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KNOWLEDGE, ATTITUDE, AND PRACTICES OF MOTHERS IN BRGY. CABASAN PENABLANCA, CAGAYAN, TOWARDS ANEMIA AMONG SCHOLL-AGED CHILDREN.

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ABSTRACT

The aim of this study was to assess and determine the level of knowledge, attitude, and practices of mothers regarding anemia in school-aged children. The profile, knowledge, attitude, and practices of respondents who met the study's inclusion criteria for anemia in school-aged children were determined using a closed-ended questionnaire. A descriptive correlation analysis research design was also used in this study. Furthermore, the study's findings reveal that the majority of respondents only completed their secondary education. The findings also revealed that the mothers are aware about anemia prevention methods and have positive attitudes and practices in this area. Furthermore, the information acquired shows that only the mothers' knowledge and practices are related to their family history and civil status, respectively. In terms of the relationship between knowledge with that of attitudes and practices, the findings demonstrated that as mothers' knowledge increases, so do their attitudes and practices. Therefore, major findings of this study include the attitude and practices of mothers towards anemia among school-aged children is directly related to that of their level of knowledge. With the findings of this study, it implies that there is a strong suggestion to educate and raise awareness among mothers about anemia. The researchers strongly recommend to strengthen and reinforce awareness among mothers regarding anemia through various attainable programs and activities.

.***Key words:*** *School-aged Children, Anemia, Knowledge, Attitude, Practices*

INTRODUCTION

Anemia is a serious global health issue affecting 1.62 billion people worldwide, significantly burdening the economies of both developing and wealthy nations. This condition is characterized by a decrease in circulating red blood cells, leading to oxygen deficiency in tissues and organs. Early detection is challenging, requiring consultation with medical professionals for accurate diagnosis. Doctors examine family history and perform physical and laboratory tests before confirming anemia. If left untreated, anemia can cause heart problems, fatigue, weakened immune systems, and other pulmonary conditions.

Globally, anemia affects 304.6 million school-aged children (SAC) aged 5 to 15 years, with a prevalence rate of 25.4%. In developing countries and countries in transition, anemia prevalence in

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SAC is considered mild according to WHO classification. In the Philippines, the 2013 National Nutrition Survey by the Food and Nutrition Research Institute – Department of Science and Technology (FNRI-DOST) recorded a 5.1% prevalence rate among SAC. Cagayan Valley has the second-highest prevalence rate among regions at 19.8%, following CARAGA. However, global statistics and data on anemia are often outdated, insufficient, and missing, contributing to the rise of untreated and mismanaged cases. The high incidence of anemia among school-aged children highlights its prevalence and impact. Despite this, management and prioritization of the condition are inadequate, leading to widespread misinformation. Anemia's link to other diseases is under-researched, and the lack of involvement from implementing bodies and the general population exacerbates the issue. Cabasan, classified as a Geographically Isolated and Deprived Area (GIDA), lacks accessible health facilities and basic health services. The absence of anemia data and community awareness in local health offices is alarming, especially considering Cagayan's high prevalence of anemia among school-aged children.

The lack of anemia data and public dissemination obscures the condition's true nature, risking an increase in untreated cases. Overlooking anemia can strain economies and hinder social progress, particularly in developing countries, due to higher mortality rates and reduced human productivity. In school-aged children, anemia can impair academic performance, labor capacity, physical growth, and cognitive function. This study aims to determine anemia status in the community based on mothers' perceptions and actions regarding anemia among school-aged children, assessing their involvement in addressing this national health issue.

METHODOLOGY

This chapter provides a detailed description of the research approach and design employed in this study. The following sections discuss the research design, research participants, data gathering materials, data gathering procedure, and the method of analysis that will be done in the conduct of this research.

Research Design

This study made use descriptive correlation analysis. This study seeks to correlate the knowledge, attitude and practices of mothers to that of their demographic profile and subsequently correlate the knowledge of mothers to that of their attitudes and practices.

