

## LEVEL OF AWARENESS AND PREVENTIVE PRACTICES ON COMPLICATIONS OF HOME DELIVERY OF SELECTED WOMEN IN CAGAYAN DE ORO CITY

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### ABSTRACT

*This study was conducted in different settings in Cagayan de Oro City which explored into an analysis of the level of awareness and preventive practices on the complications of home delivery. It was focused on three major points: (1) the awareness of home birth complications; (2) the awareness on preventive measures of such complications; (3) and significant relationship on the level of awareness on the application of preventive measure on the common complications of home delivery. The descriptive method was used to provide a clear picture of the situation without manipulating variables. To determine the reliability and validity of the research instrument, weighted mean and correlation methods were used to yield a reliable result for each item. The data were analyzed and presented through weighted mean and verbal description. The null hypothesis was set at 0.05 level of significance and tested through correlation. The analysis yielded the following results: majority of the respondents were partly aware regarding the complications and preventive measures of complications of home delivery as evidenced by high levels of moderate awareness in the overall mean. However, the results of some variables such as on the problems in uterine contraction (A strong uterine force causes the placenta to prematurely separate from the uterus) and the application of preventive measure during intrapartum period (Uterine rupture can be prevented by using medication called tocolytics), have the low level of awareness. While the results of some variables such as the awareness of puerperal infections (Puerperal Infection is caused by retained placental fragments) and also its awareness on such problem have a high level of awareness. Furthermore, each category testified that there were variations upon determining the results of the relationship between the level of awareness on the application of preventive measure and its correlation to the common complication of home delivery during intra partum and post partum period, majority had a significant relationship. Based on the results and findings, the data revealed that the respondents were having a moderate level on awareness on the possible problems and complications during intrapartum and postpartum period and so with the interventions.*

**Keywords:** Home Delivery, Complications, Preventive Practices

## INTRODUCTION

In every healthy pregnant woman certain physiological changes take place; extent of changes varies from system to system but no system remains unaffected. However, there are complications that may take place following the delivery. Some of them are minor, few are severe and, if not tackled early and appropriately, maternal mortality rises. In developing countries, roughly 75% of maternal deaths are due to direct causes; 25% are due to indirect causes. In developed countries these figures are also occurring 60% and 40%, respectively. ([www.pjms.com.pk](http://www.pjms.com.pk)).

Home birth is childbirth that occurs outside a hospital or birthing centers, but rather at the home of the mother. Most homebirths are assisted by midwives; some others by physicians. Others have no medical assistance at all; this is known as unassisted childbirth or free-birth. ([Wikipedia.com](http://Wikipedia.com))

The postpartum period covers a critical transitional time for a woman, her newborn and her family on a physiological, emotional, and social level. Nonetheless, in both developing and developed countries women's needs during this period and those of their newborns have been all too often eclipsed by the attention given to pregnancy and birth. Such an eclipse ignores the fact that the majority of maternal deaths and disabilities occur during the postpartum period and that early neonatal mortality remains high. Driven frequently by economic considerations the skimpy or even non-existent care offered to women and their newborns at home or in health facilities makes little contribution to their well-being and provides a frail basis for their future health. Poor quality care reduces opportunities for health promotion and for the early detection and adequate management of problems and diseases. ([www.who.int/reproductive-health/publications/msm](http://www.who.int/reproductive-health/publications/msm)).

In the year 2006, the City Health Offices in Region 10 identified the leading causes of maternal mortality per 1000 live births. These include the following: postpartum hemorrhage with a rate of 0.34; eclampsia, 0.15; other complications of pregnancy, 0.10; hypertension in pregnancy, 0.08; ectopic pregnancy, 0.07; puerperal sepsis, 0.04; placenta previa, 0.03; cardiomyopathy, 0.03; placenta retention, 0.02; abortion, 0.01; and uterine atony, 0.01.

In Cagayan de Oro City, the City Health Office recognized the leading causes of maternal mortality in the year 2006 to include Eclampsia, Postpartum Hemorrhage, Ruptured Ectopic Pregnancy, Pre-eclampsia, Intrapartum Eclampsia, Antepartum Eclampsia, Postpartum Cardiomyopathy, Hemolysis, Elevated Liver, Low Platelet Count (HELLP) syndrome, Hemorrhage due to Undelivered Placenta, Uterine Hemorrhage, Hemorrhage due to Uterine Inversion, Pregnancy-Induced Hypertension, and Puerperal Sepsis.

In most Western countries, homebirth declined over the 20<sup>th</sup> century, although there was a revival of the practice in the 1970s. In countries where midwives are the main care givers for pregnant women, home birth is more prevalent.

Some women choose home birth so they can have the baby on hand after birth, can have more control over the child birth experience, and can have birth in familiar,

low-cost surroundings (Pilliteri, 4<sup>th</sup> Edition).

Joy Princeton Clausen on her book, *Maternity Nursing Today*, stated that in order for a normal labor and delivery to occur each of the components (power, passenger, and passage) must be normal. When abnormalities are present in one or more of them, a complicated labor and delivery exists to some degree. In women who have complications in the early puerperium this early phase may be more obvious and will probably last for a longer period. The early puerperium has extensive physiological changes which may cause a crisis in many complications or overlapping complications of pregnancy. Until the mother's physical imbalance has been restored, she may not have fully become a part of the taking-in phase as described for a mother with a normal puerperium.

Home birth remains a controversial issue. The American College of Obstetricians and Gynecologists (ACOG) still contends that the hospital is the safest place to give birth because one can have the facilities of the hospital and the expertise of the staff are immediately available **if a complication arises suddenly**. On the other hand, both the American College of Nurse-Midwives and the Governing Council of the American Public Health Association support the choice of women who are good candidates to give birth at home, and believe that qualified caregivers, along with appropriate arrangements for back up and transfer, should be available for moms-to-be who desire this option. ([www. Baby center.com](http://www.Babycenter.com)).

