



Knowledge, Attitudes, and Beliefs about Vaccination as Perceived By Rural Residents in Surigao City

Robert Christian Oclarit¹, Noel King Florendo Almeda², Carlo Jones Lacharon³, Kristal Liza Besario⁴,
Nikko T. Ederio⁵

^{1,2,3} BS Nursing Students, College of Health Sciences, St. Paul University Surigao, Surigao City

⁴ Faculty, College of Health Sciences, St. Paul University Surigao, Surigao City

⁵ Faculty, College of Education, Culture, and Arts, St. Paul University Surigao, Surigao City

ABSTRACT: This descriptive quantitative research assessed the knowledge, attitudes, and beliefs on vaccination among the residents within the rurality of Barangay Rizal, Surigao City. The study used a validated researcher-made survey questionnaire that was also tested for reliability to ascertain the intended quantitative data. The respondents were selected through the purposive and quota sampling technique considering 100 maximum rural residents as respondents of the study. The frequency count and percentage revealed that most of the respondents were 18-24 years old, mostly female, mostly single, had achieved college level, and earning less than 9,100 pesos. Frequency Count, Mean, and Standard Deviation also revealed that most of the rural residents are less knowledgeable and have moderate levels of attitudes and beliefs about vaccination. The Analysis of Variance (AnOVA) and Pearson r revealed no significant associations between the residents' profiles and the knowledge, attitudes, and beliefs about vaccination. Likewise, there was also no association and relationships between knowledge and attitudes and between attitudes and beliefs. Notably, there was a relationship between the residents' knowledge and beliefs about vaccination. The study provided a broad overview of rural residents' sentiments towards vaccination as well. It's crucial to educate residents about the vaccine development process to address their concerns. They are cautious by observing the side effects of the vaccines before getting vaccinated. Barangay Health Workers should conduct stronger orientations or symposiums for the rural residents. Proper health education should be disseminated among these people through seminars or symposiums. Lastly, the staff or nurses of the rural health centers must provide accurate information and strengthen any advertisements or IEC materials for the wide dissemination of information. By providing brochures to provide clear and accurate information about vaccines.

KEYWORDS: Attitudes, Beliefs, Knowledge, Vaccination, Survey, Surigao, Philippines.

INTRODUCTION

Vaccination has been a transformative milestone in the field of medicine and public health. Vaccination, also known as immunization, is a preventive measure that involves administering a vaccine to stimulate the immune system, providing protection against specific infectious diseases. The primary goal of vaccination is to control and eradicate infectious diseases, contributing to the well-being and longevity of global populations. Over the years, vaccines have played a crucial role in the prevention and control of numerous deadly diseases, saving millions of lives and significantly reducing the burden on healthcare systems worldwide. Vaccines work by stimulating the immune system to recognize and remember specific pathogens, such as bacteria or viruses. This immunological memory allows the body to mount a swift and effective defense if exposed to the actual infectious agent in the future. The success of vaccines in preventing diseases such as polio, measles, and influenza has led to the near-eradication of certain illnesses and a substantial decrease in the incidence and severity of others.

Immunizations required after the first dose are called boosters. The timeframe in which boosters are required for different diseases varies (Stephanie Buga, 2022). Immunizations, also referred to as vaccines, can help protect an individual from certain diseases and infections. To introduce vaccine safety and efficacy, the two main public concerns for vaccine use. The publication dates range from 1984 to 2020. Vaccine safety and efficacy are the two main concerns of vaccine use. The Food and Drug Administration (FDA) has a rigid policy for vaccine licensure and strict surveillance after vaccine deployment to ensure the safety of the vaccine (Z He, 2021). Vaccine efficacy is a critical criterion of the vaccine pre-licensure clinical trials and post-licensure surveillance. Double-blind, randomized, and clinical controlled studies and case-controlled studies are the two main methods to



evaluate vaccine efficacy. In this study, knowledge of vaccine safety and efficacy from numerous studies and research are combined to provide an overall view and facilitate the understanding of vaccines. Vaccine administration is essentially a parental or personal decision. One's will to get vaccinated results from a complex decision-making process, influenced by a wide range of contextual, individual and group, and vaccine-specific factors, including communication and media, historical influences, religion/culture/gender/socioeconomic, politics, geographic barriers, experience with vaccination, risk perception, and design of the vaccination program (Simas, 2020).

