

**ZERO OPEN DEFECATION PROGRAM AWARENESS AND
HEALTH SANITATION PRACTICES AMONG FAMILIES
LIVING IN COASTAL AREAS**

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**ZERO OPEN DEFECATION PROGRAM AWARENESS AND
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LIVING IN COASTAL AREAS**

An Undergraduate Thesis
Presented to the Faculty of the College of Nursing,
Midwifery and Radiologic Technology
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Requirements for the Degree
Bachelor of Science in Nursing

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CERTIFICATE OF PANEL APPROVAL

In partial fulfillment of the requirements for the Bachelor of Science in Nursing degree, this research study entitled, **“ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREAS”**, prepared and submitted by Dumanjug, Kate S., Carreon, Tefannie B., Casile, Flerica Bless G., Delosa, Shanee S., Erquita, Blanche Orvinne P., has been examined and recommended for acceptance and approval.

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ABSTRACT

Access to proper sanitation remains a pressing public health concern, especially in coastal communities where open defecation contributes to waterborne diseases and environmental degradation. In response, the Department of Health (DOH) introduced the Zero Open Defecation (ZOD) Program to eliminate such practices and promote improved sanitation behaviors. This study aimed to assess the relationship between ZOD Program awareness and health sanitation practices among families in selected coastal barangays in Ozamiz City, using Nola Pender's Health Promotion Model, which emphasizes the role of individual beliefs and motivations in promoting well-being and guiding health behaviors. Level of awareness on ZOD Program among families living in coastal areas was measured across healthcare support, health risks, and social norms, while health sanitation practices included food preparation, drinking water, toilet use, and septic waste drainage. A descriptive-correlational design was employed, involving 262 respondents selected through stratified random sampling and surveyed using a validated researcher-made questionnaire. Data were analyzed using mean, standard deviation, and Pearson's r -correlation. Findings indicated a very high level of awareness of the ZOD Program and very good health sanitation practices. Significant positive relationships were observed between awareness and food preparation, drinking water, and toilet use. However, no significant correlation was found between awareness and septic waste

drainage under social norms. The study recommends that effective sanitation strategies incorporate education, infrastructure, and active community involvement. Further research is suggested to evaluate behavioral changes and address challenges in the ongoing implementation and sustainability of the ZOD Program.

Keywords: *coastal communities, environmental hygiene, health sanitation practices, public health awareness, Zero Open Defecation (ZOD)*

DEDICATION

This research study is humbly dedicated to the researchers' beloved family, whose unwavering support, sacrifices, and encouragement have been the cornerstone of the researchers' academic journey. To the researchers' parents, thank you for instilling the values of perseverance and hard work, and for believing in their potential even during moments of self-doubt.

To the researchers' mentors and instructors, your guidance, wisdom, and patience have shaped not only this study but also the individuals the researchers have become. Your dedication to teaching has inspired the researchers to pursue excellence.

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And lastly, to the Almighty, whose grace and light have guided the researchers every step of the way—this work is offered in gratitude and faith.

The Researchers

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The Researchers

TABLE OF CONTENTS

Title	Page
TITLE PAGE	i
APPROVAL SHEET	ii
ABSTRACT	iii
DEDICATION	v
ACKNOWLEDGMENT	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
INTRODUCTION	
Background of the Study	1
Theoretical Framework	5
Conceptual Framework	7
Objectives of the Study	15
Significance of the Study	15
RESEARCH METHODOLOGY	
Design	18
Environment	18
Unit of Analysis, Respondents, and Sampling Procedure	18
Data Gathering Instruments and Procedure	19

Validity and Reliability of the Instrument	20
Scoring Guidelines	21
Mode of Analysis, Statistical Instruments/Procedure	22
Ethical Consideration	22
RESULTS AND DISCUSSION	24
CONCLUSIONS AND RECOMMENDATIONS	35
REFERENCES	38
APPENDICES	
Appendix A- Survey Questionnaire	51
Appendix B- Sample of Filled out Questionnaire	59
Appendix C- Sampling Computation	60
Appendix D- Informed Consent Form	61
Appendix E- Permits	65
Appendix F- Approved Letter of Consent	69
Appendix G- Documentation	71
CURRICULUM VITAE	72

LIST OF TABLES

Table		Page
1	Respondents' Level of Awareness on Zero Open Defecation Program	28
2	Respondents' Health Sanitation Practices	32
3	Significant Relationship Between the Respondents' Level of Awareness on Zero Open Defecation Program and Their Health Sanitation Practices	37

LIST OF FIGURES

Figure		Page
1	Schematic Presentation of the Study	14

INTRODUCTION

Rationale/Background of the Study

Water is essential for life and is among the most crucial natural resources for sustaining it. However, contamination of water sources poses a significant problem for communities. Ensuring access to clean and safe drinking water is a critical public health issue, particularly for those living in remote and hard-to-reach areas of mid- and low-income countries (Onohuean et al., 2022). In 2015, approximately 1.3 million deaths were attributed to fecal water contamination.

Safe and readily available water is essential for public health, whether it's for drinking, food preparation, or other household needs. Access to clean, treated water sources helps prevent the spread of waterborne illnesses (Khokher, 2023). Due to restricted availability to clean water, it is projected that three (3) billion people would experience water stress by 2025. Both industrialized and developing countries are affected by diseases and deaths linked to water. Worldwide, waterborne illnesses are a problem, particularly in developing nations (Shayo et al., 2023). To meet its health, social, and economic objectives, the country must have access to clean water, better sanitation, and good hygiene habits. The Department of Health (DOH) issued Administrative Order 2010-0021, making sustainable sanitation a national priority. This policy aims to achieve Zero Open Defecation (ZOD) and ensure universal access to safe sanitation by 2028, supporting both the Philippine Health Agenda and the global Sustainable Development Goals for sanitation by 2030 (DOH, 2019).

In 2015, the Department of Health (DOH) introduced the Zero Open Defecation (ZOD) process under the Philippine Approach to Sustainable Sanitation (PhATSS). This

program aimed to eliminate open defecation and improve sanitation nationwide, with three goals to achieve by 2019: ZOD (G1), Basic Sanitation (G2), and Total Sanitation (G3). To reach the first level, ZOD (G1), communities needed to stop open defecation completely. Every household had to have a sanitary toilet with water and soap, dispose of waste properly, and be supported by a local government team addressing water, sanitation, and hygiene (WaSH) concerns. Additionally, there had to be a local ordinance promoting sanitation, a monitoring team to track progress, and a funded plan to move the community toward the next level, Basic Sanitation (G2)(DOH, 2019).

Open defecation is the human practice of defecating or excreting outside rather than making use of toilets. It involves defecating in street gutters, behind bushes or open bodies of water. Explaining further, the World Health Organization (WHO) states that, open defecation contaminates sources of drinking water and spreads diseases such as cholera, diarrhea and dysentery (World Health Organization, & United Nations Children's Fund, 2021). Water contaminated with fecal matter is a primary source of virus transmission. Overflowing gutters can cause contaminated water to seep into the supply lines of drinking water reservoirs, leading to their contamination (Shahzadi et al., 2023). WHO estimates that inadequate sanitation causes 432,000 diarrhea deaths annually (Tsebee, 2022).

Numerous interventions are available to help reduce the incidence of fecal water contamination, each playing a vital role in a comprehensive prevention strategy. These measures include promoting regular handwashing with soap, ensuring access to clean and sufficient water, implementing household-level water treatment and safe storage practices, providing effective sanitation services for managing solid and liquid waste, and

delivering health education and promotion initiatives. (Meki et al., 2022). Improving access to sanitation facilities and providing health education are key to addressing these health challenges and protecting vulnerable populations (Watson et al., 2019).

To tailor public health interventions and prevent outbreaks effectively, most studies focus on understanding people's knowledge, attitudes, and practices (KAP) within their specific cultural and social contexts (Anthonj et al., 2021; Muktar et al., 2024; Hilaris, 2022). However, shifts in demographics and economic conditions inevitably impact societal beliefs and practices, making it essential to consider these changes when developing public health interventions (PHIs) (Raihan et al., 2019). Consistent with the demographic trends, open defecation is prevalent in many coastal communities, such as those in Ghana and other developing countries. The lack of adequate toilet facilities in these areas has turned the coastline into an open space for defecation. (Mensah et al., 2023).

While studies have examined the effectiveness of government health programs, waste management strategies and their community impact, the specific role of program sanitation awareness, particularly regarding zero open defecation and its health effects, is often overlooked (Ganesh et al., 2024; Azevedo et al., 2021; Ghosh & Sarkar, 2023). Contrary to the Sustainable Development Goals (SDGs), coastal residential areas have poor environmental sanitation management and lack sufficient attention. This issue becomes more significant when community involvement in sanitation management is minimal. Sanitation management encompasses personal hygiene and environmental sanitation, which includes the sanitation of living areas, waste management, and access to clean water (Harahap, et al., 2022). Although international and local research, such as

the article "Philippines: Lanao Norte Expands 'Zero Open Defecation' Initiatives", highlights efforts to enhance government programs, little to no research has been conducted in our city on residents' awareness of open defecation practices (Philippines, 2023; Saleem, et al., 2019). Therefore, awareness through health education should be increased while emphasizing the importance of public education and community-led actions in reducing open defecation practices (Shiyi & Han, 2021).

This study specifically addressed knowledge and demographic gap by examining the relationship between program awareness and sanitation practices. While a significant gap between the knowledge and practices of respondents was observed as shown on the residents' actions, despite recognizing the health risks of open defecation many households continue the practice (Belay et al., 2022). Raising awareness about the dangers of open defecation, such as the spread of waterborne diseases like cholera and diarrhea, helps individuals recognize the direct link between poor sanitation and negative health outcomes. Without this understanding, individuals may not see the urgency or importance of changing their behaviors (VerKuilen et al. 2023). Knowledge empowers individuals to take action to protect their health and the health of others. That is why educating communities about the benefits of using proper sanitation facilities (Prüss-Ustün et al., 2019). Knowledge facilitates long-term change, in a way that creates a ripple effect where knowledgeable communities advocate for sustainable development in their regions (Ozaki & Shaw, 2022).

The study aimed to assess the impact of the ZOD program on sanitation practices in coastal communities. It provided data for policymakers, raised awareness of open

defecation risks, supported health education, and served as a foundation for future research on improving hygiene, public health, and program implementation.

Theoretical Framework

This study was anchored on Nola Pender's, 1982, Health Promotion Model (HPM), which helps nurses understand healthy behaviors and develop strategies to improve quality of life through health promotion (Cardoso et al., 2022). The HPM emphasizes actions that sustain or improve well-being, providing a foundation for nursing practice and guiding intervention planning, implementation, and evaluation. Nola Pender's Health Promotion Model (HPM) can be applied to the Zero Open Defecation Program and health sanitation practices among coastal families by emphasizing how personal experiences, beliefs, and motivations influence behaviors.

The HPM emphasizes that individual characteristics and experiences shape behavior, and interventions should focus on promoting healthier habits rather than merely preventing disease. Knowledge about the benefits of health-promoting behaviors directly impacts action (Ain et al., 2022). For the ZOD program, raising awareness about the risks of open defecation and the benefits of sanitation aligns with Pender's focus on education and self-efficacy (Nursing Theory, 2020). Teaching families about food safety, clean drinking water, and the importance of toilets can inspire lasting behavioral changes by integrating HPM constructs like healthcare support, social norms, and environmental facilitators.

Self-efficacy, a key component of HPM, predicts the likelihood of individuals adopting and maintaining health-promoting behaviors (Jalali et al., 2024). Within the ZOD program, self-efficacy involves coastal households' confidence in building and

using toilets, maintaining sanitation practices, and teaching others about the importance of avoiding open defecation. Those with higher self-efficacy are more likely to sustain these practices over time (Pender, 2011). Interventions such as educating households on building toilets from local materials and providing community-based sanitation tools can enhance confidence and promote proper sanitation practices (Buda et al., 2022).

