

Awareness of Postpartum Complications and Utilization of Preventive Measures Among Patients at Tagbilaran Maternity and Children’s Hospital, Tagbilaran City, Bohol

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ABSTRACT

The postpartum period, also known as puerperium and the “fourth trimester,” refers to the time after delivery when maternal physiologic changes related to pregnancy return to the nonpregnant state. In addition, to the physiologic changes and medical issues that may arise during this period, healthcare providers should be aware of the psychological needs of the postpartum mother and be sensitive to cultural differences surrounding childbirth, which may involve eating foods and restricting certain activities. This study aimed to assess the level of awareness of postpartum complications and utilization of preventive measures among patients, which hoped to come up with appropriate recommendations. Through a quantitative method, 50 randomly selected postpartum mothers were interviewed. The results revealed that they were moderately aware of the postpartum complications and moderately utilized preventive measures to prevent postnatal complications. Furthermore, it also revealed a significant correlation between the mothers’ level of awareness



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of postpartum complications and their level of utilization of preventive measures. The results implied the need to amplify and simplify information dissemination in the context of postpartum complications and preventive measures. It is recommended that there is a need to increase pregnant mothers' level of awareness of postpartum complications as well as the utilization of preventive measures.

Keywords: Postpartum, Postpartum Complications, Preventive Measures, Tagbilaran City, Social Sciences, ANOVA, Quantitative Method, Spearman Rank Correlation

INTRODUCTION

Improving maternal health has been of global concern for many years, yet the empirical evidence suggests that much work still needs to be done. In the Philippines, around 2000 mothers die due to pregnancy-related complications every year (Philippine Health Agenda 2016-2022). Women even die shortly after giving birth and thousands who make it survive to suffer from short-term or long-term health problems related to pregnancy and childbirth that impact their quality of life. Empirical evidence shows that after childbirth, most of these women were given no treatment. Unlike antenatal and obstetric care, relatively little knows about the factors that explain levels of postpartum care use (Pothisiri, 2010).

Estimates of maternal mortality show that every day more than a thousand women worldwide still die from complications related to pregnancy and childbirth (2007), although wide variations in rates of maternal mortality have been observed in different parts of the world. Of the estimated 536,000 maternal deaths annually, 99 percent occur in developing countries, and more than one-third in South Asia (188,000). Developing countries have a maternal mortality rate (MMR) of about 450 deaths per 100,000 live births, in stark contrast to 8-9 deaths per 100,000 live births in developed countries (Ronsmans & Graham, 2006).

In the year 2000, the United Nations agreed on eight Millennium Development Goals that it hoped to reach by 2015. The UN's MDGs listed "improving maternal health" as Goal No. 5 in which the target is to reduce maternal mortality ratio by three-quarters between 1990-2015 (World Health Organization, 2015).

For the *Philippines*, improving *maternal* health is an essential goal since the *maternal mortality* rate of the *Philippines* is high. In 2013, out of 2.4 million deliveries about 3,000 Filipino mothers died from childbirth. The target for the Philippines is the reduction of the MMR to 52 deaths per 100,000 live births by 2015 (Titus, 2018). In 2015, the maternal mortality rate decreased to a rate of 114 per 100,000 live births—still nowhere near the target that the MDGs established. The high rate of maternal mortality faced by the Philippines is responsible for a number of factors. Some of the leading causes of maternal deaths are hemorrhages, sepsis, obstructed labor, hypertensive disorders during pregnancy and complications associated with unsafe abortions. Getting a physician, nurse or midwife who has had formal birth training may decrease the rate of maternal mortality, but these trained birth attendants are currently only supervising. Others rely on traditional birthing attendants who do not have formal training and therefore are often unable to deal with complications.

As a nurse-midwife previously working in Tagbilaran Maternity and Children's Hospital the researcher observed that pregnant women have limited knowledge about postpartum complications, as observed postpartum complications are rarely discussed during the prenatal stage. On this note, this paper aimed to assess the level of awareness regarding postpartum complications and the utilization of preventive measures among postpartum mothers in the hope of providing a basis for the proposed Postpartum Health Educational Program in Tagbilaran Maternity and Children's Hospital in Tagbilaran City.