Framework

This study was anchored on the study of Marshoudi (2021) entitled, Knowledge, Attitudes, and Practices toward the COVID-19 Vaccine in Oman: A Pre-Campaign Cross-Sectional Study. Rather than being a hypothetical study of knowledge, attitudes, and perceptions, the study aimed to capture real-world evidence to inform policymakers and practitioners in Bangladesh in terms of how best to implement a vaccination program. The paper claimed higher rates of knowledge, seconded by attitudes, and perceptions during the COVID-19 pandemic which represents a significant finding, and further efforts should be made to support people and give them correct information about vaccines. From these concepts, the researcher would like to assess the knowledge, attitudes, and beliefs toward vaccination as perceived by residents of Barangay. Rizal, Surigao City, Philippines.

Research Objectives

This study assessed the knowledge, attitudes, and beliefs on vaccination as perceived by the rural residents of Barangay, Rizal, Surigao City. Specifically, this study determined:

1. The demographic profile of the respondents of the study
 - 1.1. age;
 - 1.2. sex;
 - 1.3. civil status;
 - 1.4. educational attainment; and
 - 1.5. socioeconomic status.
2. The level of Knowledge, Attitudes, and Beliefs among the respondents on vaccination.
3. The significant degree of variance in the level of Knowledge, Attitudes, and Beliefs among the respondents on vaccination with respect to their profile.
4. The significant degree of variance in the levels of Attitudes and Beliefs on vaccination among the respondents when they are grouped according to their knowledge levels.
5. The significant degree of relationship between Attitudes and Beliefs among the respondents on vaccination.
6. The recommendation based the findings of the study

METHODS

This descriptive quantitative research assessed the knowledge, attitudes, and beliefs on vaccination among the residents within the rurality of Barangay Rizal, Surigao City. The study used a validated researcher-made survey questionnaire that was also tested for reliability to ascertain the intended quantitative data. The respondents were selected through the purposive and quota sampling technique considering 100 maximum rural residents as respondents of the study. Statistical analyses used include frequency count and percentage to quantify the respondents' profile, and the mean and standard deviation to just simply quantify the data on knowledge, attitudes, and beliefs about vaccination. The Analysis of Variance (AnOVA) was used to analyze significant differences in knowledge, attitudes, and beliefs when the respondents were grouped according to their profiles and also to determine the relationship among the three variables. Lastly, the Pearson r tool was used to determine the significant degree of difference between attitudes and beliefs.

Ethics in the conduct of this research were strongly considered for the academic integrity of this study. Ethical research practices in educational institutions are strongly followed since it is always the goal of educational research to contribute to the general welfare of the academic community and to generally create measurable information or data that will eventually add to the increase of human knowledge (Ederio et al., 2023) such as the essence depicted by this study.



RESULTS AND DISCUSSION

I – Profile of the Respondents

Table 1 shows the profile of the respondents in terms of age, sex, civil status, educational attainment, and socioeconomic status.

Table 1. Profile of the Respondents

Profile	f (100)	%
Age		
18 – 24 years old	37	37.00
25 – 31 years old	25	25.00
32 – 38 years old	24	24.00
39 – 45 years old	9	9.00
46 – 52 years old	5	5.00
Sex		
Male	37	37.00
Female	63	63.00
Civil Status		
Single	87	87.00
Married	13	13.00
Educational Attainment		
Elementary Graduate	1	1.00
College Level	67	67.00
College Graduate	32	32.00
Socio-Economic Status		
Less than 9,100 Pesos	62	62.00
9,100 - 18,200 pesos	38	38.00

In terms of age, 37 (37%) participants are 18-24 years old, 25 (25%) are 25 years old, 24 (24%) are 32-38 years old, 9 (9%) are 39-45 years old, 5 (5%) are 46-52 years old. This shows that the majority of the participants were 18-24 years old. As to sex, 63 (63%) out of 100 respondents were females and 37 (37%) out of 100 respondents were males. As to the civil status, 87 respondents were single and 13 out of 100 respondents were married. Moreover, as to the educational attainment, 67 (67%) out of 100 respondents were achieved college level and 32 (32%) out of 100 respondents were college graduates and 1 (1%) out of 100 respondents were only completed elementary education. Lastly, as to the socio-economic status, 62 (62%) respondents had a socio-economic status less than 9,100 pesos, while the 38 (38%) fell into the 9,100 – 18,200 pesos range.