Ongoing education about sanitation benefits reinforces self-efficacy. Figueroa and Kincaid (2020) found that individuals who see the direct impact of their actions on community health are more likely to maintain those behaviors, particularly when supported by community norms and resources. This supports Pender's assertion that education and positive reinforcement foster long-term behavior change (Nursing Theory, 2020). The HPM also emphasizes the influence of interpersonal and environmental factors. Community leaders, social support, and local norms significantly impact families' participation in the ZOD program. Interventions involving leaders and promoting positive sanitation norms can increase program success (Buda et al., 2022). Environmental factors, such as access to clean water and proper sanitation facilities, also play a role. Programs focusing on infrastructure development can address barriers and encourage sustainable practices.

The primary aim of the Zero Open Defecation (ZOD) program, in line with Pender's Health Promotion Model (HPM), is to encourage sustained health-promoting behaviors such as consistent toilet use, proper waste management, and frequent handwashing. The effectiveness of health promotion initiatives is determined by their ability to bring about long-term behavioral changes (Nickel & von dem, 2020). The model provides a robust framework for designing and implementing interventions to

eradicate open defecation, enhance sanitation, and improve health in coastal communities (Figueroa & Kincaid, 2020).

Conceptual Framework

This study was conceptualized to specifically explore the relationship between zero open defecation program awareness and health sanitation practices specifically among families living in coastal areas. There are two sets of variables in this study. The first set is the independent variable, which covers the respondent's ZOD program awareness while the second set is the dependent variable, which focuses more on the respondents' health sanitation practices. In general, this framework serves as a visual examination of the relationships and linkages between these important factors in the research.

Zero Open Defecation Program Awareness. This refers to the extent of knowledge and comprehension that respondents residing in coastal areas possess concerning the objectives, goals, and importance of the Zero-Open-Defecation (ZOD) Program. This includes their knowledge of healthcare support, health risks, and social norms. Communities benefit from increased awareness of the Zero Open Defecation (ZOD) program since it encourages improved sanitation habits, decreases the spread of illnesses like diarrhea, and improves public health. Improved health results and a cleaner environment are reported by communities that comprehend and participate in such programs (United Nations Children's Fund & World Bank, 2019). The respondents' knowledge of health risks due to open defecation involves understanding how improper sanitation contributes to disease outbreaks.

According to Saleem et al. (2019), open defecation increases the risk of soil-transmitted infections and poor health outcomes due to the contamination of water and food sources. Individuals with greater awareness of the health risks associated with open defecation are more likely to adopt safe sanitation practices, leading to a decrease in disease incidence (Molina et al., 2021). Knowledge of the advantages of proper sanitation practices pertains to respondents' awareness of the benefits of adhering to proper sanitation practices, such as reducing the incidence of waterborne diseases, enhancing public health, and maintaining a cleaner environment. According to the World Health Organization (2019), improved sanitation practices prevent the spread of diseases by separating human waste from human contact, thereby enhancing both individual and community health.

Healthcare support is defined as the provision of resources, education, and services aimed at improving sanitation practices among coastal families. Their main role is to guide and act as a vital construct in promoting awareness and enhancing sanitation practices in coastal communities, ultimately contributing to the success of the Zero Open Defecation Program. In line with health support, Community health workers (CHWs) are instruments in implementing health programs by addressing barriers to healthcare, providing education, and facilitating community involvement, ultimately leading to improved health outcomes (Madzivhandila et al., 2024). According to Ngcobo et al. (2022), CHWs as support are expected to improve access to health services, advocate for health issues, offer well-being advice, and support children's education. This reflects the community's wish for active health promotion and emphasizes the importance of CHWs in guiding members toward healthier lifestyles. Madzivhandila et al. (2024) cited a study

by Perry et al. (2014) that CHWs are often viewed as a bridge between local communities and formal healthcare systems, helping to fill gaps in access and services. This role illustrates that CHWs not only provide health services but also contribute to community building and connect people to essential health resources that improves their overall health and wellbeing.

Health risks refer to an individual's grasp and understanding of specific concepts or practices that impose health risks from open defecation referring to the incidence of sanitation-related illnesses. In the context of the Zero Open Defecation (ZOD) Program, it indicates how well people are aware of the health risks posed by open defecation and the importance of proper sanitation and hygiene practices, such as toilet use and handwashing. Improving knowledge through education and community engagement is crucial for the success of the ZOD Program in coastal areas, as it empowers families to adopt safer practices and improve sanitation outcomes. By bridging knowledge gaps and engaging communities, these efforts help increase participation in ZOD programs and lead to sustained behavioral changes (Khatibi et al., 2021). Vally et al. (2019) has demonstrated a positive correlation between increasing the knowledge of individuals and communities through targeted interventions that can significantly improve sanitation practices and reduce health risks. A school-based water, sanitation, and hygiene (WASH) intervention in the Philippines showed that increasing students' knowledge about hygiene practices led to higher handwashing rates and reduced diarrhea (Sangalang et al., 2022). The program's success was due to effective education and consistent promotion of hygiene both in schools and at home, highlighting the crucial role of knowledge in raising awareness about Zero Open Defecation (ZOD) and improving public health outcomes.

Social norms are the collective beliefs and behaviors that a community shares regarding sanitation and hygiene. These norms determine what actions are deemed acceptable, such as whether open defecation is permitted or discouraged. They play a crucial role in shaping how individuals adopt sanitation practices like using toilets. Since people tend to follow behaviors that align with community expectations, shifting these norms toward favoring proper sanitation is essential for the success of the Zero Open Defecation (ZOD) Program. This shift encourages a collective move towards healthier behaviors. Geber and Hefner (2019) affirmed that social norms significantly influence people's choices and behaviors. Individuals tend to align their actions with what is commonly accepted and expected within their social group, aiming to ensure their behavior is both effective and socially validated. To support this claim, Lapinski et al. (2022) shared that social norms can significantly affect sanitation behavior by fostering community-wide compliance with ZOD practices. For example, if a community collectively views open defecation as unacceptable or stigmatizes it, individuals are more likely to adopt better sanitation practices to align with the group's expectations. Conversely, if open defecation is perceived as acceptable or normal within a community, it can hinder the success of ZOD programs.

Health Sanitation Practices. This refers to the behaviors and habits that families in coastal areas adopt to uphold hygiene and cleanliness. These practices encompass food preparation, drinking water, toilet use, and septic waste drainage. The research study in Kabuntalan, Maguindanao highlights the importance of proper sanitation practices in reducing health risks associated with poor hygiene (Latip et al., 2021). For instance, the lack of access to safe water and sanitation facilities has been linked to an increased

prevalence of diarrheal diseases among children, emphasizing the need for improved sanitation education and infrastructure (Ekundayo et al., 2024). Additionally, the Community-Led Total Sanitation (CLTS) approach has been recognized as an effective method for driving behavioral change in sanitation practices. By fostering a sense of collective responsibility and promoting participation, CLTS has contributed to improved awareness and adoption of sanitation behaviors among households (Venis, 2023). In coastal areas, open defecation and poor waste management significantly pollute water sources and increase the spread of infectious diseases. Implementing strict sanitation practices, such as installing safe latrines and promoting community awareness, is crucial for improving health outcomes in these vulnerable regions (Igaki et al., 2021). Promoting the use of clean water sources, and integrating health education into community programs can empower families to maintain long-term hygienic practices. Such comprehensive efforts can effectively reduce disease burden and enhance the quality of life for coastal populations (Buda et al., 2022)

Food preparation refers to the processes which involve making food ready for consumption, including cleaning, cooking, and handling ingredients in a safe and hygienic manner. Proper food preparation is vital in promoting Zero Open Defecation (ZOD) awareness because it directly influences hygiene, sanitation, and public health outcomes. Sustainable food preparation practices can support the Zero Open Defecation (ZOD) program by reducing sanitation-related issues caused by improper waste disposal (Lins et al., 2021). Enhancing food preparation knowledge as part of health education in the ZOD Program will empower families to adopt safer sanitation and hygiene behaviors, improving overall health outcomes. Implementing safe food practices—such as washing

hands with clean water before handling food, thoroughly cooking meals, and using clean utensils—can significantly reduce contamination risks from pathogens associated with open defecation, thereby lowering the incidence of diseases like diarrhea and cholera (Prüss-Ustün et al., 2019).

Drinking water refers to a type of water that is safe for human consumption and free from contaminants such as harmful bacteria, chemicals, or waste which is a common problem. Access to safe and clean drinking water complements improved sanitation practices by reducing the spread of waterborne diseases, such as diarrhea, which is often linked to open defecation. Without access to clean water, the effectiveness of sanitation interventions is compromised. Water contamination with harmful fecal bacteria frequently occurs in areas where hygiene and sanitation practices are inadequate (Rapeepan et al., 2023). A study on the school-based WASH intervention in the Philippines highlighted how access to water, sanitation, and hygiene facilities increased handwashing and reduced open defecation, contributing to improved health outcomes and reduced school absences due to diarrhea (Vally et al., 2019).

Toilet use is the sanitary practice of utilizing a toilet or latrine to dispose of human waste in a hygienic setting. In order to avoid contaminating the environment, water supplies, and living areas, garbage must be securely contained, treated, and removed. Using toilets properly is crucial for preventing the spread of waterborne illnesses and enhancing public health, especially in places with inadequate sanitary facilities. For instance, a study in the Philippines demonstrated that schools with enhanced water, sanitation, and hygiene facilities saw a higher use of school toilets and reduced open defecation among students, compared to those without such facilities (Vally et al., 2019).

Another research found that interventions improving toilet cleanliness and functionality in public schools led to greater toilet use and less avoidance, contributing to overall sanitation improvements (Duijster et al., 2022).

Septic waste drainage. This system is designed to collect, treat, and dispose of wastewater in areas without centralized sewage infrastructure. It relies on a septic tank to separate and break down solid waste, while liquid waste (effluent) is filtered through a drainage field into the ground, providing a method for managing household wastewater in a sanitary and environmentally friendly manner. By investing in septic systems and improving drainage, communities can significantly reduce the health risks associated with poor sanitation and increase compliance with ZOD programs (Prasad et al., 2021). A septic system is an independent, underground system designed for treating wastewater (Adegoke et al., 2019). According to the U.S. Environmental Protection Agency (2022), septic waste drainage is the treatment and disposal of household wastewater using a septic system. This system includes a septic tank that collects sewage, allowing solids to settle and decompose. The liquid waste then moves to a drain field, where it filters through the soil for further treatment by natural processes and microorganisms.

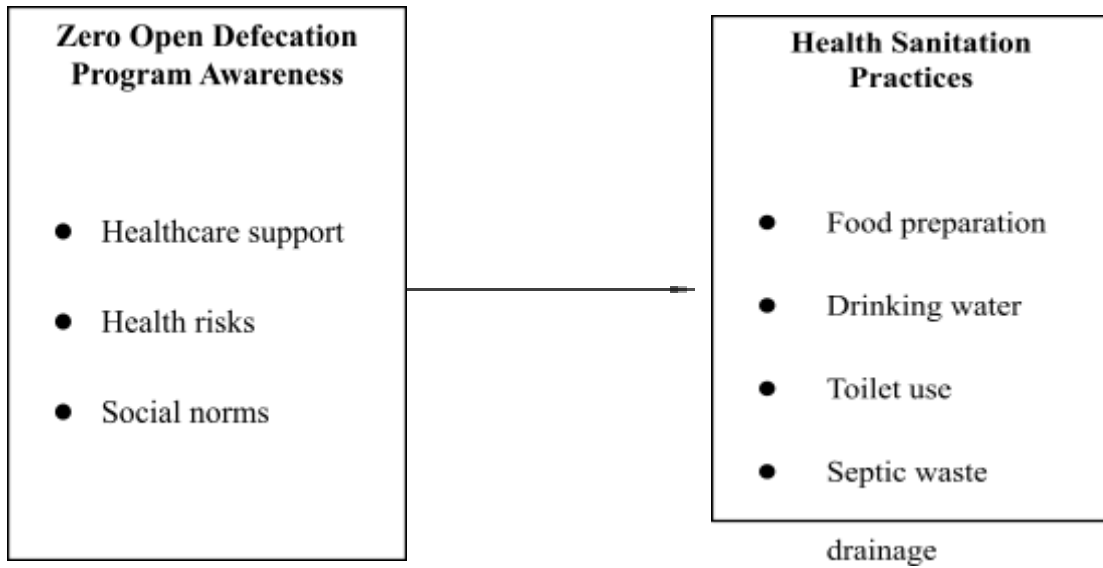


Figure 1. Schematic Presentation of the Study

Objectives of the Study

The objective of this study was to investigate the relationship between Zero Open Defecation (ZOD) program awareness and sanitation practices among families living in coastal areas to inform the development of effective health sanitation strategies. The study sought to answer to the following objectives: (1) Identify the respondents' level of awareness on zero open defecation program in terms of healthcare support, health risks, and social norms; (2) Evaluate the respondents' health sanitation practices in terms of food preparation, drinking water, toilet use, and septic waste drainage; and (3) Investigate the significant relationship between the respondents' level of awareness on zero open defecation program and their health sanitation practices.

