



Original Research



Parents' Adherence to Child Immunization of the Badjao Community in Brgy. Tambacan, Iligan City

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ABSTRACT

Introduction: Despite increased efforts to expand immunization coverage, progress in reducing zero-dose children remains low, especially in densely populated urban and remote rural areas, particularly the Badjao community. This study aimed to determine the adherence or accessibility of child immunization among the Badjao Community in Brgy. Tambacan, Iligan City.**Material and Methods:** A qualitative collective case study approach was employed to explore this issue within its social context. Data were gathered through in-depth interviews with 15 Badjao parents, focusing on the factors influencing adherence to childhood immunization. This approach is effective for a case study framework because it is contextual and focuses on a process.**Results:** The adherence to childhood immunization among Badjao mothers varies due to cultural beliefs and their understanding of vaccines, with some viewing them as treatments for illness. Influences from healthcare professionals, family, the elderly, and positive observations promoted adherence, despite barriers like lack of education, language issues, skepticism, and financial constraints. Most Badjao parents adhered to immunization, especially those who were literate, informed, and trusting of the process.**Conclusion:** Personal experiences and cultural transitions contribute to Badjao mothers in shaping health and wellness practices. Traditional norms in the Badjao community are evolving, showing a shift from exclusive reliance on traditional health practices to the acceptance of modern medical interventions, such as child immunization. This evolution indicates a growing recognition of immunization benefits and a willingness to integrate contemporary healthcare methods into their cultural frameworks.This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>)**Cite this as:** Caneos HLT, Clemeña LDP, Lopez AEE, Palanas JP (2024) Parents' Adherence to Child Immunization of the Badjao Community in Brgy. Tambacan, Iligan City. *Asian J Heal Res.* 3 (3): 219–227. doi: [10.55561/ajhr.v3i3.188](https://doi.org/10.55561/ajhr.v3i3.188)

INTRODUCTION

Immunization is a highly cost-effective public health initiative, preventing an estimated 4.4 million child deaths annually [1]. It is more economical and effective than treating diseases. Vaccination eradicates and controls vaccine-preventable diseases, significantly extending life expectancy.

In the Philippines, tribes like the Badjaos uphold rituals in their health practices. The Badjaos, one of the most marginalized groups, face difficulties accessing government health services [2] and primarily consult their *pandays* for health issues [3]. This reliance on traditional practices poses a rising problem for health

control in the community, potentially leading to catastrophic outcomes [4].

The purpose of this study is to determine the adherence of parents to child immunization among the marginalized community in urban areas. The specific aims of this study are to determine the adherence or accessibility of child immunization among the Badjao Community in Brgy. Tambacan, Iligan City. The research questions are: 1. What are the cultural beliefs of the Badjao community that are relevant to immunization? 2. What are the barriers and challenges to adherence of Badjao parents to childhood immunization? 3. What are the reasons of the Badjao parents for adhering to childhood immunization?

MATERIAL AND METHODS

Research Design

This study employed a qualitative approach, particularly a collective case study to fully grasp the scenario and its significance in a social unit [5,6]. Through contrasting and comparing, the researchers are able to comprehend the phenomena being studied both within and between cases. This study is effective for a case study framework because it is contextual and focuses on a process [5].

The term bounded system refers to a research case defined by time, location, or specific physical boundaries, recognizing and understanding the limits of an organization for research [7]. It involves establishing clear boundaries around the study object, which can include an individual, group, or community [5].

The researchers conducted in-depth interviews with 15 parents in the Badjao community to understand issues related to child immunization adherence. The following inclusion criteria of this study are: 1) a member of the Badjao community, 2) a parent with one or more children, 3) can speak and understand Bisaya language, and 4) willing to participate in the study.

Data Gathering Protocol

This study applied an open-ended interview. The researchers chose to interview as their data gathering protocol because according to [8], interviews are a flexible method that enables the researcher to examine a greater depth of meaning than is possible with other methods, cooperation can be facilitated and more information can be elicited through the use of interpersonal skills, and responses to interviews are generally higher than those to questionnaires. An interview guide using open-ended questions was prepared to gather data. The interview was done in the local dialect, Cebuano or Visayan, to make the interview process easier for respondents who prefer the local language for the interviews. Before starting the interview, the researchers explained the reason and importance of this study.