In addition, serious complications can develop during any birth and such complications can definitely represent a larger danger to both mother and child in a wilderness cabin done when encountered in a hospital. A pregnant mother may decide to have her baby delivered at home (after having gone through properly –supervised prenatal care.) with an experienced nurse, or midwife in attendance. The odds are about one in 50 that something will happen during labor and delivery to send her to the hospital. One in the 200 home deliveries, something will be potentially life threatening. It is much better if you know these potential complications before and after they happen and the description of some of the worst is not meant to scare, but to inform.

In fact, about 85% of all births are vaginal deliveries. Some situations, however, can threaten the life of both the mother and the baby. A labor complication presents a problem to the mother or the baby that requires medical assistance and an intervention to ensure an optimal outcome. Observation, reporting, technical skill, and physical and emotional supportive measures must all be carried out with a fine degree of competency. (Anderson and Shapiro, sixth edition-1994).

This study was conducted as one way to organize knowledge to best exemplify the biologic, psychosocial, and cultural forces influencing the reasons for child bearing on their respective places or areas.

Moreover, this study was also conducted to know the respondents' opinions on the reasons why they chose to deliver their babies at home. And even to know the level of awareness with regards to their perceptions on the dangers they were facing for the action they had chosen.

Furthermore, when delivery is expected to be difficult, anxiety rises and it narrows the mother's perceptual field, making her preoccupied with her perceived needs.

The woman may become preoccupied with her own safety and the survival of her baby. This is why regardless of the mode of delivery, every woman facing childbirth needs nursing nurturance in terms of preparation as to what to expect in terms of events and stimuli to be felt, heard, and seen; and protection from being exposed to sudden changes without being notified. This is more so when child birth deviates from normal, (Clark and Alfonso, 1985).

This is a nursing challenge to build some awareness on clients in order for them to have a wonderful birthing or labor experience. It is believed some of the married women are left unaware on how life threatening it is if there is no proper health providers monitoring or checking such conditions. When labor and delivery becomes complicated, emergency situations may dictate immediate changes in terms of procedures, medications, and monitoring equipment.

## **STATEMENT OF THE PROBLEM**

This study aimed to determine the level of awareness and preventive practice on the complications of home delivery of selected women in Cagayan de Oro City.

Specifically, this study sought to answer the following questions:

1. What is the level of awareness on the complications of home delivery in terms of:
  - 1.1 intrapartum period problems, and
  - 1.2 postpartum period complications?
2. What is the extent of the application of the preventive measures of the common complications in terms of:
  - 2.1 intrapartum problems interventions, and
  - 2.2 postpartum care or complications interventions?
3. Is there any significant relationships on the level of awareness on the application of preventive measures on the common complications of home delivery?

## **METHODS**

### **Research Design**

This study utilized the descriptive type of research to determine the level of awareness on the complications of home delivery among the respondents. The descriptive method of research is a fact-finding study with adequate and accurate interpretation of the findings. It describes with emphasis what actually exists such as current conditions, practices, situations, or any phenomena. This method of research is appropriate in observing, describing and documenting in every aspects of the study.

### **Research Setting**

The researchers aimed to conduct this study in those secluded areas in Cagayan

de Oro City where homebirth is prevalent. These areas include barangay Cugman, Consolacion, Cugman and Nazareth. From Liceo de Cagayan University, Macasandig and Nazareth can be reached through riding a public utility jeepney going Carmen to Divisoria. From there, the said Barangay can be reached by riding a *motorela*. Barangay Consolacion can be reached by traveling a jeepney going to Capistrano; then ride a "trisikad" going to the place where the respondents were located. To reach Barangay Cugman, the reachers took a jeepney from Liceo going to Gaisano City. From there, they had to ride another jeepney, specifically Route C passing by Barangay Lapasan, Gusa and then Cugman.

Barangays Cugman and Consolacion are also located near the rivers and elevated areas where transportation is not well accessible. Most of the respondents in Barangay Consolacion are living approximately two kilometers away from the city proper; others live under the Marcos Bridge and riversides. The respondents in Barangay Cugman are living at dike areas located closely to the highway. Most of the respondents in Barangay Macasandig live along the riverside. Inaccessibility to health centers is not only the reason why they chose home delivery but mainly because of poverty and personal reasons.

### Respondents and Sampling Procedures

The respondents of this study were the selected women from different areas in Cagayan de Oro City, particularly Macasandig, Nazareth, Consolacion, and Cugman. Specifically, the researchers chose 75 respondents among these areas. The distribution of the respondents is shown in the table below.

Table 1. DISTRIBUTION OF THE RESPONDENTS

| Area         | Sample    | Percent (%) |
|--------------|-----------|-------------|
| Consolacion  | 20        | 26.67       |
| Nazareth     | 20        | 26.67       |
| Macasandig   | 20        | 26.67       |
| Cugman       | 15        | 20          |
| <b>Total</b> | <b>75</b> | <b>100%</b> |

The respondents were selected through purposive sampling, which means that a respondent is selected by the researchers subjectively. That is, the researchers believed it is appropriate to use this sampling method since the criteria will be set before a respondent could be included in the survey.

### Research Instrument

The researchers utilized a researcher-made questionnaire based on the intrapartum and postpartum problems and complications and on the management of these problems and complications of maternal and child health.

The research instrument consisted of two parts. The first part determines the



level of awareness on intrapartum and postpartum period problems and the complications of home delivery on selected woman in Cagayan de Oro City. The second part determines the extent of applications of the preventive practices of the intrapartum and postpartum period problems and complications.

### **Data Gathering Procedures**

To facilitate the gathering of data, a written letter is addressed to the Dean of the College of Nursing requesting for approval to conduct the study. Upon approval, the researchers conducted a reliability test, which was done by interviewing 10 qualified respondents randomly.

After the questionnaires had been proven reliable, the researchers asked permission from the Barangay Captains of Macasandig, Nazareth, Consolacion, and Cugman to conduct the study. The researchers personally distributed the questionnaires to the qualified respondents. But before the respondents started answering the questionnaires, an explanation was made clear regarding the purpose of the study. And, in some questions the respondents found difficulty in answering, the researchers gave clarifications to them. The respondents were then given ample time to answer all the questions. After, the questionnaires were then gathered for the statistical analysis and interpretation of data.

