of children are still unvaccinated
- Upon further exploration of related literatures and studies, it was noted that despite several medical journals reporting vaccine hesitancy worldwide, there has been no such study exploring caregiver vaccine hesitancy specifically within the Philippines context.

Objectives

General Objective

- This study sought to assess caregiver hesitancy towards childhood COVID-19 vaccination.

Specific Objectives

Specifically, this study aimed to:

1. Describe the demographic profile of the participants (caregivers) of the study;
2. Determine and classify the mean level of caregiver hesitancy attitude toward childhood COVID-19 vaccinations;
3. Determine if there is a relationship between demographic factors and caregiver hesitancy attitude toward childhood COVID-19 vaccinations;

METHODOLOGY

- **Study Setting** - Tertiary Hospital Outpatient Department
- **Study Design** – Cross- Sectional, Analytical Study
- **Population**- Caregivers with Pediatric patients brought at OPD
- **Sampling**- Purposive sampling, no randomization with a sample size of 203
- **Variables and Measures**- Utilized a survey questionnaire with 2 parts adopted from the study of Parinyarux, Sunkonkit and Yotsombut in 2022 with modifications.
 - Part 1- Sociodemographic profile
 - Part 2- Caregiver vaccine hesitancy (Divided to 5 attitude domains)- rated using 5-pt likert scale
- Caregivers who highly rated the question "The COVID-19 vaccination is effective when administered to children (Question AV2)" was considered to have low vaccine hesitancy. Score interpretation for AV2 towards PVh were rated using the range of means

Table 1. Conversion of AV2 rating to level of caregiver vaccine hesitancy (PVh).

Rating in AV2	PVh	Descriptive Equivalent	Interpretation
1	5	Very High	This indicates that the described factor of caregiver hesitancy towards COVID-19 vaccine is always observed.
2	4	High	This indicates that the described factor of caregiver hesitancy towards COVID-19 vaccine is oftentimes observed.
3	3	Moderate/Neutral	This indicates that the described factor of caregiver hesitancy towards COVID-19 vaccine is sometimes observed.
4	2	Low	This indicates that the described factor of caregiver hesitancy towards COVID-19 vaccine is seldom observed.
5	1	Very Low	This indicates that the described factor of caregiver hesitancy towards COVID-19 vaccine is never observed.