Ethical Considerations

The researchers followed specific guidelines for conducting interviews, starting with seeking permission from the college dean through a formal letter, approved by their thesis adviser, ensuring voluntary participation and full disclosure of study objectives to selected respondents. Prior to interviews, participants were presented with all research details to obtain informed consent, ensuring security, privacy, and confidentiality throughout the process. Interviews were conducted in suitable settings, with participants briefed on objectives,

confidentiality, and interview details, utilizing conversational questions for flexibility. Privacy and confidentiality were prioritized, maintaining participants' anonymity and addressing concerns such as confidentiality, consent, and identity protection. Despite challenges, only information disclosed by participants was accessible to researchers, with meticulous documentation of interview data.

Data Gathering Procedures

The aim of this study was to comprehensively investigate a person, activity, or process of study, requiring intensive data collection [5,6] and applying “various forms of data” [7]. Data collection for case studies primarily highlighted one of the three references of data: observation, interviews, and information. The fundamentals of observation during data gathering included: area, participants, reaction, and conversation [5]. Data was collected through formal interviewing to address our research question, followed by documentation of the data.

The study was carried out in Barangay Tambacan. The researchers wrote a letter to the barangay health center midwife and the barangay captain of Brgy. Tambacan, and received approval to conduct the study within their community. This study was conducted over three weeks.

Data were collected using open-ended questions. To ensure accuracy, the entire duration of the interview was recorded, and important details were written down for encoding purposes. Each question was asked separately to give the interviewee plenty of time to consider and respond. The researchers gave instructions to the 15 mothers and allotted 30 minutes to each respondent during the interview. Six (6) relevant questions were asked of the respondents. They were then given the freedom to answer and respond to the questions to prevent giving inaccurate information.

Data Analysis

After conducting the study, the data was analyzed thematically. The researchers applied the thematic analysis framework to examine the qualitative data. The researchers precisely investigated the data to identify similar themes that were often presented, such as topics, ideas, and patterns of definition [9].

In the first phase, the researchers familiarized themselves with the data by transcribing the audio, reading the notes, and thoroughly skimming the information before starting to analyze and separate the items. In the second phase, the researchers coded the data by highlighting or creating abbreviations for sections, commonly lines or phrases.

After coding the phrases, the researchers began formulating themes in the third phase. This was helpful

in determining relevant or irrelevant information. In the fourth phase, the researchers reviewed themes, taking accurate and useful descriptions of the themes. In the fifth phase, they defined and named the themes to decipher and understand the information. Finally, in the sixth phase, they wrote up the entire analysis based on the extracted and formulated facts and themes.

Authenticity and Trustworthiness

To ensure the credibility of the data gathered, the researchers incorporated investigator triangulation to seek different interpretations of the data gathered from various perspectives of the researchers. An audit trail was also employed to assess raw data, formulate themes, and draw conclusions, maintaining a progress record of data collection and articulating the researchers' descriptions and observations during the interviews. Additionally, after gathering and transcribing the data, the researchers carried out member checking, to validate whether the researchers properly interpreted the participants' ideas. The process was conducted in an encouraging manner to promote truthfulness and reflection among the participants, thereby enhancing the quality of the data.

Reflexivity Statement

In the context of the study, the researchers, as nursing students, acknowledge that their pre-existing assumptions, experiences, and knowledge, particularly their understanding of the importance of childhood immunizations, may have influenced their approach. Intrigued by the adherence of the unique and marginalized Badjao community to this crucial aspect of healthcare, they have chosen to explore the intricacies of immunization adherence of this population. Aware of their potential bias and their possible influence on the study, the researchers mitigated these through rigorous data collection and analysis of methods, incorporated peer discussions or debriefing after each interview session to challenge their interpretations. They also engaged with the Badjao community in a respectful and culturally sensitive manner, prioritizing their perspectives rather than imposing their own views.

RESULTS

Description of the Participants

Shows the profile of the participants. All 15 participants were Badjao mothers who could speak and understand the Bisaya language. None of them were aware of their birthdays. One had 6 children, two had 5 children, three had 4 children, two had 3 children, one had one child, and four did not specify the number of children they had (Table 1).