To really validate the data that the respondents indicated on the questionnaires, an interview was done. During the interview, the time span for each respondent ranged from 30 to 40 minutes.

The researchers conducted a house to house survey of qualified respondents since the health centers were not able to provide the lists of cases of women who had undergone home deliveries.

The evaluation system of this study to determine the level of awareness of the respondents regarding the intrapartum and postpartum problems and complications in the home delivery setting, the following scale is observed:

Table 2. Scale

| SCALE | RANGE     | VERBAL<br>DESCRIPTION | INTERPRETATION                                                       |
|-------|-----------|-----------------------|----------------------------------------------------------------------|
| 3     | 2.35-3.00 | High Awareness        | Fully understands the said problem or complication.                  |
| 2     | 1.68-2.34 | Average Awareness     | Partly understands some aspects of the said problem or complication. |
| 1     | 1.00-1.67 | Low Awareness         | Recognize the said problem or complications at the minimum.          |

To determine the level of implementation of the preventive practices, the following scale is observed:

Table 3 Scale for Preventive Practices

| SCALE | RANGE     | VERBAL<br>DESCRIPTION  | INTERPRETATION                                                                                 |
|-------|-----------|------------------------|------------------------------------------------------------------------------------------------|
| 3     | 2.35-3.00 | Highly Implemented     | Frequently applies the preventive measures on the problems and complications of home delivery. |
| 2     | 1.68-2.34 | Moderately Implemented | Seldom applies the preventive measures on the problems and complications of home delivery.     |
| 1     | 1.00-1.67 | Lowly Implemented      | Does not apply the preventive measures on the problems and complications of home delivery      |

### Statistical Techniques

The following statistical tools were used in the analysis and interpretation of the data gathered:

1. The weighted mean was used to determine the level of awareness on the intrapartum and postpartum period problems and complications. It also determines the extent of application of the preventive practices on these problems and complications.

2. The Pearson Correlation Coefficient was used to test the significant relationship between the level of awareness and the preventive practices on the problems and complications of home delivery.

## RESULTS AND DISCUSSIONS

### A. INTRAPARTUM PROBLEMS

Table 1 represents the problems with the fetus during intrapartum period. With regards to the level of awareness of these problems, it explains that the respondents are averagely aware of the troubles concerning the fetus that can be experienced during delivery.

Clearly, the highest mean was 2.33, which refers to the abnormal positions and presentations of the fetus in the uterus. Joy Princeton Clausen on its book *Maternity Nursing Today* stated that, in order for a normal labor and delivery to occur, each of the components (power, passenger, and passage) must be normal. When abnormalities are present in one or more of them, a complicated labor and delivery exist to some degree.

Table 4. LEVEL OF AWARENESS ON THE PROBLEMS WITH THE FETUS DURING INTRAPARTUM PERIOD

| VARIABLES                                                                                          | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|----------------------------------------------------------------------------------------------------|------------------|-----------------------|
| PROBLEMS WITH THE FETUS                                                                            |                  |                       |
| a. A difficult labor is caused by abnormal positions and presentations of the fetus in the uterus. | 2.33             | HIGH<br>AWARENESS     |
| b. A difficult labor is caused by abnormally large fetal head.                                     | 2.09             | AVERAGE<br>AWARENESS  |
| c. A difficult labor is caused by the delivery of more than one fetus.                             | 2.12             | AVERAGE<br>AWARENESS  |
| TOTAL                                                                                              | 2.18             | AVERAGE<br>AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34); LOW AWARENESS (1.00-1.67)

Table 2 represents the problems regarding the passageway of the fetus during birth. Inadequate size of the pelvis that causes labor to be prolonged, accounts for the highest mean (2.11). According to the book Maternal and Child Health Nursing by Adele Pilliteri, an ideal pelvis for birth is called a Gynecoid, in which the inlet of the pelvis is well rounded forward and backward; and the pubic arch is wide.

The lowest mean refers to the problem of prolonged labor that is caused by a full bladder. According once more to the book Maternal and Child Health Nursing by Adele Pilliteri, a full bladder can impede fetal descent because it causes compression on the lower part of the uterus.

TABLE 6. LEVEL OF AWARENESS ON THE PROBLEMS WITH THE PASSAGEWAY DURING INTRAPARTUM PERIOD

| VARIABLES                                                                                   | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|---------------------------------------------------------------------------------------------|------------------|-----------------------|
| PROBLEMS WITH THE<br>PASSAGEWAY                                                             |                  |                       |
| a. A difficult and prolonged labor and delivery is caused by inadequate size of the pelvis. | 2.11             | AVERAGE<br>AWARENESS  |
| b. Prolonged labor may be caused by a full bladder.                                         | 1.86             | AVERAGE<br>AWARENESS  |
| TOTAL                                                                                       | 1.98             | AVERAGE<br>AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34); LOW AWARENESS (1.00-1.67)



In relation to problems with uterine contractions, Table 3 shows that the respondents were averagely aware that an insufficient uterine force prolongs labor. This obtains the highest mean of 1.93. This aspect is necessary because uterine contraction is the one that aids in expulsion of the fetus out of the uterus. However, problems regarding the premature separation of the placenta caused by a strong uterine contraction were rated unaware because of lack of experience in such complication or problem, which usually happens during the third trimester of pregnancy.

