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# Dengue: Knowledge, Attitude and Preventive Practices Among Mothers In Pilar, Capiz

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A R T I C L E I N F O

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A B S T R A C T

In isolated regions of distant provinces, dengue disease has been an issue. One of the provinces most hit by the illnesses in 2019 is Capiz. The purpose of this study was to find out what moms know, think, and do to deal with the condition. Descriptive research was used to perform this study in the municipality of Pilar. The 162 mothers of dengue victims in 2019 served as the study's responders. The findings showed that the majority of respondents were between the ages of 36.41 and 25, were mostly married, had college degrees, and earned between Php 20,000 and Php 25,000 each month. The etiologic, early symptoms, and transmission of dengue fever were all well-known to the responders. Most responders consider dengue illness to be extremely harmful. They consider dengue illness to be extremely dangerous, and every respondent believes that hospitalization is absolutely necessary when dengue fever strikes. The majority of respondents used mosquito nets and other preventative measures to prevent dengue disease from spreading. The respondents' primary information sources were radio and television, then health facilities. The study finds that although women had procedures to prevent the disease's spread and were aware of its symptoms, causes, and mechanism of transmission, dengue is nevertheless quite common during the rainy season.

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## INTRODUCTION

Dengue fever cases in the Philippines are rising annually. Despite its efforts to avoid the disease, the province of Capiz has been embroiled in controversy this year due to the prevalence of dengue fever in its communities. Region 6 of the Department of Health (DOH) reported 2590 illnesses and 15 fatalities. There were 162 illnesses and one casualty reported in the Pilar municipality. The World Health Organization claims that dengue is a rapidly spreading virus that is prone to pandemics in many regions of the world. Although it also affects more wealthy communities in tropical and subtropical nations, dengue thrives in impoverished urban areas, suburbs, and rural regions. Dengue is a virus spread by mosquitoes that causes a serious flu-like sickness and, in rare cases, a potentially fatal side effect known as severe dengue. Over the past 50 years, dengue has become 30 times more common. Almost half of the world's population is at danger, with an estimated 50–100 million infections occurring annually in over 100 endemic countries. It is currently a major cause of hospitalization and mortality among adults and children in Latin American and Asian nations.

The primary vector for dengue virus transmission is the *Aedes aegypti* mosquito. Humans get the viruses through the bites of an infected female *Aedes* mosquito, which mostly contracts the virus from feeding on the blood of an infected person. The virus first infects the mosquito's midgut before spending eight to twelve days spreading to the salivary glands. Following this time of incubation, the virus may spread to people by further feeding or probing. The juvenile stages are found in habitats that are filled with water, usually inside in man-made containers that are closely related to human homes. Studies on flight range indicate that the majority of female *Ae. aegypti* typically fly 400 meters on average during their lives, and they may spend that time in or near the homes where they first appear as adults. The virus is spread quickly inside and across groups and locations by people rather than insects. Since these mosquitoes (*Stegomyia*) bite most often during the day, dengue infection rates are greater outside. But Ae. *Aegypti* may bite anyone at any time of day and reproduce inside. The indoor home lengthens the mosquitoes' lifespan and makes them less vulnerable to changes in the weather.

The genus Flavivirus, family Flaviviridae, includes the four different serotypes of the dengue virus (DEN): DEN-1, DEN-2, DEN-3, and DEN-4. The wide genetic variety of the dengue serotypes is demonstrated by the distinct genotypes that have been found within each serotype. Among them, "Asian" DEN-2 and DEN-3 genotypes are commonly linked to severe illness that coexists with subsequent dengue infections.

Humans are the primary vectors and multipliers of the virus once infected, and they may spread it to mosquitoes that are not affected. Around the same time as an infected individual gets a fever, the virus circulates in their blood for two to seven days. After the first symptoms show (within 4-5 days; maximum 12), patients who are already infected with the dengue virus might spread the infection through Aedes mosquitoes.