Cultural Beliefs of the Badjao Community on Immunization

When asked about the participants' cultural beliefs relevant to immunization, the participants' responses can be grouped into three (3) themes. The themes are (1) knowledge and attitudes towards vaccines, (2) cultural transition and adaptation; and (3) role of health centers in Badjao community.

Theme 1: Knowledge and Attitudes Towards Vaccines. Mothers perceived vaccines as a form of medicine that not only prevents illnesses but also promotes well-being. They regard it as medicine and is beneficial for their child. Thus, this knowledge fuels their positive attitude towards immunization and vaccines. They commented:

Participant 2: *"It's for preventing illness, for their well-being, that's why they should be vaccinated."*

Participant 3: *"Medicine. It's medicine for my child. It's beneficial."*

Theme 2: Cultural Transition and Adaptation. The evolution of cultural norms and practices in the Badjao community in terms of health and wellness focuses on the transition from traditional health practices, which may not have included vaccination or immunization, towards the acceptance and incorporation of modern medical interventions like vaccines. This is highlighted in the following participants' responses:

Participant 6: *"Usually, we fear death. And secondly, we were not accustomed to getting vaccinated"*

Theme 3: Role of Health Centers in Badjao Community. The significance of health centers within the Badjao community is highlighted by Participant 14's response, which underscores the assistance and education imparted by the Center to the community that facilitated acceptance and utilization of formal healthcare services, including immunization. They stated:

Participant 14: *"Vaccination is okay, it doesn't harm them. In the past, our ancestors didn't believe in immunization or prenatal care, that was their belief long ago. If they got sick, they didn't go to the doctor or city, they were afraid. Their belief was in Umbo and Tuhan. They used coconut husks, charcoal, and fire for their rituals. But now they have learned. I tell them to get a check-up for free because some children died due to their old beliefs. They used to give soft drinks like Royal and feed them, but now they know better. They also used to not deworm, but now they do. If they need medicine, I tell them to go to the center for check-ups for children aged 0-5, but for older ones, I can get the medicine."*

Reasons for Adhering to Childhood Immunization

When asked about the participants' reasons for adhering to childhood immunization, the participants' responses can be grouped into six (6) themes. The

Table 1. Description of the Participants

Participants	Age	Number of Children
P1	Not aware of the birthday	Did not specify
P2	Not aware of the birthday	5
P3	Not aware of the birthday	Did not specify
P4	Not aware of the birthday	Did not specify
P5	Not aware of the birthday	3
P6	Not aware of the birthday	4
P7	Not aware of the birthday	Did not specify
P8	Not aware of the birthday	1
P9	Not aware of the birthday	2
P10	Not aware of the birthday	3
P11	Not aware of the birthday	5
P12	Not aware of the birthday	1
P13	Not aware of the birthday	4
P14	Not aware of the birthday	4
P15	Not aware of the birthday	6

themes are: 1) influence and trust in healthcare providers; 2) family and elders' influence; 3) motivation for protection and health, 4) adherence to recommendations; 5) risk assessment and observation; and 6) decision-making based on experience.

Theme 1: Influence and Trust in Healthcare Providers. Healthcare influence strongly encouraged mothers to trust medical professionals. Parents mentioned that they followed doctors' advice and recommendations. Thus, the authority of healthcare providers played a significant role in their decision-making process. They said:

Participant 1: *The Doctor said so... For the child's good health...*

Theme 2: Family and Elders' Influence. Elders' wisdom and family opinions highly influenced mothers' decisions and perceptions regarding vaccination uptake. Participants considered pieces of advice from their grandparents and older family members. They commented:

Participant 1: *My grandfather said to get vaccinated...*

Theme 3: Motivation for Protection and Health. Mothers expressed concern for their children's well-being. They perceived vaccination as a protective measure to prevent illness and maintain optimal health for their children. They stated:

Participant 2: *It's for preventing illness, for their well-being*

Theme 4: Adherence to Recommendations. Many mothers strongly complied with and followed instructions from healthcare facilities or nurses. This showed that adherence to vaccination schedules and maintaining health records was essential. They mentioned:

Participant 4: *They said at the hospital to take my child to the center. So, I took her there.*

Theme 5: Risk Assessment and Observation. Before adhering to vaccination uptake, some mothers

observed others who were vaccinated and remained healthy. This observation demonstrates a careful assessment of risks before fully trusting the immunization process. They remarked:

