Knowledge, level of acceptance, and perception of low socio-economic status families towards Covid-19 vaccination in Tarlac Province

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ABSTRACT

This study aimed to determine the knowledge, acceptance, and perception of families with low socio-economic status towards Covid-19 Vaccination in the Province of Tarlac. The study utilized a quantitative approach via descriptive-correlational research design, while a structured, validated, and reliability-tested questionnaire was used in data gathering through online surveys and face-to-face interviews. The respondents are 171 low socio-economic status families chosen via non-probability purposive sampling design with the inclusion criteria of poor to low-income families from three districts in the Province of Tarlac while also belonging to first,- second- and third-class municipalities. The study found that the respondents were comprised mainly of 04 - 06 household members and had completed secondary level, poor in socio-economic status and not members of Pantawid Pamilyang Pilipino Program (4P's) beneficiaries, with optimal health and mostly finished the two Covid-19 vaccination doses. In addition, most respondents are aware of credible sources of information, vaccine efficacy, expected immune response reactions, and related mortality, which facilitates high vaccine acceptance. The study also found a significant relationship between low-income families' level of acceptance of vaccines and their perceived susceptibility and severity to Covid -19 diseases. However, in terms of knowledge and perception, the study found a significant link between the profile of the respondents- in terms of their age, number of household members, and monthly income- and their knowledge and perception, but no significant relationship between the educational status and health status. Furthermore, intervention measures were proposed to enhance the knowledge, acceptance, and perception of families with low socio-economic status towards Covid-19 vaccination in Tarlac Province.

1. Introduction

Covid 19-caused virus, SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2), was identified in the later part of 2019, starting in Wuhan, China, and spread to a global scale, leading to the announcement in early 2020 of a worldwide health crisis declaring it as a pandemic (Hu et al., 2020). To counter the burden the pandemic has caused on daily living, health care delivery systems, and the economy, countries, private sectors, and the World Health Organization itself made quick partnerships and started to mobilize funding, equip the latest technologies on genomic sequencing and share advance research data to expedite a fast-track Covid-19 vaccine development World Health Organization (WHO, 2022). Spearhead programs 'Operation Warp Speed' (OWS) in the United States, United Kingdom's Oxford University, and BioNTech of Germany led the research and clinical trials that developed Covid-19 vaccines used today (Solis-Moreira, 2021).

But while the pandemic is not yet over, new challenges have emerged. The accelerated development of vaccines and recommended usage has raised concerns about their effectiveness, especially here in the Philippines, with doubts and critical questions proliferating about vaccination programs' safety after the Dengvaxia controversy and related deaths in 2017. Therefore, the Philippine Health Technology Assessment Council has rapidly reviewed various technologies to guide national healthcare decision-makers toward evidence-based policies. On September 09, 2021, based on Oxford University, London World in Data Analytics, 18,697 people were vaccinated with at least one dose in the Philippines. In this regard, the Tarlac provincial government built a large-scale vaccination facility for the mass vaccination of Tarlaqueños against coronavirus disease in compliance with national guidelines, aiming to achieve a goal vaccination of 70% of the total population of 1,052,419 people.

The World Health Organization (WHO, 2022) believes that the public plays a key role in combatting the pandemic and that their outlook toward the Covid-19 Vaccination Program and its strategies shall be closely monitored; this research was conducted to assess the implementation of Covid-19 vaccination program in the Philippines; specifically, fill the gap and determine the knowledge, level of acceptance and perceptions of low socio-economic status households regarding the Covid-19 vaccine in selected municipalities of Tarlac Province, Philippines. Researchers believe that awareness, behavior, desire to use, expectations, resistance, and doubts about the Covid-19 vaccine of the most vulnerable members of society are essential for breaking down all barriers to vaccination, reaching the goal of herd immunity, and ultimately controlling the pandemic. To date, no previous studies have focused on low-income households' response to Covid-19 vaccination here in the Philippines; hence, this study will provide a significant basis for areas that need further health education promotion aiding illness prevention to the most susceptible populations at this crisis.

