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Research Article

Compliance on Kangaroo Mother Care Program Among Mothers in The Province of Camarines Sur

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Abstract:

Low birth weight (LBW) and prematurity continue to be leading causes of neonatal morbidity and mortality, particularly in resource-limited settings. Kangaroo Mother Care (KMC), a cost-effective, evidence-based intervention, has been widely adopted in hospitals to address these challenges. However, its continued implementation at home post-discharge remains underexplored. This descriptive-correlational study aimed to assess the compliance of 142 mothers practicing KMC at home in the province of Camarines Sur. The study utilized a self-made questionnaire and unstructured interviews to evaluate compliance across four key domains: preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding, and monitoring of the baby's condition. Additionally, it examined the influence of sociodemographic variables and psychosocial factors, such as social, personal, emotional, and support system, on maternal compliance. Results revealed that while most mothers complied with essential KMC practices, lowest adherence was noted in aspects such as breast milk expression and extended skin-to-skin contact. Personal and emotional factors significantly influenced compliance. The findings underscore the need for targeted interventions, such as enhanced post-discharge education and community-based support, to promote sustained and effective Kangaroo Mother Care at home. A proposed plan is recommended to enhance maternal adherence and further reduce neonatal complications in Camarines Sur.

Keywords: Kangaroo Mother Care, maternal compliance, skin-to-skin contact, exclusive breastfeeding

Introduction

The journey toward recovery and protection against future health issues does not end at hospital discharge. It continues significantly within the home environment, where specific caregiving practices become essential. This is especially true for low birth weight (LBW) and premature infants, whose first weeks of life represent a critical period of vulnerability. Effective home care is vital, as it directly influences their long-term health outcomes and overall development. Parents and caregivers play a key role in providing a nurturing and responsive environment that supports optimal growth, addresses health needs, and prevents complications. By applying evidence-based practices and building a strong support system, families can give LBW and premature infants the best possible start in life, improving their chances for a healthy future.

Low birth weight and prematurity pose serious global health concerns that call for immediate and effective action. The World Health Organization (2025) reports that LBW and prematurity remain the leading causes of mortality among newborns and children under the age of five. These infants are born with a weight less than 2.5 kilograms or 5.5 pounds and less than 37 weeks of gestational age. It further stated that over 20 million babies are born underweight each year, and an estimated 15 million are born prematurely. This is supported by the United Nations Children's Fund (UNICEF, 2023) data in 2020 with 19.8 million newborns suffering from Low birthweight, or 14.7% of all babies born worldwide that year. Furthermore, in a report published by the United Nations (Ordinario, 2019), there are about half a million Filipino babies born with LBW every year, putting them at risk for stunting or even death. In 2023, the Philippine Statistic Authority recorded more than one-eighth or 13.8 percent of registered live births weighing less than 2500 grams in the National Capital Region.

LBW infants, according to an article from Stanford Medicine Children's Health (2025), are at higher risk for infections, developmental delays, and long-term health complications. The article highlights the critical role of prenatal care, early intervention, and continued support for families in improving the health outcomes of these susceptible infants. Compared to bigger infants, LBW babies have a roughly 20-fold increased risk of dying. The presence of a proportion of LBW infants in the community indicates a multifaceted public health problem and concern.

In the article written by Rosa-Mangeret et al. (2022) stated that neonatal mortality remains a pressing concern, with complications arising from preterm birth and LBW contributing substantially to infant deaths. Kangaroo Mother Care (KMC) has been identified as a cost-effective strategy to address these challenges. National efforts have been made to scale up KMC practices across healthcare facilities, with the proportion of hospitals implementing KMC from 3% to 43% between 2014 and 2019 (Calibo et al., 2021). Despite these advancements, the continuity of KMC post-discharge with KMC practices at home remains underexplored.

KMC is one of the proven, globally recognized interventions for reducing deaths in low birth weight and premature infants. WHO (2021) have proven that KMC decreases mortality by up to half when compared to standard incubator-based intensive care. It is

where the mother or father acts as an incubator by maintaining warmth through continuous skin-to-skin contact between the baby and the mother or father. KMC began in Bogota, Columbia, in the late 1970s to help address mortality of preterm babies. Kangaroo care aid in increasing nutrition through frequent and exclusive breastfeeding, prevents infection, and allows early discharge from health facilities. It also fosters a strong emotional bond between mother and child. Overall, KMC promotes better health outcomes for vulnerable infants and enhances maternal confidence (Cleveland Clinic, 2023).

In KMC, the baby relaxes and feels comfortable and secure while lying on the mother's chest because they recognize the sound of her heartbeat. During and after their hospital stay, families should be allowed to do KMC practices. To do this, families and healthcare providers need to collaborate closely. Families should have access to counseling, support, and routine follow-up home or local healthcare facility visits (GFCNI, 2025).

In a recent systematic review that incorporated research conducted in both community and medical settings, KMC, when compared to traditional newborn care, lowers the chance of death within 28 days of delivery or while in the hospital. Benefits of KMC include improvement in anthropometric parameter gains, specifically weight gain daily, as well as improvement in head circumference and length every week. The impact of compliance with KMC guidelines is profound. High adherence among healthcare providers and parents ensures that KMC is consistently integrated into routine care, maximizing its effectiveness and leading to better health outcomes, such as lower mortality rates and increased breastfeeding rates. Compliance also fosters community awareness and support, reducing stigma around preterm births, which encourages wider acceptance of KMC practices. Generally, KMC is a vital intervention whose influence extends beyond individual health benefits, positively affecting mothers, families, and healthcare systems as a whole (New Born Baby, 2019).

The felt need for the study arises due to the worldwide problem of increasing Infant Mortality Rate particularly of LBW and prematurity as it remain the leading cause of death. Despite a rise in admissions to the Neonatal Intensive Care Unit at Bicol Medical Center from 2649 in 2023 to 2765 in 2024, the death rate for LBW and premature infants saw a notable decrease from 196 in 2023 to 162 in 2024. This positive trend in mortality coincides with the implementation of Kangaroo Mother Care (KMC) in the hospital since 2019 and a subsequent reinforcement of KMC compliance between 2023 and 2024. This significant improvement due to KMC can extend its maximum benefits to both mothers and babies in a home setting, preventing infants from re-admissions and life-long disabilities, particularly in resource-limited settings where access to advanced neonatal care is limited. While numerous studies have documented its clinical benefits in neonatal units, less attention has been given to the crucial period when KMC transitions to the home environment.

As a Neonatal Intensive Care Unit (NICU) nurse, it is deeply fulfilling to witness our once fragile patients gather in celebration every World Prematurity Day. These small fighters have overcome some of the most difficult beginnings, showing incredible strength and the will to live. Their journey is a powerful reminder that care must continue even after hospital discharge. The need for ongoing nurturing, attention, and support at home remains essential for their survival and healthy development. This study was driven by that urgent need to understand and strengthen the commitment of mothers in continuing Kangaroo Mother Care at home. A thorough assessment of how mothers follow the program is essential in creating strong, evidence based strategies and plans that will improve their ability to provide this vital care. By doing so, we contribute meaningfully to the global goal of reducing preventable deaths among children under five years of age by the year 2030, as outlined in Sustainable Development Goal 3.2.

Statement of the Problem

The study aimed to determine the compliance status on Kangaroo Mother Care Program at home among mothers in the province of Camarines Sur.

Objectives of the Study

This study aimed to determine the compliance of the mothers on Kangaroo Mother Care practices at home for LBW and premature in the province of Camarines Sur. Specifically, it aimed to answer the following;

1. Identify the profile of the respondents in terms of:
a. Age
b. Civil Status
c. Educational Attainment
d. Employment Status
e. Family Monthly Income
f. Number of children
2. Determine the compliance status on Kangaroo Mother Care Program at home along:
g. Preparation for Kangaroo Mother Care
h. Positioning baby correctly for Kangaroo Mother Care
i. Skin-to-skin Contact and Exclusive Breastfeeding
j. Monitoring of baby’s condition
3. Identify the factors affecting the compliance of mothers on Kangaroo Mother Care at home along:

k. Social
l. Personal
m. Emotional
n. Support System

4. Test the significant relationship between the profile of the respondents and the compliance status of mothers on Kangaroo Mother Care Program at home.
5. Test the significant relationship between the compliance status of mothers and the factors affecting the compliance on Kangaroo Mother Care at home.
6. Propose a plan that could enhance the compliance on Kangaroo Mother Care at home for Low Birth Weight and preterm infants in the province of Camarines Sur.

Significance of the Study

The findings of this study will be beneficial to the following:

Parents. This study will highlight the role of caregivers, particularly mothers, in the health and well-being of LBW and preterm infants, offering them a practical, self-sustaining method for improving their child's chances of survival and healthy development. Also, the study provides a platform for mothers to share their experiences, challenges, and successes in implementing KMC at home. This can be validating, as it acknowledges the efforts and difficulties they face in adhering to the program amidst their daily routines and potential constraints.

Health Care Providers. This research will give additional knowledge and provide research-based interventions on the importance of KMC at home to help reduce neonatal mortality and morbidity rates in any health care setting.

Significant others. The research can emphasize the crucial role of a supportive family environment in promoting successful KMC at home, encouraging family members to work together to facilitate the mother's adherence.

Community. The study will emphasize the potential community-based healthcare intervention, which can be crucial in rural or low-resource settings, helping bridge the gap between urban and rural healthcare outcomes.

Researcher. This study will enhance the researcher's understanding of the advantages of KMC at home, its potential to reduce postpartum depression, and its positive impact on infants' emotional and cognitive development. Furthermore, the findings will assist the researcher in developing strategies to improve health programs in Camarines Sur.

Future Researchers. The importance of the study lies in the opportunity to expand their knowledge, develop valuable research skills, gain professional recognition, and make a meaningful contribution to improving healthcare practices and outcomes for LBW and preterm infants, particularly in Camarines Sur.

Scope and Limitations of the Study

The subject of the study focuses mainly on the compliance status of mothers as the primary KMC provider with LBW babies enrolled in KMC from July to December 2024. Using the Slovins' formula, the sample size of the study is 140, however, the researcher gathered 142 respondents. They are the respondents residing from the different municipalities of Camarines Sur. The tool used was a researcher-made questionnaire followed by unstructured interview, who were advised to continue KMC at home after their discharge from the hospital. The study conducted from the month of January to May 2025.

The respondents of this research excluded mothers who are still admitted in hospital and those who live outside Camarines Sur. The study did not assess mothers with babies whose weight is 2500 grams and above after discharge from the health institution. Also, the study delimited participation of mothers and babies with severe health conditions that prevent them from doing KMC. Fathers and other caregivers were excluded as the study focuses on maternal compliance.

Methodology

This chapter meticulously outlined the methodology employed in this research study. It detailed the research design and method utilized, the locale of the study, the sources from which pertinent data and information were gathered, the research instrument employed for data collection, the step-by-step procedures followed in gathering the data, and the statistical treatment used for analysis.

Locale of the Study

The locale of this study was one of the provinces in the Philippines, the Camarines Sur. It is situated in the Bicol Region (Region V) occupying the southeastern peninsula of Luzon and the outlying island provinces of Masbate and Catanduanes. Camarines Sur comprises of 35 municipalities and 2 cities as shown in Plate 1. As one of the largest provinces, Camarines Sur has a land area of 5,511.90 square kilometers or 2,128.16 sqaure miles (PhilAtlas, 2025). It is known for its diverse rural and urban settings. Camarines Sur has a mix of agricultural areas, urban centers, and coastal communities, which influences healthcare delivery and access. The province is home to over a million people, with a significant portion residing in rural areas where access to healthcare services may be limited.