It is hypothesized that there is no significant relationship between the respondents' level of awareness on zero open defecation program and their health sanitation practices.

Significance of the Study

This research provided data-driven insights into the influence of the Zero Open Defecation (ZOD) Program on sanitation practices in coastal communities. By examining the relationship between program awareness, hygiene behaviors, and public health outcomes, the study identified key elements that significantly impacted families residing in coastal areas, local government units, rural health unit nurses and midwives, the City Health Office, the Department of Health, and future researchers.

Families or Residents Living in Coastal Areas. This study provided valuable insights into the health implications of open defecation and the importance of proper sanitation among families residing in coastal areas. It emphasized the significance of adopting healthier hygiene practices to reduce waterborne diseases. By raising awareness of the Zero Open Defecation (ZOD) Program, the study empowered families to make

informed decisions and adopt improved sanitation habits, contributing to a safer and cleaner environment.

Local Government Unit (LGU). The findings of this research were essential for the Local Government Units in evaluating the current implementation of the ZOD Program in their communities. It enabled them to create evidence-based policies, allocate resources efficiently, and develop strategic interventions. Furthermore, the study encouraged LGUs to strengthen partnerships with local stakeholders and support sustainable public health and sanitation initiatives tailored to their communities' specific needs.

Rural Health Unit Nurses and Midwives. This study highlighted the vital role of rural health unit nurses and midwives in promoting sanitation and public health education. The data provided would allow these professionals to design targeted interventions that address community-specific challenges. It may also help bridge the gap between national sanitation programs, such as ZOD, and local practices, enhancing their capacity to deliver effective health education and services in underserved coastal areas.

City Health Office. The study may help the City Health Office identify specific gaps in sanitation knowledge and practices among coastal residents. These insights guided the development of focused health campaigns, improvements in policy implementation, and effective allocation of resources. Additionally, it supports the office's initiatives to build stronger partnerships with community leaders, health workers, and local stakeholders to improve and sustain the ZOD Program.

Department of Health (DOH). For the Department of Health, this study serves as a valuable reference in assessing the effectiveness of the ZOD Program at the local level.

The findings offered data-driven insights into the unique challenges of coastal communities, informing national strategies and policy adjustments. It contributed to the DOH's mission of promoting scalable and sustainable sanitation solutions that align with the country's broader public health goals.

Future Researchers. The study holds significance for future researchers in the fields of public health, environmental sanitation, and community development. It established a strong foundation for further studies exploring the relationship between awareness, behavior, and health outcomes. Future investigations can build upon these findings to assess long-term impacts, refine existing programs, and expand research to other regions or demographic groups.

RESEARCH METHODOLOGY

Design

This study was conducted through quantitative approach specifically, a descriptive-correlational research design. This research design focuses on examining relationships between variables by gathering measurable data in real-world settings without altering any conditions. It helps identify patterns and connections, making it ideal for studies that aim to describe situations and analyze relationships between factors (Dellafiore et al., 2022). This design was utilized for this study as it facilitates the systematic identification and assessment of ZOD Program awareness levels and Health Sanitation Practices. By focusing on describing these aspects and examining their potential relationships, this design effectively supports the study's objectives to analyze and interpret measurable data.

Environment

This research was carried out in three selected barangays in Ozamiz City, Misamis Occidental, Philippines. These barangays are strategically chosen as they are located in coastal areas near bodies of water such as seas, rivers, or lakes. Such proximity increases their susceptibility to sanitation-related challenges, as water sources in these regions are prone to contamination, thereby highlighting the importance of assessing health sanitation practices and awareness of the Zero Open Defecation (ZOD) program.

Respondents of the Study/Unit of Analysis and Sampling Procedure

The respondents of the study focused on 262 residents who lived in coastal areas in the barangays of Ozamiz City. There were no restrictions based on gender, age, or other demographic factors for a more inclusive and diverse sample. This broad approach

ensured that the findings represented a wide range of perspectives and experiences within the community regarding their awareness of the zero open defecation program and health sanitation practices. Respondents were identified randomly. The number of respondents was computed using Raosoft with 95% level of confidence and 5% margin of error.

The researchers selected respondents through stratified random sampling where the population was divided into distinct strata based on relevant criteria, such as being residents of the selected coastal barangays in Ozamiz City and possessing knowledge or experience related to the zero open defecation program and health sanitation practices. This method ensured each subgroup was proportionally represented, allowing the sample to reflect a balanced view of the link between ZOD awareness and sanitation practices.

Data Gathering Instruments

The researcher utilized a researcher-made questionnaire that is developed specifically for the purpose of this study and is translated into the level of knowledge and educational attainment of the respondents consisting of two parts.

A. Zero Open Defecation Program Awareness Questionnaire. This tool determined the degree of awareness of the respondent regarding the Zero Open Defecation (ZOD) Program. It contains three constructs namely: healthcare provider support, health risks, and social norms. It is a 4-point Likert Scale with the following responses: 4 - Strongly Agree; 3 - Agree; 2 - Disagree; 1 - Strongly Disagree.

B. Health Sanitation Practices Questionnaire. This tool determined the respondent's practices for maintaining a healthy living environment. It contains four constructs namely: food preparation, drinking water, toilet use, and septic waste drainage.

It is a 4-point Likert Scale with the following responses: 4 - Strongly Agree; 3 - Agree; 2 - Disagree; 1 - Strongly Disagree.

Data Gathering Procedure

In order to obtain data for the study, certain procedures were implemented in gathering the responses needed for analysis. The researcher first asked the dean of the College of Nursing Midwifery and Radiologic Technology for authorization. Following acceptance, a letter of approval was formally submitted to the Mayor's office, requesting permission to carry out the study in selected barangays within the city. Another letter was sent to the Barangay Captain asking for authorization to carry out the study inside the barangay, particularly to survey the locals as part of the data collection procedure. To ensure accessibility, the researcher printed a set of data collection questionnaires after obtaining consent. Prior to distributing the questionnaires, the researchers obtained informed consent by clearly explaining the purpose and objectives of the study to the respondents. Printed copies of the questionnaires were personally delivered to ensure easy access, allowing participants ample time to read and answer each question thoroughly and thoughtfully. Responses were compiled, tallied, and analyzed when data collecting was finished.

Validity and Reliability of Instrument

The questionnaire was translated to align with the respondents' preferred language and level of understanding to ensure clarity and comfort during the survey process. The questionnaire underwent evaluation and validation by a panel of experts to ensure its content and clarity. Additionally, the researchers conducted pilot testing for reliability with 20 residents from the barangay who was not included as the respondents of the

study. The result of reliability statistics was determined using the computed Cronbach's alpha value of 0.70 or higher for each variable. The ZOD program awareness and the Health Sanitation Practices results are above 0.7 indicating the reliability of the questionnaire's statements.

Scoring Guidelines

The first and second part of the researcher-made questionnaire was assessed based on the continuum as follows:

A. Zero Open Defecation Program Awareness Questionnaire. In assessing the degree of awareness of the respondent regarding the Zero Open Defecation (ZOD) Program, the following scale was used:

Continuum	Responses	Interpretation
3.26 - 4.0	4 - Strongly Agree	Very High (VH)
2.51 - 3.25	3 - Agree	High (H)
1.76 - 2.50	2- Disagree	Low (L)
1.0 -1.75	1- Strongly Disagree	Very Low (VL)

B. Health Sanitation Practices. In assessing the respondent's practices for maintaining a healthy living environment, the following scale was used:

Continuum	Responses	Interpretation
3.26 - 4.0	4 - Strongly Agree	Very Good (VG)
2.51 - 3.25	3 - Agree	Good (G)
1.76 - 2.50	2- Disagree	Poor (P)
1.00 -1.75	1- Strongly Disagree	Very Poor (VP)

Mode of Analysis/ Statistical Treatment

The study utilized the following statistical tools in analyzing the data gathered:

Mean used to represent the central tendency of a dataset. It helps researchers understand the overall trend by averaging all data points. It's particularly useful when comparing groups or measuring how typical a particular data point is in relation to the others. For example, when analyzing test scores or survey results, the mean gives a clear summary of what a "typical" score or response might be (Trochim, 2020). It will be used to describe the average level of zero open defecation program awareness among families living in the coastal area.

Standard deviation (SD) is a statistical measure that quantifies the amount of variation or dispersion in a set of data values. It indicates how much the values deviate from the mean (average) of the dataset. A higher standard deviation means that the values are spread out more widely, while a lower standard deviation indicates that the values are closer to the mean (Smith, 2024). The standard deviation will be used to measure the variability around this average, indicating how much the awareness levels differ among the families

Pearson Product-Moment Correlation Coefficient (Pearson r) will be used in exploring the relationship between the zero open defecation program awareness and health sanitation practices of families living in the coastal area.

Ethical Considerations

The study adhered to strict ethical guidelines to protect and ensure the well-being of all respondents. Before beginning data collection, the researcher obtained formal permission from the nursing department dean, barangay captains, and the Office of the

Mayor. These letters explained the study's purpose and objectives. After receiving approval, the researcher secured informed consent from each participant. Respondents were given enough time to consider participation and were informed that their involvement was voluntary. They were free to decline or withdraw from the study at any point without facing any consequences. All personal information was kept anonymous, and data collected from participants was treated with strict confidentiality. No identifying details were recorded or shared. The researcher also guaranteed that the data would only be used for this study and would be stored securely until the study's completion or publication.

The study aimed to benefit both participants and their communities. By participating, respondents helped identify key sanitation issues and awareness gaps related to the Zero Open Defecation (ZOD) program. The findings may support the development of more effective public health strategies, reduce disease risks, and improve sanitation in coastal areas. Throughout the survey, respondents were selected fairly based on the study's relevance, without regard to demographic or socioeconomic status. This ensured equal representation and prevented discrimination. The study upheld each participant's rights and dignity through voluntary participation, respectful treatment, and transparent communication.

RESULTS AND DISCUSSIONS

This section presents the results of the study, discussing the objective of this study is to investigate the relationship between Zero Open Defecation (ZOD) program awareness and sanitation practices among families living in coastal areas that is analyzed and interpreted into the following topics:

Respondents' Level of Awareness on Zero Open Defecation Program

Table 1 presents the respondents' level of awareness on Zero Open Defecation (ZOD) Program, which is overall rated as Very High ($M = 3.32$, $SD = 0.45$), reflecting a strong understanding of the program's key principles and health impacts. The awareness indicators assessed in the study include healthcare support, health risks, and social norms, all of which contributed to the high overall awareness level (Muktar et al., 2024). This heightened awareness can be attributed to continuous government initiatives, active participation from communities, and widespread data management (World Health Organization, & United Nations Children's Fund. (2021). The overall standard deviation ($SD = 0.45$) indicates a moderately consistent awareness among respondents, suggesting that while awareness is very high, there is still some variability in how individuals perceive or understand specific aspects of the program.