Specifically, it sought to answer the following questions:

1. What is the respondents' level of awareness of postpartum complications in the physiological and psychological contexts?
2. What is the respondents' level of utilization of preventive measures?
3. Is there a significant correlation between the respondents' level of awareness of postpartum complications and their level of utilization of preventive measures?

Hypotheses:

1. There is no significant correlation between the respondents' level of awareness of postpartum complications and their utilization of preventive measures.

RESEARCH METHODOLOGY

Design. The research is quantitative in nature. The researcher had chosen the evaluation research. Quantitative research is defined as a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques. In this study, quantitative evaluation research is used to find out how clients/patients in Tagbilaran Maternity and Children's Hospital in Tagbilaran City know the preventive knowledge of postpartum complications.

Environment. The present Tagbilaran Maternity and Children's Hospital (TMCH) was formerly the Tagbilaran Puericulture Center, a project of the Tagbilaran women's club. This was put-up shortly after the club was founded on September 21, 1921 and was purely a charity health center that relies on the donations coming from mothers who gave birth at the puericulture center. In addition, a monthly aid came from the municipal government of Tagbilaran.

Respondents. The respondents of the study were fifty (50) randomly selected postpartum mothers of Tagbilaran Maternity and Children's Hospital in Tagbilaran City who consented to take part in the study.

Instrument. The researchers utilized a researcher-made questionnaire as a data-gathering tool. The questions were from the gathered review of related literature and related studies, wherein it was subjected to face validity. The tool has undergone pilot testing and Cronbach's Alpha was computed to determine its reliability. For the level of awareness, Cronbach's Alpha values for Physiologic and Psychological aspects are 0.874 and 0.780, respectively. For the level of utilization, Cronbach's Alpha values are 0.781 and 0.712 for the Physiologic and Psychological aspects, respectively.

The responses was formatted using Likert-Scale wherein respondents of the study were asked to give a rating of their level of awareness on postpartum complications and the preventive measures utilized. Part 1 of the tool comprises the profile of the respondents. Part 2 included the items on their level of awareness on postpartum complications using the following scale:

Parameter:		
Rating	Descriptive Value	Interpretation
4	Extremely Aware	The postpartum patient is extremely aware on the postpartum complications in physiological context.
3	Moderately Aware	The postpartum patient is moderately aware on the postpartum complications in physiological context.
2	Slightly Aware	The postpartum patient is slightly aware on the postpartum complications in physiological context.
1	Not Aware At All	The postpartum patient is not aware at all on the postpartum complications in physiological context.

Part III comprises the level of awareness on the preventive measures

Parameter:		
Rating	Descriptive Value	Interpretation
4	Extremely Utilized	The preventive measures were extremely applied
3	Moderately Utilized	The patient moderately applied the preventive measures
2	Slightly Utilized	The patient slightly applied the preventive measures
1	Not Utilized At All	The preventive measures were not applied at all

Ethical Consideration. Prior to data gathering, the study underwent ethics review by the University of Bohol Research Ethics Committee. The research ensures strict compliance of the ethical standards and procedures where a written informed consent will be presented and explained to the respondents prior to participation. Questionnaires and consent were translated to the local language to make sure the respondents properly understand everything. Anonymity was strictly ensured, and data privacy was observed. Participation was voluntary, and they can withdraw from the study at any time without penalty or consequences should they feel that they are violated. They were treated with utmost respect and dignity; their rights and welfare will be a primary concern. If there was any potential harm or risk to the participants is expected, they were informed before giving their signed consent.

Statistical Treatment of Data. In this study, percentages, weighted mean, and spearman rank correlation were employed in the statistical analysis of the data.

