DOI: https://doi.org/10.66206/eduheart.ijnhha.266

Assessment of Service Delivery Effectiveness among BemONC-Trained and Experience-Based Healthcare Personnel in Maternal and Newborn Care in Rural Health Units of the Province of Sulu

Shermaleen S. Abdulmajid, RN[1] Mary Ann E. Lopez, MAN, RN, LPT[2]
https://orcid.org//0009-0003-6732-3488[1] https://orcid.org//0000-0001-7566-5152[2]
St. Bernadette of Lourdes College Inc.[1'2]
sabdulmajid@sblc.edu.ph[1] malopez@sblc.edu.ph[2]

ABSTRACT

This study assessed the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel providing maternal and newborn care in selected Rural Health Units in the Province of Sulu. Specifically, it examined the respondents' profile, the extent of BEmONC training, the level of service delivery effectiveness, the relationship between respondents' profile and BEmONC training with service delivery effectiveness, and the significant differences between BEmONC-trained and experience-based healthcare personnel. A quantitative descriptive-comparative and correlational research design was employed. Fifty (50) nurses, midwives, and physicians directly involved in maternal and newborn care were selected through purposive sampling. Data were collected using a structured questionnaire and analyzed using descriptive and inferential statistics. The findings revealed that respondents generally demonstrated high service delivery effectiveness in managing obstetric emergencies, providing essential newborn care, ensuring timely referrals, and improving maternal and neonatal outcomes. Statistical analysis showed that length of service, BEmONC training background, and the overall extent of BEmONC training were significantly associated with service delivery effectiveness, while significant differences were also found between BEmONC-trained and experience-based healthcare personnel. The study was limited to selected Rural Health Units in the Province of Sulu, which may affect the generalizability of the findings. The results highlight the importance of expanding formal BEmONC training, competency-based professional development, and institutional support to strengthen maternal and newborn healthcare services. This study provides evidence that may guide policymakers, health administrators, and Rural Health Units in planning and implementing competency-based interventions to improve the effectiveness of service delivery.

Keywords: *BEmONC training, service delivery effectiveness, maternal care, newborn care, rural health units, Sulu*

INTRODUCTION

Maternal and newborn health remains a major public health concern, particularly in rural areas where access to emergency obstetric and newborn care is limited. Basic Emergency Obstetric and Newborn Care (BEmONC) aims to strengthen healthcare personnel's competencies in providing quality maternal and newborn services. However, limited evidence exists comparing the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel in Rural Health Units of Sulu. This study was conducted to address this

gap and provide evidence to support competency-based training and improve maternal and newborn healthcare services.

Statement of the Problem

This study assessed the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel providing maternal and newborn care in selected Rural Health Units in the Province of Sulu. It examined the respondents' profile, the extent of BEmONC training, and the level of service delivery effectiveness. The study also examined the relationship between respondents' profiles, BEmONC training, and service delivery effectiveness; compared the effectiveness of BEmONC-trained and experience-based healthcare personnel; and proposed recommendations to strengthen maternal and newborn healthcare services.

Scope and Delimitations

This study assessed the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel providing maternal and newborn care in selected Rural Health Units in the Province of Sulu. It focused on BEmONC training, service delivery effectiveness, and their relationship. The findings were limited to the study setting but provide evidence supporting competency-based training and improvements in maternal and newborn healthcare.

Review of Related Literature

Maternal and newborn healthcare outcomes depend largely on the competence of healthcare personnel and the quality of service delivery. The World Health Organization (2023) recognizes Basic Emergency Obstetric and Newborn Care (BEmONC) as a key strategy for reducing maternal and neonatal mortality by strengthening healthcare providers' capacity to manage obstetric emergencies and provide essential newborn care. Previous studies have shown that formal BEmONC training improves clinical competence, adherence to evidence-based protocols, and readiness to respond to maternal and newborn complications, while clinical experience contributes to practical decision-making and patient management (Tiruneh et al., 2023; Ejigu et al., 2024; Lokuge et al., 2024).

Despite these documented benefits, evidence comparing the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel remains limited, particularly in Rural Health Units within the Province of Sulu. Existing literature has primarily focused on training outcomes or healthcare provider competence rather than directly comparing the effectiveness of formal BEmONC training and experience-based practice. This research gap highlights the need for local evidence to guide workforce development, strengthen maternal and newborn healthcare services, and support evidence-based policy and training initiatives.