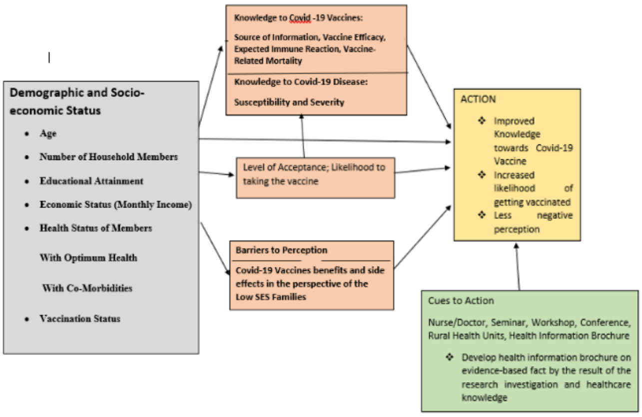
2. Theoretical basis

The Health Belief Model (HBM) was developed by social psychologists (Glanz et al., 2008) to explain the failure of people participating in programs to prevent and detect disease. The Health Belief Model is a theoretical model that can guide health promotion and disease prevention programs such as the Covid-19 Vaccination Initiative. It is used to explain and predict individual changes in health behaviors. It is one of the most widely used models for understanding health behaviors. Ultimately, it states an individual's course of action often depends on the person's perceptions of the benefits and barriers related to health behavior (LaMorte, 2019).

This model guided this study to determine the importance of gauging the knowledge, level of acceptance, and perception of low socio-economic status families towards the Covid-19 Vaccines; it measures the relationship between the current health beliefs, including behavior and practice of this underrepresented sector of community and how it affects their adherence with the current localities Vaccination Program Strategy, to localize which areas of these three key aspects of reaching optimum health (Knowledge, Level of Acceptance and Perception) indicates a weak link thus necessitates reconstruction so that cues to action; appropriate recommendations improving current vaccination strategies and a well-targeted interventions suited to these population shall be implemented thereby influencing more positive citizen initiative into getting vaccinated.

Figure 1

Rosenstock's Health Belief Model (1950)



Source. The researcher's data analysis

3. Literature review

Studies conducted in the Philippines mostly explored the prevalence of vaccine hesitancy in the general population where there is high susceptibility and severity (Caple et al., 2021; Cordero, 2022), to Filipino Employees (Bautista et al., 2020), wholly in a developmental country like Philippines (Guevarra & Reosa, 2021) and focusing on Urban areas of the country like Metro Manila (Bautista et al., 2020) wherein Low Vaccine Confidence amongst Filipinos were noted (Mendoza et al., 2021) even portion of the population indicated no total intention of getting vaccinated when it became available (Brackstone, 2022) due to the Dengvaxia Issue in 2017 (Mendoza et al., 2020). Other studies identified the reasons for this response to the vaccination program. Concerns about safety, efficacy, and adverse effects were the leading causes of vaccine distrust (Bautista, 2021). In addition, there are misconceptions, lack of comprehension, and presence of pervasive information (Lau et al., 2020), which can mainly be because the low-income households' resources in the Philippines are significantly affected by the pandemic (Cho, 2020). One study by Caldwell et al. (2021) only discussed the role of minimum health standards while there is no vaccine.

Meanwhile, other foreign-based studies such as those of Nguyen et al. (2021), Ebrahimi et al. (2021), Shacham et al. (2021), and Harapan et al. (2020) upon review all focus on Vaccine hesitancy with concerns about general populations in US, Saudi Arabia, Israel, and Indonesia. Flawed Perceptions and doubt about the low efficacy of the vaccine were some of the reasons mentioned, similar to the studies discussing Vaccine Acceptance by Mannan and Farhana (2020) and Al-Mohaithef and Padhi (2020). Some delved into knowing Public Knowledge about Covid-19 Severity, Susceptibility, and Behavior (Qalati et al, 2021; Yanti et al., 2020), into Public Apprehension affected by factors like sex, education, job, income, if they have children and political affiliation (Khubchandani et al., 2021) and Public's Vaccine Intention with emphasis on risk perceptions (Caserotti et al., 2021). One elaborated update on vaccine side effects (Centers for Disease Control and Prevention [CDC], 2021).