The data reveal that respondents demonstrated a Very High level of awareness in three key areas of the Zero Open Defecation (ZOD) Program: healthcare support ($M = 3.26$, $SD = 0.45$), health risks ($M = 3.35$, $SD = 0.41$), and social norms ($M = 3.36$, $SD = 0.48$). High awareness of healthcare support indicates that respondents recognize the vital role of healthcare professionals and institutions in promoting sanitation and hygiene through public health visits, sanitation campaigns, and educational outreach (Sofiyah et

al., 2025; Mahmud et al., 2023). The standard deviation of 0.45 for healthcare support suggests a relatively uniform level of awareness across the sample, with most respondents sharing similar understanding. The involvement of community health workers (CHWs), who provide sanitation education, resources, and support services such as financial aid, has further enhanced public understanding of health risks and empowered households to make informed decisions regarding sanitation practices (Namuhani et al., 2024; Madzivhandilla et al., 2024; Alemu et al., 2024). A slightly lower standard deviation for health risks ($SD = 0.41$) indicates an even more consistent awareness level in this category, implying that respondents generally agreed on the health-related consequences of open defecation. These findings affirm that sustained professional engagement is essential to reinforcing sanitation knowledge and fostering long-term behavior change (Torres et al., 2021; Latip et al., 2021; Nickel et al., 2020).

Similarly, the Very High level of health risk awareness reflects strong public understanding of the dangers associated with open defecation—including the transmission of waterborne diseases and environmental contamination—which serves as a key motivator for improved hygiene behavior (Soe et al., 2024&Derseh et al., 2024). Respondents clearly identified specific health risks, such as diarrhea and cholera, and recognized the effectiveness of the ZOD Program in mitigating these threats through educational and preventive initiatives (Dureab et al., 2021; Sangalang et al., 2022; Ozaki et al., 2022; World Bank, 2023). Additionally, social norms emerged as the strongest influence on awareness, with respondents affirming that cultural expectations and collective attitudes strongly discourage open defecation and reinforce hygienic practices (Chidziwisano et al., 2024). The highest standard deviation among the three areas ($SD =$

0.48) for social norms suggests slightly more variation in individual awareness or beliefs, possibly influenced by differences in community culture, exposure to peer influence, or the strength of local sanitation norms. Community-wide agreement on sanitation values, shaped through peer modeling and grassroots campaigns, has contributed to reshaping behaviors and sustaining public health improvements (Herlinawati et al., 2020; Melariri et al., 2024).

Overall, the findings imply that the Zero Open Defecation Program has been effectively communicated to the public, particularly in terms of health advocacy, cultural alignment, and community support. However, sustaining this awareness through regular reinforcement and participatory activities remains essential for long-term behavioral change and improved public health outcomes (Czerniewska et al., 2023).

Table 1
Respondents’ Level of Awareness on Zero Open Defecation Program
(n= 262)

Level of Awareness	Mean	StDev	I
Healthcare Support	3.26	0.45	VH
Health Risks	3.35	0.41	VH
Social Norms	3.36	0.48	VH
Overall Mean	3.32	0.45	VH
<i>Legend:</i> 3.26- 4.00 – <i>Very High (VH)</i> 1.76- 2.50 – <i>Low (L)</i> 2.51- 3.25 – <i>High (H)</i> 1.00- 1.75 – <i>Very Low (VL)</i>			

Respondents' Health Sanitation Practices

Table 2 presents the respondents' health sanitation practices, which are overall rated as Very Good ($M = 3.40$, $SD = 0.40$). This indicates that the community demonstrates commendable adherence to sanitation standards, contributing positively to public health and hygiene outcomes (Ozaki & Shaw, 2022). The indicators evaluated in this study include food preparation, drinking water, toilet use, and septic waste drainage. The Philippine Statistics Authority's 2022 Annual Poverty Indicators Survey indicates that the majority of Filipino families now have access to basic sanitation services, demonstrating a positive trend in community adherence to sanitation standards (PSA, 2020). The overall standard deviation ($SD = 0.40$) suggests a fairly consistent pattern of behavior across the sample, with relatively small differences in sanitation practices among respondents.

The results indicate that respondents exhibited a Very Good level of practice across key areas of sanitation, specifically in food preparation ($M = 3.50$, $SD = 0.39$), drinking water practices ($M = 3.49$, $SD = 0.42$), and toilet use ($M = 3.39$, $SD = 0.41$). In terms of food preparation, respondents consistently demonstrated safe and hygienic behaviors such as hand washing before cooking, using clean utensils, thorough cooking of food, proper storage of perishables, and appropriate disposal of food waste—all of which are essential in preventing foodborne illnesses and maintaining nutritional standards (Manafe et al., 2023). The relatively low standard deviation of 0.39 for food preparation implies a high level of agreement among respondents in performing these hygienic practices. Similarly, drinking water practices reflected a proactive commitment to health, as respondents reported regularly using boiled or filtered water, cleaning

storage containers, and avoiding unsafe sources (Saxena et al., 2024). These behaviors align with findings that effective water treatment and hygienic storage significantly reduce the incidence of diarrhea, especially among children (Soe et al., 2024; Girmay et al., 2023). A slightly higher standard deviation of 0.42 for drinking water practices indicates some variation, suggesting that while most respondents follow proper procedures, others may have less consistent behaviors or face different environmental challenges (Harahap et al., 2022).

High levels of toilet use signify adherence to proper sanitation norms and rejection of open defecation (Igaki et al., 2021). Respondents reported routine cleaning of toilet facilities, consistent handwashing after use, and efforts to maintain functionality, all of which contribute to a healthier living environment and reduction in waterborne illnesses (Bushen et al., 2022). The standard deviation of 0.41 for toilet use reflects a relatively uniform level of behavior, reinforcing the strong collective hygiene effort among households. These practices collectively reflect a strong awareness of the link between hygiene behaviors and health outcomes, underscoring the positive impact of sanitation-focused interventions at the household level (Mukhtar et al., 2024).

In contrast, septic waste drainage was rated at a Good level of practice ($M = 3.20$, $SD = 0.39$), indicating a generally sound understanding of wastewater management, though possibly constrained by limited infrastructure or access to dislodging services (Prasad et al., 2021). Respondents reported following recommended maintenance procedures such as regular septic tank pumping, appropriate field placement, and avoidance of non-biodegradable waste disposal (Viadnes, 2025). The standard deviation of 0.39 for septic waste drainage implies consistent practices across the sample, though

the overall mean score suggests some respondents may face access barriers or differing levels of support (Seth & Pingali, 2025). Moreover, awareness of and investment in technologies like traditional septic tanks, Imhoff tanks, and septic vaults suggest a commitment to mitigating sanitation-related health risks (Prasad et al., 2021). Regular inspections and adherence to safety guidelines highlight the community's effort to prevent environmental contamination and reduce the spread of disease (Meki et al., 2022). While these findings demonstrate a solid baseline of practice, they also indicate areas for improvement, particularly in expanding access to effective septic management systems (Malinay et al., 2023).

Overall, these findings reflect strong health sanitation behaviors among the respondents, particularly in practices directly linked to food, water, and hygiene. However, consistent reinforcement, and continuous community education are needed to elevate all sanitation practices to a very good level and support long-term public health benefits.

Table 2
Respondents' Health Sanitation Practices

(n=262)

Health Sanitation Practices	Mean	StDev	I
Food Preparation	3.50	0.39	VG
Drinking Water	3.49	0.42	VG
Toilet Use	3.39	0.41	VG
Septic Waste Drainage	3.20	0.39	G
Overall Mean	3.40	0.40	VG

Legend: 3.26- 4.00 – *Very Good (VG)* 1.76- 2.50 – *Poor (P)*
 2.51- 3.25 – *Good (G)* 1.00- 1.75 – *Very Poor (VP)*

Significant Relationship Between the Respondents' Level of Awareness on Zero Open Defecation Program and Their Health Sanitation Practices

Table 3 presents the significant relationships between the respondents' level of awareness of the Zero Open Defecation (ZOD) program and their corresponding health sanitation practices across three main categories: Healthcare Support, Health Risk, and Social Norms. The strength and significance of these relationships were determined using r -values and p -values.

The results emphasize that awareness of the ZOD program is significantly linked with several key sanitation behaviors, particularly under the domains of Healthcare Support and Health Risk, underscoring the critical role of community education in promoting public health standards. This finding aligns with the findings from Dapitan City in the study by Viadnes (2025), which indicated that the integration of behavioral change strategies and health interventions was crucial in reducing open defecation and improving hygiene practices.

Healthcare Support. Findings reveal that awareness of healthcare support has a significant positive correlation with sanitation practices in Food Preparation ($r = 0.212$, $p = 0.00^{**}$), Drinking Water ($r = 0.173$, $p = 0.00^{**}$), and Toilet Use ($r = 0.154$, $p = 0.01^{**}$), all below the 0.05 significance level. This indicates that families with higher awareness of the ZOD program are more likely to engage in hygienic behaviors that reduce sanitation-related health risks. However, Septic Waste Drainage did not show a significant correlation ($r = 0.058$, $p = 0.35$), suggesting that awareness alone may not be sufficient to influence practices tied to infrastructure.

These findings support existing public health research that highlights the role of healthcare workers and community health volunteers in promoting proper sanitation through education and follow-up (Torres et al., 2021). Their impact extends to providing hands-on support and household-level demonstrations, such as handwashing and water safety practices (Nguyen & Pham, 2023).

The absence of a significant link with septic waste practices points to the need for broader infrastructural and technical interventions, as these issues often require municipal support and sectoral coordination (World Health Organization, 2022). Thus, while healthcare support effectively influences household hygiene, integrated approaches combining education and infrastructure are necessary for the full realization of ZOD goals (United Nations Children's Fund, 2023).

Health Risk. Similar to healthcare support behaviors, awareness demonstrated significant positive relationships with Food Preparation ($r = 0.191$, $p = 0.00^{**}$) which is highly significant as it interprets that an individual become more aware of health risks (Dureab et al., 2021). They are more likely to engage in safe and proper food preparation behaviors which include practices like handwashing before cooking, using clean utensils, or proper food storage (Okesanya et al., 2024). Drinking Water ($r = 0.181$, $p = 0.00^{**}$) which is also highly significant interprets an increased awareness correlates with behaviors like boiling water, using water filters, or avoiding unsafe sources, contributing to better health outcomes (Mohamed et al., 2025). Toilet Use ($r = 0.158$, $p = 0.01^{**}$) although slightly lower, it still interprets a higher awareness with proper sanitation practices, such as using toilets instead of open defecation, regular cleaning, or promoting hygienic habits (Venis, 2023). These findings reinforce the link between ZOD awareness

and preventive health behaviors. Again, Septic Waste Drainage ($r = 0.041$, $p = 0.51$) did not show a statistically significant relationship, indicating that improvements in this area may require infrastructure investment and technical support beyond awareness. According to the study of Viadnes (2025), by improving access to sanitation infrastructure and hygiene education, Dapitan City has made strides in enhancing the overall well-being of its residents. The significant relationships between health risk awareness and practices such as food preparation, drinking water safety, and toilet use underscore the importance of knowledge in motivating individual and household sanitation behaviors. When people understand how improper sanitation leads to diseases like diarrhea, cholera, and other infections, they are more inclined to adopt hygienic practices that protect themselves and their families. However, the lack of significance regarding septic waste drainage suggests that behavioral awareness alone may be insufficient to address challenges related to sanitation infrastructure and waste management. This calls for combined efforts involving both community education and government investment in sanitation facilities to achieve comprehensive health improvements.

Social Norms. None of the practices under this category showed significant relationships with awareness, including Food Preparation ($r = 0.090$, $p = 0.14$), Drinking Water ($r = 0.082$, $p = 0.19$), Toilet Use ($r = 0.109$, $p = 0.08$), and Septic Waste Drainage ($r = 0.051$, $p = 0.41$). This implies that while awareness campaigns may improve individual and household sanitation behaviors, changing broader social norms requires deeper cultural engagement, sustained community dialogue, and leadership involvement (Kurniati et al., 2024). In line with the study of Viadnes (2025), the success of Dapitan's

ZOD program also highlights the importance of empowering barangay councils and community health workers to promote and sustain behavior change at the grassroots level. By actively engaging in the planning, implementation, and monitoring of sanitation programs, local leaders took ownership of the initiative, ensuring its sustainability beyond the project timeline. Similar findings have been reported in Indonesia and India, where community-led sanitation efforts were most successful when local governance structures were actively involved (ADB, 2022).