Respondents of the Study

The respondents of the study will be 18–45-year-old mothers of school-aged children who are aged 6 to 12 years old and a resident of Brgy. Cabasan, Peñablanca, Cagayan for at least 6 months.

Data Gathering tool

The researchers will determine their respondents of the study. After determining the respondents, researchers will secure approval from the municipal and barangay level regarding the conduct of the study. Construction of the questionnaire will take pace by considering the course of

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study. Orientation and endorsement of questionnaires to the Barangay Health Office will be done to ensure proper dissemination of information. Respondents will be asked to read and sign the consent attached to the questionnaire and will be given enough time to answer the said data gathering tool. Retrieval of the questionnaire will be done through the Barangay Health Workers.

Data Gathering Procedure

This study used the researcher-made questionnaire. Then the researchers seek permission from the Medical Colleges of Northern Philippines through the Vice President for Academic Affairs and Dean of Medical Laboratory Science from the locale of our study for the conduct of the study. After the approval, the researchers administered the questionnaires to the respondents of the study.

This research used an Online Survey platform and printed questionnaire to collect data. The google form that contains the questionnaire was sent to the respondents through their messenger account. Those who did not have access on the online survey platform have the printed questionnaire.

Data Analysis

To assess the knowledge of the respondents regarding the undergoing study, there are 4 subcategories namely etiology, pathophysiology and diagnosis, complications, treatment and management and prevention. Additionally, to assess attitude and practices, 2 subcategories namely treatment and management as well as prevention is being presented to assess assertiveness and what is observed by mothers if their child has anemia. Frequency and Percentage Distribution were used in determining the profile of the respondents in terms of demographics, socio-economic and health profile. Weighted mean is used in categorizing the data gathered in regards to the Likert scale of each category namely knowledge, attitude and practices. Chi-square is used to determine the relation of the level of knowledge, attitude and practices of the respondents when grouped according to profile variable. Pearson R is used to determine the relationship of the level of knowledge of the respondents to that of their attitude and practices.

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RESULT AND DISCUSSION

TABLE 1 LEVEL OF KNOWLEDGE OF MOTHERS IN ANEMIAAMONG SCHOOL-AGED CHILDREN IN TERMS OF ETHIOLOGY, PATHOPYSIOLOGY, AND DIAGNOSIS

Items	Mean	Description
1. Anemia is a blood-related condition where there are insufficient red blood cells in the body.	2.86	Knowledgeable
2. The hemoglobin level for children aging 6-12 years-old that is less than 114 g/L is considered anemic.	2.77	Knowledgeable
3. Anemia is a life-threatening blood-related condition when unmanaged and untreated.	2.89	Knowledgeable
4. Anemia may range from mild, moderate and severe depending on the severity of the status.	3.29	Very Knowledgeable
5. Anemia may manifest common symptoms is light-headedness.	2.94	Knowledgeable
6. Less common symptoms may execute noticeable manifestations is shortness of breath.	3.03	Knowledgeable
7. Additional symptoms of anemia that may rarely manifest includes occurrence of worsening heart problems.	2.80	Knowledgeable
8. Anemia may arise when there is chronic blood loss.	3.34	Very Knowledgeable
9. Lack of iron rich-food intake can increase the risk of anemia.	3.14	Knowledgeable
10. Disturbed sleeping patterns can also increase the chance of having anemia.	3.09	Knowledgeable
11. Menstruation in female children can also cause anemia due to the event of blood loss.	2.94	Knowledgeable
12. Skipping meals is a risk factor of anemia.	3.29	Very Knowledgeable
13. Limited access to health care and medical attention can result to undiagnosed cases of anemia.	2.97	Knowledgeable
14. Anemia in children is first screened through the use of several blood test parameters (haematocrit).	2.80	Knowledgeable
Categorical Mean	**3.01**	**Knowledgeable**