II – Knowledge, Attitudes, and Beliefs About Vaccination Among the Brgy. Rizal Residents

Table 2.1 Knowledge About Vaccination among the Respondents

Questions	f of Correct Answers	f of Wrong Answers
1. It is preparation that is used to stimulate the body's immune response against diseases is called?	23	77
2. Why do adolescence need vaccine?	62	38
3. All except one is not a vaccine	45	55
4. Vaccines are designed to prevent disease, rather than treat a disease once you have caught it	63	37
5. This vaccine may also be given ahead of time to persons who have a high risk of getting infected with rabies virus.	58	42



6. It is a preparation that is used to stimulate the body's immune response against diseases	69	31
7. These are vaccines that protect against infection by influenza viruses. This vaccine is a good idea for all families. It does not cause the flu, and it helps keep kids and parents from getting sick.)	70	30
8. It is a preparation that is used to stimulate the body's immune response against diseases	66	34
9. Pregnant women have been getting both vaccine?	55	45
10. Is it safe for babies to have several vaccines at ONCE?	80	20
11. If my child is healthy, eats well and exercises, are vaccines necessary?	40	60
12. Does being vaccinated against a disease give my child 100 per cent protection?	60	40
13. Does being vaccinated against a disease give my child 100 per cent protection?	70	30
14. Is it better if I let my child get a vaccine-preventable disease naturally?	65	35
15. The yearly flu vaccine is recommended only for people 50 and older.	45	55

Table 2.1 presents the knowledge of the residents of Barangay Rizal, Surigao City in terms of their knowledge about vaccination. A 15-item quiz was conducted to know their knowledge about vaccines. With the results, the respondents will then be categorized into four groups based on their level of knowledge: Not Knowledgeable, Less Knowledgeable, Knowledgeable, and highly knowledgeable.

It can be gleaned that 80% (f=23) of the respondents are highly knowledgeable about item number 10 "Is it safe for babies to have several vaccines at ONCE?". Administering multiple vaccines to babies at once serves several important purposes, contributing to the overall health and well-being of the child. It's important to note that the decision to administer multiple vaccines simultaneously is based on extensive research, monitoring, and a thorough understanding of vaccine safety. Healthcare providers follow recommended vaccination schedules to maximize the protection of children against preventable diseases. Vaccination is a crucial public health strategy to prevent the spread of infectious diseases within communities. Administering vaccines at recommended intervals helps establish herd immunity, protecting those who cannot be vaccinated due to medical reasons or age. People with a high level of knowledge about the vaccine had significantly higher odds ratios of transitioning to high-risk behavior compared to people with a low level of vaccine knowledge (Shuko Takahashi, et al, 2022). Meaning, that having a high level of knowledge about vaccines often correlates with higher acceptance rates. When people understand the benefits, safety, and effectiveness of vaccines, they are more likely to make informed decisions to get vaccinated themselves and encourage others to do the same.

However, only a few seemed to be knowledgeable about item 1 "It is the preparation that is used to stimulate the body's immune response against diseases is called?" (f=23). The preparation used to stimulate the body's immune response against diseases is called a "vaccine." Vaccines typically contain weakened or inactivated forms of a pathogen (such as a virus or bacterium), parts of the pathogen (like proteins or sugars), or genetic material from the pathogen. When administered, vaccines prompt the immune system to recognize these components as foreign and mount a protective response. This immune response helps the body develop immunity so that if the person is later exposed to the actual infectious agent, their immune system can respond more effectively, preventing or mitigating the disease. Vaccines are a critical tool in public health, as they contribute to the prevention and control of various infectious diseases, reducing the severity of illness, preventing complications, and often leading to the eventual eradication of certain diseases. It's crucial to emphasize that the overwhelming scientific consensus is that vaccines are safe, effective, and a crucial tool in public health. The benefits of vaccination in preventing the spread of infectious diseases and protecting individuals