Plate 1. Locale of the Study

Research Design

The study used a quantitative research method. A **descriptive-correlational research design** was chosen to examine the compliance of mothers on Kangaroo Mother Care (KMC) Program at home for LBW and preterm infants in the province of Camarines Sur. Descriptive research involves objectively and systematically observing behavior to describe attributes and gain an in-depth understanding of phenomena or groups. A correlational research design describes and predicts the natural relationships between variables, without researcher intervention or causal inference (Bhat, 2025). Furthermore, the process of descriptive research extends beyond the mere gathering and tabulation of data to include an understanding of the significance of the findings.

Respondents of the Study

The respondents of this study were the mothers (142) as the primary caregivers of low-birth-weight (LBW) and premature infants who underwent KMC initially in a hospital setting and are advised to continue KMC at home. Informed consent was discussed with the respondents to foster a willingness to participate in the study.

The researcher used Slovin's formula and purposive sampling to have an appropriate sample size wherein the number of respondents were chosen to reflect the characteristics of the target population in order to achieve a desired level of accuracy in the conduct of the study. Using Slovin's formula with a five percent margin of error, the required sample size was at least 140. However, the study collected data from 142 respondents, as the number exceeded the minimum requirement and all qualified participants were included by the researcher.

Research Instrument

The main research instrument used in this study is a self-made questionnaire that will be utilized to collect data. It includes the demographic profile of the respondents, compliance status, and factors affecting the compliance of mothers on KMC at home supplemented by informal interview to counter-check the data gathered to the respondents and to provide accurate assessment on their compliance to KMC Program.

Questionnaire. A questionnaire is a research tool comprising a set of questions designed to gather information from respondents. Essentially a written form of an interview, questionnaires can be administered in various ways, including face-to-face, by telephone, via computer, or through the mail. They offer a cost-effective, rapid, and efficient means of collecting substantial data from a large number of individuals, and data collection can be expedited as the researcher's presence during completion is not required (McLeod, 2023).

Data Gathering Procedure

The following outlines the procedure for gathering data:

Preparation of the Questionnaire. The researcher developed a survey instrument to collect the required data after carefully reviewing several books, journals, papers, and prior studies. A 4-point Likert scale was employed to collect and measure respondents' opinions on the research topic. There are thee sections that make up the questionnaire. The first part dealt with the demographic profile of the respondents such as age, civil status, educational attainment, employment status, family monthly income, and number of children. The second part contained the practices to assess the compliance of mothers on KMC Program at home along with

preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding and monitoring of baby's condition. The last part assessed the factors affecting the compliance of mothers on KMC Program practiced at home. The questionnaire draft was submitted to the adviser for review and feedback. The panelists' suggestions and recommendations for improvement were incorporated, and further analysis was conducted to refine and revise the instrument.

Validation of the Questionnaire. The questionnaire underwent a validation process involving 15 mothers who were actively practicing KMC at home. This dry run aimed to evaluate the clarity, structure, and appropriateness of the questionnaire items. Respondents were asked to provide feedback on the conciseness, comprehensibility, and acceptability of the questions, as well as the overall flow and time required for completion. Their feedback revealed that the questions were generally well understood, with only minor revisions needed to improve wording and ensure clarity. No items were found to be objectionable or difficult to answer, affirming the tool's suitability for the intended respondents. To establish the internal consistency of the instrument, reliability testing was performed using Cronbach's alpha. The section on compliance factors yielded a Cronbach's alpha of 0.96, indicating excellent reliability, while the section on factors affecting resulted in a Cronbach's alpha of 0.78, denoting acceptable reliability. These results confirm that the questionnaire is a valid and reliable tool for assessing maternal compliance with the Kangaroo Mother Care at home.

Administration and Retrieval of the Questionnaire. After questionnaire validation, an informed consent form was provided, allowing the researcher to thoroughly explain the study's purpose, procedures, and confidentiality measures. The researcher then personally administered the questionnaires to ensure 100% retrieval and to provide respondents with any necessary guidance. Upon completion, the questionnaires were collected. The resulting data was tallied, analyzed, and interpreted. Data collection was scheduled to take place from January 2025 to May 2025.

Results and Discussion

This chapter highlights the presentation, analysis, and interpretation of the data collected through a researcher's questionnaires. Specifically, this section covers the discussion of the profile of the mothers with LBW and preterm Infants enrolled in the KMC Program and were advised to continue at home, their compliance status, the factors affecting compliance on KMC at home, the relationship between the profile and the compliance status of the respondents, and the relationship of compliance status and the factors affecting adherence of mothers to KMC Program at home. Finally, this chapter also accentuated a proposed plan to enhance compliance with the KMC at home.

The data were organized and presented through tables and narrative descriptions to ensure a clear and systematic flow of discussion. The arrangement of the data served as the foundation for drawing conclusions and formulating recommendations for the study.

1. Profile of the Respondents

The profile of mothers with LBW and preterm babies enrolled in KMC, discharged in hospital, and advised to continue KMC at home who are residing in Camarines Sur includes the age, civil status, educational attainment, employment status, family monthly income, and number of children.

a. Age. Table 1 presents the age distribution of the respondents. Out of 142 mothers, 106 representing 74.65 percent, are in the age group of 20 to 35 years. This is followed by 32 mothers, or 22.54 percent, who are between 36 and 45 years old. Only 4 mothers, or 2.82 percent, are 19 years old and below.

Table 1. Distribution of Respondents in Terms of Age

Indicator	Frequency	Percentage	Rank
19 years old and below	4	2.82	3
20-35 years old	106	74.65	1
36-45 years old	32	22.54	2
Total	**142**	**100**	

The results revealed that the majority of the respondents fall within the age group of 20 to 35 years, with fewer younger and older mothers participated in the study. This follows the study of Aziz (2024), which presented that most postnatal mothers practicing KMC who responded in the study belong to age group of 20-30 years old. This age range represents the Optimal Reproductive Age which is considered the typical childbearing and generally the period with the best outcomes for pregnancy and childbirth.

b. Civil Status. Table 2 illustrates the percentage distribution of mothers with LBW and preterm infants practicing KMC at home, categorized by their civil status. Among the 142 mothers surveyed, 76 were married which accounted for 53.52% of the respondents. In contrast, 66 mothers, or 46.48%, were single. The data implied that majority of the mothers who participated in the study were married. However, it is significantly remarkable that almost half of the respondents are single.

Table 2. Distribution of Respondents in Terms of Civil Status

Indicator	Frequency	Percentage	Rank
Single	66	46.48	2

Married	76	53.52	1
Total	**142**	**100**	

In the study of Bugayon et al. (2024), the Philippine Statistic Authority has recorded an increased rate of unwed mothers in the Philippines from 54.3% in 2018 to 57% in 2020. It stated further that single mothers face significant challenges, including issues related to their mental health, their capacity to provide for their children, and maintaining a work-life balance. These concerns are often the subject of debate, as the responsibilities they shoulder are substantial and ideally meant to be shared between two parents. Recognizing the unique hardships single mothers face, the study emphasized the need for focused government and social work support to help them navigate the physiological and psychological strains of raising children alone.

c. Educational Attainment. Table 3 displays the educational attainment of the 142 mothers which 35.21% (50 respondents) had completed college. This was followed by high school graduates at 24.65% (35 respondents), college undergraduates at 16.9% (24 respondents), and high school undergraduates at 16.2% (23 respondents). Smaller percentages included elementary graduates at 3.52% (5 respondents), elementary undergraduates at 2.11% (3 respondents), and one respondent each in the vocational course and graduate school (doctorate undergraduate) categories, collectively accounting for 0.7% of the total mothers.

Table 3. Distribution of Respondents in Terms of Educational Attainment

Indicator	Frequency	Percentage	Rank
Graduate School - Doctorate undergrad	1	0.7	7.5
College Graduate	50	35.21	1
College Undergraduate	24	16.9	3
High School Graduate	35	24.65	2
High School Undergraduate	23	16.2	4
Elementary Graduate	5	3.52	5
Elementary Undergraduate	3	2.11	6
Others-Vocational	1	0.7	7.5
Total	**142**	**100**	

The results showed that most of the respondents are college graduate which mean that they have the greater access to information and education resources. This implied that most of the mothers practicing KMC possess a reasonable level of literacy and understanding. As demonstrated by Teñoso et al. (2023), and echoed in this study's respondent profile, college graduates represent the largest group, highlighting education's significant role in predicting compliance. Mothers who possess a comprehensive understanding of Exclusive Breastfeeding are significantly more likely, nearly six times more, to practice it compared to those with limited knowledge, highlighting the critical role of education and positive attitudes.

d. Employment Status. Table 4 presents the distribution of the respondents in terms of employment status. Ninety-four (94) or 66.2% of the 142 mothers responded in the study were unemployed. Whereas, 28 or 19.72% of them were employed, and 20 or 14.08% has their own way of earning for a living or are self-employed.

Table 4. Distribution of Respondents in Terms of Employment Status

Indicator	Frequency	Percent	Rank
Employed	28	19.72	2
Self-employed	20	14.08	3
Unemployed	94	66.2	1
Total	**142**	**100**	

The data shows that majority of the mothers were unemployed, while only a small portion were employed or self-employed. The results implied that mothers may have more time available to care for their LBW or preterm infants, which could support better compliance with KMC program at home. However, the results of the study conducted by Kwesiga et al. (2022) revealed that unemployed mothers might have more time to do KMC at home but could experience financial limitations impacting care quality. Furthermore, due to being overburdened with competing chores, mothers practiced KMC for a shorter time at home than in the hospital. The employment status of mothers practicing KMC have an effect to their compliance.

e. Family Monthly Income. Table 5 shows the distribution of mothers based on their family monthly income. Out of 142, 82 or 142 (57.75%), reported a monthly income below 10,481 Philippine pesos. Another 27 respondents (19.01%) had incomes between 10,481 and 20,962 pesos, while 23 respondents (16.2%) earned between 20,963 and 41,924 pesos. A smaller group, 8 respondents (5.63%), had incomes ranging from 41,925 to 73,202 pesos, and only two respondents (1.41%) reported incomes exceeding 73,202 pesos.

Table 5. Distribution of Respondents in Terms of Family Monthly Income

Indicator	Frequency	Percentage	Rank
Below Php 10,481	82	57.75	1
Php 10,481 to 20,962	27	19.01	2
Php 20,963 to 41,924	23	16.2	3
Php 41,925 to 73,202	8	5.63	4
Php 73,202 above	2	1.41	5
Total	**142**	**100**	

The results revealed that majority of the mothers receive the lowest family monthly income bracket. This indicate that majority of the mothers are from low-income households. Furthermore, the data highlights high prevalence of poverty within this population. Again, the results is in lined with the study of Kwesiga et al. (2022), which emphasized that most mothers doing KMC at home resulted in a loss of productivity and income since they were often unable to engage in whichever economic activity she may have previously been doing. This was because KMC and care for a pre-term baby generally required a lot of time and commitment, and so the mother could hardly do anything else. This distribution strongly implies that economic hardship is a significant factor among mothers of LBW and preterm infants in the Philippines.

f. Number of Children. Table 6 presents the distribution of respondents based on the number of children they have. There were 80 out of 142, accounting for 56.34%, reported having 2-3 children. This was followed by 30.28% or 43 respondents who were mothers of only one child, and 13.38% or 19 respondents had 4 to 5 children.

Table 6. Distribution of Respondents in Terms of Number of Children

Indicator	Frequency	Percentage	Rank
1	43	30.28	2
2-3	80	56.34	1
4-5	19	13.38	3
Total	**142**	**100**	

The results revealed that majority of mothers who participated un the study have 2-3 children, a lesser portion for mothers with only one child and four to five children. This data suggests that most of the mothers have previous caregiving experience, which may positively influence their confidence and ability to practice KMC at home. However, it's important to consider that mothers with several children might face challenges in allocating dedicated time for KMC due to other caregiving responsibilities. A study by Habte et al. (2023) in southern Ethiopia found that while prior experience with child-rearing can positively influence KMC practices, the increased workload associated with caring for multiple children can also serve as a barrier to consistent KMC adherence.