Table 1.1 shows the level of knowledge of mothers on anemia in terms of etiology, pathophysiology and diagnosis. It has a categorical mean of 3.01 which has a descriptive value of Knowledgeable. Generally, it is being accounted on the data that the mothers are only knowledgeable with “The hemoglobin level for children aging 6-12 years-old that is less than 114 g/L is considered anemic.” having a mean of 2.77. This means that the respondents are not aware enough of the normal values of hemoglobin on 6-12 years old for a child to be considered anemic. Furthermore, data revealed

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that the respondents are very knowledgeable with the statements, “Anemia may range from mild, moderate and severe depending on the severity of the status”, “Anemia may arise when there is chronic blood loss” and “Skipping meals is a risk factor of anemia” having the weighted mean of 3.29, 3.34 and 3.29, respectively. This is due to the fact that the following statements are common in anemia. Furthermore, the results support the idea presented by the United Nations Children’s Fund 2013 which pertains to the direct relationship of the knowledge, attitudes and practices of mothers to that of their educational attainment.

TABLE 1.2 LEVEL OF KNOWLEDGEOF MOTHERS IN ANEMIA AMONG SCHOOL-AGED CHILDREN IN TERMS OF COMPLICATIONS

Items	Mean	Description
1. Joint pain and swelling is a complication that may arise in children when having anemia.	2. 2.91	Knowledgeable
2. Growth and development problems like slow mental development are complications of having anemia in children.	3. 2.89	Knowledgeable
3. Bone marrow failure may arise when a child has an unmanaged and untreated anemia	4. 2.74	Knowledgeable
4. Leukemia and other cancers may arise as a complication of anemia in children.	5. 2.86	Knowledgeable
Categorical Mean	**2.85**	**Knowledgeable**

Table 1.2 shows the level of knowledge of mothers towards complications among anemic school-aged children. As presented from the table above, the categorical mean is 2.85 which has a descriptive value of Knowledgeable. As shown in the table, the statement “Bone marrow failure may arise when a child has an unmanaged and untreated anemia” with a mean of 2.74 which has a descriptive value of Knowledgeable has the lowest data. Furthermore, the statement “Joint pain and swelling is a complication that may arise in children when having anemia” has the highest mean of 2.91 with a descriptive value of Knowledgeable. Generally, the data gathered implies that mothers are not highly knowledgeable but aware of the complications that may arise from unmanaged and untreated anemia. Moreover, according to Irina Beneson and Sallie Porter, delayed in growth and development is one of the most common complications among children. With the given scope of this study, a mean of 2.89 or Knowledgeable is tagged with the statement “Growth and development problems like slow mental development are complications of having anemia in children”, thus giving an indication that mothers are not involved enough to know that anemia can cause motor and mobility development delay among the young.

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TABLE 1.3 LEVEL OF KNOWLEDGEOF MOTHERS IN ANEMIA AMONG SCHOOL-AGED CHILDREN IN TERMS OF TREATMENT AND MANAGEMENT

Items	Mean	Description
1. Lifestyle change like having enough sleeping is a key factor in correcting anemia status.	3.17	Knowledgeable
2. Healthy diet is a contributory factor in correcting anemia status like giving foods rich in iron and vitamins.	3.31	Very Knowledgeable
3. Iron supplementation is a notable and easiest way to correct anemia status of children following the prescribed iron requirement for each age group.	3.17	Knowledgeable
4. Avoiding extraneous activities can be a management procedure to allow the body to be back in its healthy well-being and produce normal blood cells that are necessary for its holistic function.	3.09	Knowledgeable
5. Seeking for secondary opinion is a preference of the family to ensure the accurate anemia status of their child.	2.77	Knowledgeable
1. Blood transfusion like packed red cell administration is a way of correcting anemia status.	2.71	Knowledgeable
Categorical Mean	**3.04**	**Knowledgeable**

