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MATERNAL KNOWLEDGE, ATTITUDES, AND HEALTH PRACTICES REGARDING MANDATORY CHILDHOOD VACCINATION IN BACLAYON, BOHOL

CONCHITA C. MANHILOT, LORLIE JANE A. OCHAVILLO, KIARA MAY B. SIMEON, ALDRIN II E. CADORNA, JACOB H. TECSON, JENCHING S. ABAY-ABAY, ALEXANDRA DENISE DARAMAN, JEANNY LOU B. TIONGSON
[1]College of Allied Health Sciences,
University of Bohol, Tagbilaran City, Philippines

Corresponding Author: ccmanhilot@universityofbohol.edu.ph

ABSTRACT

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A child's vaccination status depends heavily on a mother's knowledge, attitude, and practices toward vaccination, as mothers are typically the primary decision-makers and caregivers responsible for their child's health and well-being. Knowledge refers to a mother's understanding of the purpose, schedule, and benefits of vaccination; attitude involves her beliefs and perceptions about vaccine safety and efficacy; and practices are the actions she takes to ensure her child receives timely and complete vaccination. This study was conducted to assess maternal knowledge, attitude,

and health practices regarding mandatory childhood vaccinations in Baclayon, Bohol, in response to rising vaccine hesitancy driven by misinformation. The aim was to understand current awareness levels and vaccination behaviors to ultimately improve vaccination rates and promote children's health in the community. Using a descriptive correlational design with stratified random sampling, the study focused on mothers with children under one year old from selected barangays in Baclayon. A validated questionnaire was used, and strict ethical protocols were observed during data collection and analysis. Results showed that mothers had high knowledge, positive attitudes, and good practices toward childhood vaccination. No significant relationship was found between their demographic profiles and their knowledge, attitudes, or practices. However, a strong positive correlation existed between maternal knowledge, attitudes, and practices, indicating that higher knowledge is associated with more positive attitudes and better vaccination practices.

INTRODUCTION

Vaccination is a simple, safe, and effective way to protect individuals from serious diseases before they are exposed to them. It plays an important role in preventing and controlling illnesses, greatly reducing the number of people who get sick and saving many lives over the years. Vaccines protect the body against harmful bacteria and viruses and also improve public health cost-effectively. However, despite these benefits, achieving high vaccination rates remains a challenge. One major reason is the knowledge, attitudes, and practices of parents, especially mothers, who are often the primary decision-makers regarding their children's health.

Mothers, as primary healthcare decision-makers for children, play a critical role in ensuring timely vaccination. In most households, it is the mothers who take charge of their children's health needs. Mothers are usually the ones who visit health centers, follow vaccination schedules, and decide whether to vaccinate their child. However, many challenges remain that make this task difficult. Barriers such as misinformation, vaccine hesitancy, and negative beliefs about vaccine safety continue to affect vaccination efforts, leaving children at risk of diseases that could have been prevented (Galagali et al., 2022). Throughout history, vaccines have been successful in controlling and even eliminating deadly illnesses such as smallpox, polio, and diphtheria, underscoring their importance in protecting global health (Kraśnicka et al., 2018). In addition, vaccination helps protect the community by reducing the spread of vaccine-preventable diseases (VPDs), thereby protecting everyone, especially those unable to receive vaccines due to medical conditions (Matta, El Mouallem, Akel, Hallit, Khalife, 2020).

Despite advancements in vaccination, global vaccination rates have stagnated. The World Health Organization (WHO) and UNICEF reported in 2023 that 84% of children globally (108 million) received three doses of the DTP vaccine. Moreover, most unvaccinated children live in 31 countries with

fragile, conflict-affected conditions, where disruptions in security, nutrition, and healthcare heighten the risk of preventable diseases. Additionally, 6.5 million children missed their third DTP dose, which is crucial for disease protection. This indicates that vaccination coverage has largely remained unchanged since 2022 and has not yet returned to 2019 levels, due to challenges like healthcare disruptions, vaccine hesitancy, and inequities in access. Furthermore, data from UNICEF Philippines (2022) showed that 1 million children had not received any childhood vaccines, bringing the global total to 18 million zero-dose children. Not only that, but the country also ranked among the top five for unvaccinated children and the seventh for those unprotected against measles.