TABLE 7. LEVEL OF AWARENESS ON THE PROBLEMS WITH UTERINE CONTRACTIONS DURING INTRAPARTUM PERIOD

| VARIABLES                                                                               | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|-----------------------------------------------------------------------------------------|------------------|-----------------------|
| PROBLEMS WITH UTERINE<br>CONTRACTIONS                                                   |                  |                       |
| a. An insufficient uterine force causes prolonged labor.                                | 1.93             | AVERAGE<br>AWARENESS  |
| b. A strong uterine force causes the uterus to rupture.                                 | 1.79             | AVERAGE<br>AWARENESS  |
| c. A strong uterine force causes the placenta to prematurely separate from the uterus.  | 1.66             | LOW<br>AWARENESS      |
| TOTAL                                                                                   | 1.78             | AVERAGE<br>AWARENESS  |
| HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS<br>(1.68-2.34); LOW AWARENESS (1.00-1.67) |                  |                       |

Table 4 signifies the level of awareness on the problems with the placenta and umbilical cord during birth. Apparently, the highest mean was 2.14, which refers to the cord coil that deprives the infant of necessary oxygen supply. According to the book *Maternal and Child Health Nursing* by Adele Pilliteri, the rapid rate of blood flow through the cord makes it unlikely that the cord will twist or knot enough to interfere with fetal oxygen supply. In about 20% of all births, a loose loop of cord is found around the fetal neck (nuchal cord). If this loop of cord is removed before the newborn's shoulders are extruded, so there is no traction in it, the oxygen supply remains unimpaired. The lowest mean for this grouping was the awareness of the problem regarding fetal nutrition and oxygen supply caused by a placenta previa. It refers to the implantation of the placenta in the lower uterine segment so it will certainly block the passageway of the fetus. The incidence is approximately 5 per 1,000 pregnancies (Scott, 2000b). Other variables include awareness that premature separation of the placenta causes severe pain and bleeding, with a mean of 2.01; and awareness that slipped umbilical cord that may or may not be visible in the vagina compresses the cord and lessens oxygen supply to the

fetus, with a mean of 1.95. Every variable are considered to have average awareness. The respondents may or may not have experienced these problems during birth but the lack of awareness as to where the problem may lead to is a factor to be judged also.

Table 8 . LEVEL OF AWARENESS ON THE PROBLEMS WITH THE PLACENTA AND UMBILICAL CORD DURING INTRAPARTUM PERIOD

| VARIABLES                                                                                                                            | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------|
| PROBLEMS WITH THE PLACENTA<br>AND UMBILICAL CORD                                                                                     |                  |                       |
| a. A placenta that partially or totally covers the cervical canal causes compression on the placenta as the fetal head descends.     | 1.93             | AVERAGE<br>AWARENESS  |
| b. Premature separation of the placenta causes severe pain and bleeding.                                                             | 2.01             | AVERAGE<br>AWARENESS  |
| c. A slipped umbilical cord that may or may not be visible in the vagina compresses the cord and lessens oxygen supply to the fetus. | 1.95             | AVERAGE<br>AWARENESS  |
| d. A cord that is coiled around the neck of the infant deprives the infant of the necessary supply of oxygen.                        | 2.14             | AVERAGE<br>AWARENESS  |
| TOTAL                                                                                                                                | 2.00             | AVERAGE<br>AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34); LOW AWARENESS (1.00-1.67)

## B. POSTPARTUM COMPLICATIONS

Table 5 represents the level of awareness on postpartum hemorrhage. The highest mean refers to postpartum bleeding that is caused by retained placental fragments. Based on the book *Maternal and Child Health Nursing* by Adele Pillitteri, retained placental fragments keeps the uterus from contracting fully, thus, uterine bleeding occurs. The lowest mean was 1.93 - the awareness that postpartum hemorrhage is caused by relaxation of the uterus, a condition in which the uterus fails to contract. According to a World Health Organization (WHO) analysis, of the 585,000 women who die each year from pregnancy-related causes, about one in every four dies from hemorrhaging. According to one source also, Dr. Fortney on an article [www.fhi.org](http://www.fhi.org), prevention strategies have traditionally focused on the prenatal and delivery periods, yet a recent analysis concluded that the postpartum period is also critical. "In both developing countries and the United States, more than 60 percent of maternal deaths occurred in the

postpartum period, and hemorrhage is the most common leading problem" reported the analysis of nine studies published since 1985.

TABLE 9. LEVEL OF AWARENESS ON POSTPARTUM HEMORRHAGE DURING POSTPARTUM PERIOD

| VARIABLES                                                                             | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|---------------------------------------------------------------------------------------|------------------|-----------------------|
| POSTPARTUM HEMORRHAGE                                                                 |                  |                       |
| a. Postpartum Hemorrhage is caused by relaxation of the uterus.                       | 1.93             | AVERAGE<br>AWARENESS  |
| b. Postpartum Hemorrhage is caused by lacerations in the cervix, vagina and perineum. | 2.08             | AVERAGE<br>AWARENESS  |
| c. Postpartum Hemorrhage is caused by retained portion of the products of pregnancy.  | 2.24             | AVERAGE<br>AWARENESS  |
| TOTAL                                                                                 | 2.08             | AVERAGE<br>AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34);  
LOW AWARENESS (1.00-1.67)

Table 6 represents the level of awareness on puerperal infection after birth. The highest mean was the awareness that puerperal infection is caused by retained placental fragments (2.36). This means that the respondents have high awareness of this problem, which may be based on their experiences also. The lowest mean was the awareness that puerperal infection is caused by local vaginal infection that was present at the time of birth. Infection of the reproductive tract is another leading cause of maternal mortality (Cunningham et al., 2001). Theoretically, the uterus is sterile during pregnancy and until the membranes rupture. Yet, the risk of infection is even greater if tissue edema and trauma are present.

TABLE 10. LEVEL OF AWARENESS ON PUERPERAL INFECTION DURING POSTPARTUM PERIOD

|                                                                                                    | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION |
|----------------------------------------------------------------------------------------------------|------------------|-----------------------|
| PUERPERAL INFECTIONS                                                                               |                  |                       |
| a. Puerperal Infection is caused by rupture of the membranes over 24 hours before birth.           | 2.12             | AVERAGE<br>AWARENESS  |
| b. Puerperal Infection is caused by retained placental fragments.                                  | 2.36             | HIGH AWARENESS        |
| c. Puerperal Infection is caused by local vaginal infection that was present at the time of birth. | 2.03             | AVERAGE<br>AWARENESS  |
| TOTAL                                                                                              | 2.17             | AVERAGE<br>AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34);  
LOW AWARENESS (1.00-1.67)