. Humans who recover from a single dengue virus are immune to that specific virus serotype for the rest of their lives. Nevertheless, this immunity only offers temporary and limited defenses against recurrent infection by the other three virus serotypes. Sequential infections raise the likelihood of getting severe dengue, according to evidence. The specific viral sequence of infections and the duration between infections may also be significant factors.

One of the most difficult tasks for mothers is caring for ill children. The role of parents is still vital to the health of family members today. The findings of this study may help our moms prevent dengue fever in their homes by providing them with useful preventative and control strategies. Additionally, the local council might use this information to help create the best control measures to stop the dengue virus from spreading across the town.

In order to assess mothers' knowledge, attitudes, and preventative measures in the Pilar municipality, this research was carried out. The following are the goals of this study: to determine the respondents' sociodemographic characteristics, including age, employment, level of education, and monthly income; to ascertain the respondents' level of dengue knowledge; 3to learn how moms feel about dengue; to ascertain moms' pre-emptive measures against dengue; and to determine the informational sources for dengue illness

## LITERATURE REVIEW

According to Gregorio, E.R., et al. (2024) in their study entitled "Knowledge, attitudes, and practices related to dengue among public school teachers in a Central Luzon Province in the Philippines: an analytic cross-sectional study" that an estimated infections and reported cases continue to rise, dengue has emerged as a significant health concern in tropical areas. Despite all of the government's mitigation efforts, there are still numerous obstacles to overcome in the Philippines in order to prevent and manage the illness. The purpose of this study was to assess the health literacy of Filipino educators and ascertain the relationships between their dengue-prevention knowledge, attitudes, and chosen practices (KAP). Dengue continues to be a problem with a rising case rate despite the existence of current policies, initiatives, and strategies as well as the high disease literacy rate among Filipinos. Therefore, in order to achieve a dengue-free Philippines, certain ideas should be highlighted and interventions should be improved to better reach and impact the target population.

As stated by Yboa, B. et al. (2013), the majority of the 646 participants in the study—49.38% of whom were male and 50.62% of whom were female—were aware that dengue is spread via mosquito bites, and that these bites are more likely to occur in the afternoon. Regarding symptoms, the majority of respondents said that a person with a dengue infection may have common symptoms such as fever, headache, rashes, joint and muscle discomfort, and stomach pain. Few respondents were aware that dengue infections can cause discomfort behind the eyes. A considerable portion of respondents asserted that flies, ticks, and all kinds of mosquitoes also spread dengue diseases, despite the

fact that many people also thought that Aedes mosquitoes were the primary vector of transmission.

As stated by Nguyen, H. et al. (2019) respondents were ambivalent regarding the need for hospitalization when infected with DF (60.9%) and thought their likelihood of contracting the disease was very low (39.5%) to low (20.7%). Of those surveyed, 17.6%, 9.8%, and 6.6% said they regularly changed the water, disposed of garbage appropriately, and covered water storage containers to get rid of larvae. Knowledge was connected with gender, education level, length of sickness, and past travel experiences. Attitudes were linked to occupation, the prevalence of DF in the area, the number of mosquitoes at home, and the intensity of DF symptoms. Practices were linked to patient type, occupation, knowledge, attitudes, and mosquito density at home. More efforts should be made to increase knowledge through education, particularly for those in underdeveloped regions and at the school level, in order to improve the KAP towards DF.

As stated by Jellani, S. et al. (2015), 86% of participants had heard of dengue, yet 68% of them believed that drains and trash were also dengue vector breeding grounds, indicating a lack of awareness of dengue vector breeding habitat. The percentage of participants who knew that pure water is a breeding environment was just 25%. With fever being the most prevalent symptom, there was a lack of awareness regarding illness signs.