In summary, the typical mother who participated in the study was between 20 and 35 years old, married, and a college graduate. However, most of these mothers were unemployed and had a family monthly income of 10,481 Philippine pesos or less, with two to three children. Therefore, interventions for the KMC Program at home should specifically consider the needs and circumstances of these subgroups, taking into account factors that might influence their compliance.

2. Compliance Status on Kangaroo Mother Care Program at Home

The compliance status of mothers on KMC Program at home were determined in four domains such as preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding, and monitoring of baby's condition.

a. Preparation for Kangaroo Mother Care. Table 7 showed the compliance status of mothers according to preparation for KMC. Among the 7 indicators, rank one is activity to perform personal hygiene especially washing of hands before and after baby care to prevent infection, with the highest weighted mean of 3.54, interpreted as highly complied. In rank two, make sure the KMC provider is healthy and free from sickness with 3.44, interpreted as complied. In rank three, ensure good source of support from the family and community was rated 3.41, interpreted as complied. In rank 4, put on a KMC binder or an improvised linen like big shirts to cover baby's body during KMC, was rated 3.33, complied. Rank 5, went home with adequate knowledge and understanding on KMC Program through attending regular health education and discharge instruction, was rated 3.29, complied.

Rank 6, confidently change dirty diaper with baby lying on his or her side and not lifting up legs as it may traumatize the hips and increase abdomen pressure, was rated 3.27, complied. And rank 7, remove baby's clothes except for cap, socks and diaper to keep baby warm during KMC, was rated 3.09, complied. The average weighted mean for preparation for KMC was rated 3.34, interpreted as complied.

The data presented that out of 7 indicators for preparation for KMC, only one achieved a highly complied interpretation while the rest were interpreted as complied. The top indicator implied a strong adherence to personal hygiene whereas the bottom two suggested lack of proper understanding on the thermal benefits of skin-to-skin contact aspect of KMC, feeling of discomfort or

uncertainty about undressing their baby for KMC and unfamiliar with the recommended technique for diaper changing during KMC. Kangaroo Mother Care has many benefits for babies such as thermoregulation, bonding between mother and baby and encourage baby's growth (Cleveland, 2025). But is also important to do personal hygiene when practicing skin-to-skin contact to make sure the skin is clean for a safe and comfortable KMC to both mother and baby.

Table 7. Compliance Status of Respondents Along Preparation for Kangaroo Mother Care

Indicator	Weighted Mean	Verbal Interpretation	Rank
Went home with adequate knowledge and understanding on KMC Program through attending regular health education and discharge instruction.	3.29	Complied	5
Make sure the KMC provider is healthy and free from sickness.	3.44	Complied	2
Perform personal hygiene especially washing of hands before and after baby care to prevent infection.	3.54	Highly Complied	1
Put on a KMC binder or an improvised linen like big shirts to cover baby's body during KMC.	3.33	Complied	4
Remove baby's clothes except for cap, socks and diaper to keep baby warm during KMC.	3.09	Complied	7
Confidently change dirty diaper with baby lying on his or her side and not lifting up legs as it may traumatize the hips and increase abdomen pressure.	3.27	Complied	6
Ensure good source of support from the family and community.	3.41	Complied	3
Average Weighted Mean	**3.34**	**Complied**	

This result is supported by the article written by Carruthers et al. (2023), which emphasized hand hygiene as one of the approaches to Infection Prevention and Control (IPC) in healthcare settings. The IPC recommendations focused on community-acquired infections are designed to avoid sickness and the resulting need for patients to return to the hospital. Additionaly, in the article of Children's Health (2024), Michael Sebert, M.D., of Children's Health and UT Southwestern, underscores the lifelong importance of hand hygiene for staying healthy, explaining that it helps reduce the risk of infections like colds, flu, respiratory viruses, and gastrointestinal illness. Furthermore, the World Health Organization (WHO) guidelines on Essential Newborn Care also stress hygienic practices during KMC.

The "complied" status for making sure the KMC provider is healthy and free from sickness is very important. In the article published by New Born Baby (2019), the general health and nutrition of mothers is one of the criteria for eligibility of KMC and one of the important points that must be taken into consideration when counselling on KMC. It further states that to be able to provide KMC, mothers should be free from serious illness and should receive adequate diet and supplements recommended by her physician. The article further covered another compliance on ensuring good support from family and community. Institutional, social and community support is one of the requirements for KMC implementation as it contribute to the success of the program. To deal with the conventional responsibilities of household chores, mothers would need her family's cooperation. Community awareness, on the other hand, should be created to understands the benefits of KMC particularly when there are social, economic or family constraints. The use of KMC binder or big shirts is a recommended mother's clothing or any other suitable apparel that can retain the infant for extended period of time. The compliance on acquiring knowledge and understanding is also essential that must be taken into consideration because once they learn and realizes the benefits of KMC, mothers will undertake KMC. Confidence in changing dirty diapers entails on how well mothers can take care of their baby properly and safely. Lastly, maintaining warm through KMC is achieved though skin-to-skin contact between the KMC provider and the infant, therefor, removing of baby's clothes is necessary.

b. Positioning Baby Correctly for Kangaroo Mother Care. Table 8 showed the compliance status of mothers in terms of positioning baby correctly for KMC. Among the 7 indicators, rank one is maintain in a comfortable position leaning backward on a bed or chair, with the highest weighted mean of 3.59, interpreted as highly complied. In rank two, make sure the binder is not too tight over baby's chest, was rated 3.51, interpreted as highly complied. In rank three point five, hold baby with one hand supporting the head and neck and the other hand on the bottom and gently place the baby in a vertical position between breasts and establish chest-to-chest contact, ensuring the legs and arms are flexed in a frog position, both got the same weighted mean (3.44). In rank 5, ensure that baby's head is slightly extended, with the head turned to one side and the arms flexed, with weighted mean of 3.39, interpreted as complied. Rank 6, adjust binder securely so the baby will not fall out when moving around, 3.34 and, complied. Rank 7, last, hold baby close with as much skin-to-skin contact as possible, 3.32 and, complied. The overall compliance status of the respondents in terms of positioning baby correctly for KMC is interpreted as complied with weighted mean of 3.43.

Generally, the results indicated positive compliance status among mothers regarding the correct positioning of their babies for KMC at home. The two indicators interpreted as "highly complied" highlight the mothers' understanding of the importance of both maternal comfort and the baby's safety and well-being during KMC. Maintaining a comfortable position for the mother is crucial for prolonged KMC sessions, as supported by WHO guidelines on KMC (2003) which emphasize creating a conducive environment for both mother and infant. Ensuring the binder is not too tight is directly related to the baby's breathing and comfort, aligning with recommendations for careful monitoring during KMC to ensure a clear airway, as noted in Nationwide Children's Hospital guidelines on Kangaroo Care (2025).

The remaining five parameters, interpreted as "complied," cover key aspects of proper baby positioning. Holding the baby with one hand supporting the head and neck and the other on the bottom, and gently placing the baby in a vertical, chest-to-chest position with flexed limbs are fundamental techniques for ensuring skin-to-skin contact and the baby's stability. These positions are consistently described in KMC training manuals and guidelines of Charpark (2007), which illustrates the "frog-like" position of the baby's legs and the importance of vertical placement between the mother's breasts for optimal physiological benefits.

Table 8. Compliance Status of Respondents Along Positioning Baby Correctly for Kangaroo Mother Care

Indicator	Weighted Mean	Verbal Interpretation	Rank
Hold baby with one hand supporting the head and neck and the other hand on the bottom.	3.44	Complied	3.5
Gently place the baby in a vertical position between breasts and establish chest-to-chest contact, ensuring the legs and arms are flexed in a frog position.	3.44	Complied	3.5
Ensure that baby's head is slightly extended, with the head turned to one side and the arms flexed.	3.39	Complied	5
Adjust binder securely so the baby will not fall out when moving around.	3.34	Complied	6
Make sure the binder is not too tight over baby's chest.	3.51	Highly Complied	2
Maintain in a comfortable position leaning backward on a bed or chair.	3.59	Highly Complied	1
Hold baby close with as much skin-to-skin contact as possible.	3.32	Complied	7
Average Weighted Mean	**3.43**	**Complied**	

Ensuring the baby's head is slightly extended and turned to one side is crucial for maintaining an open airway, a key safety aspect emphasized in UNICEF's Baby Friendly Initiative (2025). Adjusting the binder securely to prevent the baby from falling while moving addresses the practicalities of KMC in daily life, allowing mothers to engage in light activities while maintaining skin-to-skin contact. Holding the baby close with as much skin-to-skin contact as possible is the core principle of KMC, facilitating thermoregulation, bonding, and breastfeeding, benefits widely documented in literature, including a review by Canadian Paediatric Society (2024) on the importance and benefits of skin-to-skin contact for both term and preterm infants.

c. Skin-to-Skin Contact and Exclusive Breastfeeding. Table 9 highlights the compliance status of mothers according to Skin-to-Skin Contact and Exclusive Breastfeeding. The rank one in seven indicators is safely maintain the baby in the KMC position until their desire for it is satisfied, with the highest weighted mean of 3.42 and interpreted as complied. Rank 2, when breastfeeding, correctly and safely turn baby in a breastfeeding position while on KMC. (Baby's face towards the breast), 3.36, complied. Rank 3, let husband or other relative to do KMC as substitute while having a short break provided that they are healthy, 3.13, complied. Rank 4, exclusively breastfeed baby for 8-12 times, 15 to 20 minutes each, in 24 hours or once feeding cues are shown such as drooling, tonguing, biting hands, licking, or crawling towards breasts, 2.86, complied. Rank 5, observe 30 minutes short breaks during each session, 2.86, complied. Rank 6, perform continuous skin-to-skin contact (KMC) for more than 20 hours per day as recommended to provide maximum benefits to baby, 2.74, complied. Rank 7 is express and store breast-milk correctly to provide enough milk for baby while on KMC, with weighted mean of 2.49 and interpreted as moderately complied. The average weighted mean for the compliance on skin-to-skin contact and exclusive breastfeeding is 2.97 with an interpretation of complied.

Table 9. Compliance Status of Respondents Along Skin-to-Skin Contact and Exclusive Breastfeeding

Indicator	Weighted Mean	Verbal Interpretation	Rank
Perform continuous skin-to-skin contact (KMC) for more than 20 hours per day as recommended to provide maximum benefits to baby.	2.74	Complied	6
Safely maintain the baby in the KMC position until their desire for it is satisfied.	3.42	Complied	1
Observe 30 minutes short breaks during each session.	2.82	Complied	5
Let husband or other relative to do KMC as substitute while having a short break provided that they are healthy.	3.13	Complied	3
Exclusively breastfeed baby for 8-12 times, 15 to 20 minutes each, in 24 hours or once feeding cues are shown such as drooling, tonguing, biting hands, licking, or crawling towards breasts.	2.86	Complied	4
When breastfeeding, correctly and safely turn baby in a breastfeeding position while on KMC. (Baby's face towards the breast)	3.36	Complied	2
Express and store breast-milk correctly to provide enough milk for baby while on KMC.	2.49	Moderately Complied	7
Average Weighted Mean	**2.97**	**Complied**	

The results revealed that mothers generally comply with activities related to Skin-to-Skin Contact and Exclusive Breastfeeding which indicates a positive trend in adhering to these crucial KMC components. The "complied" indicators highlight several important practices. Maintaining the baby in the KMC position until the baby is satisfied underscores the understanding of the importance of prolonged skin-to-skin contact for the infant's well-being, aligning with studies that demonstrate its benefits in regulating the baby's physiological parameters and promoting bonding (Cleveland Clinic, 2023). Correctly positioning the baby for breastfeeding while in KMC, with the baby's face towards the breast, reflects an understanding of facilitating early and effective breastfeeding, a cornerstone of KMC as emphasized by the World Health Organization (2003). Allowing healthy partners or relatives to provide substitute KMC during short breaks acknowledges the need for maternal rest while ensuring the continuation of skin-to-skin benefits for the baby.