Thus, all synthesized studies share some similarities with this study about knowledge, vaccine acceptance, and perceptions about Covid-19 vaccination but differ significantly in scope- whereas this study combines knowledge, acceptance, and perceptions, which is singled out in the others with a focus on developing a helpful tool in promoting health and illness prevention by targeting possible deficiencies in the three critical variables mentioned making this study more comprehensive- and setting wherein our study is focused on a specific population which is the low socio-economic status families. In contrast, most foreign studies mentioned determined population parameters are based on sex or are randomized.

4. Methodology

This research used a quantitative approach. A descriptive-correlational survey design was also utilized in the study.

This study used a purposive sampling technique to determine the respondents of the survey with equal distribution among selected 1st 2nd, and 3rd class municipalities of the Province of Tarlac, namely, Gerona, Victoria, and Mayantoc, with the inclusion criteria being eligible individuals in taking the Covid-19 vaccine with prioritization on unvaccinated individuals; those that belong to ages 12 to 60 years old and is a member of poor to low-income class families according to Philippine Institute for Developmental Studies with monthly income of 21, 914 to 10, 957 or lesser especially those that is considered Indigent belonging to the 4P's (Pantawid Pamilyang Pilipino Program).

Raosoft, an online sample size calculator, was used to compute the sample population with a 5% margin of error and a 95% degree of confidence via a raw population of 300, which came up with 169 sample size, which was also confirmed using the ***Cochran's Formula***. This enables the calculation of an optimum sample size given a desired level of accuracy, a target level of confidence, and the projected percentage of the attribute present with 168.8 or 169 calculated size in the population resulting in 56.3 when delegated to the 3 municipalities using a reliability of 95% and at least 5% precision (plus or minus). Thus, according to the standard tables, a 95% confidence level yields Z values of 1.96;

$$((1.96)^2 (0.5) (0.5)) / (0.05)^2 = 385 \tag{1}$$

Then modified to suit our smaller population; *385 / (1 + (384 / 300)) = 168.8*. So, for this smaller population, we need at least 169 respondents from families with low socio-economic status. Researchers then settled for a sample size of 57, with each congressional district needing 171 total respondents. Tally frequency and percentage were also utilized to provide a basis for comparison when describing the profile of the respondents. The researcher's statistician used the two-tailed Pearson correlation to analyze the data. For data cleansing, editing, organizing, and processing, Microsoft Excel 2019 was used.

Furthermore, the survey was conducted through an online survey platform and a face-to-face interview after the Municipal Mayors signed approval letters. Ethical considerations, data confidentiality, and infection control procedures/health protocols were strictly observed during the study.

The formulated interview questionnaires in the form of a 5-point Likert scale also underwent validation by four experts who are practitioners and specialize in the related field of study. Thus, the instrument was a questionnaire based on studies and published articles from the Department of Health of the Philippines and the Center for Disease Control and Prevention (CDC).

$$n_0 = \frac{Z^2pq}{e^2} \qquad n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}} \tag{2}$$