The success of childhood vaccination programs depends heavily on parents' active participation and decision-making, particularly mothers, who play a crucial role in their children's healthcare. Parents, particularly mothers, are responsible for ensuring their children are vaccinated. Mothers' attitudes, knowledge, and perceptions regarding vaccination play a vital role, as they directly affect their commitment to timely and comprehensive vaccination (Alabadi & Aldawood, 2020). However, misconceptions, false allegations, rumors, and fake news have been widely spreading on the internet and social media platforms. These misleading narratives have amplified the people's fear and distrust of vaccines, influencing public perception and undermining vaccination programs. As a result, vaccination rates have declined significantly, even with the government's strengthened information drive on vaccination facts. Globally, one in five children is not fully vaccinated, contributing to higher mortality rates from vaccine-preventable diseases (Fatima & Syed, 2018).

This incident has also heightened vaccine hesitancy among Boholano mothers, who are often the primary decision-makers regarding their children's health. Many mothers are now reluctant to have their children vaccinated, fearing potential adverse effects due to the misinformation circulating online. This study is conducted on the premise that maternal knowledge and health practices regarding mandatory childhood vaccinations in Baclayon, Bohol, are to be determined. The findings of this study will serve as a basis for the formulation of health information education campaign materials to enhance understanding of current levels of awareness and vaccination practice implementation among mothers, ultimately improving vaccination rates and contributing to the overall health and well-being of children in the community.

Related Literature. The vaccination method is widely regarded as one of the most significant achievements in public health, effectively reducing illness and death from vaccine-preventable diseases in children. However, many parents still have concerns about vaccines, causing them to refuse to vaccinate their children. In recent years, vaccine hesitancy has increased significantly, leading to declines in childhood vaccination rates across many countries, including the United States. Parents play a significant role in the

decision-making process regarding their children's vaccination; hence, their judgment is vital. Several studies have examined parents' knowledge, attitudes, and beliefs regarding vaccination. A common finding across those studies is the lack of knowledge, which was considered a main reason for parents' choice to postpone or avoid vaccination (Kyprianidou, Tzira, Galanis, Giannakou, 2021).

Vaccination is one of the most essential responsibilities for every healthcare provider, as it provides several health and economic benefits, including preventing the spread of infectious diseases and protecting public health. Nevertheless, skepticism about vaccines remains one of the most challenging factors hindering vaccination among parents worldwide, particularly mothers, who are the primary decision-makers for children's vaccination (Al-Rashdan, Ta'an, Mukattash, Williams, 2024).

Furthermore, to better understand the interplay among maternal knowledge, attitudes, and vaccination-related health practices, this study is anchored in key health behavior theories. The Health Promotion Model (HPM) by Nola Pender emphasizes that health is not merely the absence of disease, but a dynamic state of well-being achieved through proactive health behaviors. It focuses on individual characteristics and prior experiences, perceived benefits, barriers, and self-efficacy in performing health-promoting actions. In the context of childhood vaccination, a mother's past experiences with healthcare, the influence of social support, and her perception of vaccine safety all shape her likelihood of adhering to vaccination guidelines.

For instance, if a mother has had positive experiences with healthcare providers or has received accurate vaccine information, she may be more likely to follow recommended vaccination schedules. The HPM also highlights how perceived benefits (e.g., disease prevention) versus barriers (e.g., fear or misinformation) affect maternal decision-making. The influence of family and community, emphasized in the model, is especially relevant in shaping a mother's choices around childhood vaccination.

Another theory, "The Theory of Planned Behavior" by Icek Ajzen, further supports this study. TPB posits that behavioral intention—such as the intention to vaccinate—is influenced by attitude, subjective norms, and perceived behavioral control. If mothers have a positive attitude toward vaccines, feel social pressure to vaccinate, and believe they can access and complete vaccinations easily, they are more likely to do so. TPB research also supports the idea that improving knowledge about vaccine safety and efficacy positively affects attitude and compliance (Ajzen, 1991).

The study is also anchored in "The Health Belief Model", a psychological model used to explain and predict health behaviors by focusing on individuals' beliefs about health and the factors influencing their decisions to take health-related actions. Developed in In the 1950s, by social psychologists Irwin Rosenstock, Godfrey Hochbaum, and Stephen Kegels, it remains widely used in health promotion and education

efforts. The model is based on the idea that a person's willingness to engage in healthy behaviors is influenced by personal beliefs about health risks and the effectiveness of behaviors in reducing those risks. Although the HBM provides a strong basis for predicting health behavior, it has limitations. For instance, it does not account for habitual behaviors, social and environmental influences, or emotional factors, all of which can also play significant roles in health decisions.