According to Lennon, J.L. (2004), both male and female students ranked a clean environment as the most important preventive measure for preventing dengue illness. This illustrates the necessity of focusing on certain mosquito control initiatives when creating training and health education plans. Both the perceived significance of cleaning up the outdoors and the relative lack of relevance of cleaning up and controlling the inside mosquito breeding site are reflected in the greater evaluation of outside activities relative to indoor activities. Regarding methods for controlling indoor mosquitoes, no male participant responded. Programs for vector control must take into account the role that women play as homemakers.

Vector-borne illnesses are one of the biggest global public health issues, claims Basole (2018). Television was the primary source of dengue information. Dengue has a substantial disease burden that contributes to morbidity and death. The best method for managing dengue is vector control. However, community involvement can make vector control techniques effective. Therefore, evaluating the community's understanding of the illness becomes crucial. The study's goal was to determine how well-informed urban residents were about dengue fever. A cross-sectional research with 400 participants was carried out in the community. The approach of systematic random sampling was used to choose the participants. A pre-made questionnaire was used to gather data during the house-to-house visit. The majority of them (87.75%) recognized fever as a primary symptom of dengue fever. Just 32.25 percent were aware that dengue disease is spread by Aedes mosquitoes. Of the participants, 42% knew a lot about dengue.

## METHODOLOGY

The descriptive type of research was used in this study. It took place in the Pilar municipality. Its land area is 30.1 square feet. mi and consists of twenty-four barangays. The population of this place is 45,287. The municipality of Pilar has the fewest dengue cases in the Province of Capiz, with 162 cases reported in 2019. The 122 moms of dengue victims in 2019 served as the study's responders. Data was gathered during September and October of 2019 across a two-month period. The Pilar Health Center provided the list of dengue victims. The respondents were chosen using a convenience sample approach. Mothers who are available to participate in the study are considered study responders.

Information was gathered from the respondents using a modified version of a standard questionnaire created by Shaub et al. There were four sections to the questionnaire. The sociodemographic profile of the respondents, including age, employment, level of education, and monthly income, is the main emphasis of Part I. Part II will concentrate on the respondents' knowledge of dengue, Part III will concentrate on their attitudes about dengue, and Part IV will concentrate on their dengue prevention behaviors.

A letter of authorization was obtained from the offices of the campus satellite director and the research office prior to the actual data collection. A letter of authorization was issued to the municipal mayor and the barangay chairman of the chosen baranggays for their acceptance of the research after they gave their assent. Following the Mayor's consent, the Municipal Health Center provided a list of dengue victims. After that, the researchers asked the responder if they would mind participating in the study. The questionnaire was then given out for completion. The collected data was tallied and examined. The data was evaluated using frequency, percentage, and mean.

The responses on knowledge on dengue were categorize as follows:

| Perception | Weight | Range of Scores |
|---|---|---|
| Highly Knowledgeable | 5 | 4.51-5.00 |
| Knowledgeable | 4 | 3.51-4.50 |
| Uncertain | 3 | 2.51-3.50 |
| Unknowledgeable | 2 | 1.51-2.50 |
| Highly Unknowledgeable | 1 | 1.00-1.50 |

The responses on preventive practices dengue was categorize as follows:

| Perception | Weight | Range of Scores |
|---|---|---|
| Always | 5 | 4.51-5.00 |
| Usually | 4 | 3.51-4.50 |
| Sometimes | 3 | 2.51-3.50 |
| Seldom | 2 | 1.51-2.50 |
| Never | 1 | 1.00-1.50 |

**RESEARCH RESULT**

The survey included 122 moms as responders in total. The majority of respondents were between the ages of 36.41 (f-35, 28.69%), married (f-98, 80.33%), college graduates (f-51, 41.80%), and earning between Php 20,001 and Php 25, 000 per month (f-48, 39.34%). This suggests that the majority of responders were recent college grads working for minimum pay.