Table 7 represents the level of awareness on thrombophlebitis after birth. It can be observed from the table that the highest mean was the awareness that thrombophlebitis is caused by prolonged delivery. Thrombophlebitis is an inflammation of the lining of a blood vessel accompanied by the formation of a clot. It occurs most commonly as a result of trauma to the vessel wall, hypercoagulability of the blood, infection, chemical irritation, and prolonged sitting, standing or immobilization. Thrombophlebitis is generally evident, with the vessels feels hard and cordlike and is extremely sensitive to pressure. The surrounding area may be erythematous and warm to touch, and the entire leg may be pale and swollen. Women who have varicose veins, those who are 30 years of age with increased parity, or those who have a high incidence of thrombophlebitis in their family, are more prone to this (Salonen et al., 2001)

TABLE 7. LEVEL OF AWARENESS ON THROMBOPHLEBITIS DURING POSTPARTUM PERIOD

| VARIABLES                                                                                                                                      | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION        |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------|
| <b>THROMBOPHLEBITIS</b>                                                                                                                        |                  |                              |
| a. Thrombophlebitis is caused by increased viscosity of blood that increases blood clotting and blocks flow of blood in the lower extremities. | 1.80             | AVERAGE<br>AWARENESS         |
| b. Thrombophlebitis is caused by dilation of the lower extremity veins due to pressure of the fetal head during pregnancy and birth.           | 1.82             | AVERAGE<br>AWARENESS         |
| c. Thrombophlebitis is caused by prolonged delivery that leads to immobility, pooling, and clotting of blood in the lower extremity.           | 1.88             | AVERAGE<br>AWARENESS         |
| <b>TOTAL</b>                                                                                                                                   | <b>1.83</b>      | <b>AVERAGE<br/>AWARENESS</b> |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34); LOW AWARENESS (1.00-1.67)

Table 8 represents the level of awareness on urinary system problem after birth. Usually, the most common and known strategy that leads to urinary infection is the poor perineal hygiene after delivery. Preferably, perineal hygiene should be prioritized especially after birth because of vulnerability to infection. One study shows the reason that even though this seems very simple; it is difficult for a woman to accomplish it because of pain from lacerations after delivery. This hinders the woman from doing this hygienic practice. The lowest mean was 1.93 - the awareness that urinary retention is caused by decreased bladder sensation from the pressure of birth. They do are aware of the statement, but still lack some knowledge about it. Swelling or bruising of the tissues surrounding the bladder and urethra may lead to difficulty urinating, but this usually resolves on its own.

**TABLE 8. LEVEL OF AWARENESS ON URINARY SYSTEM PROBLEM DURING POSTPARTUM PERIOD**

| VARIABLES                                                                                 | WEIGHTED MEAN | VERBAL DESCRIPTION |
|-------------------------------------------------------------------------------------------|---------------|--------------------|
| <b>URINARY SYSTEM PROBLEMS</b>                                                            |               |                    |
| a. Urinary retention is caused by decreased bladder sensation from the pressure of birth. | 1.93          | AVERAGE AWARENESS  |
| b. Urinary tract infection is caused by poor perineal hygiene after delivery.             | 2.36          | HIGH AWARENESS     |
| c. Urinary tract infection is caused by failure to completely empty the bladder.          | 2.29          | AVERAGE AWARENESS  |
| TOTAL                                                                                     | 2.19          | AVERAGE AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34);  
LOW AWARENESS (1.00-1.67)

Table 9 refers to the level of awareness on the emotional and psychological problems after birth. The highest mean was 2.31; a congenital abnormality is caused by ingestion of medicines that is teratogenic. Although not all drugs cross the placenta (e.g., heparin, because of its large molecular size), most do. Also, even though most herbs are safe, ginseng, for example, used to improve the general well-being, and senna, used to relieve constipation, may not be safe (Allaire et al., 2000). The lowest mean was 1.90 - postpartum depression is caused by changes in hormone levels that occur after pregnancy. Almost every woman notices some immediate feelings of sadness (postpartal blues) after childbirth. This probably occurs as a response to the anticlimactic feeling after birth and probably is related to hormonal shifts as estrogen, progesterone, and corticotropin-releasing hormone levels in her body decline (Farrington & Ward, 2000)

**TABLE 9. LEVEL OF AWARENESS ON THE EMOTIONAL AND PSYCHOLOGICAL COMPLICATIONS OF PUERPERIUM**

| VARIABLES                                                                                       | WEIGHTED MEAN | VERBAL DESCRIPTION |
|-------------------------------------------------------------------------------------------------|---------------|--------------------|
| <b>EMOTIONAL AND PSYCHOLOGICAL COMPLICATIONS OF PUERPERIUM</b>                                  |               |                    |
| a. A congenital abnormality is caused by defects in the genes.                                  | 2.13          | AVERAGE AWARENESS  |
| b. A congenital abnormality is caused by ingestion of medicines that is teratogenic.            | 2.31          | AVERAGE AWARENESS  |
| c. A congenital abnormality is caused by pre-existing serious medical conditions of the mother. | 2.14          | AVERAGE AWARENESS  |
| d. Postpartum Depression is caused by changes in hormone levels that occur after pregnancy.     | 1.90          | AVERAGE AWARENESS  |
| TOTAL                                                                                           | 2.11          | AVERAGE AWARENESS  |

HIGH AWARENESS (2.35-3.00); AVERAGE AWARENESS (1.68-2.34);  
LOW AWARENESS (1.00-1.67)



## A. INTRAPARTUM INTERVENTIONS

Table 10 shows that the extent of application of the preventive measure during intrapartum period among women in Cagayan de Oro City is generally described as Highly Implemented, with the mean of (1.86). Specifically, the item with the highest mean (1.97) is on the Insufficient uterine contractions can be prevented by stimulating the nipples, this implies that there is a moderate consciousness on the side of intervening there difficulties during labor process. On the other hand, the item with the lowest mean (1.63) that is, uterine rupture can be prevented by using medication called tocolytics. This could probably imply that the use of medications during labor have not been applied to woman who delivers her child at home.