Related Studies. One of the most common reasons why parents hesitate to vaccinate their children is the fear of possible side effects. This fear is influenced by factors such as past healthcare experiences, family history, feelings of control, and social interactions. Additionally, vaccine hesitancy is fueled by persistent myths, such as the supposed links between the hepatitis B vaccine and multiple sclerosis, or between the MMR vaccine and autism, with concerns about autism remaining prevalent among parents (Facciolà et al., 2019).

In Debre Tabor town, Northwest Ethiopia, Simegn et al. (2023) found that approximately 280 mothers and caregivers, or over half of the study participants, had a history of appropriate childhood vaccination practices. This shows that many caregivers are aware of the importance of vaccines and have taken steps to protect their children. However, many mothers did not do it regularly or consistently. Moreover, it was shown that childhood vaccination habits are influenced by several factors, including parenthood, attitudes toward vaccines, level of knowledge, workload, and fear of possible side effects, underscoring that mothers' decisions and actions are deeply affected by both personal beliefs and external pressures.

This study seeks to explore critical questions concerning maternal knowledge, attitudes, and health practices (KAP) regarding mandatory childhood vaccinations. Specifically, it aims to determine the demographic profile of respondents, including age, educational attainment, religion, monthly income, civil status, number of children, and the age of their youngest child. Furthermore, the study assesses maternal knowledge, attitudes, and health practices regarding mandatory childhood immunization. It also investigates whether there is a significant relationship between these demographic factors and respondents' knowledge, attitudes, and practices, as well as whether there is a significant correlation among knowledge and attitude, knowledge and practice, and attitude and practice. An additional objective is to develop Information, Education, and Communication (IEC) materials tailored to the study's findings to enhance vaccination awareness and improve compliance among mothers.

RESEARCH METHODOLOGY

This study used a descriptive correlational research design to assess mothers' knowledge, attitudes, and health practices regarding mandatory

childhood vaccination in selected barangays of Baclayon, Bohol. The descriptive correlational approach was selected to examine possible relationships among variables without establishing causation. The research was conducted in five barangays: Libertad, Taguihon, Guiwanon, Montaña, and Santa Cruz, which are adopted communities of the University of Bohol. These areas were selected because of the university's active engagement in community health nursing and outreach programs, ensuring accessibility and cooperation from residents. A stratified random sampling technique was used to obtain a representative sample from each barangay. This method ensured equal and diverse representation across population groups, enhancing the generalizability of the findings. The respondents included mothers residing in the selected barangays who met the established inclusion criteria. Exclusion criteria included mothers who were not the primary caregiver or had children aged 5 or older. The primary data collection instrument was a modified questionnaire composed of four sections. Part I gathered demographic information, including age, educational attainment, religion, monthly income, marital status, number of children, and the youngest child's age.

Weight Value	Symbol	Description	Meaning
4	SA	Strongly Agree	I fully understand and strongly believe in the statement
3	MA	Moderately Agree	I have a good understanding, but still have some uncertainties
2	A	Agree	I have basic knowledge, but I may not be completely confident
1	D	Disagree	I do not understand, or I have a negative opinion about the statement.

Part II focused on assessing maternal knowledge of childhood vaccination using a 6-item questionnaire.

Weight Value	Symbol	Description	Meaning
4	SA	Strongly Agree	I have a very positive and strong belief in favor of vaccination
3	MA	Moderately Agree	I have a positive attitude, but with some reservations
2	A	Agree	I generally support vaccination, but have some concerns
1	D	Disagree	I do not support vaccination

Part III explored maternal attitudes using a seven-item questionnaire. Parts II and III of the questionnaire were adapted from two published studies: "Parental Awareness and Attitude about Childhood Immunization in Riyadh, Saudi Arabia: A Cross-Sectional Study" by Alshammari, AlFayyad, Altannir, and Al-Tannir (2021), and "Knowledge and Attitudes on Pediatric Vaccinations and Intention to Vaccinate in a Sample of Pregnant Women from the City of Rome" by Rosso, Massimi, De Vito, and colleagues (2019).