Table 1. Socio-demographic profile of the respondents

| *Characteristics* | *Frequency* | *Percentage* |
|---|---|---|
| Age | | |
| 18-23 | 11 | 9.02 |
| 24-29 | 19 | 15.57 |
| 30-35 | 29 | 23.77 |
| 36-41 | 35 | 28.69 |
| 42-47 | 18 | 14.75 |
| 48-53 | 2 | 1.64 |
| 54-59 | 6 | 4.92 |
| 60 and above | 2 | 1.64 |
| Total | 122 | 100% |
| Civil Status | | |
| Married | 98 | 80.33 |
| Single | 14 | 11.48 |
| Widowed | 4 | 3.28 |
| Separated | 6 | 4.92 |
| Total | 122 | 100% |
| Education | | |
| Elementary Graduate | 21 | 17.21 |
| High School Graduate | 35 | 28.69 |
| College | 51 | 41.80 |
| Undergraduate | 15 | 12.30 |
| College Graduate | | |
| Total | 122 | 100% |
| Monthly Income | | |
| Php 5000 and below | 11 | 9.02 |
| Php 5001 – 10,000 | 18 | 14.75 |
| Php 10,001 – 15,000 | 17 | 13.93 |
| Php 15,001 – 20, 000 | 22 | 18.03 |
| Php 20,001 – 25,000 | 48 | 39.34 |
| Php 25,001 – 30, 000 | 4 | 3.28 |
| Php 30, 001 and above | 2 | 1.64 |
| Total | 122 | 100% |

The answers to the question on dengue fever knowledge are displayed in Table 2. The respondents' mean level of knowledge of dengue's etiology was 4.38. With a mean score of 4.03, the respondents were also aware of the early signs of dengue fever. With a mean score of 3.40, they were also aware of how dengue disease spreads.

Table 2. Responses to Knowledge on Dengue

| *Statement* | *Mean* | *Verbal Interpretation* |
|---|---|---|
| ***Knowledge on Causes of dengue fever.*** | | |
| 1. Dengue is caused by mosquito bites | 4.55 | Highly Knowledgeable |
| 2. Dengue mosquitoes likely to feed/bite in the afternoon | 4.21 | Knowledgeable |
| Total Mean | 4.38 | Knowledgeable |
| ***Knowledge on Initial symptoms of dengue fever*** | | |
| 1. Fever is a symptom of dengue | 4.20 | Knowledgeable |
| 2. Headache is a symptom of dengue fever | 4.21 | knowledgeable |
| 3. Joint pans are symptoms of dengue | 3.59 | knowledgeable |
| 4. Muscle pain is a symptoms of dengue fever | 3.59 | Knowledgeable |
| 5. Rashes are symptoms of dengue fever | 4.53 | Highly Knowledgeable |
| 6. Abdominal pains is a symptoms of dengue fever | 3.59 | Knowledgeable |
| 7. Nose Bleeding, bloody diarrhea, blood vomiting | 4.53 | Highly Knowledgeable |
| Total Mean | 4.03 | Knowledgeable |
| ***Knowledge of Transmission of dengue fever*** | | |
| 1. Flies transmit dengue fever | 3.49 | Uncertain |
| 2. Ticks transmit dengue fever | 3.49 | Uncertain |
| 3. All types of mosquitoes transmit dengue fever | 4.50 | Uncertain |
| 4. Aedes mosquitoes transmit dengue fever | 4.52 | Highly Knowledgeable |
| 5. Person to person contact transmits dengue fever | 3.49 | Uncertain |
| 6. Blood transfusion | 4.50 | Knowledgeable |
| 7. Needle stick | 4.50 | Knowledgeable |
| 8. Sexual intercourse | 3.49 | Uncertain |
| Total Mean | 3.40 | Knowledgeable |

The responses to questions about views about dengue disease are shown in Table 3. Most responders (f-96, 78.69%) consider dengue illness to be extremely harmful. They believe that dengue fever is extremely dangerous (f-88,72.13%), and every responder believes that hospitalization is absolutely necessary when dengue fever strikes (f-122, 100%). This suggested that women in the remote barangays of the municipality of Pilar are aware of the possibility of contracting dengue fever and consider it to be extremely harmful.