Moreover, the entrenched nature of social norms related to sanitation behaviors means that interventions need to go beyond informational campaigns to foster collective community responsibility and peer accountability. Studies emphasize that shifting social norms often involves leveraging social networks and influencers who can model and reinforce positive hygiene behaviors over time (Mahmud et al., 2023). Additionally, integrating sanitation education into school curricula and community rituals has been shown to gradually transform perceptions and practices, creating a generational ripple effect (Lee et al., 2024). Therefore, to achieve lasting improvements in sanitation and hygiene, programs must incorporate multi-level strategies that address both individual knowledge and the socio-cultural fabric that shapes behavior. This comprehensive approach not only strengthens community cohesion but also enhances resilience against reverting to old practices, ultimately supporting the long-term success of ZOD initiatives (World Bank, 2023).

The results suggest that ZOD program awareness has the most consistent and significant influence on individual sanitation practices under Healthcare Support and Health Risk, particularly regarding food preparation, drinking water, and toilet use.

However, complex or communal practices such as septic waste management and broader social norms were not significantly influenced by awareness alone, indicating the need for broader support through policies, infrastructure investment, and community mobilization.

Table 3

Significant Relationship Between the Respondents' Level of Awareness on Zero Open Defecation Program and their Health Sanitation Practices

Variables	Test Statistics		Remarks
	r-value	p-value	
<u>Healthcare Support and:</u>			
Food Preparation	0.212	0.00**	Reject Null Hypothesis
Drinking Water	0.173	0.00**	Reject Null Hypothesis
Toilet Use	0.154	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.058	0.35	Accept Null Hypothesis
<u>Health Risk and:</u>			
Food Preparation	0.191	0.00**	Reject Null Hypothesis
Drinking Water	0.181	0.00**	Reject Null Hypothesis
Toilet Use	0.158	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.041	0.51	Accept Null Hypothesis
<u>Social Norms and:</u>			
Food Preparation	0.090	0.14	Accept Null Hypothesis
Drinking Water	0.082	0.19	Accept Null Hypothesis
Toilet Use	0.109	0.08	Accept Null Hypothesis
Septic Waste Drainage	0.051	0.41	Accept Null Hypothesis

Ho: There is no significant relationship between the respondents' level of awareness on zero open defecation program and their health sanitation practices.

*Legend: 0.00-0.01** Highly Significant, 0.02-0.05* Significant, above 0.05 Not Significant*

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the findings, the following conclusions were drawn:

1. The families residing in the coastal area were very knowledgeable regarding the Zero Open Defecation (ZOD) Program. Awareness was especially strong in areas such as healthcare support, knowledge of health risks, and the impact of social norms. The information about the ZOD Program has been effectively disseminated within the community, possibly through local health workers, public health campaigns, and community engagement activities.
2. In terms of health sanitation practices, respondents adhere to very good health sanitation practices in food preparation, drinking water safety, and toilet use. There was a positive translation of awareness into daily sanitation habits, indicating that most families are actively engaging in practices that support the goals of the ZOD Program.
3. Awareness of the ZOD Program alone may not be sufficient to alter behaviors unless supported by community-wide engagement or structural support. The results emphasize the importance of targeted awareness programs that not only inform individuals but also address specific areas of sanitation to promote behavior change effectively. These programs could be complemented by accessible sanitation infrastructure, continuous health education, and active participation from local government units and health workers to create an enabling environment. By integrating knowledge with tangible support and

community involvement, such interventions are more likely to foster lasting improvements in hygiene practices and public health outcomes.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. It is recommended that families residing in coastal areas continue to strengthen their sanitation practices by actively participating in the Zero Open Defecation (ZOD) Program. Ongoing awareness and education initiatives should be supported to reinforce proper hygiene behaviors, reduce the incidence of waterborne diseases, and promote a healthier, cleaner coastal environment.
2. Local government units and rural health workers may conduct regular information campaigns in coastal areas to reinforce awareness and understanding of the ZOD Program. These efforts may include community seminars, household visits, and distribution of educational materials to encourage sustained hygienic practices.
3. Rural health unit nurses and midwives may use the study's findings to design focused interventions that address specific sanitation gaps. This may include personalized hygiene guidance, monitoring of household sanitation facilities, and collaborative planning with local leaders to meet unique community needs.
4. Local government units could formulate data-driven sanitation policies and allocate resources to expand toilet construction, water access, and sanitation maintenance in coastal communities. These efforts can directly support the full implementation and sustainability of the ZOD Program.

5. The City Health Office and the Department of Health may strengthen partnerships with LGUs, RHUs, and community leaders to ensure coherent planning, implementation, and monitoring of sanitation initiatives. Shared responsibilities and coordinated actions can amplify the impact of the ZOD Program.
6. The Department of Health may establish standardized monitoring tools to evaluate ZOD compliance across coastal areas. This can guide ongoing policy refinement and ensure programs adapt to changing community conditions and challenges.
7. Future researchers may explore long-term effects of the ZOD Program on health and environment, investigate behavioral drivers behind sanitation practices, and test new strategies to increase community participation and infrastructure development in underserved coastal regions.

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APPENDICES

APPENDIX A: Survey Questionnaire

ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREA

Instruction: Please complete the demographic information below by selecting the option that best describes you in each category.

“Instruksyon: Palihug kumpletoha ang impormasyon bahin sa imong demograpiko pinaagi sa pagpili sa kapilian nga labing husto nga naghulagway kanimo sa matag kategoriya.”

I. Zero Open Defecation Program Awareness

Instruction: The following statements assess your awareness of the Zero Open Defecation (ZOD) Program. Please indicate the degree to which you agree or disagree with each statement by selecting the response that best reflects your perspective:

4=Strongly Agree

2=Disagree,

3=Agree,

1=Strongly Disagree,

“Instruksyon: Ang mga sumusunod nga pahayag magsukod sa imong kahibalo bahin sa Zero Open Defecation (ZOD) Program. Palihog ipakita kung unsa ka ka-uyon o dili ka uyon sa matag pahayag pinaagi sa pagpili sa tubag nga labing angay sa imong panglantaw:”

4=Kusognapag-uyon.

2= wala ka-uyon,

3=Nakauyon,

1=Kusongkawala ka-uyon,

A. Healthcare Support	4	3	2	1
1. I know that community health workers (CHWs) provide health education and resources related to sanitation in my area. <i>“Nakahibalo ko nga ang mga community health workers (CHWs) nagahatag og edukasyon sa kahimsog ug mga Kapanguhaan bahin sa sanitasyon sa</i>				

APPENDIX A cont'd				
<i>akong lugar.”</i>				
2. I know that the ZOD program offers assistance for maintaining sanitation facilities (e.g., subsidies or financial support). <i>“Nakahibalo ko nga ang ZOD program nagahatag og tabang alang sa pagmentinar sa mga pasilidad sa sanitasyon (sama sa mga subsidy o pinansyal nga suporta).”</i>				
3. I believe that the support provided by CHWs has improved my understanding of health risks related to open defecation. <i>“Nagtuo ko nga ang suporta nga gihatag sa mga CHWs nakatabang sa pagpalambo sa akong pagsabot sa mga risiko sa kahimsog nga may kalabotan sa open defecation.”</i>				
4. I have received guidance from community health workers on how to access health services for sanitation-related issues. <i>“Nakadawat ko og giya gikan sa mga community health workers kung unsaon pag-access sa mga serbisyo sa kahimsog alang sa mga isyu nga may kalabotan sa sanitasyon.”</i>				
5. I feel that the ZOD program has helped our community improve its sanitation and health outcomes through educational initiatives and support from CHWs. <i>“Nabati nako nga ang ZOD program nakatabang sa atong komunidad sa pagpangayo og mas maayo nga sanitasyon ug kahimsog pinaagi sa mga inisyatibo sa edukasyon ug suporta gikan sa mga community health workers.”</i>				

APPENDIX A cont'd**B. Health Risks**

1. I understand the health risks associated with open defecation, such as the spread of waterborne diseases. <i>“Nakahibalo ko sa mga risiko sa kahimsog nga may kalabotan sa open defecation, sama sa pagkatap sa mga sakit nga dala sa tubig.”</i>				
2. I am aware of the connection between poor sanitation and the spread of diseases like cholera and diarrhea. <i>“Nakahibalo ko sa koneksyon bahin sa dili maayo nga sanitasyon ug sa pagkalat sa mga sakit sama sa kolera ug diarrhea.”</i>				
3. I believe that the ZOD Program plays a crucial role in reducing health risks in coastal areas. <i>“Nagtuo ko nga ang ZOD Program adunay dakong papel sa pagpakunhod sa mga isog sa panglawas sa mga lugar nga duol sa baybayon.”</i>				
4. I believe that practicing proper hygiene, such as regular handwashing, helps prevent sanitation-related illnesses. <i>“Nagtuo ko nga ang pagpraktis sa hustong kalimpyo, sama sa regular ngapaghugas sa kamot, makatabang sa pagpugong sa mga sakit nga may kalabutan sa kalimpyo.”</i>				
5. I actively support the importance of education and community engagement in improving sanitation practices. <i>“Aktibo akong mosuporta sa kaimportante sa edukasyon ug pag-apil sa komunidad aron mapalambo ang mga praktis sa kalimpyo.”</i>				

APPENDIX A cont'd				
C. Social Norms				
1. I believe that open defecation is not socially acceptable in my community, as discouraged by the ZOD program. <i>“Nagtuo ko nga ang open defecation kay dili gina-dawat sa akong komunidad, tungod kay wala kini girekomendasa ZOD program.”</i>				
2. I think that our community collectively discourages open defecation and promotes the use of proper sanitation facilities. <i>“Ako gahunahuna nga ang among komunidad dili mo sang-ayon sa open defecation ug nag-awhag sa paggamit sa husto nga mga pasilidad sa sanitasyon.”</i>				
3. I feel that there is strong social pressure in my community to follow sanitation practices like using toilets and washing hands. <i>Nabati nako nga adunay kusog nga pagawhag sa komunidad aron magsunod sa mga pamaagi sa saktong sanitasyon, samas a paggamit og kasilyas ug paghinlo sa kamot pinaagi sa pagpanghunaw.</i>				
4. I believe that the ZOD program has shifted the community's norms towards more hygienic and sanitary behaviors. <i>“Nagtuo ko nga ang ZOD program nakabag-o sa mga pamatasan sa komunidad ngadto sa mas limpyo ug hapsay nga mga pamaagi sa kahimsog.”</i>				
5. I think that most people in my community are willing to adopt proper sanitation practices to meet community expectations. <i>“Naghunahuna ko nga kadaghanan sa mga tawo sa akong komunidad andam mugamit og husto nga mga pamaagi sa sanitasyon aron matuman ang mga gilauman sa komunidad.”</i>				

APPENDIX A cont'd

II. Health Sanitation Practices

Instruction: The following statements are related to your Health Sanitation Practices.

Please indicate the degree to which you agree or disagree with each statement by selecting the response that best reflects your perspective:

4 =Strongly Agree

2=Disagree,

3 =Agree,

1 =Strongly Disagree,

“Instruksyon: Ang mga sumusunod nga pahayag magsukod sa imong kahibalo bahin sa Health Sanitation Practices. Palihog ipakita kung unsa ka ka-uyon o dili ka-uyon sa matag pahayag pinaagi sa pagpili sa tubag nga labi ng angay sa imong panglantaw.”

4=Kusog na pag-uyon.