RESULTS AND DISCUSSION

Level of Awareness of Postpartum Complications. In the physiological aspect, results revealed that patients were moderately aware with a composite mean of 2.96. The statement on “too much loss of blood can cause death” ranked as the highest among all items with a rating of 3.32 derived as extremely aware. While second from the ranking was the statement on “poor urinary elimination and improper technique in wiping the perineal area after urination and defecation can cause urinary tract infection” with a rating of 3.12 derived as moderately aware. Third from the ranking was the item on “vaginal bleeding will result when the uterus relaxes” with a score of 3.06 also obtained as moderately aware. On the other hand, the item on “prolong labor can cause relaxation of the uterus which lead to bleeding after delivery” ranked as the lowest with a rating of 2.68 derived as moderately aware. Second from the bottom was the item on “ruptured perineal varicosities and laceration of the lower genital tract can cause vaginal bleeding” with a rating of 2.74 still derived as moderately aware. Third from the bottom rank were the items on “retention of placenta can result to bleeding” and “of the uterus after birth is potentially a life-threatening complication” ranked as the second from the bottom with a rating of 2.88 still derived as moderately aware. Looking at the mothers’ profile specifically on their educational attainment, the least rated items were too technical and theoretical that only midwives by profession or any healthcare givers possess the knowledge on the stated complications. According to Kumbani and McInerney (2006), women who had completed primary education had higher awareness of danger signs than women with incomplete or no formal education. Better education is associated with enlightenment and awareness of different health conditions although exposure to information is crucial.

In terms of the psychological aspect, results showed that patients were moderately aware with a composite mean of 2.82. The statement on “unwanted pregnancy and lack of financial and emotional support can also lead depression” was ranked as the highest with a rating of 3.04; followed by item on “lack of stable relationship with parents or partners can lead to postpartum depression” with a rating of 3.02; and third on the rank is the item which states that “extreme Fatigue, sleep disturbance, and poor concentration” with a score of 2.92, all with a descriptive value of moderately aware. However, the items that were rated lowly by the

respondents are as follows: “Baby blues are transitory and will not interfere with parenting” was ranked as the lowest among all items with a rating of 2.46 derived as slightly aware.; followed by the item on “prolong the feeling of sadness is not common during postpartum” with a rating of 2.58 derived as moderately aware; and third from the bottom rank was the item on “unusual change in appetite is common when there is depression” with a rating of 2.72 derived as moderately aware. In terms of psychological complications, the least rated statements were not commonly experienced by the mothers as they are mostly married. They get the full support system from their husband making them confident and comfortable with the situation. It was found that psychosocial risk factors were found to be the most potent lack of social support, marital disharmony, depressive symptoms during pregnancy, history of emotional problems and prolonged infant health problems were most predictive of Paranoid Personality Disorder (Senecky, Agassi, Inbar, Horesh, Diamond, Bergman, and Apter, 2009).

Overall, results revealed that patients were moderately aware of the postpartum complications with a weighted mean of 2.886. The physiological aspect has relatively a higher rating (2.96) compared to the psychological aspect (2.82); though, despite the disparity, both have a rating of moderately aware. The result opposes the evidence that suggests that pregnancy and childbirth experiences impact the psychological state of women in the postpartum period. A prospective study on 825 women in southeast England found that measures of feelings of discomfort during pregnancy and childbirth were significantly associated with low psychological well-being in the postpartum period. Their subjective experience of childbirth appeared to have a greater impact on the psychological state than other more objective aspects of childbirth, such as instrumentation or clinical interventions during delivery, e.g., episiotomies, enemas, and forceps deliveries (O’Byrne, 2017).