TABLE 10. THE EXTENT OF THE APPLICATION OF THE PREVENTIVE MEASURES

| DURING INTRAPARTUM PERIOD                                                                                                                                                                                       |                  |                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|
| VARIABLES                                                                                                                                                                                                       | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION     |
| a. Insufficient uterine contractions can be prevented by stimulating the nipples.                                                                                                                               | 1.97             | MODERATELY<br>IMPLEMENTED |
| b. Uterine rupture can be prevented by using medication called tocolytics.                                                                                                                                      | 1.63             | LOWLY<br>IMPLEMENTED      |
| c. Decreased oxygen and nutrient supply to the fetus in a prolapsed umbilical cord can be prevented by manual elevation of the fetal head off the cord.                                                         | 1.87             | MODERATELY<br>IMPLEMENTED |
| d. Encourage the woman to void at least 2 to 4 hours during labor.                                                                                                                                              | 1.94             | MODERATELY<br>IMPLEMENTED |
| e. Decreased oxygen supply to the fetus in a coiled umbilical cord can be prevented by inserting the first two fingers between the neck of the infant and the cord and slip the cord through the infant's body. | 1.82             | MODERATELY<br>IMPLEMENTED |
| TOTAL                                                                                                                                                                                                           | 1.86             | MODERATELY<br>IMPLEMENTED |

HIGHLY IMPLEMENTED (2.35-3.00); MODERATELY IMPLEMENTED (1.68-2.34);  
LOWLY IMPLEMENTED (1.00-1.67)

## B. POST PARTUM INTERVENTIONS

In table 11 represents the extent of application of preventive measures to intervene postpartum hemorrhage among women in Cagayan de Oro City, it can be seen from the table that the respondents are moderately capable in initiating postpartum

interventions on such problem as evidenced by the overall mean of (2.02). This means that selected woman in Cagayan de Oro City are averagely aware on how to prevent heavy bleeding when the uterus fails to properly contract after the placenta has been delivered, or because of tears in the uterus, cervix or vagina after child's birth.

Noticeably, the highest mean was (2.11) that Postpartum Hemorrhage can be prevented by ice application at the hypogastrium and uterine massage. These kinds of interventions are common even in hospital settings because it could help a lot on the physiologic effect to help minimize or prevent bleeding. The lowest mean for this category was (1.91), falls under Postpartum Hemorrhage can be prevented by nipple stimulation and breastfeeding. This means that in a home setting, stimulation of the nipples that helps prevent hemorrhage has been moderately implemented.

TABLE 11. THE EXTENT OF THE APPLICATION OF PREVENTIVE MEASURES TO INTERVENE POSTPARTUM HEMORRHAGE

| VARIABLES                                                                                             | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION     |
|-------------------------------------------------------------------------------------------------------|------------------|---------------------------|
| a. Postpartum Hemorrhage can be prevented by nipple stimulation and breastfeeding.                    | 1.91             | MODERATELY<br>IMPLEMENTED |
| b. Postpartum Hemorrhage can be prevented by ice application at the hypogastrium and uterine massage. | 2.11             | MODERATELY<br>IMPLEMENTED |
| c. Postpartum Hemorrhage can be prevented by dilatation and curettage.                                | 2.04             | MODERATELY<br>IMPLEMENTED |
| TOTAL                                                                                                 | 2.02             | MODERATELY<br>IMPLEMENTED |

HIGHLY IMPLEMENTED (2.35-3.00); MODERATELY IMPLEMENTED (1.68-2.34);  
LOWLY IMPLEMENTED (1.00-1.67)

In table 12, in terms of the extent of the application of preventive measures to intervene puerperal infection in table 14, the over all mean was (2.32) which is on a average awareness.

The highest mean in this category is performing proper perineal hygiene to prevent infection was (2.39); and the use of antibacterial medication was (2.38) and was the lowest mean from all the choices.

This means that there is a moderate implementation in line with the application of preventive practices to prevent such complications that would somehow occur in a postpartum mother.

TABLE 12. THE EXTENT OF THE APPLICATION OF PREVENTIVE MEASURES TO INTERVENE PUERPERAL INFECTION

| VARIABLES                                                                               | WEIGHTED<br>MEAN | VERBAL DESCRIPTION        |
|-----------------------------------------------------------------------------------------|------------------|---------------------------|
| a. Puerperal Infection can be prevented by proper perineal hygiene.                     | 2.39             | HIGHLY<br>IMPLEMENTED     |
| b. Puerperal Infection can be prevented by the removal of retained placental fragments. | 2.18             | MODERATELY<br>IMPLEMENTED |
| c. Puerperal Infection can be prevented by antibacterial medications.                   | 2.38             | HIGHLY<br>IMPLEMENTED     |
| TOTAL                                                                                   | 2.32             | MODERATELY<br>IMPLEMENTED |

HIGHLY IMPLEMENTED (2.35-3.00); MODERATELY IMPLEMENTED (1.68-2.34);  
LOWLY IMPLEMENTED (1.00-1.67)

In table 13, in terms of bed rest while elevating the affected part of the leg (2.09), applying warm compress to the affected part of the leg (2.13) and wearing protective stockings (2.03) which all refer to moderate implementation rating (2.09). This means that the applications of such practices were moderately known to them on how to intervene the inflammation of the lining of a blood vessel with the formation of blood clots. If thrombophlebitis is in a superficial vein, just under your skin, serious complications are rare. However, if the clot occurs in a deep vein, the risk of serious complications is greater. Recommend self-care steps that include applying heat to the painful area, elevating the affected leg and using a nonsteroidal anti-inflammatory drug. The condition usually subsides within a week or two. These help prevent recurrent swelling and reduce the chances of complications of deep vein thrombosis. (<http://www.medicinenet.com/script/main/>)