Exclusive breastfeeding 8-12 times for 15-20 minutes every 24 hours or in response to feeding cues indicates a general awareness of the recommended frequency and duration of breastfeeding for newborns, a key element of optimal infant nutrition as advocated by WHO and UNICEF (2025). Observing 30-minute short breaks during each KMC session suggests an understanding of balancing continuous skin-to-skin contact with the mother's needs for comfort and rest.

However, the activity "Express and store breast-milk correctly to provide enough milk for baby while on KMC" received the lowest weighted mean and was interpreted as "moderately complied." This suggests a potential challenge in this specific aspect of exclusive breastfeeding within the KMC context. Expressing and storing breast milk can be demanding, especially for mothers of preterm or low birth weight infants who may face difficulties with milk supply or have infants with immature sucking reflexes, as highlighted in research on the challenges of breastfeeding preterm infants (NHS, 2025). Ensuring adequate milk supply for exclusive breastfeeding, particularly when direct breastfeeding might not always be feasible during KMC sessions, requires consistent effort and proper techniques for expression and storage.

d. Monitoring of Baby's Condition. Table 10 presented the compliance status of the respondents according to monitoring baby's condition. Among 7 indicators, rank one is check baby's temperature, color and breathing, weighted mean of 3.64, highly complied. Rank 2 point 5, regularly monitor the weight of baby and give oral supplement/take home medications to the baby as recommended have the same weighted mean of 3.51, highly complied. Rank 4, communicate clearly with other caregivers/family members when they should call help immediately, 3.48, complied. Rank 5, report any abnormalities such fast breathing, gasping, apnea, chest indrawing, abdominal distention, skin discoloration, difficulty feeding, diarrhea, change in temperature, recurrent vomiting and convulsion, 3.45, complied. Rank 6, follow the scheduled consultations/check-ups regularly, 3.40, complied. Rank 7, stop KMC if the baby becomes uncomfortable and refuses the position, 3.35, complied. The overall compliance status for monitoring baby's condition has an interpretation of complied (3.48).

The results implied that mothers complied with all the indicators in monitoring baby's condition. The "highly complied" indicators

underscore the mothers' strong adherence to critical aspects of infant well-being. Regularly checking the baby's temperature, color, and breathing is a fundamental aspect of newborn care, especially for potentially vulnerable infants receiving KMC. This aligns with the core principles of KMC, which emphasize close observation for early detection of any distress (WHO, 2003). Similarly, the high compliance in regularly monitoring the baby's weight and administering prescribed oral supplements/take-home medications demonstrates a commitment to the infant's physical health and adherence to medical recommendations. Regular weight monitoring is a key indicator of growth and well-being in infants, particularly preterm or low birth weight babies who often benefit from KMC (UNICEF, 2025).

Table 10. Compliance Status of the Respondents Along Monitoring Baby's Condition

Indicator	Weighted Mean	Verbal Interpretation	Rank
Check baby's temperature, color and breathing.	3.64	Highly Complied	1
Report any abnormalities such fast breathing, gasping, apnea, chest indrawing, abdominal distention, skin discoloration, difficulty feeding, diarrhea, change in temperature, recurrent vomiting and convulsions.	3.45	Complied	5
Regularly monitor the weight of baby.	3.51	Highly Complied	2.5
Give oral supplement/take home medications to the baby as recommended.	3.51	Highly Complied	2.5
Communicate clearly with other caregivers/family members when they should call help immediately.	3.48	Complied	4
Follow the scheduled consultations/check-ups regularly.	3.40	Complied	6
Stop KMC if the baby becomes uncomfortable and refuses the position.	3.35	Complied	7
Average Weighted Mean	**3.48**	**Complied**	

The "complied" indicators further illustrate a comprehensive approach to monitoring. Clear communication with other caregivers about when to seek immediate help highlights the importance of a supportive care network and timely intervention in case of emergencies. Promptly reporting any abnormalities such as changes in breathing, color, feeding, temperature, or the occurrence of vomiting or convulsions is crucial for early identification and management of potential health issues common in newborns, especially those born preterm or with low birth weight who are often the recipients of KMC (Mayo Clinic, 2024). Adhering to scheduled consultations/check-ups ensures regular professional assessment of the baby's health and development, which is vital for infants receiving KMC (Nationwide Children's Hospital, 2025). Finally, stopping KMC if the baby becomes uncomfortable and refuses the position indicates a responsive and baby-centered approach, prioritizing the infant's comfort and safety during the practice.

In summary, the overall compliance status of mothers on KMC at home in four domains of KMC are generally interpreted as complied. The strong adherence are found in monitoring baby's condition. However, the indicators that got the lowest weighted means are noted in the skin-to-skin contact and exclusive breastfeeding domain.

3. Factors Affecting Compliance of Mothers on Kangaroo Mother Care at Home

In this section, the factors affecting compliance of mothers on KMC at home along with social factors, personal factors, emotional factors, and support system factors were enumerated and presented.

a. Social Factors. Table 11 presents the social factors affecting mothers' compliance with the KMC Program at home. All six indicators were interpreted as an "Affect" collectively enumerated according to their ranks: rank one, encouragement and support from family/partner to do KMC practice, 3.43; rank 2, opportunities to interact with other mothers practicing KMC, 3.23; rank 3, people in the community understand and value KMC, 3.21; rank 4, local health workers' activities that support KMC, 2.75; rank 5, cultural and traditional practices that support KMC, 2.68; rank 6, feeling of pressure from others not to do KMC, 2.58. The average weighted mean for social factors affecting compliance on KMC is 2.98 with an interpretation of affect.

The results implied that social factors generally play an important role in influencing compliance of mothers on KMC Program at home. The indicator with highest weighted mean, the encouragement and support from family or partner, states its positive influence on KMC practice. This aligns with numerous studies highlighting the crucial role of family support in maternal and child health behaviors, including KMC (Yadav, Panda, and Jham, 2024). A supportive environment can alleviate the burdens of care and encourage mothers to persist with KMC.

Table 11. Social Factors Affecting Compliance of Mothers on Kangaroo Mother Care at Home

Indicator	Weighted Mean	Verbal Interpretation	Rank
Encouragement and support from the family/partner to do KMC practice.	3.43	Affect	1
People in the community understand and value KMC.	3.21	Affect	3
Feeling of pressure from others not to do KMC.	2.58	Affect	6
Opportunities to interact with other mothers practicing KMC.	3.23	Affect	2
Cultural and traditional practices that support KMC.	2.68	Affect	5
Local health workers activities that support KMC.	2.75	Affect	4
Average Weighted Mean	**2.98**	**Affect**	

Community understanding and valuing of KMC and opportunities to interact with other mothers practicing KMC also show a positive influence, although slightly less strong. Community acceptance can normalize KMC practices and reduce stigma, as noted in research on socio-cultural barriers to KMC (ResearchGate, 2015). Interaction with other KMC mothers can provide emotional support, shared experiences, and practical tips, fostering adherence (Healthy Newborn Network, 2017).

Conversely, the feeling of pressure from others not to practice KMC indicates a negative influence. External disapproval or conflicting advice can undermine a mother's confidence and motivation to continue KMC. Cultural and traditional practices that support KMC show a slightly positive influence, but the moderate rating suggests that these practices may not be universally supportive or strongly emphasized in the community studied. Local health workers' activities that support KMC also fall within the "Affect" category, implying that while health workers are providing some level of support, there might be room for improvement in their active promotion and facilitation of KMC within the community (BMJ Public Health, 2024).

b. Personal Factors. Table 12 presented the personal factors affecting mothers' compliance with the KMC Program at home. All six indicators were interpreted as greatly affect and enumerated in their ranks: rank one, belief that KMC is important for the baby's health and development, 3.73; rank 2, comfort and enjoyment in doing KMC practices, 3.67; rank 3, physical stamina/stability to practice KMC regularly, 3.66; rank 4, adequate knowledge and understanding to perform KMC, 3.65; rank 5, confidence in caring baby, 3.62; rank 6, adequate time to dedicate to KMC, 3.60. The average weighted mean personal factors is 3.66, which is interpreted as greatly affect.

Table 12. Personal Factors Affecting Compliance of Mothers on Kangaroo Mother Care at Home

Indicator	Weighted Mean	Verbal Interpretation	Rank
Confidence in caring baby.	3.62	Greatly Affect	5
Adequate knowledge and understanding to perform KMC.	3.65	Greatly Affect	4
Adequate time to dedicate to KMC.	3.60	Greatly Affect	6
Physical stamina/stability to practice KMC regularly.	3.66	Greatly Affect	3
Comfort and enjoyment in doing KMC practices.	3.67	Greatly Affect	2
Belief that KMC is important for baby's health and development.	3.73	Greatly Affect	1
Average Weighted Mean	**3.66**	**Greatly Affect**	

The results implied that personal factors are critical determinants of mothers' compliance with the KMC Program at home. The consistently high weighted means across these factors underscore the significant influence of a mother's individual characteristics and perceptions on her engagement with KMC. The first indicator with highest weighted mean, "Belief that KMC is important for the baby's health and development", appears to be the most influential personal factor. A strong conviction in the benefits of KMC serves as a powerful motivator for mothers to overcome any challenges and prioritize its practice (Habte, Tamene, and Gizachew, 2024). Whereas, comfort and enjoyment in doing KMC practices play a significant role in long-term adherence. When mothers find KMC a pleasant and bonding experience, they are more likely to continue it consistently (Cleveland Clinic, 2025). Physical stamina/stability to practice KMC regularly is also vital, as KMC often requires mothers to sit or recline comfortably for extended periods. Postpartum recovery and any pre-existing physical limitations can influence their ability to sustain KMC practice. Furthermore, having adequate time to dedicate to KMC is a practical yet significant personal factor. The demands of newborn care and household responsibilities can pose challenges, and a mother's perception of having sufficient time directly impacts her ability to engage in prolonged skin-to-skin contact (Heidari et al., 2014). Additionally, confidence in caring for the baby is paramount, as a mother who feels capable is more likely to embrace and adhere to KMC practices. Studies have shown that KMC itself can enhance maternal confidence by fostering bonding and a sense of competence in caring for their infant (Park, 2020). And also, adequate

knowledge and understanding of how to perform KMC are equally crucial. Mothers who are well-informed about the benefits and proper techniques are more likely to implement KMC correctly and consistently (Ludington-Hoe, 2011).

c. Emotional Factors. Table 13 presents the emotional factors affecting mothers' compliance with the KMC Program at home. The top four indicators were collectively interpreted as greatly affect in their ranks: rank one, feeling of emotional connection to the baby during KMC, 3.66; rank two, self-confidence in feeling more capable as a mother, 3.61; rank three, mental readiness to consistently care for the baby, 3.57; rank four, feeling of comfort during the skin-to-skin contact aspect of KMC, 3.56. While two indicatorswere collectively interpreted as "Affect" in their ranks and weighted mean: rank five, emotional support received from a partner/family regarding KMC, 3.39; and rank 6, stress or feeling anxious while practicing KMC, 2.56. The average weighted mean for emotional factors is 3.39, which is interpreted as affect.

Table 13. Emotional Factors Affecting Compliance of Mothers on Kangaroo Mother Care at Home

Indicator	Weighted Mean	Verbal Interpretation	Rank
1. Feeling of emotional connection to the baby during KMC.	3.66	Greatly Affect	1
2. Self-confidence in being more capable as a mother.	3.61	Greatly Affect	2
3. Stress or feeling anxious practicing KMC.	2.56	Affect	6
4. Emotional support receive from a partner/family regarding KMC.	3.39	Affect	5
5. The feeling of comfort during the skin-to-skin contact aspect of KMC.	3.56	Greatly Affect	4
6. Mental readiness to consistently care the baby.	3.57	Greatly Affect	3
Average Weighted Mean	**3.39**	**Affect**	

The results highlight the significant role of emotional factors in influencing mothers' compliance with the KMC Program at home. The fact that four indicators were interpreted as "Greatly Affect" underscores the strong connection between a mother's emotional state and her ability to consistently practice KMC.