Participant 14: *We think about it, but we look at others who got vaccinated and nothing bad happened to them, so we join in because it doesn't harm.*

Theme 6: Decision-Making Based on Experience. Personal experiences played a significant role in mothers' choices. These experiences revealed that immunization is associated with better health outcomes for their children. They stated:

Participant 15: *Because when my child was not vaccinated, and they got sick, the illness continued.*

Challenges to Childhood Immunization Adherence

When asked about the participants' beliefs on immunization, the participants' responses can be grouped into six (6) themes. The themes are: 1) education and awareness, 2) compliance for well-being, 3) trust and skepticism, 4) relocation and fear of death, 5) language and communication, and 6) financial constraints.

Theme 1: Education and Awareness. Literacy challenges faced by the Badjao community further exacerbated their awareness barriers to adhering to childhood immunization. Mothers reported difficulties due to lack of information, education, and illiteracy, which made it hard for them to grasp the importance of immunization. They commented:

Participant 1: *I didn't return because they didn't inform me... We're Badjaos and we can't read.*

Theme 2: Compliance for Well-Being. Participants demonstrated an understanding of following the immunization schedule and ensuring their child's well-being. Some mothers prioritized their children's health and followed immunization guidelines diligently. They said:

Participant 2: *Yes, we comply. If we don't comply, the child won't get better.*

Theme 3: Trust and Skepticism. The skepticism among Badjao mothers about vaccine safety and efficacy is a notable challenge. Their expressed doubts, fueled by fears of harmful or expired medicines, highlight the uncertainties and suspicions surrounding immunization. These concerns often stem from misinformation, limited understanding, or negative experiences. They mentioned:

Participant 13: *We might be fooled. A friend told me not to just give anything to the children.*

Theme 4: Relocation and Fear of Death. Frequent relocation caused barriers to immunization access and instilled fear among parents. The Badjao parents revealed that, due to frequent relocation and fear of

Table 2. Summary of Themes

Themes	Descriptions
Cultural Beliefs of the Badjao Community on Immunization	
Knowledge and Attitudes Towards Vaccines	Understanding of vaccines within the Badjao community's cultural context. This explores their perception of vaccines as a form of medicine that not only prevents illnesses but also promotes well-being. The indication of a broad understanding and acceptance of vaccines within their community is supported by the participants' insights.
Cultural Transition and Adaptation	The evolution of cultural norms and practices in the Badjao community in terms of health and wellness focuses on the transition from traditional health practices, which may not have included vaccination or immunization, towards the acceptance and incorporation of modern medical interventions like vaccines.
Role of Health Centers in Badjao Community	The significance of health centers within the Badjao community is highlighted by Participant 14's response, which underscore the assistance and education imparted by the Center to the community that facilitated acceptance and utilization of formal healthcare services, including immunization.
Reasons for Adhering to Childhood Immunization	
Influence and Trust in Healthcare Providers	Healthcare influence can strongly encourage mothers to trust medical professionals. Parents mentioned that they follow doctors' advice and recommendations. Thus, the authority of healthcare providers plays a significant role in their decision-making process.
Family and Elders' Influence	Elders' wisdom and family opinions highly influence mothers' decisions and perceptions regarding vaccination uptake.
Motivation for Protection and Health	Mothers expressed concern for their children's well-being. They perceive vaccination as a protective measure to prevent illness and maintain optimal health for their children.
Adherence to Recommendation	Many mothers strongly complied with and followed instructions from healthcare facilities or nurses. This showed that adherence to vaccination schedules and maintaining health records were essential.
Risk Assessment and Observation	Before adhering to vaccination uptake, some mothers observed others who were vaccinated and remained healthy. Personal experiences played a significant role in mothers' choices.
Decision-Making Based on Experience	These experiences revealed that immunization is associated with better health outcomes for their children.
Challenges to Childhood Immunization Adherence	
Education and Awareness	Literacy challenges faced by the Badjao community further exacerbated their awareness barriers to adhering to childhood immunization. Mothers reported difficulties due to lack of information, education, and illiteracy, which made it hard for them to grasp the importance of immunization.
Compliance for Well-Being	Participants demonstrated an understanding of following the immunization schedule and ensuring their child's well-being. Some mothers prioritized their children's health and followed immunization guidelines diligently.
Trust and Skepticism	The skepticism of Badjao mothers regarding the safety and efficacy of vaccines poses a challenge. Mothers expressed doubts about vaccination, fearing harmful or expired medicines. This illustrates the doubts, uncertainties, and suspicions harbored by Badjao mothers about immunization, often fueled by misinformation, lack of understanding, or negative experiences. Frequent relocation caused barriers to immunization access and instilled fear among parents.
Relocation and Fear of Death	The Badjao parents revealed that, due to frequent relocation and fear of death, they became reluctant to immunize their children.
Language and Communication	Language differences between Bisaya and their native language created challenges and barriers to understanding explanations and reading information from healthcare providers.
Financial Constraints	It was discovered that money was one of the significant factors, with some mothers mentioning the need for funds to access healthcare services.