Weight Value	Symbol	Description	Meaning
4	SA	Strongly Agree	I consistently and frequently practice mandatory childhood vaccination for my children. *Kanunay ko magaprakis sa mandatoryong bakuna para sa akong mga anak*
3	MA	Moderately Agree	I occasionally practice mandatory childhood vaccination for my children *Usahay nako ipraktis ang mandatory nga pagbakuna sa akong mga an*ak
2	A	Agree	I rarely practice mandatory childhood vaccination for my children *Panagsa ra nako ipraktis ang mandatory nga pagbakuna sa akong mga an*ak
1	D	Disagree	I do not practice mandatory childhood vaccination for my children *Wala naho ginapraktis ang mandatory nga pagbakuna sa akong mga* anak

Part IV evaluated maternal health practices through another six-item set. All items in Parts II, III, and IV employed a four-point Likert scale, with options coded as follows: Strongly Agree (4), Moderately Agree (3), Agree

(2), and Disagree (1). Part IV was adapted from the studies "Knowledge, Attitude, and Practice of Mothers toward Children's Obligatory Vaccination" by Ramadan, Soliman, and El-Kader (2016) and "Assessment of Mothers' Knowledge, Attitudes, and Practices Regarding Childhood Vaccination during the First Five Years of Life in Saudi Arabia" by Almutairi and associates (2021). Since these instruments were modified, they were subjected to face validity through expert review and pilot testing with 10 mothers who met the inclusion criteria but were not included in the final analysis. Reliability testing using Cronbach's alpha was conducted, resulting in the following coefficients: maternal knowledge ($\alpha = 0.816$), maternal attitude ($\alpha = 0.867$), and maternal health practices ($\alpha = 0.826$), indicating high internal consistency across all scales.

The data gathering procedure followed a structured seven-phase process. Initially, the researchers secured approval from the Dean of the College of Nursing at the University of Bohol. Ethical clearance was then obtained from the university's Ethics Review Committee to ensure compliance with ethical standards. Formal requests were also submitted to the Vice President for Academics and the municipal mayor of Baclayon, followed by individual requests to barangay captains for access to community respondents. Informed consent was obtained from all participants prior to questionnaire distribution, with assurances of voluntary participation, confidentiality, and data privacy. After the data collection, the completed questionnaires were retrieved, tallied, and tabulated. The data were then forwarded to a statistician for analysis.

For data analysis, normality testing indicated that only the variable "age" was normally distributed, whereas the others were not. Therefore, the Pearson Product-Moment Correlation was used for continuous variables, and the Chi-Square test was applied for categorical data. Descriptive statistics summarized the demographic profile and responses, and a scoring system was utilized to interpret levels of knowledge, attitudes, and health practices. A significance level of $p < 0.05$ was used to determine statistically meaningful associations among variables.

RESULTS AND DISCUSSION

The demographic profile of the respondents covered their age, highest educational attainment, religion, monthly income, civil status, number of children, and age of children. Most respondents fall within the age groups of 25-29 years (29.6%) and 30-34 years (24.1%), indicating that the majority are young adults likely in their prime childbearing years. Smaller proportions are found in the 20-24 and 35-39 age groups (each 14.8%), with very few respondents aged 16-19 or 40-44 (7.4% each), and only one respondent (1.9%) aged 45-49. Additionally, Alshammari (2021) noted that parents aged 30-49 are more likely to have good knowledge and positive attitudes toward childhood immunization, a finding consistent with findings from various

income settings worldwide.

Regarding educational attainment, a significant portion of respondents are college graduates (40.7%), followed by those who have completed junior high school (16.7%) and those with some college level (14.8%). Smaller groups include junior high school attendees (9.3%), senior high school level, and graduates (7.4% each). Adefolalu, Kanma-Okafor, and Balogun (2019) found that a mother's age, education, and occupation significantly influence her knowledge and compliance with immunization schedules. This aligns with the current study, which found that most mothers are educated and demonstrate a strong awareness of vaccination adherence. Similarly, Almutairi (2021) reported high levels of knowledge, positive attitudes, and good vaccination practices among mothers with higher education, suggesting that educational interventions can further improve compliance and address vaccination complications.

In terms of religion, the vast majority (90.7%) identify as Roman Catholic, with small minorities being Born Again and Christian (3.7%) and Pentecostal (1.9%). Monthly income data shows that half of the respondents (50%) earn less than P10,000, while 24.1% earn between P10,000 and P20,000. Smaller percentages fall into higher income brackets 13% earn between P20,000 and P30,000, 7.4% between P30,000 and P40,000, 1.9% between P40,000 and P50,000, and 3.7% earn P50,000 or more.