Table 1.3 shows the level of knowledge of the respondents on treatment and management of anemia. It has a categorical mean of 3.04 which has a descriptive value of Knowledgeable. The table reveals that the lowest mean is 2.7 with a descriptive value of “Knowledgeable” is under the item “Blood transfusion like packed red cell administration is a way of correcting anemia status”. The statement is in connection to the lack of healthcare facilities and personnel in the area to guide them regarding such health care condition. It is being accounted in the study of Joseph E. Maakaron, M.D. of Medscape that blood transfusion should be performed over patients who are actively experiencing bleeding and having symptoms of anemia. The study of F. M. Macheso revealed that limited resources in food due to their low-socioeconomic status can lead to anemia. Furthermore, this study emphasizes the fact that mothers giving their children low iron content food can result to anemia. Additionally, as accounted in HealthinAging.org, some but not all types of anemia can be treated and possibly managed with the help of iron-rich food intake, vitamin B12, folate as well as intake of vitamin C.

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TABLE 1.4 LEVEL OF KNOWLEDGEOF MOTHERS IN ANEMIA AMONG SCHOOL-AGED CHILDREN IN TERMS OF PREVENTION

Items	Mean	Description
1. Intake of food rich in iron helps prevent the probability of having anemia	3.40	Very Knowledgeable
2. General check-up is one of the preventive measures that allows early detection of health conditions like anemia.	3.31	Very Knowledgeable
3. Having basic exercises can help maintain a healthy well-being and a healthy lifestyle mitigating the occurrence of anemia.	3.43	Very Knowledgeable
4. Clean surroundings (i.e., with plants around, proper waste disposal is observed, no burning of plastics and other waste materials, etc.) creates a conducive environment to prevent my child/children from acquiring anemia.	3.29	Very Knowledgeable
5. Prohibiting smoking is a preventive measure to avoid anemia.	3.23	Knowledgeable
6. Vitamin intake like Vitamin C and Vitamin B12 can help prevent acquiring anemia among school-aged children.	3.23	Knowledgeable
7. Iron supplementation is also a preventive measure to avoid acquiring anemia among school-aged children.	3.23	Knowledgeable
Categorical Mean	**3.30**	**Very Knowledgeable**

Table 1.4 shows the level of knowledge of mothers towards preventive measures of anemia among school-aged children. Unlike other categories of knowledge on anemia, the table reveals that with its categorical mean of 3.30 with a descriptive value of “Very Knowledgeable” supports the fact that mothers have very high knowledge in terms of preventing anemia. With the lowest mean of 3.23, the following statements “Prohibiting smoking is a preventive measure to avoid anemia”,” Vitamin intake like Vitamin C and Vitamin B12 can help prevent acquiring anemia among school-aged children”, ”Iron supplementation is also a preventive measure to avoid acquiring anemia among school-aged children” got the lowest mean as to the data gathered from the respondents. In contrary, according to Jorge L. Rosado, et.al., iron supplementation is known to be the most effective way to treat anemia among anemic children. Furthermore, with the highest mean of 3.43, the statement “Having basic exercises like walking and jogging can help maintain a healthy well-being and a healthy lifestyle mitigating the occurrence of diseases like anemia” is a very common preventive measure amongst the population in preventing any disease or condition to occur. According to James M. Soliga, et.al., extreme exercises are not advisable for people who have anemia because this cannot help to manage and treat such. Moreover, pursuing extreme exercises in an anemic state will only cause life threatening conditions to the patient.

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TABLE 2.1 ATTITUDE OF MOTHERS IN ANEMIAAMONG SCHOOL-AGED CHILDREN IN TERMS OF TREATMENT AND MANAGEMENT

Items	Mean	Description
1. I believe enough sleep is a contributory factor in correcting anemia status.	3.26	Strongly Agree
2. I think a healthy diet is a key in correcting anemia status.	3.54	Strongly Agree
3. I think Iron supplementation really helps in normalizing iron level in the body causing the correction of anemia status.	3.37	Strongly Agree
4. I believe that avoiding extraneous activities can be a key factor in overcoming anemia.	3.00	Agree
5. I prefer seeking for secondary opinion for my child's anemia status to ensure accuracy of diagnosis.	2.97	Agree
1. I believe blood transfusion can correct anemia status like transfusion of packed red cell.	2.83	Agree
Categorical Mean	**3.16**	**Agree**