METHODOLOGY

Data Analysis- a.Descriptive Statistics

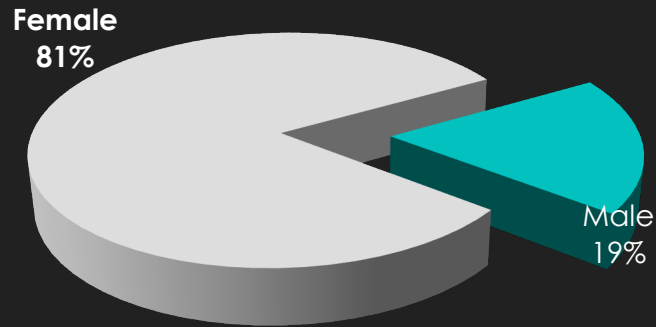
b. Multiple regression analysis

Model 1 – Predictors include sociodemographic profile

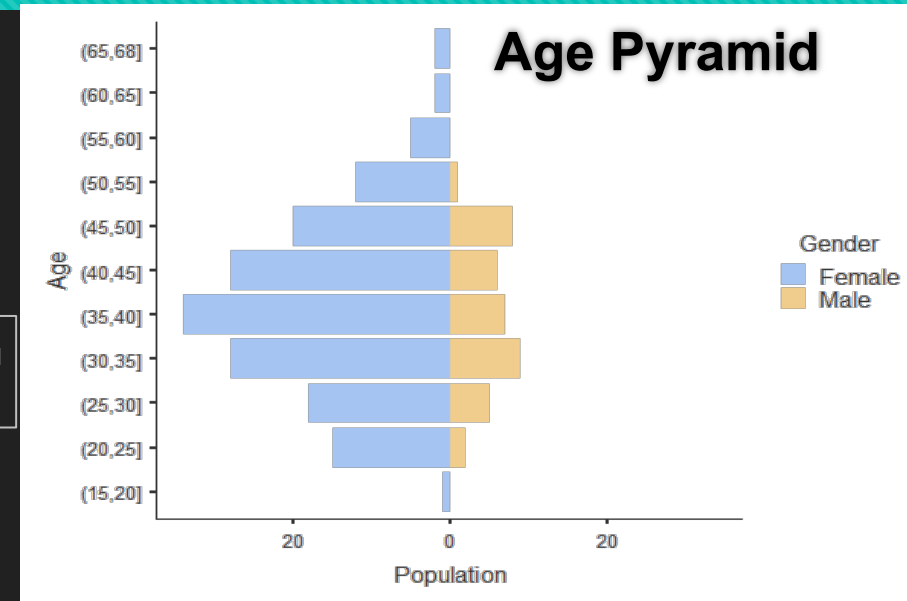
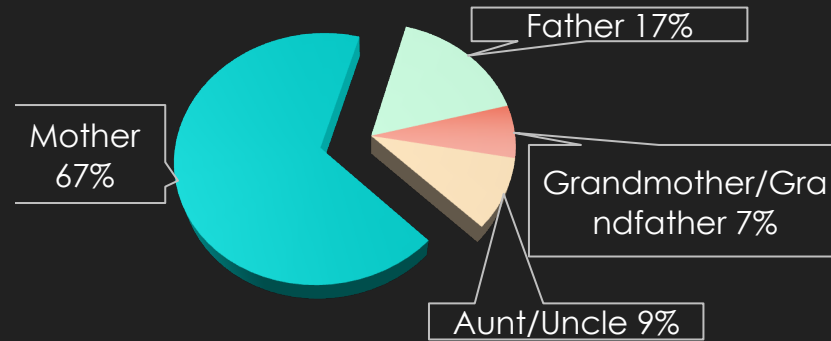
Model 2- Predictors include caregiver attitude

Table 2. Demographic Profile of the Respondents

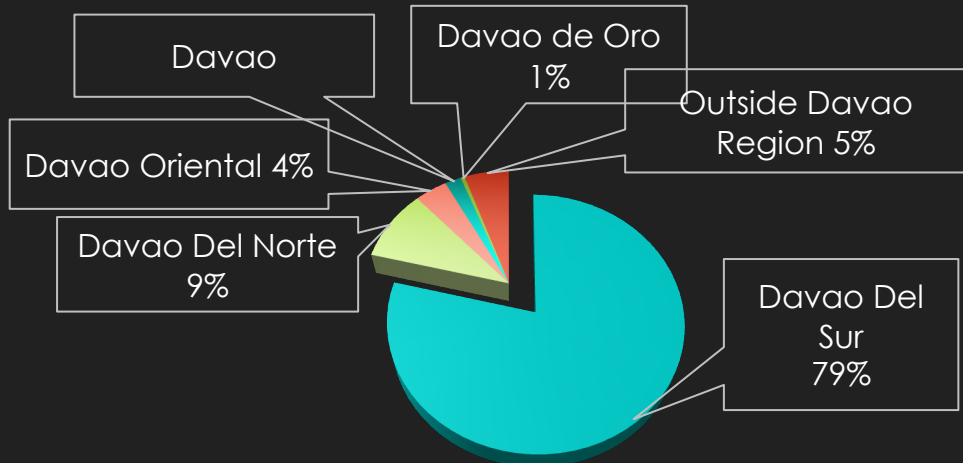
Gender



Relationship to child



Living Region



Educational Attainment

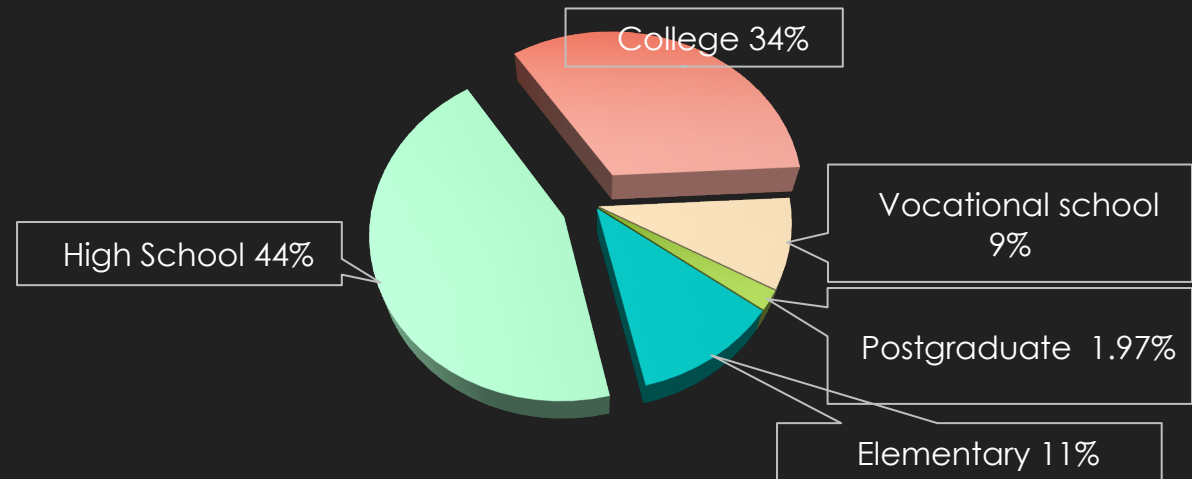


Table 3. Caregiver COVID 19 vaccination hesitancy (PVh) levels.