Level of Utilization of Preventive Measures. In terms of patients’ level of utilization of preventive measures used to prevent physiological postpartum complications, patients gave a rating of “moderately utilized” with a composite mean of 3.08. The item on “Thorough hand washing before and after using the bathroom can prevent the occurrence of infection” and “Cleanliness and proper breast care (washing the breast daily with clean water) reduces the incidents of cracked nipples and fissures” ranked first and were moderately utilized by the respondents with

a weighted mean of 3.24; this is followed by the item “Observing foul-smelling discharges helps detect early infection” with a weighted mean of 3.24 calculated as moderately used. Third from the ranking was the item on “Proper perineal washing should be done regularly (at least two times a day or as needed)” with a rating of 3.22 derived as moderately utilized. Respondents also moderately used adherence to “A well-balanced diet promotes healing and prevents infection” with a weighted mean of 3.20 in preventing physiological postpartum complications. On the other hand, item “Applying ice or cold pack to the uterus and on the breast may relieve pain and engorgement” was the lowest among all the items with a weighted mean of 2.90 but still rated as moderately utilized. Second, from the bottom rank was the item on “Fundal massage after the expulsion of placenta helps the uterus to contract and prevent bleeding” with a rating of 2.92 also derived as moderately utilized. Third from the bottom rank was the item on “Early breastfeeding stimulated uterine contraction thus, preventing bleeding” with a rating of 2.94 derived as moderately utilized.

In terms of the level of utilization of preventive measures for postpartum complications in the psychological context, results showed that patients gave a rating of “moderately utilized” with a composite mean of 3.22. The item on “relaxation techniques reduce unavoidable stress” ranked as the lowest among all the items with a rating of 3.12 but still derived as moderately utilized. More of the results revealed that respondents extremely utilized “open lines of communication in the family can strengthen relationships preventing depression” with a weighted mean of 3.32; this is followed by the statement on “Interaction with other mothers and significant others is one way of expressing feelings and concerns” with a rating of 3.24 derived as moderately utilized. “Positive thinking enhances self-esteem and effective coping,” were also moderately used by the respondents with weighted mean of 3.22. The result can be correlated to the number of pregnancies among the mothers wherein in their demographic profile, 36% of the mothers were pregnant twice. They are well acquainted with how to handle postpartum complications and they utilize its preventive measures. According to O’Hara and McCabe (2013), risk factors mirror those typically found with major depression, except for postpartum-specific factors such as sensitivity to hormone changes. In their study on postpartum depressions, controlled trials of psychological interventions have validated a variety of individual and group interventions. Medication often leads to depression improvement, but in controlled trials

there are often no significant differences in outcomes between patients in the medication condition and those in placebo or active control conditions. The study of Sockol, Epperson & Barber (2013) where a meta-analysis was done on Preventing postpartum depression assesses the efficacy of a wide range of preventive interventions designed to reduce the severity of postpartum depressive symptoms or decrease the prevalence of postpartum depressive disorders. Postpartum depression is a specific mental disorder for which preventive interventions could yield dramatic effects. Depression is one of the most common psychological complications of childbearing. Postpartum depression limits a woman's ability to function effectively as well as perform their maternal role. They tend to discontinue breastfeeding early; they are less likely to comply with recommended safety practices and their children have lower rates of preventive healthcare utilization and vaccination. A wide range of interventions for preventing postpartum depression have been assessed in randomized controlled trials, mostly are qualitative in nature. In contrast to other studies conducted, it was found out that some prevention programs did not significantly reduce the risk for postpartum depression.

In summary, the physiological concept in the preventive measures ranked as the second with a rating of 3.08 derived as moderately utilized. However, the psychological concept was rated higher (3.22) compared to the physiological concept (3.08). However, both were derived as moderately utilized. Meaning, the postpartum patients have moderately utilized and were moderately aware of the preventive measures for both physiological and psychological concepts of postpartum complications. With the underlying result, it proves that the mothers had strong support system from their families. As stated in the demographic profile, most of them were married. They have a husband to support them all throughout the stages of pregnancy. On the other hand, Nayak, Kamath, Kumar and Rao (2012) claimed that little has been reported on issues, such as how women distinguished between normal and complicated birth, what elements are required to achieve a normal birth, and the various sociocultural aspects of childbirth. Moreover, their ethnographic study on 100 rural women found that Bangladeshi women re-cognized the need to have both physical strength and mental courage to survive the childbirth experience, indicating the psychological aspects of childbirth. A randomized controlled trial was conducted by Chamangasht, Kamrani and Farid (2021) on primiparous postpartum mothers assessing the efficacy of