Table 2.1 shows the attitude of mothers towards treatment and management. The categorical mean of 3.16 with description "Agree" shows that the respondents have moderate attitude on anemia. The attitude of mothers towards blood transfusion in the statement "I believe blood transfusion can correct anemia status like transfusion of packed red cell" coincides with their level of knowledge as presented in 2.3 with a weighted mean of 2.83, thus, this indicates a moderate attitude of the respondents towards conduct of blood transfusion processes as a way of treatment for anemia. In contrary, according to the study of Evelyn B. Ngimbudzi, et.al, mothers believe that anemia is being cured more through cultural beliefs and herbal medications rather than seeking professional medical help. Furthermore, according to Jacquelyn Cafasso of Healthline, a well-balanced and nutritious diet that should be rich in iron can prevent iron-deficiency. Moreover, serving iron-rich foods with vitamin C-rich diet can help the body to absorb more iron, thus, can help to prevent and manage anemia.

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TABLE 2.2 ATTITUDE OF MOTHERS IN ANEMIAAMONG SCHOOL-AGED CHILDREN IN TERMS OF PREVENTION

Items	Mean	Description
1. I prefer iron-rich food as a way of preventing anemia occurrence.	3.51	Strongly Agree
2. I believe that conducting general check-up can be a preventive measure to avoid anemia.	3.40	Strongly Agree
3. I believe having exercises even the basic ones like walking and jogging, etc. can help prevent anemia.	3.46	Strongly Agree
4. I believe clean surroundings (i.e., with plants around, proper waste disposal is observed, no burning of plastics and other waste materials, etc.) creates a conducive environment to prevent my child/children from acquiring anemia.	3.60	Strongly Agree
5. I think prohibiting smoking within the vicinity is a preventive measure to avoid anemia.	3.23	Agree
6. I believe that intake of vitamins like Vitamin C and Vitamin B12 can help prevent to acquire anemia.	3.43	Strongly Agree
2. I believe that intake of supplements like iron supplements helps prevent anemia.	3.34	Strongly Agree
Categorical Mean	**3.42**	**Strongly Agree**

Table 2.2 shows the attitudes of the respondents towards prevention of anemia. Comparing their attitude on treatment and management, the categorical mean of 3.42 with description “Strongly Agree” supports that the respondents have very high attitude on prevention of anemia. There is a need to increase attitude of the respondents on the need to prevent smoking as a preventive measure against anemia as supported by lowest weighted mean of 3.23 with description “Agree” under the statement “I think prohibiting smoking within the vicinity is a preventive measure to avoid anemia”. According to the study entitled “Association of household environment and prevalence of anemia among children under-5 in India” smoking is one of the contributory factors of anemia among children. On the other hand, the highest mean pertains to the need of a conducive environment for their child to help prevent anemia as supported by the highest weighted mean of 3.60 with description “Strongly Agree” under item “I believe clean surroundings (i.e., with plants around, proper waste disposal is observed, no burning of plastics and other waste materials, etc.) creates a conducive environment to prevent my child/children from acquiring anemia”. Generally, the results of the attitude of anemia towards preventing anemia agrees with the result of their level of knowledge towards prevention of anemia having a “very Knowledgeable” mark.