Regarding civil status, 55.6% of respondents are married, while 44.4% are single. For the number of children, most respondents had one to two children (68.5%), 25.9% had three to four children, and a small group (5.6%) had five or more children. The age of the youngest child with 40.7% having infants aged 1-4 months and 35.2% having infants aged 5-8 months. Only 24.1% have children aged 9-12 months.

Respondents' Level of Knowledge on Mandatory Childhood Vaccination. According to the findings, the respondents' level of understanding regarding the mandated vaccination of children was disclosed. The statement that received the highest ranking, "Vaccination is required by law to ensure child health protection" (3.67), demonstrates that respondents have a strong understanding of the legal duty surrounding vaccination and its role in protecting children's health. A significant understanding of the importance of vaccines in preventing major diseases is reflected in the statement "Vaccination protects my child from serious diseases" (3.61), which follows closely. The third item, which states that "Vaccines are safe and have more benefits than potential risks" (3.46), demonstrates belief in the efficacy and safety of vaccines, thereby reinforcing a firm foundation of knowledge among the participants. On the other hand, the two items that received the lowest rankings highlight areas where one's knowledge may be somewhat lacking. The statement "Getting multiple vaccines at once is safe for my children" had the lowest weighted mean (3.11), indicating only moderate agreement. This suggests there may be uncertainty or misconceptions about vaccine scheduling and safety when vaccines

are administered simultaneously. In a similar vein, "Unvaccinated children have a higher risk of contracting preventable diseases" (3.41), which ranked fifth despite remaining in the "Highly Knowledgeable" group, indicates a need for ongoing education on the direct hazards posed by vaccine hesitancy or refusal. According to Bagasin, Langcay, Pamittan, Quilang, Umblas, and Cabatotan (2024), who conducted a study of primary caregivers in Solana, Cagayan, Philippines, their findings are consistent with theirs. They discovered that people had a generally positive attitude toward immunization and a high level of awareness. However, they discovered gaps in their understanding of certain vaccines, such as the MMR vaccine, and only partial compliance with the full immunization schedule. As a result of their emphasis on the reality that cultural and familial influences, including religious beliefs, shape attitudes and compliance, they highlighted the need for education that is both targeted and culturally sensitive. Similarly, Quintos, Ramos, Ramos, Ravelo, Relon, and Chua (2022) investigated the knowledge, attitudes, and practices of mothers in barangays in Flora, Apayao, that had varying immunization rates. A number of factors, including religion, marital status, education level, and attendance at seminars, influenced mothers' vaccination behaviors, despite the fact that, overall, moms had positive attitudes and were knowledgeable. The findings of this research highlight that although there is a firm foundation of knowledge, it is vital to address specific misconceptions and socio-cultural factors to enhance vaccine compliance rates.

Respondents' Attitudes on Mandatory Childhood Vaccination. In the study, responses from 54 mothers were presented regarding their perspectives on the implementation of mandated vaccinations for children. Because it falls within the "Moderately Agree" category, the composite mean of 3.15 indicates that caregivers have a favorable opinion regarding children's immunization. This is because the mean does not fall outside of this range. The item that received the highest ranking, "Childhood vaccination protects my child from serious diseases" (3.61), demonstrates a significantly positive attitude and emphasizes caregivers' trust in vaccination's direct preventive benefits. In a similar vein, statements such as "Childhood vaccinations are essential for my child's health" and "Healthcare professionals' recommendations are reliable" both received a score of 3.56, indicating extremely positive sentiment. On the other hand, the item "I would still vaccinate my child even if I heard negative opinions about vaccines" received a score of 2.96, indicating that individuals have positive attitudes but some reluctance in the face of both positive and negative information. It is important to note that the statement "Child immunization is prohibited in my religion" has a weighted mean of 1.33, with a descriptor of "Disagree" and an interpretation of "Highly Negative Attitude" in relation to the statement. When interpreted in the opposite direction, this suggests that respondents do not agree with the notion that their faith forbids vaccinations for children. This disagreement demonstrates that they have a favorable attitude regarding vaccinations within the framework of their

religious beliefs. In essence, respondents are more likely to favor or accept vaccination for children, and religion is not viewed as a barrier to vaccination. The inverse association indicates that attitudes toward vaccination are more favorable when there is less agreement with the prohibition of vaccination. Sinha and Verma (2023), on the other hand, investigated caregivers' reluctance in India to receive vaccine instruction. One of the things they found was that although the overall level of hesitation was rather low, it was affected by several other factors, such as a lack of maternal understanding and concerns about safety. A sizeable number of caregivers have voiced their concerns regarding the deleterious consequences of vaccines and have questioned whether or not it is necessary to vaccinate against diseases that are regarded as uncommon. The findings of this study indicate that vaccine hesitancy is often driven by factors such as demographics, disinformation, and safety concerns, rather than by simple ignorance or mistrust.