TABLE 13. THE EXTENT OF THE APPLICATION OF PREVENTIVE MEASURES TO INTERVENE THROMBOPHLEBITIS DURING POSTPARTUM PERIOD

| VARIABLES                                                                                       | WEIGHTED<br>MEAN | VERBAL DESCRIPTION        |
|-------------------------------------------------------------------------------------------------|------------------|---------------------------|
| a. Thrombophlebitis can be prevented by bed rest while elevating the affected part of the leg.  | 2.09             | MODERATELY<br>IMPLEMENTED |
| b. Thrombophlebitis can be prevented by applying warm compress to the affected part of the leg. | 2.13             | MODERATELY<br>IMPLEMENTED |
| c. Thrombophlebitis can be prevented by wearing protective stockings.                           | 2.03             | MODERATELY<br>IMPLEMENTED |
| TOTAL                                                                                           | 2.09             | MODERATELY<br>IMPLEMENTED |

HIGHLY IMPLEMENTED (2.35-3.00); MODERATELY IMPLEMENTED (1.68-2.34);  
LOWLY IMPLEMENTED (1.00-1.67)

In table 14 represents the extent of application of preventive measures to intervene urinary system problems among women in Cagayan de Oro City. It can be noted that the item with the highest mean rating (2.47) that Urinary tract infection can be prevented by increasing fluid intake. This implies that the respondents are very much aware of how water hydration is important to postpartum woman in tackling about. On the other hand, the item with the lowest mean rating (1.99) is that, Urinary retention can be prevented by bladder training.

Swelling or bruising of the tissues surrounding the bladder and urethra may lead to difficulty urinating. To encourage urination, it is recommended that a woman contract and release her pelvic muscles while sitting on the toilet. It may help to place hot or cold packs on the tissue between the vaginal opening and anus, straddle the toilet like a saddle or pour water across your vulva while you urinate.

Difficulty urinating usually resolves on its own. When treated promptly and properly, these problems rarely lead to complications. But left untreated, a urinary tract infection can become something more serious than a set of uncomfortable symptoms. (<http://www.medicinenet.com/script/main/>)

TABLE 14. THE EXTENT OF THE APPLICATION OF PREVENTIVE MEASURES TO INTERVENE URINARY SYSTEM PROBLEMS DURING POSTPARTUM PERIOD

| VARIABLES                                                               | WEIGHTED<br>MEAN | VERBAL<br>DESCRIPTION     |
|-------------------------------------------------------------------------|------------------|---------------------------|
| a. Urinary retention can be prevented by bladder training.              | 1.99             | MODERATELY<br>IMPLEMENTED |
| b. Urinary tract infection can be prevented by good perineal hygiene.   | 2.30             | MODERATELY<br>IMPLEMENTED |
| c. Urinary tract infection can be prevented by increasing fluid intake. | 2.47             | HIGHLY<br>IMPLEMENTED     |
| TOTAL                                                                   | 2.26             | MODERATELY<br>IMPLEMENTED |

HIGHLY IMPLEMENTED (2.35-3.00); MODERATELY IMPLEMENTED (1.68-2.34);  
LOWLY IMPLEMENTED (1.00-1.67)

Table 15 presents represents the extent of application of preventive measures to intervene urinary system problems among women in Cagayan de Oro City. The data shows that the overall mean rating is (2.17) with a verbal description of Moderately Implemented. The item with the highest mean rating (2.23) are Postpartum Depression can be prevented by getting emotional and psychological support from others; and Postpartum Depression can be prevented by getting adequate rest and sleep. The item with the lowest mean rating (2.05) is on the Postpartum Depression can be prevented by getting daily walks or exercise.

Women's bodies are the scene of a powerful changing tide of hormones in the days and weeks after a baby is born. The rising hormone levels that gradually effected the incredible changes in a woman's body during the time she was carrying your daughter

have now precipitously dropped. Most new mothers will have periods of weepiness, mood swings, anxiety, unhappiness, and regret. Usually this lasts for a few days or less and is quickly forgotten. It's not unusual, however, for the blue period to come and go for six weeks. A true grief reaction, at a time of great stress (and insistent noise), in a person who is chronically sleep deprived, all built on a shifting foundation of tremendous hormonal surges. Most of the time though, the powerful positive feelings that also accompany this time of new beginnings soon displace the sadness (Alan Greene MD FAAP).

TABLE 15. THE EXTENT OF APPLICATION OF PREVENTIVE MEASURES TO INTERVENE EMOTIONAL AND PSYCHOLOGICAL COMPLICATIONS DURING POSTPARTUM PERIOD

| VARIABLES                                                                                             | WM   | VERBAL DESCRIPTION     |
|-------------------------------------------------------------------------------------------------------|------|------------------------|
| a. Postpartum Depression can be prevented by getting emotional and psychological support from others. | 2.23 | MODERATELY IMPLEMENTED |
| b. Postpartum Depression can be prevented by getting adequate rest and sleep.                         | 2.23 | MODERATELY IMPLEMENTED |
| c. Postpartum Depression can be prevented by getting daily walks or exercise.                         | 2.05 | MODERATELY IMPLEMENTED |
| TOTAL                                                                                                 | 2.17 | MODERATELY IMPLEMENTED |

The correlation coefficient in postpartum hemorrhage and prevention of postpartum hemorrhage was (.4300), supported by probability level of (.000). The data revealed that there is significant relationship between postpartum hemorrhage and prevention of postpartum hemorrhage. The correlation coefficient in postpartum hemorrhage and prevention of puerperal infections was (.3606), supported by a probability level of (.003). The data revealed that there is significant relationship between postpartum hemorrhage and prevention of puerperal infections. The correlation coefficient in postpartum hemorrhage and prevention of thrombophlebitis was (.4591), supported by a probability level of (.000). The data revealed that there is significant relationship between postpartum hemorrhage and prevention of thrombophlebitis. The correlation coefficient in postpartum hemorrhage and prevention of urinary system problems was (.3671), supported by probability level of (.003). The data revealed that there is significant relationship between postpartum hemorrhage and prevention of urinary system problems. The correlation coefficient in postpartum hemorrhage and prevention of emotional and psychological problem was (.4076), supported by probability level of (.001). The data revealed that there is significant relationship between postpartum hemorrhage and prevention of emotional and psychological problem.