5. Result and discussion

5.1. Profile of the low socio-economic status families

The demographic profile of low socio-economic status families includes information such as the number of household members of the family, highest educational attainment, monthly income classification, health status, vaccination status and if they belong to the Pantawid Pamilyang Pilipino Program as an Indigent Family: One hundred and ten respondents (64.3%) live in a home with 04 - 06 members; thirty-eight respondents (22.2%) live in a household with 01 - 03 persons only; and twenty-three respondents (64.3%) live in a family with 07 - 09 members. This result suggests that most low socio-economic status respondents must divide limited resources to an average household of at least four persons and up. Regarding their **educational attainment, seventy-three percent, or 42.7 percent, of the sample completed secondary-level education**. Sixty-one percent, or 35.7%, were able to complete secondary school; twenty-nine percent, or 17% were only able to complete elementary; five percent, or 3%, are elementary undergraduates; and three, or 1.8%, are certified in a technical-vocational level which indicates that most of the low-income families' education is at the secondary level- made feasible by the increasing availability of Barrio Schools in remote barangays or far-flung areas in the Philippines. *Taking into consideration the aspect of socio-economic status, researchers found out that* One hundred and seventeen respondents, or 68.4%, are not members of the **Pantawid Pamilyang Pilipino Program** (a government cash-assistance program in the Pjilippines) for Indigents; only fifty-four respondents, or 31.6%, are members of the 4P's and get a government stipend every quarter. As a result, it can be concluded that most respondents, despite being classed as **Low and Poor Class in terms of Monthly Income**- measured as one hundred and forty-eight or 86.5% earn only a gross income of PHP 10.957 or even less per month; and twenty-three or 13.5% earns an income of PHP 10,957 to 21, 194- does not receive the help they needed especially at this time of crisis making it a vital area of concern since this is a crucial benchmark of an individual's socio-economic status determining possible compromises on sufficing their daily needs and health maintenance. However, the **Health Status** among One hundred thirty-two people, or 77%, respondents still considered optimum without the presence of disease/illness, which can be attributed to the fact that these Families that served as respondents reside in an urban agricultural area have better access to cheaper, higher food supply and security dimension if compared to those that live in rural. *As a result, only* a portion of Thirty-nine respondents, or 23 percent of those surveyed, have co-morbidities.

Lastly, **Vaccination Status** *was also analyzed among the sample wherein* Eighty-nine out of 171 respondents (52%) are entirely vaccinated; sixty percent (35.1%) are unvaccinated; nineteen percent (11.1%) have already received a booster shot; and three percent (1.8%) are still on their first dose. These findings concluded that most respondents had already gotten at least two vaccine doses. Still, the remaining portion of unvaccinated to incompletely vaccinated individuals might imply the need for further intervention to increase compliance and calls for follow-up to reach the goal of 'herd immunity'.

5.2. Knowledge of the low socio-economic status families towards Covid-19 vaccination

Knowledge in this study pertains to comprehension and then awareness of the low socio-economic status of families about aspects of the Covid-19 vaccine and related information specified below. Regarding **Sources of Information for Covid-19 Vaccines and related Information**, respondents (grand mean = 3.96 over 5) know how to acquire reputable and relevant information properly. However, the findings also show that Covid-19 and vaccine-related information can be enhanced through critical fact-checking and reliability testing. Especially when it comes to information extracted from social media sites, which are the most used information dissemination platform among the elderly population and the primary source of information by 40.95% or 70 out of 171 respondents, this turn-out of access has positive impact on the respondents' knowledge with the **Covid-19 Vaccine Efficacy**, wherein low socio-economic status families are aware (grand mean = 3.72 over 5) that the Covid-19 vaccine is safe to use and provides the same protection to people with allergies or co-morbidities drawing that most of the respondents has adequate awareness with regards to vaccine effectiveness since resources are more readily available via the government health agencies and its publication materials made rampant on social media- which also made a vital effect towards their knowledge on the Vaccines' **Expected Immune Reaction -** that through social media respondents are kept up-to-date and aware (grand mean = 3.67 over 5) of what to expect as normal physiological reaction after taking a Covid-19 vaccine dosage but areas of inconsistencies are also observed regarding adverse effects during interviews, as videos and blogs of negative impacts are also predominant hence this result connotes that although awareness is displayed, complete understanding is still underway and fragile which needs further strengthening as incomplete knowledge promotes area of hesitancy and low adherence as shown by a sample of the study population being still unvaccinated.

Another aspect that increases fear and doubts identified is **Vaccine-Related Mortality,** where there is only a moderate amount of awareness (grand mean = 3.31 over 5) regarding the possibility and history of death from Covid-19 vaccines. This suggests that the situation in the marginalized region regarding vaccine-related mortality is contradictory, with word of mouth being propagated and believed despite tangible evidence of no direct and causal linkage between the vaccines and recorded deaths.