death, they became reluctant to immunize their children. They said:

Participant 6: *"For Badjao children, they're kept hidden because they're scared of dying."*

Theme 5: Language and Communication. Language differences between Bisaya and their native language created challenges and barriers to understanding explanations and reading information from healthcare providers. They remarked:

Participant 14: “We understand if we ask, but reading, we don’t understand.”

Theme 6: Financial Constraints. It was discovered that money was one of the significant factors, with some mothers mentioning the need for funds to access healthcare services. They commented:

Participant 15: “Yes, you need money; they won’t entertain you if you don’t have money.”

Summary of Themes

These show the summary of themes. The first research question has three (3) themes: 1) knowledge and attitudes towards vaccines; 2) cultural transition and adaptation; and 3) role of health centers in the Badjao community. The second research question has six (6) themes: 1) influence and trust in healthcare providers; 2) family and elders’ influence; 3) motivation for protection and health; 4) adherence to recommendations; 5) risk assessment and observation; and 6) decision-making based on experience. The third research question has six (6) themes: 1) education and awareness; 2) compliance for well-being; 3) trust and skepticism; 4) relocation and fear of death; 5) language and communication; and 6) financial constraints. Each theme is given a brief description of what it entails ([Table 2](#)).

Concept Map of Themes

This shows the concept map of parents’ adherence to child immunization in the Badjao community in Brgy. Tambacan, Iligan City. The research questions are written below the research title along with their respective themes. One (1) Research question has three (3) Themes, while the other two have six (6) Themes.

DISCUSSION

This section discusses the findings of this study based on the data analyzed in the previous chapter. The focus of this study was to identify the adherence to childhood immunization among Badjao mothers ([Fig.1](#)).

Summary of Findings

The results of the study indicated that adherence to childhood immunization among Badjao mothers varied due to several factors. Cultural beliefs significantly influence adherence, largely because of their understanding and perception of vaccines. While parents generally knew that vaccines prevent diseases, some viewed them as treatments administered only when children were ill.

Traditional health norms in the community have gradually adapted to modern practices such as

immunization and professional healthcare. The study found that the primary reasons for adherence were the influence, trust, and recommendations of healthcare professionals, families, and the elderly. Key obstacles include a lack of education and awareness, language and communication issues, and skepticism, leading to uncertainty and suspicion about immunization.

Overall, the researchers found that most of the Badjao parents interviewed adhered to childhood immunization. Moreover, parents who were literate, informed, and trusted immunization were more likely to ensure that their children received vaccines.

Comparison with Earlier Similar Literature

The findings align with previous studies highlighting a lack of information and encouragement among parents as a critical issue for improving immunization rates [10]. The Badjao community’s literacy challenges exacerbate barriers to childhood immunization, with mothers reporting difficulties due to a lack of information, education, and illiteracy [11].

The study revealed the importance of adherence to childhood immunization among Badjao mothers, influenced by their understanding of vaccines and the role of health centers. Low immunization coverage is often due to myths, misconceptions, and fears about vaccines [12]. Findings from [13] show that mothers often adopt the immunization views and beliefs of their mothers and grandparents, highlighting the strong influence of family opinions on vaccination decisions.

The study also emphasizes that trust in healthcare professionals, family influence, and the desire to protect children are key drivers of Badjao mothers’ commitment to immunization. This aligns with Schellenberg et al. (2023) [14], who highlighted the role of trust in shaping parental perspectives on vaccinations. Our findings indicate that Badjao mothers’ personal experiences play a significant role in their decision to immunize their children, teaching them that immunization leads to better health outcomes. In contrast, previous literature (Ellithorpe et al. 2022) [15] noted that mothers with unvaccinated children rely on family for vaccination information, adopting beliefs passed down by their elders.