and communities far outweigh the risks associated with rare side effects. Public health efforts often focus on education, communication, and addressing concerns to ensure that as many people as possible are vaccinated and protected against preventable diseases. With the presented result in the table that only a few are knowledgeable about the definition of vaccine, it implies that around 80% of these respondents do not know at all when it comes to vaccination preparation. Overcoming these challenges requires targeted efforts to improve vaccine literacy and address misinformation. It is important to provide clear and accurate information about vaccines, addressing common concerns and misconceptions. Building trust through open and transparent communication, involving community leaders and healthcare providers, and addressing vaccine-related disparities can also help increase vaccine acceptance and coverage of public health campaigns, educational initiatives, and effective communication strategies are essential in addressing these challenges and ensuring that enough individuals are vaccinated to achieve population immunity, protecting both individuals and the community as a whole (Ghahramani, 2022).

Table 2.2 Summary of the Level of Knowledge on Vaccination among the Respondents

Total Score Attained	Interpretation	f(100)
0	Not Knowledgeable	25
1-5	Less Knowledgeable	45
6-10	Moderate Knowledgeable	20
11-15	Highly Knowledgeable	10

Among the 100 respondents, 45 out of 100 respondents are Less Knowledgeable. This indicates that most of the respondents have limited knowledge about vaccination. This is caused by limited access to the right information about the matter. Efforts should be undertaken to improve knowledge of official vaccination recommendations in the general population and reduce common misconceptions about vaccinations. This information can be provided during general practitioner visits or through media campaigns (MK Akmatov, 2018). There was poor knowledge and a positive perception among most of the clients. Educational intervention in the form of training should be done to improve clients' knowledge and perceptions toward vaccination (Orok E, Ndem E and Daniel E, 2022). Respondents who are Less knowledgeable and don't have enough understanding about vaccines have a lower degree of understanding and are more prone to associate vaccines with bad events and believe in misinformation about vaccine safety, potentially increasing the perceived risk of vaccine side effects. As a result, they would not consider vaccination to be a risky practice.

The 25 out of 100 respondents are Not Knowledgeable on vaccines. No knowledge and no trust in vaccines represent a very hard challenge in achieving the vaccination coverage required for population immunity (Silva Guljaš, 2021). When people lack knowledge about vaccines, they may not fully understand the benefits, safety, and effectiveness. This lack of understanding can lead to misconceptions or misinformation about vaccines, which may result in vaccine hesitancy or refusal. If the participants have low levels of trust in the healthcare system, government agencies, or pharmaceutical companies, they may be very less likely to believe in the safety and efficacy of vaccines.

20 out of 100 respondents are Moderately Knowledgeable about vaccines. Those respondents believed that they had a reasonable level of knowledge about vaccination. The community's knowledge, attitudes, and beliefs towards vaccinations are well understood. The participant's knowledge about vaccines is crucial as it helps individuals make informed decisions regarding their health and the health of the community. When people are knowledgeable about the benefits, safety, and effectiveness of vaccines, they are more likely to seek vaccination and encourage others to do the same.

Only 10 out of 100 respondents are Highly Knowledgeable on vaccines. People with a high level of knowledge about the vaccine had significantly higher odds ratios of transitioning to high-risk behavior compared to people with a low level of vaccine knowledge (Shuko Takahashi, et al, 2022). Having a high level of knowledge about vaccines often correlates with higher acceptance rates. When people understand the benefits, safety, and effectiveness of vaccines, they are more likely to make informed decisions to get vaccinated themselves and encourage others to do the same. People with sufficient knowledge about a vaccine can better comprehend its potential benefits and importance, which can help to shape positive vaccine views and enhance vaccination confidence.



A study conducted by Zheng, et al. (2021), The knowledge-attitude-behavior hypothesis proposes that people's health knowledge and information is a critical foundation for their desire to engage in health-related behavior. Furthermore, knowledge about specific health conditions can be considered a necessity for health decision-making, including vaccination uptake, as part of an individual's health literacy.