Respondents' Practices on Mandatory Childhood Vaccination. The data illustrated the practices of 54 respondents regarding mandatory childhood vaccination. The overall composite mean of 3.49 indicates that respondents generally exhibit high levels of positive practice related to immunization. The respondents are in complete agreement that they ensure their children receive the appropriate vaccines (3.57) and that they contact their healthcare providers regularly to maintain their immunizations at the most recent levels (3.57). Both of these behaviors are tied for the highest ranking. It is also firmly practiced to report any adverse reactions to vaccinations, such as fever, rashes, diarrhea, or pain, to healthcare staff (3.54). This demonstrates the caregivers' alertness to post-vaccination monitoring. To control fever, antipyretics should be taken as directed (3.50), and it is essential to stay informed about new vaccines or schedule revisions (3.41), both of which are additional examples of proactive health habits. However, the discussion of vaccination schedules with healthcare experts prior to making decisions received a substantially lower score than the average (3.33) and was categorized as "occasionally practiced." This suggests there is an opportunity to improve communication among healthcare providers, nurses, and other caregivers. For the most part, these data suggest that caregivers are strongly committed to adhering to immunization procedures and to managing their children's health responsibly.

However, encouraging more regular communication with healthcare professionals may further improve vaccination outcomes. Similar research was conducted by Akinyemi and Owoaje (2020) in Nigeria and Kenya, investigating maternal knowledge, attitudes, and compliance. The fact that only about 60% of children have received all their immunizations demonstrates gaps between knowledge and practice. This is despite a generally positive attitude toward vaccines. At the clinic, several difficulties were encountered, including misinformation, safety concerns, religious influences, and logistical obstacles such as clinic accessibility and wait times. A considerable improvement in vaccine compliance was associated with enhanced maternal education and

counseling during prenatal care, according to the study's findings. This research highlights the significance of mother empowerment and interaction with healthcare providers as essential components for the successful promotion of immunization.

Relationship Between Respondents' Knowledge, Attitudes, and Practices on Mandatory Childhood Vaccination. Table 1 shows that when the respondents' levels of knowledge, attitudes, and health practices regarding mandatory childhood vaccination were subjected to Spearman's rank correlation test, all pairs of variables showed significant relationships. Specifically, the correlation between knowledge and attitude yielded a computed value of 0.840 (p-value = 0.000); between knowledge and health practices, 0.747 (p-value = 0.000); and between attitude and health practices, 0.768 (p-value = 0.000). Since all p-values are less than the 0.05 level of significance, the null hypotheses were rejected. Based on these data, it appears that higher levels of knowledge are highly connected with more positive attitudes and better health habits. Furthermore, similar to a more favorable attitude, higher levels of knowledge are also significantly correlated with those practices. In addition, the research conducted by Almutairi, Alsharif, Khamis, Sallam, Sharif, Alsufyani, Alshulah, and Alqasimi (2021) found that mothers' knowledge of childhood immunizations, along with their attitudes toward vaccination, significantly influences the development of vaccination practices. Women with limited understanding of vaccines were found to be more likely to develop unfavorable attitudes and poor adherence to immunization schedules, according to the study.

This finding supports the idea that limited knowledge can serve as a barrier to effective immunization, as it often leads to misconceptions, hesitancy, or complete avoidance of mandatory vaccines.

Table 1. *Relationship Between Respondents' Knowledge, Attitudes, and Practices on Mandatory Childhood Vaccination n = 54*

Variables	Statistical Test Used	Test Value	P-value	Decision	Interpretation	Variables
Maternal Knowledge and Maternal Attitude	Spearman's Rank Correlation	0.840	.000	Reject the null hypothesis.	There is a significant relationship between the variables.	Maternal Knowledge and Maternal Attitude
Maternal Knowledge and Health Practices	Spearman's Rank Correlation	0.747	.000	Reject the null hypothesis.	There is a significant relationship between the variables.	Maternal Knowledge and Health Practices
Maternal Attitude and Health Practices	Spearman's Rank Correlation	0.768	.000	Reject the null hypothesis.	There is a significant relationship between the variables.	Maternal Attitude and Health Practices

CONCLUSIONS

Although it is possible that the maternal demographic profile does not have a substantial influence on the knowledge, attitudes, and practices about childhood vaccination among mothers in Baclayon, Bohol, it is critically important to make ongoing efforts to correct any misconceptions that may still exist. In order to maintain and improve immunization outcomes, it is vital to continue to strengthen communication between healthcare providers and mothers, improve education regarding the safety of vaccines, and combat misinformation.