2= Wala ka-uyon,

3=Naka-uyon,

1=Kusog nga wala ka-uyon,

A. Food Preparation	4	3	2	1
1. I always wash my hands with clean water before handling food to prevent contamination. <i>“Kanunay ko maghugas og mga kamot gamit ang limpyo nga tubig adisir magdumala og pagkaon aron malikayan ang pagkahugaw o kontaminasyon og kagaw.”</i>				
2. I make sure to thoroughly cook food to kill harmful pathogens and ensure food safety. <i>“Gisiguro nako nga lutoon og maayo ang pagkaon aron mapatay ang mga delikadong mikrobyo ug masiguro ang kalimpyo sa pagkaon.”</i>				
3. I store food properly (e.g., refrigerating perishable items) to prevent contamination and spoilage. <i>“Ginabutang nako ang pagkaon sa</i>				

<i>Husto nga lugar (sama sa pagbutang sa mga pagkaon nga dalimadaut sa refrigerator) aron malikayan ang kontaminasyon ug pagkadaut.”</i>				
4. I use clean utensils and cooking equipment to avoid cross-contamination when preparing food. <i>“Nagagamit ko og mga limpyo nga mga gamit pang-kaon ug pangluto aron malikayan ang kontaminasyon sa pag-andam sa pagkaon.”</i>				
5. I dispose food waste properly to reduce the risk of water contamination and health issues in our community. <i>“Ginalabay nako ang mga basura sa pagkaon sa husto nga paagi aron malikayan ang risgo sa kontaminasyon sa tubig ug mga possible na mahimong problema sa panlawas sa atong komunidad.”</i>				
B. Drinking Water				
1. I ensure that our drinking water is free from contaminants such as bacteria, chemicals, or waste. <i>“Gina-sigurado nako nga ang among tubig nga imnon walay kontaminasyon sama sa bakterya, kemikal, o basura.”</i>				
2. I regularly clean our water storage containers to prevent contamination and ensure water safety. <i>“Kanunay nako ginalimpyohan ang among mga butanganan ug tubig aron malikayan ang kontaminasyon ug masiguro ang kalimpyo sa tubig.”</i>				

3. I am aware of methods to purify drinking water, such as boiling or using filters, to ensure its safety. <i>“Kaahibalo ko sa mga pamaagi sa paglimpyo sa tubig nga imnon, sama sa pagpabukal o paggamit og mga salaan, aron masiguro ang kalimpyo sa tubig.”</i>				
4. I believe access to clean drinking water is essential for preventing waterborne diseases like diarrhea. <i>“Nagtuo ko nga ang access sa limpyo nga tubig nga imnon importante aron malikayan ang mga sakit nga dala sa tubig sama sa diarrhea.”</i>				
5. I avoid drinking water from unsafe or untreated sources to protect my family’s health. <i>“Ginalikayan nako ang pag-inom og tubig gikan sa mga dili luwas o wala malimpyohan nga tinubdan aron maprotektahan ang kahimsog sa akong pamilya.”</i>				
C. Toilet Use				
1. My family always uses a sanitary toilet facility to dispose of human waste properly and avoid open defecation. <i>“Ang akong pamilya kanunay naggamit og girekomenda nga saktong sanitasyon sa kasilyas aron tarong nga malabay o mapagawas ang hugaw sa tawo ug malikayan ang open defecation.”</i>				
2. We ensure that our toilet is cleaned regularly to prevent contamination and maintain hygiene. <i>“Ginasigurado namo nga ang among kasilyas kanunay malimpyo</i>				

<i>Aron malikayan ang kontaminasyon ug mapadayon ang sanistatayson sa kalimpyo”</i>				
3. After using the toilet, all family members wash their hands with soap and clean water to prevent disease spread. <i>“Mahuman mogamit sa kasilyas, ang tanang miyembro sapamilya maghugas sa ilang mga kamot gamit ang sabon ug limpyo nga tubig aron malikayan ang pagkalap sa sakit.”</i>				
4. I believe that using a proper toilet facility significantly reduces the risk of waterborne illnesses in our community. <i>“Nagtuo ko nga ang paggamit sa husto nga kasilyas makapamenos sa risiko sa mga sakit nga dala sa tubig sa among komunidad.”</i>				
5. I make sure that our toilet is functioning properly to maintain sanitation standards and prevent waste from contaminating the environment. <i>“Sigurado ko nga ang among kasilyas nag-function og tarong aron mapadayon ang mga sakto nga sanitasyon ug malikayan ang kontaminasyon sa palibot.”</i>				
D. Septic Waste Drainage				
1. I am aware of the proper methods for maintaining a septic system, such as regular pumping, ensuring the proper placement of drainage fields, and avoiding the disposal of non-biodegradable items, to ensure safe disposal of wastewater. <i>“Nakabalo ko sa mga saktong</i>				

<i>Pamaagi alang sa pagmentinar sa mga septic tank parehas anang regular na pagbomba, paglantaw nga naa sa saktong posisyon ang mga agianan sa tubig, og paglikay sa paglabay sa mga dili malata na mga butang aron ma sigurado nga sakto og luwas sa sakit ang paglabay sa mga ginamitang tubig.”</i>				
2. Our household follows recommended guidelines for septic waste disposal to protect the environment and public health. <i>“Ang among panimalay nagsunod sa girekomendar nga mga balaod alang sa paglabay sa Hugawsa septic alang sa pagprotektar sa palibot og panglawas sa publiko.”</i>				
3. I believe that investing in septic systems, such as the traditional septic tank system, the Imhoff tank, and the septic vault system, is important for reducing health risks associated with improper waste management, such as preventing water contamination, controlling the spread of diseases like cholera, and reducing environmental pollution. <i>“Nagtuo ko nga ang pag-invest sa septik systems, sama sa tradisyonal nga septic tank system, Imhoff tank, ug septic vault system, importante aron mapakunhod ang mga risiko sa kahimsog mahitungod sa dili husto nga pagdumala sa basura, sama sa pagpugong sa kontaminasyon sa tubig, pag kontrol sa pag kalap sa mga sakit sama sa cholera, ug pagpamenos sa polusyon sa palibot.”</i>				

4. I ensure that our septic system is regularly checked and maintained to avoid leaks or contamination. <i>"Gina-sigurado nako nga ang among septic system kanunay nga gicheck ug gimentinar aron malikayan ang mga leaks o kontaminasyon."</i>				
5. I believe that proper septic waste drainage helps to reduce the spread of diseases caused by water contamination in our community. <i>"Nagtuo ko nga ang husto nga drainage sa septic na basura makatabang sa pagpakunhod sa pagkadaghan sa mga sakit nga hinungdan sa kontaminasyon sa tubig sa among komunidad."</i>				

Appendix B: Sample of Filled Out Questionnaire

A. Healthcare Support	4	3	2	1
1. I know that community health workers (CHWs) provide health education and resources related to sanitation in my area. <i>"Nakahibalo ko nga ang mga community health workers (CHWs) nagahatag og edukasyon sa kahimsog ug mga kapanguhaan bahin sa sanitasyon sa akong lugar."</i>	/			
2. I know that the ZOD program offers assistance for maintaining sanitation facilities (e.g., subsidies or financial support). <i>"Nakahibalo ko nga ang ZOD program nagahatag og tabang alang sa pagmentinar sa mga pasilidad sa sanitasyon (sama sa mga subsidy o pinansyal nga suporta)."</i>		/		
3. I believe that the support provided by CHWs has improved				

Appendix C: Sampling Computation

Raosoft		Sample size calculator
What margin of error can you accept? 5% is a common choice	5 %	The margin of error is the amount of error that you can tolerate. If 90% of respondents answer yes, while 10% answer no, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size.
What confidence level do you need? Typical choices are 90%, 95%, or 99%	95 %	The confidence level is the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer yes would be more than the margin of error away from the true answer. The true answer is the percentage you would get if you exhaustively interviewed everyone. Higher confidence level requires a larger sample size.
What is the population size? If you don't know, use 20000	815	How many people are there to choose your random sample from? The sample size doesn't change much for populations larger than 20,000.
What is the response distribution? Leave this as 50%	50 %	For each question, what do you expect the results will be? If the sample is skewed highly one way or the other, the population probably is, too. If you don't know, use 50%, which gives the largest sample size. See below under More information if this is confusing.
Your recommended sample size is	262	This is the minimum recommended size of your survey. If you create a sample of this many people and get responses from everyone, you're more likely to get a correct answer than you would from a large sample where only a small percentage of the sample responds to your survey.

Total Population (N) = 815
Sample Population (n) = 262

Barangay	%	Distribution
T- 359	44%	115
C- 320	39%	102
S- 136	17%	45
Total Population (N) =815	100%	262

Table 1

Respondents' Level of Awareness on Zero Open Defecation Program

(n=262)

Level of Awareness	Mean	StDev	I
Healthcare Support	3.26	0.45	VH
Health Risks	3.35	0.41	VH
Social Norms	3.36	0.48	VH
Overall Mean	3.32	0.45	VH

Legend: 3.26- 4.00 – Very High (VH) 1.76- 2.50 – Low (L)

2.51- 3.25 – High (H) 1.00- 1.75 – Very Low (VL)

Table 2

Respondents' Health Sanitation Practices

(n=262)

Health Sanitation Practices	Mean	StDev	I
Food Preparation	3.50	0.39	VG
Drinking Water	3.49	0.42	VG
Toilet Use	3.39	0.41	VG
Septic Waste Drainage	3.20	0.39	G
Overall Mean	3.40	0.40	VG

Legend: 3.26- 4.00 – Very Good (VG) 1.76- 2.50 – Poor (P)

2.51- 3.25 – Good (G) 1.00- 1.75 – Very Poor (VP)

Appendix D: Informed Consent Form

Table 3

Significant Relationship Between the Level of Awareness on Zero Open Defecation Program and Their Health Sanitation Practices Among Families Living in Coastal Areas

Variables	Test Statistics		Remarks
	r-value	p-value	
<u>Healthcare Support and:</u>			
Food Preparation	0.212	0.00**	Reject Null Hypothesis
Drinking Water	0.173	0.00**	Reject Null Hypothesis
Toilet Use	0.154	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.058	0.35	Accept Null Hypothesis
<u>Health Risk and:</u>			
Food Preparation	0.191	0.00**	Reject Null Hypothesis
Drinking Water	0.181	0.00**	Reject Null Hypothesis
Toilet Use	0.158	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.041	0.51	Accept Null Hypothesis
<u>Social Norms and:</u>			
Food Preparation	0.090	0.14	Accept Null Hypothesis
Drinking Water	0.082	0.19	Accept Null Hypothesis
Toilet Use	0.109	0.08	Accept Null Hypothesis
Septic Waste Drainage	0.051	0.41	Accept Null Hypothesis

Ho: There is no significant relationship between the respondents' level of awareness on zero open defecation program and their health sanitation practices.

Legend: 0.00-0.01** Highly Significant, 0.02-0.05* Significant, above 0.05 Not Significant



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INFORMED CONSENT FORM
(PORMA SA NASABTAN NGA PAGTUGOT)

Researcher/Investigator (Nagtugot):

Course:

College:

Email / Contact Number:

Thesis Title:

PART I. INFORMATION SHEET	
Introduction (Pasiuna)	Good day! We are <u>Carreon, Tefannie B., Casile, Flerica Bless G., Delosa, Shance S., Dumanjug, Kate S., Erquita, Blanche Orvinne P.</u>, the researchers of the study entitled <u>"ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREAS."</u> we are a student under the program, <u>Bachelor of Science in Nursing</u> at Misamis University in Ozamiz City. I am to conduct the research with <u>residents who lives in coastal areas</u> as respondents. In this vein, I am respectfully seeking your <u>voluntary participation</u>, being qualified to give your informed consent to take part of this study. Before you decide whether to participate or not in this study, please read the succeeding information about the study and feel free to ask questions anytime should there be anything you do not understand or want to clarify. If you agree to answer the <u>Questionnaire</u>, you will be asked to affix your name and signature on this form for which you will be given a copy. <i>(Maayong adlaw! Kami si <u>Carreon, Tefannie B., Casile, Flerica Bless G., Delosa, Shance S., Dumanjug, Kate S., Erquita, Blanche Orvinne P.</u>, ang nagpahigayon sa pagtuon kabahin sa <u>"ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREAS"</u> Kami nga estudyante nga nagkuha sa kurso na <u>Bachelor of Science in Nursing</u> sa Misamis University sa Ozamis City. Ako nagapili kanimo isip partisipante nga maay mutubag sa gikinahagnglang impormasyon niining gihimong pagtuon. Ako matinahurong naghangyo sa inyong bulontaryo nga pag-apil niini nga pagtuon. Gikinahanglan nga ikaw naa sa saktong edad ug naay kakayahan nga mohatag sa pagtugot aron makaapil niini nga pagtuon. Sa dili pa ka mohukom sa pag-apil niini nga interview, palihug sa pagbasa sa mga impormasyon sa ubos ug gawasnon ka nga makapangutana kon adunay wala nimo nasabtan o gusto nimong iklaro. Kung motugot ka sa pagahimoon nga interview, papirmahon ka niini nga porma ug tagaan usab ka ug imong kaugalingong kopya.</i>
Purpose (Katuyoan)	The purpose of this study is to <u>provide data that helps policymakers assess whether the implementation of the Zero Open Defecation (ZOD) program has influenced sanitation practices in the community.</u> This research will fill the gap about <u>Knowledge.</u> <i>(Ang katuyoan niini nga pagtuon mao ang <u>paghatag og datos nga makatabang sa mga naghimo og palisiya sa pagsusi kung ang pagpatuman sa Zero Open Defecation (ZOD) nga programa nakaimpluwensya ba sa mga pamatasan sa kalinisan sa komunidad. Kini nga pagtuon makahatag og kaayuhan ngadto sa <u>Kahibalo.</u></u></i>)
Type of Research Intervention (Matang sa Interbensyon sa Pagtuon)	This study will be conducted through the use of <u>Survey Forms.</u> The gathering of data will be conducted in person. <i>(Kining pagtuon pagabuhaton pinaagi sa <u>Survey Forms.</u> Personal ang pagkuha sa datos.)</i>
Selection of Participants (Pagpili sa mga Partisipante)	The selection of the participants is based on the following inclusion criteria: The participants will be selected through <u>purposive sampling.</u> The participants will be selected with the following criteria: being residents of the chosen coastal barangays in Ozamiz City and having knowledge or experience related to zero open defecation program and health sanitation practices.

APPENDIX D- Cont'd



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Confidentiality of Data (Pag-amping sa Datos)	Only the researcher will have access to the information and responses of the participants. The personal identifying information of the participants will only be used for research analysis and will be treated with the utmost confidentiality. During the study, all data will be kept in a locked, secure filing cabinet, of which will be discarded 6 months after the publication of the results. <i>(Ang nagtuon lamang ang makakita sa mga impormasyon ug tubag sa respondents. Ang mga datos nga makuha i-analisa ug hatagan og tumang pag-amping aron dili ibutyag. Sa panahon sa pagtuon, ipahimutang sa usa ka selyadong filing cabinet ang tanang datos nga pagagub-on human sa 6 kabulan gikan sa pag-publish sa resulta.)</i>
Sharing of Findings (Pagpaambit sa Nakaplagan)	The results of this study will be presented during the thesis/dissertation final defense of the researcher. Also, the research findings may be shared through publications and conferences with the assurance that the identities of the respondents will remain confidential. A printed copy of the completed study will be provided to the participants. <i>(Ang mga resulta niini nga pagtuon ipresenta sa panahon sa final defense sa thesis/ dissertation sa nagtuon. Ang mga nakaplagan sa pagtuon posible nga ipaambit pinaagi sa mga publications ug conferences nga adunay kapanigurohan nga dili mabutyag ang pagkatawo sa mga partisipante. Pagahatagan og isa ka giimprinta nga kopya sa kumpleto nga pagtuon ang mga partisipante.)</i>
Rights to Refuse or Withdraw (Katungod sa Pagpalibabad o Pag-undang)	You are free to withdraw or terminate participation at any stage of the study, without the need to give any reason. You will not be penalized in case of termination of participation. <i>(Gawasnon ka nga moatras or moundang sa pag-apil sa bisan asa nga punto sa pagtuon nga dili na magkinahanglan pa ug rason. Dili ka ipamulta sa pag-atras o pag-undang.)</i>
Who to Contact (Kinsa ang Kontakon)	Should there be any queries as a parent, you can contact the researcher through the following details: <i>(Kung adunay mga pangutana, mamhimo nga mokontak pinaagi aning mga detalye:)</i> Name of the Researcher (Ngalan sa Nagtuon): Cellphone Number/s: e-mail ad: STATEMENT BY THE RESEARCHER (PAGPADAYAG SA NAGTUON) I will read the Information sheet to the potential participant. With the best of my ability, I make sure that the participant will understand the interview questions and that possible follow-up interviews may be undertaken. <i>(Akong pagabasaon ang mga nasulat niining Information Sheet ngadto sa potensyal nga partisipante. Kutob sa akong mahimo siguroon nako nga masabtan sa partisipante ang mga pangutana sa interview ug ang possible nga follow-up nga interviews.)</i> I can assure that the participant will be given an opportunity to ask questions about the study, and all the questions raised will be answered fully. I can likewise assure that the participant will not be coerced into giving consent that must be free and voluntary. <i>(Gisiguro ko nga ang partisipante mahatagan og panahon sa pagpangutana kabahin niining pagtuon og ang tanang pangutana nga iyang gihatag matubag sa hingpit. Siguroon ko usab ang maong partisipante dili mapugos sa paghatag sa pagtugot nga kinahanglan nga gawasnon og boluntaryo.)</i> A copy of this Informed Consent Form will be provided to the participant.

APPENDIX D- Cont'd



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	<i>(Ang mga partisipante niini nga pagtuon mao ang indibidwal nga naga-angkon sa mosunod: nga mga residente sa napiling baybayong barangay sa Dakbayan sa Ozamiz ug adunay kahibalo o kasinatian may kalabot sa Zero Open Defecation nga programa ug mga praktis sa kalinisan sa panglawas.)</i>
Voluntary Participation <i>(Boluntaryo nga Partisipasyon)</i>	<i>Your participation has to be voluntary and will not affect your situation or status in any way, including your relationship with the researcher. Thus, you are free to decide if you will take part or not. If you decide to participate, you are free not to answer any question(s) if you choose not to, and you are free to withdraw or terminate participation at any stage of the study, without the need to give any reason. You will not be penalized in case of termination of participation.</i> <i>(Boluntaryo ang imong pag-apil ug kini dili makaapekto sa imong sitwasyon o estado apil na imong relasyon sa nagtuon. Gawasnon ka nga modesisyon kung kung moapil ka niini nga pagtuon o dili. Kung mo-debisyon ka nga moapil, gawasnon ka nga dili motubag sa bisan asa nga pangutana nga dili nimo gusto nga tubagon.)</i>
Procedure <i>(Pamaagi)</i>	<i>The respondents will be given ample time to read the items in the questionnaires. The retrieval of the answered questionnaire will be according to the schedule agreed upon. The researcher will personally retrieve the questionnaires. Tallying of the research data will follow. Aside from answering the questionnaires, you may be asked to provide demographic profile as deemed necessary for the study. The personal information which includes name, age, civil status, (etc.) will be utilized in the discussion of the findings of the study. The information and data provided by you as a respondent will be utilized for this study alone and will be treated with utmost confidentiality.</i> <i>(Ang mga partisipante pagahatagan og igong panahon sa pag-apil sa interview. Ang interview pwedeng himoon kausa nga higayon o sa makadaghan depende sa panginanghalanon. Isulat sa nagtuon ang interviews para sa pag-analisa sa datos. Ang mga impormasyon ug datos nga nakuha gikan kanimo isip ka partisipante gamiton lamang niining research og hatagan og tumang pag-amping nga dili mabutyag.)</i>
Duration <i>(Gidugayon)</i>	<i>The gathering of data through the interview will last for 45 minutes to 1 hour.</i> <i>(Ang pagkuha sa datos pinaagi sa interview mokabat ngadto sa 45 minutos hangtod isa ka oras)</i>
Risks and Discomforts <i>(Risiko ug Kahasol)</i>	<i>The respondents will be protected from physical, social, or economic risks. In case the items in the survey instrument are too personal and make you feel uncomfortable, you may decline to answer any or all questions and may terminate your involvement at any time you choose.</i> <i>(Ang mga partisipante ginaprotektahan sa pisikal, sosyal o ekonomikanhong risiko. Kung pananglitan adunay mga pangutana nga personal ra kaayo o kung dili ka komportable, manahimong dili ka motubag o mobalibad sa pagtubag sa bisan asa o sa tanang mga pangutana ug moatras sa pag-apil sa bisan unsang panahon nga imong gusto.)</i>
Benefits <i>(Kaayohan)</i>	<i>This study will enable you to shed light or provide understanding about the factors that can influence breastfeeding. Thus, your responses shall be highly valued being deemed important in the field of nursing.</i> <i>(Kini nga pagtuon makapahimo kanimo paghatag og katin-awan o pagpasabot kahahin sa nagkalahi lahi nga mga factors nga makainpluwensya sa pagpatotoy sa mama ngadto sa iyang anak. Ang imong mga tubag hatagan og dakong bill nga giisip nga importante sa linya sa nursing.)</i>
Reimbursements <i>(Hulip nga bayad)</i>	<i>There will be no monetary expenses or costs on your part as a respondent, nor any monetary compensation for your participation in this study. However, personal protective equipment (PPE) like face masks, alcohol and face shields may be provided during the gathering of the research data.</i> <i>(Wala kay magasto sa imong pag-apil niini nga pagtuon ug dili usab ka bayaran ug kwarta sa imong pag-apil niini nga pagtuon. Apan adunay nga personal protective equipment (PPE) sama sa face masks, alcohol ug face shields nga pwede nga mahatag sa panahon sa pagkuha sa mga datos)</i>

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(Ang kopya sa niining Informed Consent Form ihatag ngadto sa respondent.)

Print Name of Researcher (Ngalan sa Nagtuon):

PART II. CERTIFICATE OF CONSENT

This research entitled "ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREAS," by Carreon, Tefannie B., Casile, Flerica Bless G., Delosa, Shanee S., Dumanjug, Kate S., Erquita, Blanche Orvinne P., with the aim to provide data that helps policymakers assess whether the implementation of the Zero Open Defecation (ZOD) program has influenced sanitation practices in the community.

(Kini nga pagtuon gitutuloan, "ZERO OPEN DEFECATION PROGRAM AWARENESS AND HEALTH SANITATION PRACTICES AMONG FAMILIES LIVING IN COASTAL AREAS" nga gihimo nila Carreon, Tefannie B., Casile, Flerica Bless G., Delosa, Shanee S., Dumanjug, Kate S., ug Erquita, Blanche Orvinne P., nga nagtumong sa paghatag og datos nga makatabang sa mga tigbuhat og palisiya sa pagtino kung ang pagpanghimatuod sa Zero Open Defecation (ZOD) nga programa nakaapekto ba sa mga kasanayan sa kalinisan sa komunidad.)

I have read the foregoing Informed Consent Form, or it has been read to me. I had the opportunity to ask questions, which were subsequently answered fully. I consent voluntarily to be a participant of this study.

(Akong nabasa ang nauna nga Informed Consent Form, o gibasa kini kanako. Natagoan ako og higayon nga makapangutana nga natubag sa hingpit. Ako masugot nga boluntaryo nga mahimong participant sa niining pagtuon.)

Print Name of Participant (Ngalan sa Partisipante):

Signature of Participant (Pirma sa Partisipante):

Date: [MM/DD/YYYY] April 18

Nancy Polu

[Signature]

If Illiterate (Kung dili makasulat ug makabasa)

If the respondent is illiterate, a witness who is literate will sign. The respondent will choose him/ her and who is without connection with the researcher or the research group to attest this undertaking. The respondent will affix his thumb print.

(Kung ang participant kay dili makabasa o makasulat, mopirma ang usa ka makabasa ug makasulat nga testigo. Ang respondent ang mopili kaniya nga walay koneksyon sa nagtuon o sa iyang grupo para mopamatuod sa gimbuhaton. Ang respondent mobutang sa iyang tamlu (thumb print)).