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TABLE 3.1 PRACTICES OF MOTHERS IN ANEMIAAMONG SCHOOL-AGED CHILDREN IN TERMS OF TREATMENT AND MANAGEMENT

Items	Mean	Description
1. I let my child practice a healthy lifestyle like having enough sleep and doing basic exercises (e.g., walking, jogging, etc.) to correct his/her anemia status.	3.69	Always
2. I reinforce iron-rich foods (vegetables) to my child's diet to treat his/her anemia.	3.77	Always
3. I give iron supplementation to my child once he/she is diagnosed with anemia to correct his/her anemia status.	3.49	Always
4. I restrict my child from doing extraneous activities until his/her anemia status is corrected.	3.29	Always
5. I seek for secondary opinion just to confirm my child's anemia status to receive the best treatment possible.	2.94	Sometimes
1. I allow blood transfusion to my child as a treatment for anemia like transfusion of packed red cells.	2.63	Sometimes
Categorical mean	**3.30**	**Always**

Table 3.1 shows the practices of the mothers regarding treatment and management of anemia. The table above having a categorical mean of 3.30 with a descriptive value of "Always" indicates a high practice against anemia. The statement "I allow blood transfusion to my child as a treatment for anemia like transfusion of packed red cells" has the lowest mean with 2.63 with a descriptive value of sometimes. The result is consistent with the result of the knowledge and attitudes of mothers towards blood transfusion as treatment of anemia. Moreover, it is evident that providing vegetables and iron rich foods to their children as supported by the highest weighted mean of 3.77 under item "I reinforce vegetables and iron-rich foods to my child's diet to treat his/her anemia". As accounted in many research journals, iron-supplementation as well as intake of vegetables rich in iron and vitamin C and B12 can help manage, mitigate and treat anemia. According to the study entitled "Iron Deficiency Anemia in Children Residing in High and Low-Income Countries: Risk factors, Prevention, Diagnosis and Therapy", reinforcing iron-rich food in the diet is the most cost-effective way of managing and reducing anemia prevalence. The result of the practices of mothers towards treatment and management coincides with the result of their level of knowledge and attitude. This implies that mothers know that having a healthy lifestyle, eating iron-rich foods and intake of supplements and vitamins helps to treat and further manage anemia among school-aged children

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TABLE 3.2 PRACTICES OF MOTHERS IN ANEMIAAMONG SCHOOL-AGED CHILDREN IN TERMS OF PREVENTION

Items	Mean	Description
1. I prepare iron-rich food for my child in order to avoid acquiring anemia.	3.66	Always
2. As a family, we seek medical consultation for general check-ups as one of the preventive measures that allow detection of conditions like anemia.	3.54	Always
3. I let my child do basic exercise routines like walking and jogging, etc. to maintain a healthy lifestyle and avoid having anemia.	3.43	Always
4. I maintain clean surroundings by planting plants around our vicinity, adhering strictly to proper waste segregation, and avoiding burning plastics and other waste materials to prevent my child/children from acquiring anemia.	3.57	Always
5. I prohibit smoking within our vicinity as a preventive measure to avoid having anemia.	2.97	Sometimes
6. I let my child take vitamins like Vitamin C and Vitamin B12 to boost immune system and specially to avoid having anemia.	3.37	Always
7. I let my child take supplements like iron supplements to prevent anemia.	3.20	Sometimes
Categorical mean	**3.39**	**Always**

Table 3.2 shows the practices of the mothers towards prevention of anemia. The table above with categorical mean of 3.39 which has a descriptive value of “Always” supports that there is high practice among the respondents. The result for statement “I prohibit smoking within our vicinity as a preventive measure to avoid having anemia” is consistent within the 3 categories of this study. The highest mean value is in terms of preparing iron rich food for their children having the highest weighted mean of 3.66 with description “Always” under item “I prepare iron-rich food for my child in order to avoid acquiring anemia,”. Furthermore, intake or inclusion of iron-rich food in the diet of the children also agrees with the other 2 categories of this study.