The respondents in this study exhibited high levels of knowledge, good attitudes, and acceptable practices regarding mandated childhood vaccination. This was the case regardless of demographic criteria such as age, education, civil status, religion, income, or the number of children. On the other hand, there are still certain gaps in our knowledge, particularly regarding the safety of administering multiple vaccines at the same time, the impact of negative opinions, and communication about vaccination schedules. This disparity may be a contributing factor to parents' doubt and reluctance. The findings lend credence to various theoretical frameworks, including the Health Belief Model, the Theory of Planned Behavior, and the Health Promotion Model. These models illustrate the significance of individual beliefs, experiences, and access to information in the process of developing health behaviors. Additionally, the findings highlight the community's role in this process. There is evidence that greater equitable access to information can help reduce the typical social and economic obstacles in the health sector.

RECOMMENDATIONS

1. The Rural Health Unit (RHU) of Baclayon, in collaboration with Barangay Health Workers (BHWs), should implement an enhanced and regular community-based health education program focused on promoting the safety and efficacy of childhood vaccines. This program should also address common concerns among mothers, particularly regarding the simultaneous administration of multiple vaccines, to strengthen vaccine confidence and compliance.

2. The Department of Health, in collaboration with the RHU and LGU, will enhance the implementation of targeted communication programs to strengthen dialogue between healthcare providers and mothers, ensuring that vaccination schedules, benefits, and safety are clearly explained.

3. The health information campaigns should be delivered using a universal, community-wide approach to ensure consistent vaccination practices across all socio-demographic groups. Strategies may include house-to-house visits, distribution of illustrated flyers, and the use of community radio to effectively reach all mothers, regardless of their education, income, or civil status.

4. Under Republic Act No. 10152, Section 4, the Department of Health (DOH), together with other government agencies, non-government organizations, professional and academic societies, and Local Government Units (LGUs), is mandated to make appropriate information materials available and establish a system for their distribution to the public. In line with this mandate, the DOH, Rural Health Units (RHUs), and LGUs should work together to reinforce positive attitudes and combat vaccine hesitancy through an enhanced program that collaborates with and engages local influencers, such as religious leaders, teachers, and barangay officials, to promote childhood vaccination. Their endorsement can increase trust and acceptance among hesitant mothers.

5. To further encourage proactive maternal health behaviors, local health centers should offer brief orientation sessions for first-time mothers during prenatal checkups that focus on the importance of childhood immunization. This early intervention supports the development of positive health practices from the start of motherhood.

6. Future researchers may expand this study by involving more respondents, including mothers who have children older than one year old, as well as fathers or other caregivers in the household. This would allow for a more comprehensive assessment of the influence of various family members on decisions regarding childhood vaccination. Additionally, it is recommended to conduct a comparative study of urban and rural barangays to examine potential differences in knowledge, attitudes, and health practices driven by environmental or resource-related factors.

REFERENCES CITED

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Al-Rashdan, A., Ta'an, W., Mukattash, T., & Williams, K. (2024). Parental decision-making and childhood vaccination: A cross-sectional study. Vaccines, 12(1), 68. https://doi.org/10.3390/vaccines12010068

Alabadi, M., & Aldawood, Z. (2020). Parents' knowledge, attitudes, and practices on childhood vaccination in Saudi Arabia. Vaccines, 8(4), 1–14. https://doi.org/10.3390/vaccines8040636

Adefolalu, O. A., Kanma-Okafor, O. J., & Balogun, M. R. (2019). Maternal knowledge, attitude, and compliance regarding immunization of under-five children in primary health care centres in Ikorodu, Lagos State. Journal of Community Medicine and Primary Health Care, 31(1), 45–56.