Table 3. Attitudes toward vaccination among the respondents

Indicators	M	SD	VR	I
1. Vaccine makes me feel safe	2.94	1.08	MAg	MAt
2. Vaccine is not but may be faulty as fake	2.80	1.03	MAg	MAt
3. Vaccine was rapidly developed and approved	2.83	1.01	MAg	MAt
4. Vaccine is being promoted for commercial gains of pharmaceutical companies	2.81	0.99	MAg	MAt
5. After getting vaccine, I don't need to follow preventive measures such as wearing face mask, sanitation, and social distancing	2.76	1.03	MAg	MAt
6. I will tell my family and friends to take vaccine	3.14	0.89	MAg	MAt
7. I take vaccines without dilemma	3.14	0.96	MAg	MAt
8. Taking vaccine is very important to us	3.19	1.01	MAg	MAt
9. New vaccine has no health problems	3.08	1.01	MAg	MAt
10. Vaccine is good but it makes me feel traumatized	3.08	1.02	MAg	MAt
Average	2.98	1.00	MAg	MAt

Scale	Interval	Verbal Response	Code	Interpretation	Code
4	3.25-4.00	Strongly Agree	SA	Strong Attitude	SA
3	2.50-3.24	Moderately Agree	MAg	Moderately Attitude	MAt
2	1.75-2.49	Slightly Agree	StA	Slight Attitude	SAt
1	1.00-1.74	Disagree	D	No Attitude	NA

Table 3 shows the moderate attitudes of the residents of Barangay Rizal, Surigao City toward vaccinations. Generally, the rural residents are quite not inclined towards submitting themselves for vaccination. However, according to the residents, they are being required to undergo vaccination despite their hesitancy. Positively, it was also notable that the residents would tell or recommend to their family and friends to take a vaccine since they have taken vaccines without dilemma. It is however quite difficult for the respondents to follow preventive measures such as wearing face masks, sanitation, and social distancing after vaccination since they believe in the immunity the vaccinations give to them. Vaccines save millions of lives from infectious diseases caused by viruses and bacteria. As the world awaits safe and effective vaccines, people celebrate the progress made and highlight the challenges ahead in vaccines and the science behind them. Vaccines prevent diseases caused by a large number of viruses and bacteria, and those against parasites are under development. No vaccine has a 100 percent success rate. You may contract COVID-19 and other diseases even after being vaccinated but chances are the infection would be much milder. The vaccine only protects you from hospitalization, death, and serious disease. You can still be an asymptomatic carrier and you must continue to follow the appropriate behaviors such as the use of masks, hand sanitizers, or hand washing (A. Iwasaki, 2021).

Table 4. Beliefs on Vaccination among the Respondents

Indicators	M	SD	VR	QI
1. I believe that the vaccine will be used to carry out mass sterilization	2.60	1.06	MAg	MB
2. I believe vaccines was created to force or voluntary to get vaccinated	2.69	1.08	MAg	MB



3.	I believe that the rabies and other vaccines was created to profit from the vaccines	2.71	1.07	MAg	MB
4.	I believe getting a vaccine I will be safer than before	2.80	1.08	MAg	MB
5.	I believe that vaccination is important	2.80	1.05	MAg	MB
6.	I believe that vaccine will effect immediately after getting a shot	2.80	0.96	MAg	MB
7.	I believe the vaccine effectiveness data are often fabricated (made up)	2.75	0.99	MAg	MB
8.	I believe the people are deceive about vaccine safety	2.73	1.12	MAg	MB
9.	I believe the government is trying to cover up the link between vaccines and autism	2.77	1.03	MAg	MB
10.	I believe the people are deceived about the effectiveness of vaccines	2.78	1.03	MAg	MB
Average		2.74	1.05	MAg	MB
Scale	Interval	Verbal Response	Code	Interpretation	Code
4	3.25-4.00	Strongly Agree	SA	Strong Belief	SB
3	2.50-3.24	Moderately Agree	MAg	Moderately Belief	MB
2	1.75-2.49	Slightly Agree	StA	Slight Belief	SB
1	1.00-1.74	Disagree	D	No Belief	NB

Table 4 shows the moderate belief of the residents of Barangay Rizal, Surigao City about vaccinations. Generally, the rural residents' beliefs about vaccination are only moderately strong. However, as previously discussed, the residents are being required to undergo vaccination despite their hesitancy. It was also notable that the residents believed that getting a vaccine would make them feel safer than before, that vaccination is important, and that vaccines would just take effect immediately after administration. There are those residents however that still believe that the vaccine will be used to carry out mass sterilization.