Low socio-economic status families' knowledge of Covid-19 disease

The Low Socio-Economic Status Families' knowledge regarding the Covid-19 Disease was divided into two areas of analysis in this study. The knowledge regarding **Susceptibility to Covid-19** has displayed promise; given that the pandemic has been over two years and resources have been freely available, their comprehension of susceptibility is ideal, with a grand mean of 4.19 over 5. This data suggests that respondents have optimum knowledge of their disease susceptibility, which is also consistent with their understanding of the severity of Covid-19 i**nfection.** The respondent's knowledge of the severity has a positive grand mean of 3.80 over 5. Still, specific aspects of their understanding need to be kept aligned and maintained- with the current understanding/data of this new Novel Coronavirus Disease-19, the discovery of other variants, and even its pathophysiology continuously and rapidly changes.

5.3. Level of acceptance towards Covid-19 vaccination

The investigation discovered a moderate acceptance of refusing Covid-19 Vaccination (grand mean = 2.67 over 5). This refusal is due to fear of side effects (64.1%), a lack of adequate and consistent information (25.2%), the fact that they have co-morbidity (32%), that they are relatively healthy and thus do not require the vaccine (21.4%), and doubt and hesitancy due to hearing negative things about the vaccine and its effect on people (42.7 percent). This finding depicts vaccine acceptance as highly positive among the population. However, numerous portions still resist and have doubts affecting adherence to the program, which is a variant of concern since this data is from a susceptible population.

5.4. Perception towards Covid-19 vaccination

This finding indicates that the perception of the Covid-19 vaccine among families with low socio-economic status is more favorable as follows: In terms of perceived benefits (grand mean 3.81 over 5), respondents agree that the vaccines are safe and beneficial. This connotes that most of the population perceives the vaccines and the vaccination program as valuable and necessary to control the health crisis. However, this turn-out does not reflect the results in terms of **Perceived Side Effects** (grand mean 3.58 over 5), the sample population's perspective on how these vaccines are majorly harmful- as per subjective accounts during interview, some admit adhering to vaccination without complete understanding just for compliance as vaccine cards is ‘required’ to go out and make a living for their family. This, in turn, could have long-term implications on their family health maintenance. It can also threaten public health, a barrier to reaching herd immunity and controlling the pandemic.

5.5. Relationship between the low-income families’ level of acceptance of the Covid-19 vaccine and their perceived susceptibility and severity to Covid-19 disease

Table 1

Acceptance and Susceptibility to Covid-19 Vaccination

Variables	Pearson *r*-value	*p*-value	Decision	Result
Susceptibility	0.436	0.000	Reject Ho	Significant Correlation
Severity	0.636	0.000	Reject Ho	Significant Correlation

Source. Data analysis result of the research

A positive Pearson value indicates a significant relationship between these variables and the level of acceptance, which means that the level of awareness due to a well-rounded knowledge of susceptibility is directly proportional to the level of acceptance of the population to the Covid-19 Vaccines and an increased positive level of acceptance is also demonstrated by the Low-Income Family groups who is knowledgeable with the Covid-19 disease in terms of its severity.

5.6. Relationship between the knowledge of Covid-19 Vaccines and the profile of the respondents

Table 2

Knowledge of Covid-19 Vaccines and Respondent Profile

Profile	Pearson *r*-value	*p*-value	Decision	Result
Age	-0.317	0.000	Reject Ho	Significant
Number of Household Members	0.248	0.001	Reject Ho	Significant
Monthly Income Earned	0.157	0.040	Reject Ho	Significant
Vaccination Status	0.516	0.000	Reject Ho	Significant
Indigent Family Group	0.158	0.039	Reject Ho	Significant
Highest Education Attained	0.124	0.107	Accept Ho	Not Significant
Health Status	-0.367	0.628	Accept Ho	Not Significant

Source. Data analysis result of the research

Regarding age, a significantly negative Pearson value was correlated with the variable, which denotes that the younger population predominantly has more knowledge or is more aware than the older people from the low-income family groups. Other correlations have a positive Pearson value; hence, with several household members, findings concluded that the more extensive the family knowledge and awareness also tend to increase, the lesser knowledge was demonstrated by those who earn lower monthly income, that the more people are knowledgeable and aware with the Covid-19 Vaccines and related information the more they are likely to get vaccinated thus unawareness equates being undecisive and refusal to take available vaccines. Lastly, a low level of knowledge was emphasized on poor and low-income family groups not beneficiaries of the Pantawid Pamilyang Pilipino Program; hence, providing resources significantly affects compliance and availing essential health services to this marginalized community sector.