Our findings indicate a cultural transition in the Badjao community. Previous literature has shown that the Badjaos, who uphold traditional health rituals, face difficulties accessing health services and primarily consult their pandays. Our study reveals an evolution in their health practices, with a shift from traditional methods to the acceptance of modern medical interventions, including child immunizations and vaccines.

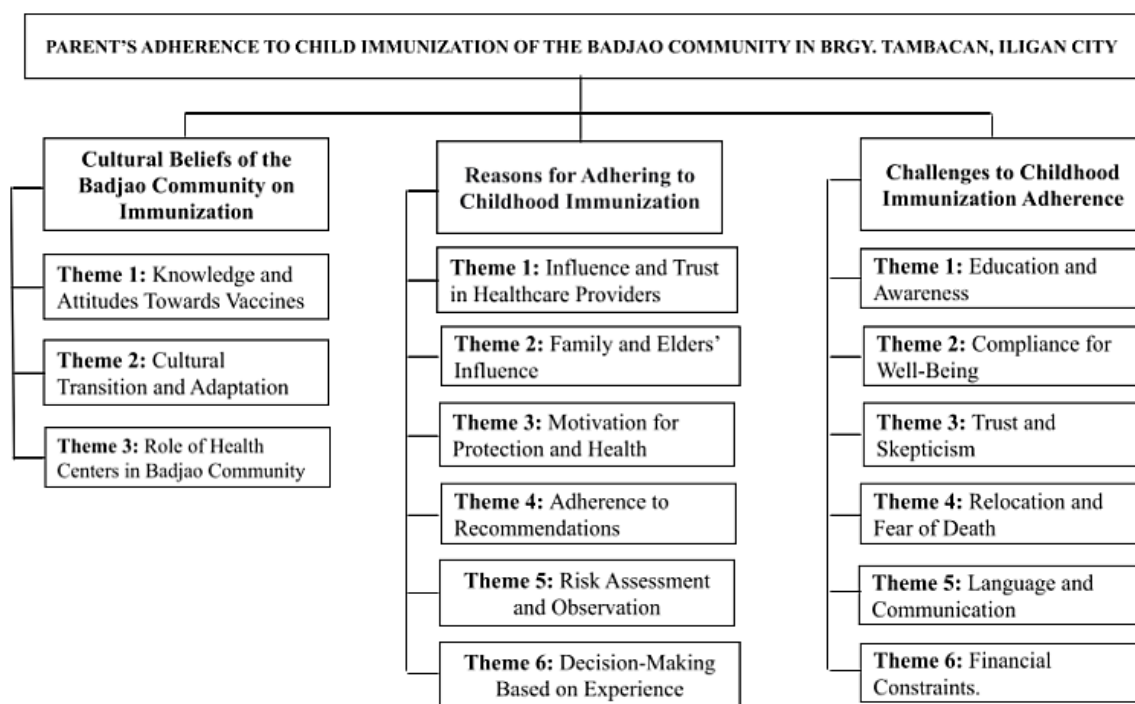


Figure 1. Concept Map

Implications of the Study

The findings of this study are significant for public health strategies targeting the Badjao community. Firstly, the reliance of Badjao mothers on personal experiences for deciding to immunize their children highlights the importance of real-world testimonials and stories in promoting vaccination. Health programs should incorporate narratives and examples from within the community to foster greater acceptance and adherence to immunization.

Secondly, trust among Badjao mothers placed in healthcare providers suggests that these professionals play a crucial role in influencing immunization decisions. Therefore, strengthening the relationship between healthcare providers and the Badjao community can enhance vaccination rates. Furthermore, the observed cultural transition towards medical practices indicates a shift that health interventions can leverage. Recognizing this evolution allows the development of culturally tailored health promotion strategies that respect traditional beliefs while promoting modern medical practices.

Additionally, addressing the difficulties in accessing health services for the Badjao community is essential. Creating outreach programs can mitigate these barriers, ensuring more children receive timely vaccinations. Involving pandays and respected community figures in vaccination campaigns can enhance the credibility and

reach of these initiatives. Overall, this study underscores the need for culturally informed, experience-based, and trust-centered approaches in promoting child immunization within the Badjao community.