Vaccination is a simple, safe, and effective way to protect against harmful diseases before encountering them, as it activates the body's natural defenses to learn to resist specific infections and strengthen the immune system. In this sense, vaccination against COVID-19 or other diseases will reduce the risk of becoming seriously ill and dying, since the person will be better protected. Immunity will not be 100%, since a vaccinated person can still catch the disease; however, the consequences for the body are expected to be much less (B. Argentaria, 2021). The body's immune system helps protect us against infections. When we are exposed to infection, the immune system triggers a series of responses to neutralize the microbes and limit their harmful effects. Exposure to an infectious disease often gives lifelong protection (immunity) so we do not contract the same disease again. A good vaccine will provide adequate and prolonged protection against the disease. These include vaccines against tetanus, diphtheria, polio, and pertussis, Covid-19. Booster doses may also be required for travel vaccines. (P. Skoyen, 2018). This would mean that most of the participants' belief about the vaccine leads to a positive attitude towards acceptance of vaccination. Vaccine development and distribution involve numerous checks and balances, involving scientists, researchers, regulatory bodies, and public health authorities. These processes prioritize public health and safety and are designed to protect individuals and communities from preventable diseases. It is important to rely on accurate information from reputable sources such as healthcare professionals, scientific institutions, and government health agencies when evaluating the safety and efficacy of vaccines. Misinformation and conspiracy theories can create fear and confusion, undermining public health efforts and putting communities at risk (C Peltras, 2021). Quite how an improvement in health care and vaccines that supposedly save lives would lead to a lowering in global population is an oxymoron, unless Gates is referring to vaccines that sterilize people (Watson, 2010). These are misconceptions about vaccines.



III – Association Between Knowledge, Attitudes, and Beliefs About Vaccination Among the Brgy. Rizal Residents with Respect to the Profile Variables

Table 5. Association Between the Knowledge, Attitudes, and Beliefs About Vaccination Among the Brgy. Rizal Residents and the Profile Variables

Profile	Dependent Factors	p	Decision	Difference
Age	Knowledge	0.377	Do not reject Ho	Not Significant
	Attitudes	0.159	Do not reject Ho	Not Significant
	Beliefs	0.628	Do not reject Ho	Not Significant
Sex	Knowledge	0.241	Do not reject Ho	Not Significant
	Attitudes	0.293	Do not reject Ho	Not Significant
	Beliefs	0.570	Do not reject Ho	Not Significant
Civil Status	Knowledge	0.483	Do not reject Ho	Not Significant
	Attitudes	0.441	Do not reject Ho	Not Significant
	Beliefs	0.689	Do not reject Ho	Not Significant
Educational Attainment	Knowledge	0.639	Do not reject Ho	Not Significant
	Attitudes	0.748	Do not reject Ho	Not Significant
	Beliefs	0.353	Do not reject Ho	Not Significant
Socio-Economic Status	Knowledge	0.757	Do not reject Ho	Not Significant
	Attitudes	0.631	Do not reject Ho	Not Significant
	Beliefs	0.194	Do not reject Ho	Not Significant

Decision: Reject Ho if p < 0.05

Tables 5 presents that there are no significant differences in the Knowledge, Attitudes, and Beliefs about vaccination among the Brgy. Rizal Residents with respect to the profile variables. It means that regardless of the residents’ age, sex, civil status, educational attainment, and socioeconomic status, their knowledge, attitudes, and beliefs on vaccination do not vary and are not defined by or associated to the respondents’ demographic background. An individual’s desire to be vaccinated is an outcome behavior that is the result of a complex decision-making process that may be impacted by a wide range of potential reasons (McDonald, 2015). Vaccines have significantly contributed to worldwide reductions in morbidity and mortality by reducing the incidence of serious infectious diseases, and also when giving the vaccine, it doesn’t matter what gender you are, age, whether you are able or not, and whether you have gone to school or not (IOM, 2012).