5.7. Relationship between the perception towards Covid-19 Vaccines and the profile of the respondents

Table 3

Perception of Covid-19 Vaccines and Respondent Profile

Profile	Pearson *r*-value	*p*-value	Decision	Result
Age	0.103	0.181	Accept Ho	Not Significant
Number of Household Members	0.137	0.074	Accept Ho	Not Significant
Highest Education Attained	0.023	0.764	Accept Ho	Not Significant
Health Status	0.072	0.350	Accept Ho	Not Significant
Indigent Family Group	0.051	0.507	Accept Ho	Not Significant
Vaccination Status	0.161	0.035	Reject Ho	Significant
Monthly Income Earned	0.187	0.014	Reject Ho	Significant

Source. Data analysis result of the research

Two variables showed positive Pearson values indicating significant relationships; regarding monthly-income earned positive perception towards Covid-19 Vaccines shows variable decline among people experiencing poverty to low-income families, greatly emphasized with the second variable, whereas these perceptions lean more negatively, sample population are found all the more likely to question the benefits of the vaccines and develop refusal to adhere on the Vaccination Program.

5.8. Interventions to improve public health management and promotion among low socio-economic status families

Interventions were formulated based on the knowledge, level of acceptance, and perception of people experiencing poverty to low-income families focusing on the following activities: strategize the process and steps of vaccination in the community using the T.U.S.O.K! strategic guide, strengthen the advocacy and information dissemination of vaccination emphasizing the benefits of vaccination using the 'CLEARING THE CONFUSION' brochure.

5.9. Implication of the study to public health management

This research undertaking has provided statistical evidence about Covid-19 vaccination in Tarlac Province. It could be used to improve the health promotion of the local government units and its public health agencies to increase citizen engagement in vaccination programs. Also, this study proved that belonging to a low socio-economic class family is not a fixed determinant of lesser knowledge, awareness, and lower comprehension skills. Furthermore, this could be of valuable help in conducting further studies that will explore deeper solutions to problems regarding vaccination. Hence, it is a reference framework relevant to nursing education and practice.

6. Conclusions and recommendations

6.1. Conclusions

Based on the study's findings, the following conclusions were reached.

1. The demographic profile of the respondents shows that they were primarily adolescents and adults aged 18 - 59 years old, with optimum health, and were fully vaccinated. However, numerous individuals of the population were still hesitant and refused to get themselves vaccinated. The primary distribution of respondents was not a member of the Pantawid Pamilyang Pilipino Program (4Ps), although income and education level classify them as Low Socio-Economic Status.

2. In addition, regarding knowledge, the results show that most respondents are 'aware' of Covid-19 vaccines and related information. With the knowledge regarding the Covid-19 vaccine and disease, findings show awareness of the need to be critical in filtering information regardless of source to determine credibility as the study population depicts being relevantly aware of the effectiveness of vaccines and their current status in terms of its mortality or related-deaths, if any, in the country.

Also, as expected with the time frame of the pandemic, respondents have developed awareness of the Covid-19 disease susceptibility, including an understanding of the severity of the infection. However, this can still be improved, especially with the older population displaying lower awareness as social media has become the trend and leading platform for access to Covid-19 vaccines and related information.

3. Furthermore, the level of acceptance is variably positive, with a high acceptance rate among the low socio-economic population of the study. However, hesitancy and refusal are still present, and identified reasons (fear of side effects, lack of resources, having inconsistent Covid-19 vaccine and related information, predominant exposure to an environment with vaccine having adverse effects, having co-morbidity and belief their body might be too strong for them to handle and being 'healthy' means no need for the vaccine as protection) heeds for concern as the goal is to reach maximum herd immunity and control the pandemic.