Table 3. Responses to attitude towards Dengue Fever

| *Statement* | *Frequency* | *Percentage* |
|---|---|---|
| ***Level of the Danger of dengue fever*** | | |
| Very dangerous | 96 | 78.69 |
| Dangerous | 26 | 21.31 |
| Neutral | 0 | 0 |
| Not Dangerous | 0 | 0 |
| Completely not dangerous | 0 | 0 |

| | | |
|---|---|---|
| ***For hospoSelf-perceive risk of dengue fever*** | | |
| Very high risk | 88 | 72.13 |
| High risk | 29 | 23.77 |
| Having risk | 5 | 4.10 |
| Low risk | 0 | 0 |
| Very low risk | 0 | 0 |
| ***The necessity of hospitalization if suffering from dengue fever*** | | |
| Very necessary | 122 | 100 |
| Necessary | 0 | |
| Neutral | 0 | |
| Not necessary | 0 | |
| Completely not necessary | 0 | |

Respondents' methods for preventing dengue disease are shown in Table 4. According to the data, the majority of respondents used mosquito nets and other steps to prevent dengue disease from spreading (m-4.59). This suggested that while the women in the remote barrio of the municipality of Pilar follow preventative measures to prevent the spread of dengue fever, the disease is still extremely common there.

Table 4. Dengue prevention practices of the respondents

| ***Measures to prevent mosquitoes*** | ***Mean*** | ***Verbal Interpretation*** |
|---|---|---|
| 1. Using mosquito repellent coil | 3.49 | Sometimes |
| 2. Using mosquito net | 4.59 | Usually |
| 3. Using insect repellent spray | 3.49 | Sometimes |
| 4. House sanitation | 3.49 | Sometimes |
| 5. Environmental sanitation, clearing bushes | 2.50 | Seldom |
| 6. Applying repellent body lotion | 3.52 | Usually |
| 7. Removal of standing water | 3.50 | Sometimes |
| 8. Pouring chemicals on standing water | 1.50 | Never |
| 9. Covering water container | 3.50 | Sometimes |
| Total Mean | **3.29** | **Sometimes** |

Table 5 showed that the respondents' primary information sources were radio and television, followed by health clinics. This suggested that the respondents learned about dengue fever from television and radio as well as from their visits to health facilities.

Table 5. Sources of Information relative to dengue fever infection

| ***Sources of Information*** | ***Frequency*** | ***Percentage*** |
|---|---|---|
| TV/Radio | 119 | 97.54 |
| School | 32 | 26.23 |

| | | |
|---|---|---|
| Health Centers | 101 | 82.79 |
| Neighbors | 19 | 15.57 |
| Brochures | 2 | 1.64 |
| Newspaper | 4 | 3.39 |

## DISCUSSION

Even though most of the women have college degrees and are aware of the symptoms, indicators, and transmission of dengue fever, they are still young and inexperienced in caring for children with diseases like this. They are aware of dengue and have taken precautions to stop its spread and contamination because of their attitude toward the disease. Radios and televisions are now found in practically every home. Information technology advancements greatly aid in the dissemination of knowledge in all spheres of society. Every household has relied on this to keep them informed about the events occurring in their society.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis, it can be concluded that there is a high degree of understanding of the causes and symptoms of dengue. Though they are competent in certain areas, they do not have accurate information on how dengue was spread. Perceptions of dengue fever were also favorable. Additionally, they took action to prevent dengue disease. Furthermore, the survey found that responders only took action to prevent dengue illness when there was an epidemic nearby. Because of this outcome, government and non-governmental groups should improve their program and launch a large-scale education campaign to decrease mosquitoes and prevent dengue by educating the public. IEC materials might be placed in places like schools to make them easier for locals to access.

## ADVANCED RESEARCH

This study is only limited to the knowledge, attitude and practice of mothers in the municipality of Pilar. Further study on a wider scope should be conducted.

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