IV – Association Between Knowledge, Attitudes, and Beliefs About Vaccination Among the Brgy. Rizal Residents

Table 6. Significant Degree of Difference in the Attitudes and Beliefs among the Respondents on Vaccination when grouped according to their Knowledge Levels

Factors	p-value	Decision	Interpretation
Knowledge Attitude	0.172	Do not reject Ho	Not Significant
Knowledge Belief	0.039	Reject Ho	Significant

Decision: Reject Ho if p < 0.05

Table 7. Degree of Relationship between Attitudes and Beliefs Among the Respondents on Vaccination

Factors	r (x, y)	p-value	Decision	Relationship
Attitudes Beliefs	0.027	0.787	Do not reject Ho	Not Significant

Decision: Reject Ho if p < 0.05

Tables 6 and 7 present that there is a significant degree of variance in the residents’ beliefs with respect to their knowledge levels. On the other hand, regardless of the knowledge levels, the attitude levels toward vaccination do not vary. Furthermore, there



is no significant degree of relationship between attitudes and beliefs among the respondents on vaccination in Barangay Rizal. This implies that the attitudes do not relate to and influence the respondents' beliefs and likewise, the beliefs of the residents about vaccination are not influenced or defined by their attitudes. According to Alkattan (2022), beliefs can impact vaccination, and understanding the compatibility of vaccination with one's culture and values can influence acceptance or resistance. Moreover, our beliefs are influenced by our level of knowledge. In the case of the Brgy. Rizal residents, most of them have lesser knowledge about vaccination as seen in Table 2 which also correlates with their moderate beliefs about vaccinations as seen in Table 4.

CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, the researchers realized that it is important to address concerns and misinformation about vaccines in a responsible and evidence-based manner. The belief that vaccines may be faulty, or fake can contribute to vaccine hesitancy, which can have serious public health implications. Moreover, misconceptions about the speed of vaccine development can indeed contribute to vaccine hesitancy. It's crucial to educate residents about the vaccine development process to address their concerns. The residents may not know the process of making the vaccine which is why they believe that making the vaccine is a rush or speedy process. The residents are cautious by observing the side effects of the vaccines before getting vaccinated. Vaccination is a crucial tool in public health, and individuals must make informed decisions about their health. Vaccines cannot be promoted for commercial gains or any advertisements. Strict regulations are in place in many countries to prevent misleading or deceptive marketing practices related to vaccines. These regulations aim to ensure that information provided to the public about vaccines is accurate and evidence-based. Furthermore, some respondents also believed that vaccines could sterilize people. The belief that vaccines can sterilize people is a misconception and a form of vaccine misinformation. Vaccines are primarily designed to provide immunity against specific infectious diseases by stimulating the body's immune system to recognize and fight off pathogens, such as viruses or bacteria. Likewise, the residents believed that some people may have been voluntarily vaccinated or some were required due to local ordinances. Positively, the respondents believe that vaccines cannot be fabricated. Vaccines are carefully developed through a rigorous scientific and regulatory process to ensure their safety and effectiveness. Unfortunately, most of the rural respondents are either less knowledgeable or not knowledgeable about vaccination. They are influenced by the beliefs and opinions of those around them. This can include friends, family, community leaders, and even public figures.

Based on the findings and conclusion of the study, the research recommends that Barangay Health Workers conduct stronger orientations or symposiums for the rural residents in Barangay Rizal. Proper health education should be disseminated among these people in barangay Rizal through seminars or symposiums. Correct information about all vaccines (COVID-19, Immunization, and the like) will help to prevent the reluctance among these people. Social marketing is a potentially helpful intervention when introducing immunization programs. Moreover, the staff or nurses of the health center must provide accurate information and strengthen any advertisements or IEC materials for the wide dissemination of information. They may also provide brochures about vaccines because it is important to provide clear and accurate information about vaccines. Lastly, communicating vaccination information in rural and remote communities, and communication of vaccination uncertainties must be done with clarity around the vaccination benefits, scale, and timeline.

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