4. Finally, regarding the perception of benefits, families agreed that getting vaccinated is essential to lower transmission and acquisition of the infection rate among themselves and others. Therefore, it is concluded that in terms of the side effects, it weighs less than the protection these vaccines offer. Vaccines are relatively safer to protect than cause harm. Hence, an exploration of the reasons and appropriate intervention shall be made to cater to a part of the sample that still has a negative perception and adheres to vaccination for compliance only without complete understanding so that long-term health maintenance can be promoted. The respondents also believe that, upon further survey, the Covid-19 vaccine Pfizer is the safer and most effective choice than other vaccines, with it being their preference, and admitted more likeliness to avail of the vaccine only if this choice were to be followed.

6.2. Recommendations

Based on the conclusions, the following recommendations were made:

1. The Provincial Government of Tarlac and higher-ranking officials must provide vital, consistent, and citizen-appropriate health education about the Covid-19 vaccination through commercial ads on various platforms (e.g., Facebook, Instagram, YouTube) to influence, convince, and broaden people's understanding about the Covid-19, the vaccines and related information.

2. Regarding knowledge about vaccines, findings are relatively neutral but still concluded fragile, indicating the need for improvement. The acceptability rate was significantly low among those with co-morbidities and those poor to low-income families. Thus, for the Department of Health-Philippines, this study can help substantially design future vaccination uptake efforts with specific target points to ensure adherence, which may eventually lead to herd immunity against SARS-CoV-2. To the Department of Social Welfare and Development, this study may help identify and provide families that need resource assistance to improve their quality of life.

3. The study could also be beneficial to Local Government Units, Specifically Rural Municipal Governments and Mayors, for developing a program like the researchers proposed strategic guide program '*TUS-OK!*' that focuses primarily on the Covid-19 Vaccination and how they can encourage the low socio-economic status families adherence to vaccination and alter their perception regarding their beliefs about the vaccine, which leads to their unwillingness to be vaccinated. Another, as primary health promoters and advocates of illness prevention, Rural Health Unit staff, in collaboration with the Municipal Government, should conduct an event solely dedicated to addressing people's worries and queries and discussing the importance of Covid Vaccination. Thus, Healthcare personnel of Rural Health Units must conduct advocacy regarding Covid-19 vaccination by organizing a seminar and facilitating the TUSOK program guide, which promotes understanding of Covid-19 vaccinations with the help of barangay captains, municipal government officials, and nurses.

4. Lastly, to future researchers, the results of this undertaking would be a beneficial source of information in exploring the adherence of people from a low socio-economic status background at the height of the pandemic. However, this also provides limitations to the current undertaking as health behavior could change continuously depending on new medical interventions and approaches to be further discovered or introduced as the world turns to progress to the 'new normal'.

6.3. Limitations and future directions

This research undertaking was designed to explain the response and adherence of the most vulnerable and susceptible sector of the community halfway a health crisis of the new Novel Coronavirus Disease 2019 - towards the fast track vaccine uptake and programs launched by World Health Organization (WHO, 2022), as they emphasize the pivotal role of public sector as being the significant and key component towards reaching the goal of herd immunity-controlling the pandemic reducing further human resource burden and socio-economic losses, especially in developing countries such as the Philippines.

However, this study can only describe the variables presented cross-sectionally-which delimits the trend and results at the specific period of the pandemic that this research was conducted and could not furthermore measure and explain possible improvement of variables (knowledge, level of acceptance and perception) as new interventions, vaccine and even Covid-19 disease and related information were to be developed and discovered, providing an avenue for a retrospective investigation to compare research findings to current vaccination strategy that will track the level of Covid-19 and related information awareness and health response thereof of the low socio-economic status families at a more recent period of the pandemic.

Finally, this study will serve as a springboard for any future studies on the compliance and adherence to any vaccine activities that will facilitate improvement, recommend points for public-centered and cost-effective interventions focusing on health promotion that could effectively influence long-term health maintenance as comprehension and awareness directs optimum health-seeking behaviors to attain the goal of wellness state-herd immunity towards the new normal.

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