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TABLE 4 RELATIONSHIP BETWEEN KNOWLEDGE TO THAT OF ATTITUDEOF MOTHERS ON ANEMIA AMONG SCHOOL-AGED CHILDREN

Variables	Attitudes						Practices					
Knowledge	Tx and Mngt		Prevention		Overall Attitude		Tx and Mngt		Prevention		Overall Practice	
	R	Sig.	r	Sig.	r	Sig.	R	Sig.	R	Sig.	r	Sig.
Etiology, Pathophysiology and diagnosis	.670	.000*	.601	.000*	.656	.000*	.249	.150	.478	.004*	.423	.011*
Complications	.500	.002*	.438	.009	.484	.003	.109	.533	.342	.045*	.264	.126
Treatment and Management	.596	.000*	.656	.000*	.651	.000*	.185	.287	.428	.010	.357	.035*
Prevention	.520	.001*	.600	.000*	.583	.000*	.133	.445	.408	.015*	.317	.064
Overall knowledge	.626	.000*	.628	.000*	.650	.000*	.185	.288	.453	.006*	.372	.028

**Shows relationship*

Table 4 shows the summary of result on the test of relationship between the knowledge of the respondents with that of their attitudes and practices towards anemia. The relationship is said to be significant between knowledge of the respondents on treatment and management of anemia and their overall attitude (r=.651, p=.000) on anemia including their specific attitude on treatment and management (r=.596, p=.000) and prevention (r=.656, p=.000) of anemia as well as their overall practice (r=.357, p=.035) against anemia. Also, relationship between knowledge of the respondents regarding prevention of anemia and overall attitude (r=.583, r=.000) and their specific attitude on treatment and management (r=.520, p=.001) and prevention (r=.600, p=.000) including practice on prevention (r=.408, p=.015) is significant. In general, the overall knowledge of the respondents has significant relationship with overall attitude (r=.650, p=.000), attitude on treatment and management (r=.626, p=.000), prevention (r=.650, p=.000) and their practice on prevention (r=.453, p=.006) against anemia. According to Felistas Mphatso Macheso in her study entitled “Knowledge, Beliefs and Practices of Mothers Related to Anemia in Under five children at Kamuzu Central Hospital, Malawi”, the poor knowledge of mothers towards anemia greatly affect their health seeking behavior which can lead to lack of preventive controls towards anemia among children under the age of five.

The result of the study shows that the respondents are knowledgeable on anemia specifically on its prevention which supports that they are highly knowledgeable. However, despite being knowledgeable in other areas of anemia, there is a need to increase their knowledge in terms of etiology, pathophysiology and diagnosis, complications and treatment and management as the result supports that their level of knowledge under these categories are lower compared to their knowledge on anemia regarding its prevention. Furthermore, the result of the study indicates that the attitudes of the mothers in terms of treatment and management of anemia is low compared to their attitudes on prevention of anemia particularly on the belief on the process of blood transfusion in correcting anemia. Moreover, the results also indicate that the practice of the respondents regarding treatment and management is also low compared to their practices on prevention of anemia. However, mothers should

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be encouraged to be vigilant in prohibiting smoking within their vicinity as a way to prevent anemia as this is one of the factors in acquiring anemia as well as other ailments and diseases among children.

Conclusions

Based on the findings and result of the study it is concluded that mothers are knowledgeable on anemia particularly on its prevention and displays high attitudes and practices with regards to its preventive measures. Moreover, the study also concludes that only family history and civil status are associated to the knowledge and practices of the mothers. However, the result of the relationship between the knowledge to that of their attitudes and practices supports a conclusion that as the mothers' knowledge increases their attitudes and practices also increases which supports that there is strong recommendation to educate and raise awareness among mothers regarding anemia. Generally, the researchers reject the null hypothesis in specific variables specifically in the association of the knowledge and practices to that of the profile of the respondents. The gathered result implies a direct relationship between overall to specific knowledge, attitudes and practices of the respondents indicating that an increase in knowledge supports an increase on attitude and practices of the respondents.

RECOMMENDATION

Based on the results and findings the following activities and programs are recommended:

1. Seminars and orientation should be conducted to mothers in order to further increase their knowledge on anemia and eventually increasing their attitudes and practices.
2. It is a must to encourage mothers to prohibit smoking as this is a factor related to anemia among children.
3. It is very much needed that barangays should have health facilities to cater conditions and diseases to limit and restrict further complications and severity of such condition.

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