The correlation coefficient in puerperal infections and prevention of postpartum



hemorrhage was (.4289), supported by probability level of (.000). The data revealed that there is significant relationship between puerperal infections and prevention of postpartum hemorrhage. The correlation coefficient in puerperal infections and prevention of puerperal infections was (.4217), supported by probability level of (.000). The data revealed that there is significant relationship between puerperal infections and prevention of puerperal infections. The correlation coefficient in puerperal infections and prevention of thrombophlebitis was (.4393), supported by probability level of (.000). The data revealed that there is significant relationship between puerperal infections and prevention of thrombophlebitis. The correlation coefficient in puerperal infections and prevention of urinary system problems was (.4911), supported by probability level of (.000). The data revealed that there is significant relationship between puerperal infections and prevention of urinary system problems. The correlation in puerperal infections and prevention of emotional and psychological problem was (.5522), supported by probability level of (.000). The data revealed that there is significant relationship between puerperal infections and prevention of emotional and psychological problem.

The correlation coefficient in thrombophlebitis and prevention of postpartum hemorrhage was (.0267), supported by probability level of (.833). The data revealed that there is no significant relationship between thrombophlebitis and prevention of postpartum hemorrhage. The correlation coefficient in thrombophlebitis and prevention of puerperal infections was (.0334), supported by probability level of (.792). The data revealed that there is no significant relationship between thrombophlebitis and prevention of puerperal infections. The correlation coefficient in thrombophlebitis and prevention of thrombophlebitis was (.0979), supported by probability level of (.438). The data revealed that there is no significant relationship between thrombophlebitis and prevention of thrombophlebitis. The correlation coefficient in thrombophlebitis and prevention of urinary system problems was (-.0015), supported by probability level of (.990). The data revealed that there is no significant relationship between thrombophlebitis and prevention of urinary system problems. The correlation coefficient in thrombophlebitis and prevention of emotional and psychological problem problems was (-.1079), supported by probability level of (.392). The data revealed that there is no significant relationship between thrombophlebitis and prevention of emotional and psychological problem.

The correlation coefficient in urinary system problems and prevention of postpartum hemorrhage was (.4124), supported by probability level of (.001). The data revealed that there is significant relationship between urinary system problems and prevention of postpartum hemorrhage. The correlation coefficient in urinary system problems and prevention of puerperal infections was (.5981), supported by probability level of (.000). The data revealed that there is significant relationship between urinary system problems and prevention of puerperal infections. The correlation coefficient in urinary system problems and prevention of thrombophlebitis was (.3966), supported by probability level of (.001). The data revealed that there is significant relationship between urinary system problems and prevention of postpartum hemorrhage. The correlation coefficient in urinary system problems and prevention of urinary system problems was (.4045), supported by probability level of (.001). The data revealed that there is

significant relationship between urinary system problems and prevention of urinary system problems. The correlation coefficient in urinary system problems and prevention of emotional and psychological problem was (.1691), supported by probability level of (.178). The data revealed that there is no significant relationship between urinary system problems and prevention of emotional and psychological problem.

The correlation coefficient in emotional and psychological complications of puerperium and prevention of postpartum hemorrhage was (.4125), supported by probability level of (.001). The data revealed that there is significant relationship between emotional and psychological complications of puerperium and prevention of postpartum hemorrhage. The correlation coefficient in emotional and psychological complications of puerperium and prevention of puerperal infections was (.4639), supported by probability level of (.000). The data revealed that there is significant relationship between emotional and psychological complications of puerperium and prevention of puerperal infections. The correlation coefficient in emotional and psychological complications of puerperium and prevention of thrombophlebitis was (.4548), supported by probability level of (.000). The data revealed that there is significant relationship between emotional and psychological complications of puerperium and prevention of thrombophlebitis. The correlation coefficient in emotional and psychological complications of puerperium and prevention of urinary system problems was (.4143), supported by probability level of (.001). The data revealed that there is significant relationship between emotional and psychological complications of puerperium and prevention of urinary system problems. The correlation coefficient in emotional and psychological complications of puerperium and prevention of emotional and psychological problem was (.6831), supported by probability level of (.000). The data revealed that there is significant relationship between emotional and psychological complications of puerperium and prevention of postpartum hemorrhage. Therefore the data revealed that majority of the variables have a significant relationship which shows that the level of awareness on the application of preventive measure correlates to the common complication of home delivery during post partum period.

## CONCLUSIONS

Health as Expanding Consciousness practice gives insight not only to individual life patterns, but also to the pattern of the community interacting with the individual. Caring in the Health as Expanding Consciousness perspective is nonjudgmental, noninterventionist, and involves *being with* rather than just *doing for*. With the findings of this study, it is concluded that Margaret Newman's theory on the Health as Expanding Consciousness has a significant influence to the respondent's awareness through which health practice is not focused on simply treating disease, but rather on attending to how the current situation fits into the patient's evolving pattern of interaction with that which is meaningful to her, and how the patient chooses to move forward.

In addition, Betty Neuman's Systems Model views the client as an open system consisting of energy resources (physiologic, psychologic, socio-cultural, developmental,

and spiritual) surrounded by two concentric boundaries. Basing on this study, primary preventions focused on protecting the normal line of defense; and strengthening the flexible line of defense. It is carried out when a stressor is suspected or identified. A reaction has not yet occurred, but the degree of risk is known.

## RECOMMENDATIONS

In view of the findings and conclusions drawn from the study, the following recommendations are proposed for considerations:

1. The "hilots" must undergo special training from the health centers so they may be able to impart the knowledge to the mothers about the complications of home delivery, especially about the premature separation of the placenta from the uterus caused by a strong uterine contraction.

2. Basic knowledge about the application of preventive measure during intrapartum period such as the use of medication called tocolytics to prevent uterine rupture must also be imparted to the home birthing women to gain and enhance awareness so with its effects, contraindications and special precautions.

3. With a moderate level of awareness (based on results and findings), continuous education and information dissemination must also be made through especially by the Barangay Health Workers so that home birthing women may be updated and..

4. Future researchers may conduct a similar study on utilizing external evaluators to determine the level awareness on the complications and preventive measures on complications of home delivery, or for validation of the results on areas other than Barangay Macasandig, Nazareth, Consolacion and Cugman.

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