The feeling of emotional connection to the baby during KMC is a powerful motivator. Skin-to-skin contact is known to release oxytocin, often referred to as the "love hormone," which strengthens the bond between mother and child, fostering a deeper emotional connection (NHS, 2022). This enhanced bond can increase a mother's desire and commitment to providing KMC. Similarly, self-confidence in feeling more capable as a mother is crucial. The act of providing KMC and witnessing its positive effects on their baby can boost a mother's sense of competence and maternal efficacy (Park, 2020), leading to greater compliance.

The feeling of comfort during the skin-to-skin contact aspect of KMC also significantly impacts compliance. If the practice is perceived as comfortable and pleasant for the mother, she is more likely to continue it consistently (Cleveland Clinic, 2025). Mental readiness to consistently care for the baby (weighted mean 3.57) reflects the mother's overall emotional and psychological preparedness for the demands of newborn care, including KMC. A mother who feels mentally stable and ready is better equipped to adhere to the program's requirements.

The two indicators interpreted as "Affect" also play a role, albeit a less dominant one. Emotional support received from a partner/family regarding KMC can provide encouragement and reduce feelings of isolation, positively influencing compliance. However, the "Affect" rating suggests that while helpful, its absence may not be a critical barrier for all mothers. Stress or feeling anxious while practicing KMC has a negative impact. High levels of maternal stress and anxiety can significantly hinder a mother's ability and willingness to engage in KMC (Muliyati, Damanik, and Roosita, 2019). Addressing sources of stress is therefore important for promoting KMC compliance.

The overall weighted mean of 3.39 for all emotional factors, interpreted as "Affect," indicates that while individual emotional states can greatly influence compliance, the general emotional climate surrounding KMC for these mothers has a moderate impact. Interventions aimed at promoting KMC should consider strategies to foster emotional connection, build maternal confidence, ensure comfort, support mental readiness, encourage partner/family involvement, and mitigate maternal stress and anxiety.

d. Support System Factors. Table 14 presents the factors affecting mothers' compliance with the KMC Program at home in terms of their support system. The results showed all six indicators were interpreted as “Affect” collectively in their ranks: rank one, provision of clear and helpful information about KMC from healthcare providers, 3.43; rank 2, knowledge of where to seek help or advice concerning KMC questions,3.40; rank 3, help received from someone to do household chores while doing KMC, 3.37; rank 4, accessibility to healthcare professionals who support KMC, 3.32; rank 5, accessibility to support groups or resources for mothers practicing KMC, 3.29; and rank 6, ask a partner or other relatives to do KMC during short breaks, 3.28. The average weighted mean for all support system factors is 3.35, which is interpreted as "Affect”.

The data indicates that the support system factors generally affect mothers' compliance with the KMC Program at home highlighting the crucial role of external support in facilitating KMC practices. The provision of clear and helpful information about KMC from

healthcare providers, a foundational element of a supportive system, got the highest weighted mean. Mothers need accurate and understandable guidance to feel confident and competent in implementing KMC, as emphasized by BMJ Public Health (2024), which highlights the importance of continuous and repeated counseling by healthcare professionals. Similarly, knowing where to seek help or advice concerning KMC questions empowers mothers to address challenges and reinforces their adherence to the program. The accessibility to healthcare professionals who support KMC further strengthens the support network, ensuring ongoing guidance and encouragement (Qian Cai, 2024).

Table 14. Support System Factors Affecting Compliance of Mothers on Kangaroo Mother Care at Home

Indicator	Weighted Mean	Verbal Interpretation	Rank
Accessibility to healthcare professionals who support KMC.	3.32	Affect	4
Provision of clear and helpful information about KMC from healthcare providers.	3.43	Affect	1
Ask a partner or other relatives to do KMC during short breaks.	3.28	Affect	6
Help received from someone to do household chores while doing KMC.	3.37	Affect	3
Knowledge of where to seek help or advice concerning KMC questions.	3.40	Affect	2
Accessibility to support groups or resources for mothers practicing KMC.	3.29	Affect	5
Average Weighted Mean	**3.35**	**Affect**	

Practical support, such as help received from someone to do household chores while doing KMC, directly addresses a key barrier to KMC compliance: time constraints. Family and community support in alleviating household burdens allows mothers to dedicate the necessary time for skin-to-skin contact, a factor consistently linked to successful KMC (Bijayalaxmi, 2024). Accessibility to support groups or resources for mothers practicing KMC provides valuable peer support, emotional encouragement, and shared experiences, which can significantly enhance compliance (Healthy Newborn Network, 2017). Finally, the ability to ask a partner or other relatives to do KMC during short breaks not only offers the mother respite but also promotes family involvement and reinforces the benefits of KMC within the household.

In summary, the overall weighted mean for all factors affecting compliance generally denote affect which mean that these factors influence the compliance status of mothers on kMC at home. The greatly affect were noted in personal and emotional factors which may be taken into consideration when developing a plan to enhance compliance with KMC.

4. Relationship Between Profile of the Respondents and the Compliance Status of Mothers on Kangaroo Mother Care Program at Home

The profile of the respondents includes age, civil status, educational attainment, employment status, family monthly income and number of children were tested its significant relationship with the compliance status of mothers on KMC at home along with preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding, and monitoring baby's condition.

a. Profile of the Respondents and Preparation for Kangaroo Mother Care. Table 15 showed the relationship between the profile of the respondents and preparation for KMC as one of the domains of compliance to KMC Program. The computed x^2 of age (2.67), civil status (5.86), family monthly income (20.65), and number of children (11.89) are less than the tabular values and the p-values are greater than 0.05, leading to the acceptance of the null hypothesis, hence interpreted as not significant. Conversely, the computed x^2 of educational attainment (66.12) and employment status (16.29) are greater than the tabular values and the p-values are lesser than 0.05, resulting in the rejection of the null hypothesis with an interpretation of significant.

The findings revealed interesting insights into the relationship between mothers' profiles and their preparation for KMC. The lack of a statistically significant relationship between age, civil status, family monthly income, and number of children with KMC preparation suggests that these demographic factors do not significantly influence how well mothers prepare for KMC at home in this specific population. However, educational attainment and employment status emerged as significant factors.

Table 15. Relationship Between the Profile of the Respondents and Preparation for Kangaroo Mother Care

Indicator	Computed x^2	p-value at 0.05	Decision on Ho	Interpretation
Age	2.67	0.849	Accepted	Not Significant
Civil Status	5.86	0.119	Accepted	Not Significant
Educational Attainment	66.12	<0.001	Rejected	Significant

Employment Status	16.29	0.012	Rejected	Significant
Family Monthly Income	20.65	0.056	Accepted	Not Significant
Number of Children	11.89	0.065	Accepted	Not Significant

These findings align with the with existing literature highlighting the influence of socioeconomic factors on health-related behaviors and access to information. Lower educational attainment may correlate with reduced health literacy, potentially hindering a mother's ability to understand and prepare for KMC. Similarly, certain employment situations might present time constraints or lack of support, impacting a mother's capacity to engage in preparatory activities. These results underscore the necessity for targeted interventions that address the specific needs of mothers with lower educational backgrounds and varying employment statuses to ensure equitable access to information and support for KMC practices. Further research could explore the underlying reasons for these associations to inform the development of more effective and tailored interventions.

Studies indicate that mothers with higher levels of education tend to have greater knowledge and better compliance with KMC practices, which translates into more effective preparation and implementation of KMC at home. This is supported by the study conducted by Habte (2023) that in Ethiopia, mothers who attained secondary education or higher scored significantly better in practicing key elements of KMC compared to those with no formal education or only primary education. Similarly, mothers employed in government or private sectors demonstrated higher compliance with KMC preparation and practice than those who were unemployed or engaged in daily labor, suggesting that employment status, potentially linked to socioeconomic status and access to information, plays a role in readiness for KMC at home.

The employment-education nexus was associated with better preparation for and adherence to KMC, as employed and better-educated mothers had more resources and knowledge to implement KMC effectively at home. Furthermore, according to Samsudin et al. (2022), educational interventions such as structured training and participatory workshops, have been shown to significantly improve mothers' knowledge and skills related to KMC, further supporting the importance of educational attainment in preparing for KMC at home. These findings are echoed in global reviews, which emphasize that education and training are critical for the successful and sustainable implementation of KMC, both in healthcare settings and at home.

b. Profile of the Respondents and Positioning Baby Correctly for Kangaroo Mother Care. Table 16 shows the relationship between the profile of the respondents and positioning baby correctly for KMC. The computed x^2 of age (4.94), employment status (8.82), family monthly income (9.19), and number of children (9.56) are less than the tabular values and the p-values are greater than 0.05, leading to the acceptance of the null hypothesis with an interpretation of not significant. Whereas, the computed x^2 of civil status (9.64) and educational attainment (78.56) exceeds the tabular values and the p-values are less than 0.05, leading to the rejection of the null hypothesis with an interpretation of significant.

Table 16. Relationship Between the Profile of the Respondents and Positioning Baby Correctly for Kangaroo Mother Care

Indicator	Computed x^2	p-value at 0.05	Decision on Ho	Interpretation
Age	4.94	0.551	Accepted	Not Significant
Civil Status	9.64	0.022	Rejected	Significant
Educational Attainment	78.56	<0.001	Rejected	Significant
Employment Status	8.82	0.184	Accepted	Not Significant
Family Monthly Income	9.19	0.687	Accepted	Not Significant
Number of Children	9.56	0.145	Accepted	Not Significant

The results implied that the profile of mothers such as age, employment status, family monthly income and number of children do not have a statistical relationship with their ability to correctly position a baby for KMC. But the civil status and educational attainment are significantly related with how mothers position their baby correctly for KMC. Civil status can also indirectly affect a mother's ability to correctly position her baby for KMC. Mothers with strong social support, often associated with being in a stable partnership, may experience less stress and have more assistance in caring for their baby (WHO, 2023). This support can allow for greater focus on learning and practicing KMC, including proper positioning. Single mothers or those with limited support may face challenges such as increased stress, time constraints, and lack of assistance, which could impede their ability to consistently and correctly practice KMC. On the other hand, research shows that mothers with higher educational attainment are more likely to possess adequate knowledge and understanding of KMC, including the correct positioning of the infant (Habte, Tamene and Gizachew, 2023).

c. Profile of the Respondents and Skin-to-Skin Contact and Exclusive Breastfeeding. Table 17 presents the relationship between the profike of the respondents and skin-to-skin contact and exclusive breastfeeding. The computed x^2 of age (1.46), civil status (1.28), and number of children (5.12) are less than the tabular values and the p-values are higher than 0.05, leading to the decision on acceptance of null hypothesis with an interpretation of not significant. While the computed x^2 of educational attainment (41.71), employment status (16.12), and family monthly income (22.31) are higher than the tabular values and the p-values are less

than 0.05, leading to the rejection of the null hypothesis with an interpretation of significant.

The findings indicated age, civil status and number of children of the mothers are not significantly related with the skin-to-skin contact and exclusive breastfeeding. While the mothers' educational attainment, employment status and family monthly income are signicantly related thus, influencing their ability to perform skin-to-skin contact and exclusive breastfeeding as compliance to KMC Program at home. Mothers with higher education levels may have greater access to information about the benefits of these practices, better comprehension of healthcare instructions, and increased confidence in their ability to implement them.