an early self-care-based education program on their self-evaluation. It was conducted to 58 primarous women. Result showed that before intervention was given, there was no statistically significant difference in the mean total self-evaluation but six weeks after, a significant difference was observed in the mean self-evaluation scores between the intervention. In conclusion, study showed that early self-care education or knowledge increases postpartum adaptation thereby decreasing the appearance of postpartum complications.

Table 1. Spearman Rank Correlation Between the Respondents' Level of Awareness of Postpartum Complications and their Utilization of Preventive Measures

Test Value	P-value	Decision	Interpretation
0.822	0.000	Reject the null hypothesis	Significant correlation

A Spearman Rank Correlation test revealed that there is a significant correlation between patients' awareness of postpartum complications and their utilization of preventive measures. This implied that when patients have a high level of awareness of postpartum complications, it is most likely they too will also have a high level of utilization of preventive measures. A similar study conducted by Nagar, Ahmed and Belai, 2017 entitled "Knowledge and Practices of Pregnant Women Regarding Danger Signs of Obstetric Complication showed that poor level of knowledge on the danger signs greatly affect their level of practices.

In 2019, a systematic review and meta-analysis on "Women's Knowledge of Obstetric Danger signs in Ethiopia" was done. Reports showed that almost all global maternal deaths occurred in developing countries where the majority of women lack knowledge on obstetric danger signs. This review aimed at synthesizing the existing literature about women's knowledge of obstetric signs. Result showed that among 215 articles, 12 studies reported women's knowledge of obstetric dangers during pregnancy, 10 articles reported on the level of knowledge during delivery and 8 studies reported on the level of knowledge about obstetric danger signs during pregnancy, delivery and postpartum. All concluded that women's knowledge about danger signs in Ethiopia was very poor which means it hampered access to obstetric care when women encountered obstetric complications.

CONCLUSION

In light of the findings, the following are the conclusions of the study: (1) The mothers were moderately aware of the postpartum complications in the both physiological and psychological aspect. However, there is a difference in their level of awareness. To increase the pregnant mothers' level of awareness, they need more idea on postpartum complications. This can be done through information dissemination and educational orientation during prenatal stage. (2) The mothers had moderately utilized the preventive measures to prevent physiological and psychological postpartum complications. To improve their utilization on these aspects, the mothers should be more knowledgeable on how it should be done. Through information education and communication, it will serve as an opportunity for the mothers to have an idea on its preventive measures. During prenatal check-ups, it is also an excellent time to let the mothers familiarize with the different measures to prevent physiological and psychological postpartum complications. (3) The mothers' level of awareness on the postpartum complications and the preventive measures are significantly correlated. Information on postpartum complications and its preventive measures should be discussed together when being introduced to the mothers.

RECOMMENDATIONS

In light of the findings and conclusions, the following are the recommendations of the study:

1. Amplify information dissemination to the mothers in the community on the context of postpartum complications and its preventive measures to reduce the maternal mortality rate associated with postpartum complications
2. Simplify educational materials to be used in information dissemination to ensure proper comprehension from the mothers in the community.
3. Educational materials such as leaflets and brochures should be distributed to the mothers after delivery.
4. The Rural Health Units are encouraged to strengthened monitoring and evaluation of the cases of postpartum, most notably in the secluded areas in the province.

5. Gear on program implementations that will address the problem of postpartum cases in the province.
6. A qualitative research study should be conducted of the same context with current research to determine in-depth information on postpartum complications among the mothers in the province.
7. Since the respondents are moderately aware of the complications and utilization, it is imperative to create a health education program that focuses on the post-partum complications and its preventive measures.
8. The crafted health education program should be implemented to the mothers residing in the rural areas of the province.

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