Strengths of the Study

This study's strengths lie in its qualitative approach, utilizing interviews and focus groups to explore participants' experiences, motivations, and challenges related to child immunization. These methods delve into the "why" behind decisions, offering a deeper understanding of cultural, social, and economic factors impacting vaccination choices in the Badjao community.

Interviews uncover underlying beliefs and traditional practices that may not surface in surveys, fostering trust and ownership in the research process. Additionally, adopting culturally sensitive approaches enhances communication and understanding with the Badjao population. Investigator triangulation further enriches the study by comparing findings from diverse data sources, revealing hidden meanings and interpretations that a single researcher might overlook, thus providing a more comprehensive understanding of the phenomenon.

Limitations and Recommendations

Qualitative studies may present several weaknesses. However, in this study, two weaknesses were identified. First, qualitative study involves in-depth interviews and analysis, which are time-consuming, particularly in transcribing, coding, and identifying themes. Second, it is complex and uncertain, often presenting uncertainties and contradictions in the participants' responses.

Hence, it is suggested to use a mixed-methods approach that combines quantitative data collection, which presents facts with numbers, with qualitative methods to gain a better and comprehensive understanding of the community's experiences and perspectives on immunization. Future studies should consider a longer timeline to capture the long-term effects of immunization decisions and include a broader range of Badjao communities for more comprehensive insights.

CONCLUSION

Personal experiences and cultural transitions contribute to shaping health and wellness practices for Badjao mothers. Traditional norms in the Badjao community are evolving, showing a shift from exclusive reliance on traditional health practices to the acceptance of modern medical interventions, such as child immunization. This evolution indicates a growing recognition of immunization benefits and a willingness to integrate contemporary healthcare methods into their cultural frameworks.

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CONFLICT OF INTEREST

The authors declare there is no conflict of interest.

REFERENCES

- UNICEF. 2023. The State of the World's Children 2023 | UNICEF. www.unicef.org; [accessed 2023 November 20] <https://www.unicef.org/reports/state-worlds-children-2023>.
- Ty M. 2010. Challenges in public health facilities and services: evidence from a geographically isolated and disadvantaged area in the Philippines. *Journal of Global Health Reports*. 4:e2024. doi:<https://doi.org/10.29392/joghr.3.e2019059>
- Jondonero C, Mamauag M, Tabil V, Lomondot SH, Daco N, Longcob W, Coyoca GS. 2016. Health behavior and practices of the Badjaos: an implication to health intervention. *Int J Nurs Sci*. 2016; 6(2): 172-178. <https://scholarly.msuiit.edu.ph/pages/articledetails.php?artno=287&s=>
- Lozano R. 2001. Ongoing problems and issues in fixing Indigenous health. *Australian and New Zealand Journal of Public Health*, 25(6), 494-496.
- Merriam SB. 1998. *Qualitative Research and Case Study Applications in Education*. San Francisco (CA): Jossey-Bass Publishers.
- Yin RK. 2009. *Case Study Research: Design and Methods*. 4th ed. Thousand Oaks (CA): Sage Publications.
- Creswell JW. 2002. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Upper Saddle River (NJ): Merrill Prentice Hall. SAGE Publications
- Burns & Grove's understanding nursing research: building an evidence-based practice. 6th ed. Elsevier/Saunders.
- Caulfield J. 2019. How to Do Thematic Analysis. Scribbr. [accessed 2024 May 22]. <https://www.scribbr.com/methodology/thematic-analysis/>
- Tiwari DA, Vishwakarma DK. 2019. A study of knowledge, attitude and practice of mothers on immunization of children in urban slums. *Pediatric Review: International Journal of Pediatric Research*. 6(10):547–554. doi:<https://doi.org/10.17511/ijpr.2019.i10.09>.
- Steens A, Stefanoff P, Daae A, Vestheim DF, Riise Bergsaker MA. 2020. High overall confidence in childhood vaccination in Norway, slightly lower among the unemployed and those with a lower level of education. *Vaccine*. 38(29):4536–4541. doi: <https://doi.org/10.1016/j.vaccine.2020.05.011>.
- Muhammad A, Cheema DA. 2023. "Barriers to Childhood Vaccination in Urban Slums of Pakistan." *Eastern Mediterranean Health Journal*, vol. 29, no. 5, pp. 371–379. <https://doi.org/10.26719/emhj.23.062>. Accessed 27 Sept. 2023.
- Ellis N, Walker-Todd E, Heffernan C. 2020. Influences on childhood immunization decision-making in London's Gypsy and Traveller communities. *British Journal of Nursing*. 29(14):822–826. doi:<https://doi.org/10.12968/bjon.2020.29.14.822>.