Table 17. Relationship Between the Profile of the Respondents and Skin-to-Skin Contact and Exclusive Breastfeeding

Indicator	Computed x^2	p-value at 0.05	Decision on Ho	Verbal Interpretation
Age	1.46	0.962	Accepted	Not Significant
Civil Status	1.28	0.733	Accepted	Not Significant
Educational Attainment	41.71	0.005	Rejected	Significant
Employment Status	16.12	0.013	Rejected	Significant
Family Monthly Income	22.31	0.034	Rejected	Significant
Number of Children	5.12	0.529	Accepted	Not Significant

These findings are consistent with the study of Lawa et al. (2023). They stated that higher education empowers women with greater knowledge and awareness of vital health practices like KMC. This enhanced understanding, often gained through increased access to health information, healthcare resources, and medical concepts, increases the likelihood that educated mothers will recognize and adopt KMC's benefits. Furthermore, their education may encourage them to question traditional practices, such as separating premature infants from their mothers, in favor of evidence-based approaches.

Employment status and family monthly income, on the other hand, also influence mothers' compliance to skin-to-skin contact and exclusive breastfeeding. The online literature of Taylor and Francis authored by Hassan et al. (2024), mothers employed in government or private sectors often demonstrate higher compliance with KMC compared to unemployed mothers. This difference can be attributed to several interconnected factors: employment in government or private sectors often correlates with higher socioeconomic status, granting greater financial resources, improved living conditions, and reduced financial stress. Employed mothers also have increased access to information and healthcare resources through employer-provided health insurance, workplace programs, and health-literate social networks. Additionally, they may benefit from work flexibility and maternity leave, allowing them to attend training and dedicate time to KMC. Higher education and stable employment also correlate with greater health literacy, improving KMC understanding and implementation.

d. Profile of the Respondents and Monitoring Baby's Condition. Table 18 shows the relationship between the profile of the mothers and monitoring of baby's condition. The computed x^2 of age (3.49), civil status (0.59), family monthly income (16.64), and number of children (11.97) are less than the tabular values ang the p-values exceed the 0.05 level of significance, leading to the acceptance of the null hypothesis and interpreted as not significant. However, the computed x2 of educational attainment (87.58) and employment status (14.26) exceed the tabular values and the p-values are less than 0.05 level of significance, leading to the rejection of the null hypothesis and interpreted as significant.

Table 18. Relationship Between the Profile of the Respondents and Monitoring of Baby's Condition

Indicator	Computed x^2	p-value at 0.05	Decision on Ho	Verbal Interpretation
Age	3.49	0.745	Accepted	Not Significant
Civil Status	0.59	0.898	Accepted	Not Significant
Educational Attainment	87.58	<0.001	Rejected	Significant
Employment Status	14.26	0.027	Rejected	Significant
Family Monthly Income	16.64	0.164	Accepted	Not Significant
Number of Children	11.97	0.063	Accepted	Not Significant

The results depicted that the profiles of mothers such as age, civil status, family monthly income and number of children do not influence their monitoring practices of baby's condition while on KMC at home. Whereas, educational attainment and employment status found to have significant relationship with the compliance of mothers on monitoring baby's condition as part of KMC Program at home. These findings are supported with the results of the studies previously presented. Lawal et al. (2023) and Hassan et al. (2024) explained the importance of education and employment status, respectively. Education provides mothers' ability to

comprehend health literacy while employment influences compliance on KMC practice because of their socio-economic status and financial capacity.

Generally, there is a significant relationship between the mothers' profile (educational attainment) and the compliance status of mothers on KMC Program at home in terms of preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding, and monitoring baby's condition. Whereas, some demographic profiles of the mothers such as employment status, civil status and family monthly income are found to have an influence on some of the compliance status of mothers on KMC Program at home. These findings are important in developing activities to include in the plan to enhance the compliance status of mothers on KMC Program at home.

5. Relationship Between Compliance Status of Mothers and Factors Affecting Compliance on Kangaroo Mother Care at Home

In this section, tables are presented to show the results on the significance relationship between compliance status of mothers such as preparation for KMC, positioning baby correctly for KMC, skin-to-skin contact and exclusive breastfeeding, and monitoring baby's condition with the factors affecting mothers' compliance on KMC at home along with social, personal, emotional and support system factors.

a. Compliance on Preparation for Kangaroo Mother Care and Factors Affecting Compliance. Table 19 shows the relationship between preparation for KMC and the factors affecting compliance of mother on KMC Program at home. The computed rs for social factors (0.48), personal (0.41), emotional (0.41), and support system factors (0.36) exceed the tabular values and the p-values are less than 0.05 level of significance which resulted to the rejection of the null hypothesis and interpreted as significant.

Table 19. Relationship Between Preparation for KMC and Factors Affecting Compliance

Factors	Computed r_s	p-value at 0.05	Decision on Ho	Interpretation
Social Factors	0.48	<0.001	Rejected	Significant
Personal Factors	0.41	<0.001	Rejected	Significant
Emotional Factors	0.41	<0.001	Rejected	Significant
Support System Factors	0.36	<0.001	Rejected	Significant

The results indicated a statistically significant positive correlation between preparation for KMC and all categories of factors. These implied that mothers who are more prepared for KMC tend to experience more positive social, personal, and emotional factors, as well as a stronger support system, which in turn likely contributes to better compliance with the KMC program. The findings are supported by the study of Habte et al. (2023), which emphasized the crucial role of family support and counseling in KMC compliance, aligning with the significant correlation observed between preparation and support system factors. When mothers feel supported by their families and receive adequate counseling, they are more likely to adhere to KMC recommendations. Furthermore, the result of the study of Zulu et al. (2020), showed that majority of the respondents with 94% perceived KMC as good and beneficial. While mothers held positive views of KMC, its implementation at home was hindered by factors such as maternal fatigue or illness, lack of partner support, inadequate midwife follow-up, and competing demands from household chores.

In summary, the four key factors such as social, personal, emotional and support system affect the compliance of mothers on KMC Program particularly in preparation for KMC. This suggests that while mothers are largely adhering to the recommended positioning techniques, there's still potential for improvement to reach a "highly complied" status across all indicators. Therefore, all the four factors will be taken into consideration in making plan to enhance compliance on KMC Program at home particularly in preparation for KMC.

b. Compliance on Positioning Baby Correctly for Kangaroo Mother Care and Factors Affecting Compliance. Table 20 shows the relationship between positioning baby correctly for KMC and the factors affecting compliance of mothers on KMC at home along with social, personal, emotional, and support system elements. The computed rs of social (030), personal (0.40), emotional (0.42), and support system factors (0.36) exceed the tabular values and the p-values are less tha 0.05 level of significance, leading to the rejection of the null hypothesis and an interpretation of significant.

Table 20. Relationship Between Positioning Baby Correctly for Kangaroo Mother Care and Factors Affecting Compliance

Factors	Computed r_s	p-value at 0.05	Decision on Ho	Interpretation
Social Factors	0.30	<0.001	Rejected	Significant
Personal Factors	0.40	<0.001	Rejected	Significant
Emotional Factors	0.42	<0.001	Rejected	Significant
Support System Factors	0.36	<0.001	Rejected	Significant

The results implied that there is a statistical significant positive relationship between mothers' ability to correctly position their baby for KMC and the various factors affecting their compliance. The correlation mean that mothers who are better at positioning their

baby correctly for KMC tend to experience more positive social, personal, and emotional factors, as well as a stronger support system, which likely contributes to their ability to implement KMC effectively. Correct positioning of the baby for KMC is positively linked to a mother's physical comfort, self-confidence, and ability to manage responsibilities, while also fostering stronger emotional bonds and reducing anxiety. Mothers who position their babies correctly often experience greater community acceptance and benefit from robust support systems, including guidance from healthcare providers and family assistance. These interrelated factors collectively enhance both maternal satisfaction and the effectiveness of KMC, supporting optimal outcomes for both mother and baby.

The results are consistent with the study conducted by Habte, Tamene and Gizachew (2023), which aimed at assessing the postnatal mothers compliance on KMC and the factors that influence it in southern Ethiopia. The study revealed that maternal knowledge, as personal factor, is a significant predictor of KMC practice. Specifically, mothers with good KMC knowledge were 1.4 times more likely to practice KMC items than mothers with poor knowledge. Also, place of delivery which can be associated with availability of health services, a support system factor, was also found to be a significant predictor of compliance with key elements of KMC. Furthermore, birth preparedness and complication readiness can be connected with mothers' mental readiness, an emotional factor, was also identified as significant predictors on compliance of KMC including positioning baby correctly.

c. Compliance on Skin-to-Skin Contact and Exclusive Breastfeeding and Factors Affecting Compliance. Table 21 presents the relationship between skin-to-skin contact and exclusive breastfeeding with the factors affecting compliance of mothers on KMC Program at home. The computed r_s of social (0.50), personal (0.28), emotional (0.34), and support system factors (0.39) exceed the tabular values and the p-values are less than 0.05 level of significance resulting to the rejection of the null hypothesis with an interpretation of significant.

The findings revealed a statistically significant positive correlation between the practice of skin-to-skin contact and exclusive breastfeeding and all categories of factors. This suggests that mothers who more frequently practice skin-to-skin contact and exclusive breastfeeding tend to experience more positive social, personal, and emotional factors, as well as a stronger support system, which likely contributes to their adherence to these key KMC practices.

Table 21. Relationship Between Skin-to-Skin Contact and Exclusive Breastfeeding and Factors Affecting Compliance

Factors	Computed r_s	p-value at 0.05	Decision on Ho	Interpretation
Social Factors	0.50	<0.001	Rejected	Significant
Personal Factors	0.28	0.001	Rejected	Significant
Emotional Factors	0.34	<0.001	Rejected	Significant
Support System Factors	0.39	<0.001	Rejected	Significant

In the article written by Taskou (2023), direct skin-to-skin contact enhances maternal breastfeeding self-efficacy and increases both the initiation and duration of exclusive breastfeeding, highlighting the importance of maternal confidence and emotional readiness in sustaining these practices. While brestfeeding plays a critical role in the health and survival of infants, it is impotant to note that these practices are not only influenced by individual maternal characteristics but are also strongly shaped by the broader psychosocial environment including factors that hinders compliance on KMC.

c. Compliance on Monitoring Baby's Condition and Factors Affecting Compliance. Table 22 shows the relationship between monitoring of baby's condition and the factors affecting compliance of mothers on KMC Program at home along with socal, personal, emotional, and support system factors. The computed rs of social (0.28), personal (0.39), emotional (0.46), and support system factors (0.41) exceed the tabular values and the p-values are less than 0.05 level of significance resulting to the rejection of the null hypothesis with an interpretation of significant.

Table 22. Relationship Between Monitoring of Baby's Condition and Factors Affecting Compliance

Factors	Computed r_s	p-value at 0.05	Decision on Ho	Interpretation
Social Factors	0.28	0.001	Rejected	Significant
Personal Factors	0.39	<0.001	Rejected	Significant
Emotional Factors	0.46	<0.001	Rejected	Significant
Support System Factors	0.41	<0.001	Rejected	Significant

The results indicate a statistically significant positive correlation between monitoring the baby's condition and all categories of factors. The data implied that monitoring of baby's condition, as part of compliance to KMC Program, have been influenced by four key factors: social, personal, emotional and support system-related. It suggests that mothers who consistently and more actively monitor their baby's condition, which is vital for ensuring infants' safety, tend to experience more positive social, personal, and emotional factors, as well as a stronger support system. These interconnected factors appear to enhance their commitment to vigilant

health monitoring throughout the KMC process. The results also further emphasized that effective KMC is not just a technical intervention but is deeply influenced by the mother's environment and psychosocial context. Since monitoring is essential to identify subtle warning signs early and provide timely treatment (WHO, 2003), mothers should be educated on how to recognize these danger signs and encouraged to seek medical attention whenever they have concerns. Therefore, attentive monitoring of baby during KMC Program can be associated with greater social encouragement, higher self-confidence and health literacy, stronger emotional attachment, and better support from healthcare providers and family, which in turn contributes to better KMC compliance.

In summary, all domains of compliance and factors are significantly related to each other. Particularly, in preparation for KMC, social factors got the highest computed r_s. While in correct positioning of baby, emotional factors got the highest computed r_s. In skin-to-slin contact and exclusive breastfeeding, again, social factors got the highest computed r_s. And for the monitoring of baby's condition, emotional factors has the highest computed r_s.