	N (%)	
Very Low (1)	43 (21.18)	
Low (2)	76 (37.44%)	
Moderate/Neutral (3)	54 (26.60%)	
High (4)	18 (8.87%)	} 41.48%
Very High (5)	12 (5.91%)	

Table 3. Multiple Regression Analysis of Socio-demographic data, EC&V and Family Context association with Caregiver Vaccine Hesitancy

Determinant	Coefficient	Std. Error	t-value	Pr(> t)
(Intercept)	1.6270	1.2612	1.290	0.1988
Age.30-39	-0.2403	0.2277	-1.056	0.2736
Age.40-49	-0.1713	0.2438	-0.703	0.2488
Age.50-59	0.0320	0.3287	0.097	0.2128
Age 60 Above	0.3099	0.6896	0.224	0.2396
Gender Male	0.3099	0.32705	0.948	0.3447
Living Region: Davao Del Norte	1.0673	1.2168	0.877	0.3816
Living Region: Davao Del Sur	1.3702	1.1860	1.155	0.2496
Living Region: Davao Occidental	0.6615	1.3111	0.505	0.6145
Living Region: Davao Oriental	1.3356	1.2602	1.06	0.2907
Living Region: Outside Davao Region	1.0064	1.2341	0.816	0.4159
Relationship: Father	0.24846	0.37782	0.658	0.5117
Relationship: Grandparents	0.17253	0.50457	0.342	0.7328
Relationship: Mother	0.4123	0.28781	1.433	0.1538
Education: Elementary school	0.3779	0.3164	1.194	0.234
Education: High School	-0.1119	0.1876	-0.596	0.5517
Education :Postgraduate	-0.3329	0.5862	-0.568	0.5709
Education: Vocational school	-0.2620	0.3024	-0.866	0.3875

Determinant	Coefficient	Std. Error	t-value	Pr(> t)
Ever refused any other vaccination for the children: Yes	0.4571	0.2390	1.912	0.0575*
Number of received COVID-19 vaccinations (shots)	-0.2712	0.1178	-2.302	0.0225*
There were the children with high risk of serious COVID-19 complications due to congenital diseases: Yes	-0.4082	0.1908	-2.14	0.0338*

Table 4. Multiple Regression Analysis of Caregiver attitudes in association with Caregiver Vaccine Hesitancy

Determinant	Coefficient	Std. Error	t-value	Pr(> t)
AV1 (I am knowledgeable and know enough about the COVID-19 vaccine.)	-0.228440	0.061165	-3.735	0.00025*
AV3 (Long term safety data of the COVID-19 Vaccination in children is not available)	-0.447783	0.071008	-6.306	2.05e -09*
AP3 (COVID-19 vaccination centers for children are sufficient and conveniently accessible.)	0.178457	0.081144	2.199	0.02910*
SN2 (I wanted to fulfill my caregiver responsibility to live up to societal expectations.)	-0.237474	0.095796	-2.479	0.01407*
CP1 (To vaccinate my children is not a financial burden)	0.128146	0.071900	1.387	0.07634*
CP2 (I am certain that I can manage to vaccinate my children with the COVID-19 vaccine on time.)	-0.293451	0.088845	-2.582	0.00115*

CONCLUSION

- The study encompasses a diverse demographic profile.
- Findings revealed moderate level of hesitancy among caregivers.
- Demographics is not significantly associated with caregiver vaccine hesitancy.
- Caregivers who refused any other vaccination showed positive correlation towards vaccine hesitancy.
- Increased number of covid vaccination centers actually increased vaccine hesitancy.
- Families facing higher risk for COVID-19 complications due to congenital diseases displayed lower hesitancy.

RECOMMENDATIONS

- Increase the sample size
- Extend the scope of the questionnaire to a broader geographical level
- Conduct Qualitative research to provide a deeper understanding of the factors that influence caregiver attitudes towards vaccine hesitancy.

THANK YOU!

References