Name and Signature of the Witness
(Ngalan ug Firma sa Testigo)

Thumb mark

APPENDIX E –Letters of requests



MISAMIS UNIVERSITY
Ozamiz City 7200, Philippines

College of Nursing, Midwifery, and Radiologic Technology
Tel No. +63 88 521-0367 / Telefax No. +63 88 521-2917
E-mail Address: mn@misu.edu.ph



CERTIFIED: ISO 21001:2018 Quality Management System – DNV
ACCREDITED: Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA)
GRANTED: AUTONOMOUS STATUS by the Commission on Higher Education (CHED)

May 05, 2025

DR. SAMMY B. TAGHOY
College Dean

Dear Dr. Taghoy,

Good day!

We, the undersigned are third year students from Misamis University, Ozamiz City, taking a Bachelor of Science in Nursing. As part of our academic requirements, we are currently conducting a research study entitled **"Zero Open Defecation Program Awareness and Health Sanitation Practices Among Families Living in Coastal Area."** This study aims to determine the level of awareness about the Zero Open Defecation Program in terms of healthcare support, health risks, social norms, and determine health sanitation practices in terms of food preparation, drinking water, toilet use, and septic waste drainage. Overall, this research intends to identify potential gaps in knowledge and practices among the families in the coastal areas, as well as to provide recommendations for improving their sanitation and hygiene behaviors.

In line with this, we respectfully seek approval from your esteemed office to conduct our study. Please be assured that all information obtained will be treated with the utmost confidentiality and used solely for academic purposes.

We appreciate your time and consideration of our request.

Thank you, and May the Lord bless you!

Sincerely yours,

TEFFANIE B. CARREON
Researcher

KATES DUMANJUG
Researcher

FLERICA BLESS G. CASILE
Researcher

SHANNE S. DELOSA
Researcher

BLANCH ORVINNE P. ERQUITA
Researcher

Noted by:

ARNIELYN M. LMEULAN, RN, MN, MAN
Research Adviser

Approved by:

SAMMY B. TAGHOY, PhD, RN
College Dean

APPENDIX E cont'd



MISAMIS UNIVERSITY
Ozamiz City 7200, Philippines

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May 05, 2025

H
B
Ozamiz City, Misamis Occidental

Dear Hon. Ga

Good day!

We, the undersigned are third year students from Misamis University, Ozamiz City, taking a Bachelor of Science in Nursing. As part of our academic requirements, we are currently conducting a research study entitled "Zero Open Defecation Program Awareness and Health Sanitation Practices Among Families Living in Coastal Area." This study aims to determine the level of awareness about the Zero Open Defecation Program in terms of healthcare support, health risks, social norms, and determine health sanitation practices in terms of food preparation, drinking water, toilet use, and septic waste drainage. Overall, this research intends to identify potential gaps in knowledge and practices among the families in the coastal areas, as well as to provide recommendations for improving their sanitation and hygiene behaviors.

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We appreciate your time and consideration of our request.

Thank you, and May the Lord bless you!

Sincerely yours,

TEFANNIE B. CARREON
Researcher

KARY S. DUMANJUG
Researcher

FLERICA BLESS G. CASILE
Researcher

SHANDE A. DELOSA
Researcher

BLANCHE ORVINNE P. ERQUITA
Researcher

Noted by:

SAMMY B. TAGAROY, PhD, RN
College Dean

Approved here:

H
B
Ozamiz City, Misamis Occidental

APPENDIX E cont'd



May 05, 2025

HC
Ba
Ozamiz City, Misamis Occidental

Dear Hon. Ca

Good day!

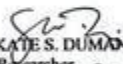
We, the undersigned are third year students from Misamis University, Ozamiz City, taking a Bachelor of Science in Nursing. As part of our academic requirements, we are currently conducting a research study entitled "Zero Open Defecation Program Awareness and Health Sanitation Practices Among Families Living in Coastal Area." This study aims to determine the level of awareness about the Zero Open Defecation Program in terms of healthcare support, health risks, social norms, and determine health sanitation practices in terms of food preparation, drinking water, toilet use, and septic waste drainage. Overall, this research intends to identify potential gaps in knowledge and practices among the families in the coastal areas, as well as to provide recommendations for improving their sanitation and hygiene behaviors.

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We appreciate your time and consideration of our request.

Thank you, and May the Lord bless you!

Sincerely yours,

 TEFANNIE B. CARREON Researcher	 KATE S. DUMANJUG Researcher	 FLERICA BRESS G. CASILE Researcher
 SHANEX S. DELOSA Researcher	 BLANCHE ORVINNE P. ERQUITA Researcher	

Noted by:

SAMMY B. TAGUHO, PhD, RN
College Dean

Approved by:

HC
Ba
Ozamiz City, Misamis Occidental

APPENDIX E cont'd



May 05, 2025

H

B:

Ozamiz City, Misamis Occidental

Dear Hon. Fui

Good day!

We, the undersigned are third year students from Misamis University, Ozamiz City, taking a Bachelor of Science in Nursing. As part of our academic requirements, we are currently conducting a research study entitled "Zero Open Defecation Program Awareness and Health Sanitation Practices Among Families Living in Coastal Area." This study aims to determine the level of awareness about the Zero Open Defecation Program in terms of healthcare support, health risks, social norms, and determine health sanitation practices in terms of food preparation, drinking water, toilet use, and septic waste drainage. Overall, this research intends to identify potential gaps in knowledge and practices among the families in the coastal areas, as well as to provide recommendations for improving their sanitation and hygiene behaviors.

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We appreciate your time and consideration of our request.

Thank you, and May the Lord bless you!

Sincerely yours,

TEFANY B. CARREON
Researcher

KATE S. DUMANJUG
Researcher

FLERICA BLISS G. CASILE
Researcher

SHANIE S. DELOSA
Researcher

BLANCHE ORVINNE P. ERQUITA
Researcher

Noted by:

SAMMY B. TAGBOY, PhD, RN
College Dean

Approved by:

H

B:

Ozamiz City, Misamis Occidental

APPENDIX F- Statistical Computations

Table 1

Respondents' Level of Awareness on Zero Open Defecation Program

(n=262)

Level of Awareness	Mean	StDev	I
Healthcare Support	3.26	0.45	VH
Health Risks	3.35	0.41	VH
Social Norms	3.36	0.48	VH
Overall Mean	3.32	0.45	VH

Legend: 3.26- 4.00 – Very High (VH)

2.51- 3.25 – High (H)

1.76- 2.50 – Low (L)

1.00- 1.75 – Very Low (VL)

Table 2

Respondents' Health Sanitation Practices

(n=262)

Health Sanitation Practices	Mean	StDev	I
Food Preparation	3.50	0.39	VG
Drinking Water	3.49	0.42	VG
Toilet Use	3.39	0.41	VG
Septic Waste Drainage	3.20	0.39	G
Overall Mean	3.40	0.40	VG

Legend: 3.26- 4.00 – Very Good (VG)

2.51- 3.25 – Good (G)

1.76- 2.50 – Poor (P)

1.00- 1.75 – Very Poor (VP)

APPENDIX F cont'd

Table 3

Significant Relationship Between the Level of Awareness on Zero Open Defecation Program and Their Health Sanitation Practices Among Families Living in Coastal Areas

Variables	Test Statistics		Remarks
	r-value	p-value	
<u>Healthcare Support and:</u>			
Food Preparation	0.212	0.00**	Reject Null Hypothesis
Drinking Water	0.173	0.00**	Reject Null Hypothesis
Toilet Use	0.154	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.058	0.35	Accept Null Hypothesis
<u>Health Risk and:</u>			
Food Preparation	0.191	0.00**	Reject Null Hypothesis
Drinking Water	0.181	0.00**	Reject Null Hypothesis
Toilet Use	0.158	0.01**	Reject Null Hypothesis
Septic Waste Drainage	0.041	0.51	Accept Null Hypothesis
<u>Social Normsand:</u>			
Food Preparation	0.090	0.14	Accept Null Hypothesis
Drinking Water	0.082	0.19	Accept Null Hypothesis
Toilet Use	0.109	0.08	Accept Null Hypothesis
Septic Waste Drainage	0.051	0.41	Accept Null Hypothesis

Ho: There is no significant relationship between parental attitude and adherence to pediatric vaccination among teenage mothers.

*Legend: 0.00-0.01** Highly Significant, 0.02-0.05* Significant, above 0.05 Not Significant*

APPENDIX G- Documentation



APPENDIX H- Turnitin Result



Page 2 of 50 - Integrity Overview

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A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

CURRICULUM VITAE

PERSONAL DATA

Name	:Tefannie B. Carreon
Date of Birth	:November 29, 2003
Place of Birth	:Ozamiz City
Home Address	:P-2B Banadero, Ozamiz City, Misamis Occidental
Gender :	:Female
Civil Status :	:Single
Contact No :	:09209827980
Email	:tefannicarreon@gmail.com



EDUCATIONAL BACKGROUND

Elementary :	La Salle University Brother Martin Simpson Laboratory School Ledesma St. Ozamiz City, Misamis Occidental
Secondary:	Ozamiz City National High school Mayor Fernando Bernad Ave, Ozamiz City, Misamis Occidental
Senior High School	Misamis University H.T. Feliciano Street Aguada, Ozamiz City, Philippines
College :	Misamis University H.T. Feliciano Street Aguada, Ozamiz City, Philippines

CURRICULUM VITAE

PERSONAL DATA

Name	:Flerica Bless G. Casile
Date of Birth	:September 13, 2003
Place of Birth	:Ozamiz City
Home Address	:P-3 Bañadero, Ozamiz City, Misamis Occidental
Gender	:Female
Civil Status	:Single
Contact No	:09122601045
Email	: flerica2003@gmail.com



EDUCATIONAL BACKGROUND

Elementary :	La Salle University Integrated School La Salle St., Barangay Aguada, Ozamiz City, Misamis Occidental
Secondary:	La Salle University Integrated School La Salle St., Barangay Aguada, Ozamiz City, Misamis Occidental
Senior High School:	La Salle University Integrated School La Salle St., Barangay Aguada, Ozamiz City, Misamis Occidental
College:	Misamis University H.T. Feliciano Street Aguada, Ozamiz City, Philippines

CURRICULUM VITAE

PERSONAL DATA

Name : Shanee S. Delosa

Date of birth : August 24, 2004

Place of Birth : Tangub City

Home Address : Purok 3 Maquilao, Tangub City

Gender : Female

Civil Status : Single

Contact no : 09776710260

Email : delosashanee21@gmail.com



EDUCATIONAL BACKGROUND

Elementary: Maquilao Integrated School
Tangub City

Secondary: St. Michael's High School
Tangub City

Senior High: St. Michael's High School
Tangub City

College: Misamis University

H.T. Feliciano Street Aguada, Ozamiz City, Philippines

CURRICULUM VITAE

PERSONAL DATA

Name : Kate S. Dumanjug

Date of Birth : December 8, 2003

Place of Birth : Ozamiz City

Home Address : P-Madasigon, Barangay Maningcol, Ozamiz City,
Misamis Occidental

Gender : Female

Civil Status : Single

Contact No : 09955507577

Email : dumanjugkates@gmail.com



EDUCATIONAL BACKGROUND

Elementary: Ozamiz City Special Education Center
Ostia Avenue Barangay Tinago, Ozamiz City, Misamis Occidental

Secondary: Ozamiz City National High school
Mayor Fernando Bernad Ave, Ozamiz City, Misamis
Occidental

Senior High School: Misamis University
H.T. Feliciano Street Aguada, Ozamiz City, Philippines

College: Misamis University
H.T. Feliciano Street Aguada, Ozamiz City, Philippine

CURRICULUM VITAE

PERSONAL DATA

Name : Blanche Orvinne P. Erquita

Date of Birth : June 5, 2003

Place of Birth : Ozamiz City

Home Address : P-2 Molicay, Ozamiz City,
Misamis Occidental

Gender : Female

Civil Status : Single

Contact No : 09671525116

Email : erquitablanche5@gmail.com



EDUCATIONAL BACKGROUND

Elementary: Misamis University, H.T. Feliciano Street Aguada,
Ozamiz City, Philippines

Secondary: Misamis University, H.T. Feliciano Street Aguada,
Ozamiz City, Philippines

Senior High School: La Salle University, Barangay Aguada Ozamiz City,
Philippines

College: Misamis University, H.T. Feliciano Street Aguada,
Ozamiz City, Philippines