6. Proposed Plan to Enhance the Compliance of Mothers on Kangaroo Mother Care Program at Home in the Province of Camarines Sur

This section outlines the plan developed from this research in consideration of statistical data gathered as well as guided by existing literature and research cited in this study. The WHO identified different features of KMC to care for preterm and LBW infants that includes skin-to-skin contact, with support of exclusive breastfeeding or breast-milk feeding, timely discharge from the special care within the facility or at home, and monitoring. Additionally, readiness of mothers and proper positioning of baby during KMC are also important for an effective KMC. Furthermore, different aspects of KMC were presented including its benefits, health system barriers and interventions effective in improving KMC coverage which may be related to various factors influencing adherence to KMC.

This study found that among the features of KMC, four were identified as the weakest complied of mothers on KMC Program at home. These were the indicators of skin-to-skin contact and exclusive breastfeeding such as expressing and storing breast-milk correctly to provide enough milk for baby while on KMC, performing continuous skin-to-skin contact for more than 20 hours per day as recommended, observance of 30 minutes short breaks during each session, and exclusively breastfeed for 8-12 times, 15-20 minutes interval in 24 hours or once feeding cues are shown. Whereas the factors that greatly affect compliance of mothers on KMC Program at home are the personal and emotional factors. The plan focused on addressing these identified features and factors through proper coordination and collaboration with various stakeholders within health institutions and community. Continuous health education with public health workers and the community are both important in enhancing compliance on KMC Program. Furthermore, giving importance to personal and emotional support for mothers would greatly give positive results in compliance to KMC Program both in hospital and community setting.

Rationale

As seen in table 23 is the matrix of the proposed plan, the areas of concern highlight the identified weak points from the findings that should be prioritized in planning. The specific objectives define the purpose of each intervention, while the strategies or activities outline the steps to achieve these objectives. The agencies or personnel involved are responsible for implementing the plan, and the desired outcomes serve as the basis for evaluating whether the objectives have been successfully met.

General Objective

The proposed plan was developed to enhance the compliance status on Kangaroo Mother Care Program at home for LBW and preterm infants in the province of Camarines Sur.

Table 23. Proposed Plan to Enhance the Compliance Status of Mothers with LBW and Preterm Infants on Kangaroo Mother Care Program at Home

Areas of Concern	Specific Objectives	Strategies/ Activities	Agency/ Personnel Involved	Desired Outcomes
1. Compliance on Skin-to-skin contact and Exclusive Breastfeeding				
a. breastmilk expression and storage	Improve mothers' ability to express and store breastmilk hygienically and safely	1. Conduct hands-on training sessions on breastmilk expression and storage before discharge. 2. Provide illustrated take-home guides. 3. Give free starter kits	Lactation Consultants, Nurses, Barangay Health Workers	Increased rates of properly expressed and safely stored breastmilk among KMC mothers at home

		(manual pumps, sterile containers).		
b. continuous skin-to-skin contact for 20 hours or more	Increase the duration of uninterrupted skin-to-skin contact to meet >20 hours per day	1. Educate mothers and family on positioning techniques and using KMC wraps 2. Conduct home visits to reinforce techniques 3. Provide reminders (KMC schedule chart or mobile alerts)	Nurses, Midwives, Barangay Health Workers, Fathers	Mothers achieve 20+ hours of daily skin-to-skin contact
c. observance of short breaks during KMC	Guide mothers on appropriate timing and management of breaks during KMC	1. Integrate short-break planning into hospital discharge instructions 2. Provide easy-to-use KMC monitoring charts (indicating feeding, rest, hygiene breaks)	Nurses, Midwives, Health Educators	Improved compliance to 30-minute structured breaks during continuous KMC
d. correct breastfeeding techniques	Ensure mothers maintain recommended breastfeeding frequency (8–12x/day)	1. Personalized breastfeeding coaching 2. SMS reminders for feeding intervals 3. Establish peer lactation support groups in the community	Lactation Consultants, Midwives, BHWs	Increased breastfeeding frequency according to guidelines
2. Factors affecting compliance on KMC				
a. Personal Factors on KMC (personal perceptions, physical stamina, time and own understanding)	Support mothers in managing fatigue and organizing their time	1. Offer time management counseling 2. Encourage involvement of family members in household chores to free up mother's time 3. Provide resting spaces in barangays for breastfeeding mothers	Barangay Officials, Family Members, Social Workers	Reduced fatigue and improved adherence to KMC routines
b. Emotional Factors on KMC (self-confidence, mental readiness)	Address maternal emotional well-being to encourage KMC compliance	1. Integrate mental health screening during follow-ups 2. Create KMC peer support circles for emotional sharing and encouragement 3. Provide access to counseling services when needed	MSWDO, Psychologists, Peer Counselors	Improved maternal emotional resilience and KMC compliance

Summary, Conclusions, And Recommendations

This chapter outlines the summary of the significant findings and conclusions of the study. This also highlights the recommendations formulated to enhance the compliance of mothers on Kangaroo Mother Care Program at home in the province of Camarines Sur.

Summary of Findings

The main objective of this study is to assess whether mothers comply on Kangaroo Mother Care practices at home for LBW and premature infants in the province of Camariner Sur. This study wants to find the following specific objectives:

1. Identify the profile of the respondents in terms of:

a. Age

b. Civil Status
c. Educational Attainment
d. Employment Status
e. Family Monthly Income
f. Number of Children
2. Determine the compliance status on Kangaroo Mother Care at home along:
o. Preparation for Kangaroo Mother Care
p. Positioning Baby Correctly for Kangaroo Mother Care
q. Skin-to-Skin Contact and Exclusive Breastfeeding
r. Monitoring of Baby's Condition
3. Determine the factors affecting the compliance of mothers on Kangaroo Mother Care at home along:
a. Social Factors
b. Personal Factors
c. Emotional Factors
d. Support System Factors
4. Test the significant relationship between the profile of the respondents and the compliance status of mothers on Kangaroo Mother Care Program at home.
5. Test the significant relationship between the compliance status of mothers and the factors affecting the compliance on Kangaroo Mother Care at home.
6. Propose a plan that could enhance the compliance on Kangaroo Mother Care at home for Low Birth Weight and preterm infants in the province of Camarines Sur.

Based on the interpreted and analyzed data, the following significant findings were enumerated.

1. Profile of the Respondents

Out of the 142 mothers who participated in the study, 106 respondents or 74.65% belonged to the age group of 20 to 35 years old. This was followed by 32 respondents or 22.54% in the 36 to 45 age group, and only four respondents or 2.82% were 19 years old and below. In terms of civil status, 76 respondents accounting for 53.52% were married while 66 mothers or 46.48% were single. Regarding educational attainment, 50 out of 142 respondents were college graduates, accounting for 35.21%. This was followed by 35 high school graduates (24.65%), 24 college undergraduates (16.9%), 23 high school undergraduates (16.2%), 5 elementary graduates (3.52%), and 3 elementary undergraduates (2.11%). Additionally, one respondent reported having completed a vocational course, and another indicated being a doctorate undergraduate.

In terms of employment status, 94 respondents or 66.2% were unemployed, 28 employed respondents or 19.72%, and 20 self-employed mothers or 14.08%. The data on family monthly income showed 82 mothers or 57.75% of the 142 mothers had a family income of ₱10,481 or less. This was followed by 27 respondents (19.01%) earning between ₱10,481 and ₱20,962; 23 respondents (16.2%) with an income of ₱20,963 to ₱41,924; 8 respondents (5.63%) earning between ₱41,925 and ₱73,202; and only 2 respondents (1.41%) with a family income exceeding ₱73,202. As for the number of children, 80 or 56.34% of the mothers had two to three children, 43 mothers or 30.28% with only one child, and 19 mothers or 13.38% who had four to five children.

2. Compliance Status on Kangaroo Mother Care Program at home

The evaluation of the respondents of their compliance on KMC Program at home revealed in different domains:

a. Preparation for Kangaroo Mother Care. In preparation for KMC, the overall weighted mean is 3.34 which has an interpretation of "complied". Only one out seven indicators had weighted mean of 3.54 with an interpretation of highly complied and was ranked first is "Perform personal hygiene especially washing of hands before and after baby care to prevent infection". This is followed by the six indicators with interpretation of complied: "Make sure the KMC provider is healthy and free from sickness", rank 2 (3.44); "Ensure good source of support from the family and community", rank 3 (3.41); "Put on a KMC binder or an improvised linen like big shirts to cover baby's body during KMC", rank 4 (3.33); "Went home with adequate knowledge and understanding on KMC Program through attending regular health education and discharge instruction", rank 5 (3.29); "Confidently change dirty diaper with baby lying on his or her side and not lifting up legs as it may traumatize the hips and increase abdomen pressure", rank 6 (3.27); and last in the rank (7^{th}), "Remove baby's clothes except for cap, socks and diaper to keep baby warm during KMC", with the lowest weighted mean (3.09).

b. Positioning Baby Correctly for Kangaroo Mother Care. In positioning baby correctly for KMC, the overall weighted mean is 3.43 with an interpretation of complied. Furthermore, the top two indicators that got an interpretation of "Highly Complied" are "Maintain in a comfortable position leaning backward on a bed or chair" (rank 1, 3.59), and "Make sure the binder is not too tight over baby's chest" (rank 2, 3.51). Collectively, the following indicators were interpreted as complied: "Hold baby with one hand supporting the head and neck and the other hand on the bottom" and "Gently place the baby in a vertical position between breasts and establish chest-to-chest contact, ensuring the legs and arms are flexed in a frog position" both got the same weighted mean (3.44), rank 3.5; "Ensure that baby's head is slightly extended, with the head turned to one side and the arms flexed" (rank 5,

3.39); followed by "Adjust binder securely so the baby will not fall out when moving around" (rank 6, 3.34); and the lowest in rank (7th) with the lowest weighted mean (3.32) is "Hold baby close with as much skin-to-skin contact as possible".

c. Skin-to-Skin Contact and Exclusive Breastfeeding. Moreover, the overall weighted mean for skin-to-skin contact and exclusive breastfeeding is 2.97 which is still interpreted as complied. The following indicators were collectively presented in their ranks with an interpretation of complied: "Safely maintain the baby in the KMC position until their desire for it is satisfied" (rank 1, 3.42); "When breastfeeding, correctly and safely turn baby in a breastfeeding position while on KMC. Baby's face towards the breast" (rank 2, 3.36); "Let husband or other relative to do KMC as substitute while having a short break provided that they are healthy" (rank 3, 3.13); "Exclusively breastfeed baby for 8-12 times, 15 to 20 minutes each, in 24 hours or once feeding cues are shown such as drooling, tonguing, biting hands, licking, or crawling towards breasts" (rank 4, 2.86); "Observe 30 minutes short breaks during each session" (rank 5, 2.82); and, "Perform continuous skin-to-skin contact (KMC) for more than 20 hours per day as recommended to provide maximum benefits to baby" (rank 6, 2.74). However, there is a remarkable findings for "express and store breast-milk correctly to provide enough milk for baby while on KMC" with the lowest weighted mean of 2.49 with an interpretation of moderately complied and ranked as the 7th among indicators.

d. Monitoring of Baby's Condition. In monitoring baby's condition got 3.48 overall weighted mean which is interpreted as complied. The top three indicators out of seven indicators were interpreted as highly complied while the remaining 4 were interpreted as complied. The following indicators were collectively presented with an interpretation of "Highly Complied": "Check baby's temperature, color and breathing (3.64, rank 1); and both "Regularly monitor the weight of baby" and "Give oral supplement/take home medications to the baby as recommended" have the same weighted mean (3.51, rank 2.5). Furthermore, the four indicators that were interpreted as "Complied" are: "Communicate clearly with other caregivers/family members when they should call help immediately" (3.48, rank 4); "Report any abnormalities such fast breathing, gasping, apnea, chest indrawing, abdominal distention, skin discoloration, difficulty feeding, diarrhea, change in temperature, recurrent vomiting and convulsions" (3.45, rank 5); "Follow the scheduled consultations/check-ups regularly" (3.40, rank 6); and, "Stop KMC if the baby becomes uncomfortable and refuses the position" (3.35, rank 7). The overall compliance status for monitoring baby's condition has an interpretation of complied (3.48).