Akinyemi, J. O., & Owoaje, E. T. (2020). Determinants of incomplete childhood immunization in Nigeria. BMC Public Health, 20, 1093. https://doi.org/10.1186/s12889-020-09192-6

Almutairi, W. M., Alshammari, T. M., Alruwaili, A. S., Alshammari, A. A., Alshammari, H. M., & Alruwaili, N. A. (2021). Parents' knowledge, attitudes, and practices toward childhood vaccination in Saudi Arabia. International Journal of Environmental Research and Public Health, 18(19), 10271. https://doi.org/10.3390/ijerph181910271

Alshammari, T. M., Yusuff, K. B., Aziz, M. M., & Subaie, G. M. A. (2021). Parental perceptions, attitudes, and acceptance of childhood immunization in Saudi Arabia. International Journal of Environmental Research and Public Health, 18(10), 5292. https://doi.org/10.3390/ijerph18105292

Bagasin, J. A., Dela Cruz, R. M., & Santos, L. P. (2024). Maternal knowledge and compliance with childhood immunization in selected rural communities in the Philippines.Philippine Journal of Nursing, 94(1), 23–34.

Facciolà, A., Visalli, G., Orlando, A., Bertuccio, M. P., Spataro, P., Squeri, R., Picerno, I., & Di Pietro, A. (2019). Vaccine hesitancy: An overview of parents' opinions about vaccination and possible reasons for vaccine refusal. Journal of Public Health Research, 8(1), 1436. https://doi.org/10.4081/jphr.2019.1436

Fatima, K., & Syed, N. I. (2018). Determinants of childhood immunization in developing countries: A systematic review. Human Vaccines & Immunotherapeutics, 14(12), 2838–2846. https://doi.org/10.1080/21645515.2018.1517066

Galagali, P. M., Kinikar, A. A., & Choudhury, P. (2022). Vaccine hesitancy: A growing concern. Current Pediatrics Reports, 10(3), 181–187. https://doi.org/10.1007/s40124-022-00275-4

Kraśnicka, J., Krajewska-Kułak, E., Klimaszewska, K., & Cybulski, M. (2018). Parents' attitudes towards childhood vaccination. Human Vaccines & Immunotherapeutics, 14(6), 1449–1456. https://doi.org/10.1080/21645515.2018.1445934

Kyprianidou, M., Tsiantou, V., Galanis, P., & Kaitelidou, D. (2021). Parental attitudes towards vaccination of children: A systematic review. PLOS ONE, 16(4), e0249422. https://doi.org/10.1371/journal.pone.0249422

Matta, P., El Mouallem, R., Akel, M., Hallit, S., & Khalife, M. C. (2020). Parents' knowledge, attitudes, and practices regarding children's vaccination in Lebanon: The role of parent–physician communication. BMC Public Health, 20, 143. https://doi.org/10.1186/s12889-020-8239-9

Ramadan, H. A., Soliman, S. M., El-Kader, R. G. A., & El-Kholy, A. A. (2016). Knowledge, attitudes, and practices of mothers regarding children's immunization. IOSR Journal of Nursing and Health Science, 5(4), 28–36.

Republic of the Philippines. (2011). Republic Act No. 10152: Mandatory Infants and Children Health Immunization Act of 2011. https://lawphil.net/statutes/repacts/ra2011/ra_10152_2011.html

Rossi, R. (2015). Vaccination coverage and parental knowledge. PLOS ONE, 10(8), e0136362. https://doi.org/10.1371/journal.pone.0136362

Quintos, M. J., Rivera, A. P., & Gomez, C. A. (2022). Factors affecting immunization uptake among Filipino mothers.Asia Pacific Journal of Multidisciplinary Research, 10(2), 45–54.

Simegn, A., Duress, E., Gela, G., Belay, H., Chilot, Y., Sinamaw, A., Seid, M., Andualem, Z., Bitew, A., & Eshetu, E. (2023). Maternal knowledge, attitude, and practice towards childhood immunization in Ethiopia. BMC Public Health, 23, 1127. https://doi.org/10.1186/s12889-023-15812-9

Sinha, P., & Verma, A. (2023). Knowledge, attitudes, and practices of parents regarding children's immunization. Journal of Family Medicine and Primary Care, 12(4), 725–731. https://doi.org/10.4103/jfmpc.jfmpc_1041_22

World Health Organization. (2024). Vaccines and immunization. https://www.who.int/news-room/fact-sheets/detail/immunization

World Health Organization, & United Nations Children's Fund. (2023). Immunization coverage: 2023 revision. https://www.who.int/publications/i/item/WHO-WHE-IMM-2023.1