14. Schellenberg N, Dietrich LM, Petrucka P, AM C. 2023. Predictors and impact of trust on vaccine decisions in parents of 2-year-old children in Canada: findings from the 2017 Childhood National Immunization Coverage Survey (cNICS). *BMC Public Health*. 23(1). doi:<https://doi.org/10.1186/s12889-023-16705-5>.
15. Ellithorpe ME, Adams R, Aladé F. 2022. Parents' Behaviors and Experiences Associated with Four Vaccination Behavior Groups for Childhood Vaccine Hesitancy. *Maternal and Child Health Journal*. 26(2):280–288. doi:<https://doi.org/10.1007/s10995-021-03336-8>.
16. Abdullah S, Mustafa I. 2022. Knowledge and Attitude of Mothers about Children Immunization and Barriers to Adherence the Program, in Erbil City. *Erbil Journal of Nursing and Midwifery*. 5(1):51–60. doi:<https://doi.org/10.15218/ejnm.2022.06>
17. Abdullahi MF, Stewart Williams J, Sahlèn KG, Bile K, Kinsman J. (n.d.). Factors contributing to the uptake of childhood vaccination in Galkayo District, Puntland, Somalia. *Global health action*. <https://pubmed.ncbi.nlm.nih.gov/32847489/>
18. Albers AN, Thaker J, Newcomer SR. 2022. Barriers to and facilitators of early childhood immunization in rural areas of the United States: A systematic review of the literature. *Preventive medicine reports*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9152779/>
19. Balgovind P, Mohammadnezhad M. 2022. "Perceptions of Healthcare Workers (HCWs) towards Childhood Immunization and Immunization Services in Fiji: A Qualitative Study." *BMC Pediatrics*, vol. 22, no. 1. <https://doi.org/10.1186/s12887-022-03665-9>. Accessed 31 Oct. 2022
20. Bangura JB, Xiao S, Qiu D, Ouyang F, Chen L. 2020. Barriers to childhood immunization in sub-Saharan Africa: A systematic review - *BMC Public Health*. BioMed Central. <https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-09169-4>
21. Braun V, Clarke V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*.3(2):77-101. <https://www.tandfonline.com/doi/abs/10.1191/1478088706qp063oa>
22. Cuesta JG, Whitehouse K, Kaba S, Nanan-N'Zeth K, Haba B, Bachy C, Panunzi I, Venebles E. 2020. "When You Welcome Well, You Vaccinate Well": A Qualitative Study on Improving Vaccination Coverage in Urban Settings in Conakry, Republic of Guinea." *International Health*. <https://doi.org/10.1093/inthealth/ihz097>. Accessed 23 Sept. 2020.
23. Department of Health (DOH). n.d. Expanded Program on Immunization. [accessed 2024 January 18] <https://doh.gov.ph/uhc/health-programs/expanded-program-on-immunization/>
24. Elbarazi I, Al-Hamad S, Alfalasi S, Aldhaheeri R, Dubé E, Alsuwaidi AR. 2020. Exploring vaccine hesitancy among healthcare providers in the United Arab Emirates: a qualitative study. *Human Vaccines & Immunotherapeutics*.:1–8. doi:<https://doi.org/10.1080/21645515.2020.1855953>.
25. Francis MR, Nuorti JP, Lumme-Sandt K, Kompithra RZ, Balraj V, Kang G, Mohan VR. 2021. Vaccination coverage and the factors influencing routine childhood vaccination uptake among communities experiencing disadvantage in Vellore, southern India: a mixed-methods study. *BMC Public Health* 21, 1807. <https://doi.org/10.1186/s12889-021-11881-8>
26. GebreEyesus T.2019."Factors affecting child immunization coverage in a rural district of Ethiopia." *BMC Public Health*.19(1):1-9.