In summary, the respondents' evaluation on the compliance status on KMC Program at home reveal that they complied in all four categories. However, there were four indicators which has lower weighted means identified as areas needed to be addressed to enhance their compliance on KMC Program at home. These indicators that got the lowest weighted mean are: express and store breast-milk correctly to provide enough milk for baby while on KMC; perform continuous skin-to-skin contact for more thatn 20 hours per day as recommended to provide maximum benefits to baby; observe 30 mins short breaks during each session; and exclusively breastfeeding baby for 8 to 12 times, 15 to 20 minutes each, in 24 hours or once feeding cues are shown such as drooling, tonguing, biting hands, licking, or crawling towards breasts. These identified indicators were taken into consideration as they are essential in crafting plans to enhance the mothers' compliance with KMC.

3. Factors Affecting Compliance on Kangaroo Mother Care at Home

The respondents' evaluation on factors affecting compliance on KMC at home are revealed according to the following categories:

a. Social Factors. The overall weighted mean for social factors affecting compliance is 2.98 with an interpretation of affect. All six indicators were interpreted as an "Affect" collectively enumerated according to their ranks: "Encouragement and support from family/partner to do KMC practice" (3.43, rank 1); "Opportunities to interact with other mothers practicing KMC" (3.23, rank 2); "People in the community understand and value KMC" (3.21, rank 3); "Local health workers' activities that support KMC" (2.75, rank 4); "Cultural and traditional practices that support KMC" (2.68, rank 5); and lastly, "Feeling of pressure from others not to do KMC" (2.58, rank 6). The data from Table 11 indicates that social factors generally "Affect" mothers' compliance with the KMC Program at home. All factors in social aspect influence the compliance of mothers on KMC at home.

b. Personal Factors. The overall weighted mean for personal factors affecting compliance is 3.66 with an interpretation of greatly affect. All factors in personal aspect influence greatly the compliance of mothers on KMC at home enumerated in their ranks: "Belief that KMC is important for the baby's health and development" (3.73, rank 1); "Comfort and enjoyment in doing KMC practices (3.67, rank 2); "Physical stamina/stability to practice KMC regularly" (3.66, rank 3); "Adequate knowledge and understanding to perform KMC" (3.65, rank 4); "Confidence in caring baby" (3.62, rank 5); and lastly, "Adequate time to dedicate to KMC" (3.60, rank 6).

c. Emotional Factors. The overall weighted mean for emotional factos affecting compliance is 3.39 with an interpretation of affect. The top four indicators were interpreted as "Greatly Affect" and the lowest two were interpreted as "Affect." The following indicators were collectively interpreted as "Greatly Affect": "Feeling of emotional connection to the baby during KMC" (3.66, rank 1); "Self-confidence in feeling more capable as a mother" (3.61, rank 2); "Mental readiness to consistently care for the baby" (3.57, rank 3); and, "Feeling of comfort during the skin-to-skin contact aspect of KMC" (3.56, rank 4). Furthermore, the two indicators interpreted as "Affect" are: "Emotional support received from a partner/family regarding KMC" (3.39, rank 5) and "Stress or feeling anxious while practicing KMC" (2.56, rank 6).

d. Support System Factors. The overall weighted mean for support system factos affecting compliance is 3.35 with an interpretation of affect. All six indicators were interpreted as "Affect" are collectively in their ranks: provision of clear and helpful

information about KMC from healthcare providers (3.43, rank 1); knowledge of where to seek help or advice concerning KMC questions (3.40, rank 2); help received from someone to do household chores while doing KMC (3.37, rank 3); accessibility to healthcare professionals who support KMC (3.32, rank 4); accessibility to support groups or resources for mothers practicing KMC (3.29, rank 5); and asking a partner or other relatives to do KMC during short breaks (3.28, rank 6).

In summary, the respondents' evaluation on the factors affecting compliance on KMC at home revealed personal and emotional factors greatly influence in adhering to KMC practices at home.

4. Relationship Between Profile of the Respondents and Compliance Status on Kangaroo Mother Care at Home

The significance relationship between profile of the respondents and their compliance on KMC Program at home revealed in different features of KMC:

a. Profile of the Respondents and Preparation for Kangaroo Mother Care. There is significant relationship between some of the profile of the respondents such as educational attainment and employment status with the preparation for KMC as part of compliance to KMC Program at home with the computed chi-square of 66.12 and 16.29, respectively. The computed value is greater than the tabular value at 0.05 level of significance which results to the rejection of the null hypothesis.

b. Profile of the Respondents and Positioning baby correctly for Kangaroo Mother Care. There is significant relationship between some of the profile of the respondents such as civil status and educational attainment with the positioning baby correctly for KMC as part of compliance to KMC Program at home with the computed chi-square of 9.64 and 78.56, respectively. The computed value is greater than the tabular value at 0.05 level of significance which results to the rejection of the null hypothesis.

c. Profile of the Respondents and Skin-to-Skin Contact and Exclusive Breastfeeding. There is significant relationship between some of the profile of the respondents such as educational attainment, employment status and family monthly income with the skin-to-skin contact and exclusive breastfeeding as part of compliance to KMC Program at home with the computed chi-square of 41.71, 16.12 and 22.31, respectively. The computed value is greater than the tabular value at 0.05 level of significance which results to the rejection of the null hypothesis.

d. Profile of the Respondents and Monitoring Baby's Condition. There is significant relationship between some of the profile of the respondents such as educational attainment and employment status with the monitoring baby's condition as part of compliance to KMC Program at home with the computed chi-square of 87.58 and 14.26, respectively. The computed value is greater than the tabular value at 0.05 level of significance which results to the rejection of the null hypothesis.

5. Relationship Between Compliance Status of Mothers and Factors Affecting Compliance on Kangaroo Mother Care at Home

The significance relationship between compliance status of mothers and the factors affecting compliance on KMC Program at home revealed in various aspects:

a. Preparation for Kangaroo Mother Care and Factors Affecting Compliance. There is significant relationship between the preparation for KMC and all the factors affecting compliance such as social, personal, emotional and support system aspect. The computed spearmans' rho such as 0.48 (social factor), 0.41 (personal factor), 0.41 (emotional factor), and 0.36 (support system factor) are greater than the tabular value at 0.05 level of significance (0.165) which results to the rejection of the null hypothesis.

b. Positioning Baby Correctly for Kangaroo Mother Care and Factors Affecting Compliance. There is significant relationship between the positioning baby correctly for KMC and all the factors affecting compliance such as social, personal, emotional and support system aspect. The computed spearmans' rho such as 0.42 (emotional factor), 0.40 (personal factor), 0.36 (support system factor), and 0.30 (social factor) are greater than the tabular value at 0.05 level of significance (0.165) which results to the rejection of the null hypothesis.

c. Skin-to-skin contact and Exclusive Breastfeeding and Factors Affecting Compliance. There is significant relationship between the skin-to-skin contact and exclusive breastfeeding and all the factors affecting compliance such as social, personal, emotional and support system aspect. The computed spearmans' rho such as 0.50 (social factor), 0.39 (support system factor), 0.34 (emotional factor), and 0.28 (personal factor) are greater than the tabular value at 0.05 level of significance (0.165) which results to the rejection of the null hypothesis.

d. Monitoring Baby's Condition and Factors Affecting Compliance. There is significant relationship between monitoring baby's condition and all the factors affecting compliance such as social, personal, emotional and support system aspect. The computed spearmans' rho such as 0.46 (emotional factor), 0.41 (support system factor), 0.39 (personal factor), and 0.28 (social factor) are greater than the tabular value at 0.05 level of significance (0.165) which results to the rejection of the null hypothesis.

6. Proposed Plan to Enhance Compliance Status of Mothers on Kangaroo Mother Care Program at Home in the Province of Camarines Sur

The proposed plan includes targeted hands-on trainings and seminars, educational campaigns, home visits, time management, family and community involvement, integration of mental assessment and counseling, and collaboration between hospitals and barangay health centers. These strategies are expected to significantly enhance maternal compliance with the Kangaroo Mother Care program at home and contribute to better outcomes for LBW and preterm infants in Camarines Sur.

Conclusions

This section presents a concise summary of the key challenges and insights derived from the analysis and interpretation of the study's findings.

1. Most of the mothers with LBW and preterm Infants are from the age bracket 20 to 35 years old. Majority were married, college graduate, with family monthly income of 10, and below, and with 2 to 3 children.
2. Generally, mothers who participated in the study are compliant to the KMC Program at home particularly in areas related to hygiene and monitoring of the baby's condition. Despite overall compliance, mothers demonstrated difficulty in maintaining exclusive breastfeeding routines, especially in expressing and storing breast milk.
3. The respondents of the study believed that all factors particularly personal and emotional factors greatly affect the compliance of mothers on KMC at home.
4. There is significant relationship between profile and the compliance status of mothers on KMC Program at home. Specifically, educational attainment and employment status, civil status and family monthly income played pivotal roles in enhancing mothers' understanding and practice of KMC.
5. There is a significant relationship between the compliance status and factors affecting compliance of mothers on KMC at home. A well-established personal and emotional factor composed of the mothers' own perceptions, knowledge, beleifs, feelings and physical stamina were the most significant factors in sustaining compliance.
6. The compliance status of mother with LBW and preterm infants on Kangaroo Mother Care Program at home will be enhance if the proposed plan will be put into action.

Recommendations

Based on the aforementioned findings, the following recommendations are presented:

1. Develop age-appropriate and socioeconomically sensitive educational materials and counseling sessions focused on KMC, targeting young mothers with financial constraints. Health providers should tailor communication based on the family structure and educational background of the mothers to enhance relevance and understanding.
2. Strengthen lactation support by providing mothers with regular follow-ups on breastfeeding practices, access to breast pumps or storage containers, and mobile or community-based breastfeeding counseling to assist with milk expression and storage.
3. Integrate psychosocial support into postnatal care by establishing peer support groups, mental health screening during post-discharge visits, and offering family counseling to address emotional challenges and boost maternal confidence in continuing KMC.
4. Develop KMC education and support programs that address the varied backgrounds of mothers. Use simple and visual learning tools for those with lower education, and provide care packages for unemployed and low-income mothers. Encourage family involvement for married mothers and create peer support groups for single mothers. These tailored efforts will help improve understanding and sustain compliance with KMC at home.
5. Develop individualized care plans that assess and address mothers' beliefs, perceptions, stamina, and emotional state. Train barangay health workers to conduct home visits focusing on emotional reinforcement, health education, and practical tips to improve resilience and self-efficacy.
6. Advocate for the adoption and integration of the proposed KMC enhancement plan at the municipal or provincial health level. Monitor its implementation through regular evaluation, feedback collection from mothers, and coordination with local health units to ensure sustainability and impact.

Suggestions for Further Study

Future researchers may further consider the following:

1. A Longitudinal Study on the Impact of Home-Based Kangaroo Mother Care Adherence on the Growth and Development of Low Birth Weight and Preterm Infants
2. Exploring the Roles of Fathers and Extended Caregivers in Sustaining Kangaroo Mother Care at Home
3. Lived Experiences of Mothers in Practicing Kangaroo Mother Care at Home: A Qualitative Study
4. Development and Evaluation of a Mobile Health Application to Monitor and Support Maternal Kangaroo Mother Care Practices at Home
5. A Comparative Study on Compliance with Kangaroo Mother Care Practices Among Urban and Rural Mothers
6. The Influence of Maternal Stress and Mental Health on the Sustainability of Kangaroo Mother Care at Home

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