Theoretical Framework

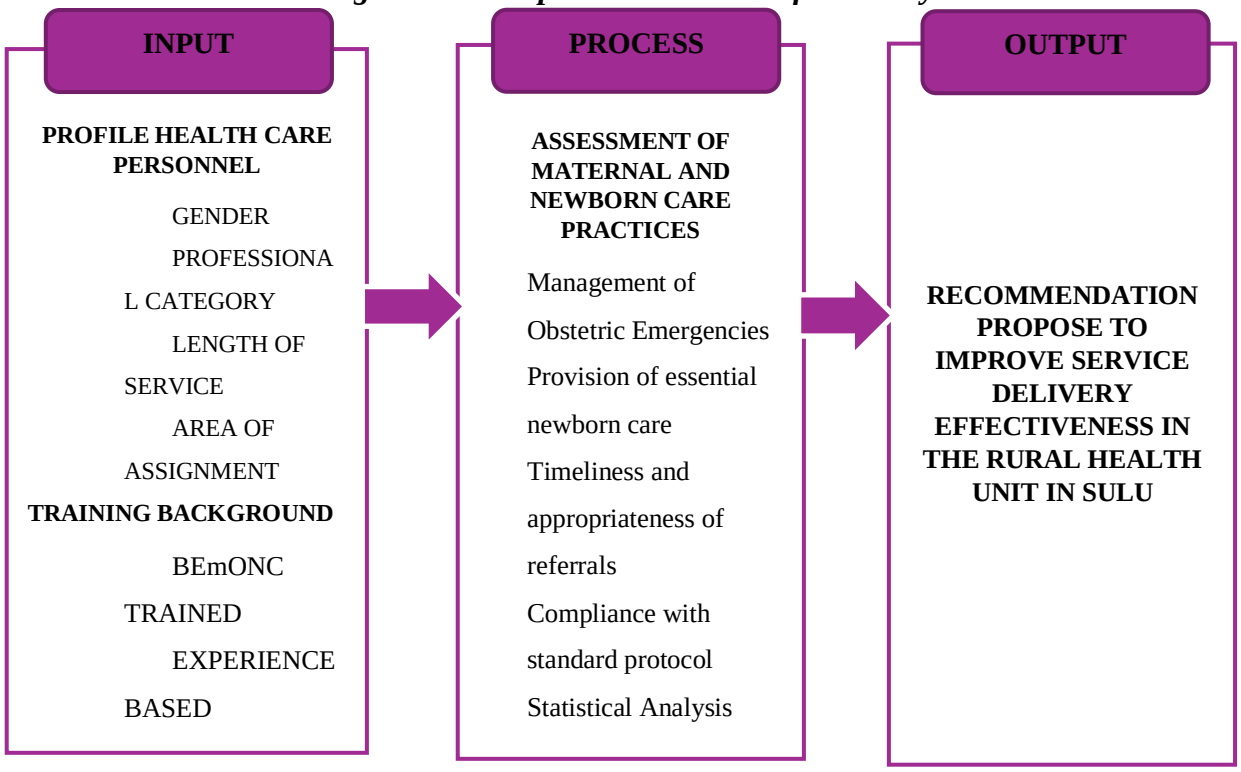
This study is anchored in Jean Watson's Theory of Human Caring, Callista Roy's Adaptation Model, and Patricia Benner's Novice to Expert Theory, which collectively explain the relationship between healthcare providers' competence, caring behaviors, and service

delivery effectiveness. Watson's theory emphasizes compassionate, patient-centered care as a foundation of quality maternal and newborn services. Roy's Adaptation Model highlights the importance of timely and appropriate nursing interventions in promoting positive maternal and neonatal outcomes. Benner's theory explains how clinical competence develops through formal education, training, and accumulated professional experience. Together, these theories provide the theoretical basis for examining how BEmONC training and experience-based practice influence the effectiveness of service delivery among healthcare personnel in Rural Health Units in the Province of Sulu.

Conceptual Framework

This study utilizes the Input–Process–Output (IPO) Model, in which the respondents' profile and BEmONC training serve as the inputs, quantitative analysis as the process, and evidence-based recommendations to improve service delivery effectiveness as the output.

Figure 1. Conceptual Framework of the Study



METHODOLOGY

This study employed systematic research methods to assess and compare the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel in selected Rural Health Units in the Province of Sulu.

Research Design

A quantitative descriptive-comparative and correlational research design was employed to examine the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel.

Research Steps

Healthcare personnel directly involved in maternal and newborn care were selected through purposive sampling. Eligible participants included physicians, nurses, and midwives classified as either BEmONC-trained or experience-based. Data were collected using a researcher-developed, structured questionnaire based on the World Health Organization BEmONC Learning Resource Package, Department of Health maternal and newborn care standards, and relevant nursing literature. Prior to data collection, the instrument underwent expert validation and pilot testing to establish content validity and reliability.

Data Collection and Sample Collection

Following ethical approval and permission from the relevant authorities, questionnaires were administered in person to eligible respondents. Participation was voluntary, informed consent was obtained, and confidentiality and anonymity of all responses were strictly maintained throughout the study.

Data Analysis Methods

Descriptive statistics (frequencies, percentages, weighted means, and standard deviations) were used to summarize respondent characteristics and assess the effectiveness of service delivery. An independent-samples t-test assessed differences between BEmONC-trained and experience-based healthcare personnel, while the Pearson product-moment correlation coefficient examined relationships among respondents' profile variables, training background, and service delivery effectiveness. All statistical analyses were performed at a 0.05 level of significance.

Research Hypotheses and Validation

The study tested the hypotheses that significant differences exist between the service delivery effectiveness of BEmONC-trained and experience-based healthcare personnel and that respondents' profile characteristics and training background are significantly associated with service delivery effectiveness. The researcher-developed questionnaire underwent expert validation and pilot testing to ensure its validity and reliability prior to the actual data collection.

Study Limitations and Ethical Considerations

The study was limited to selected Rural Health Units in the Province of Sulu and included only healthcare personnel directly involved in maternal and newborn care; therefore, the findings may not be generalized beyond the study setting. Ethical approval was obtained from the institution's Ethics Review Board (ERB) prior to data collection. Participation was voluntary, informed consent was secured, and respondents' confidentiality, anonymity, and privacy were strictly maintained throughout the study.

RESULTS AND DISCUSSIONS

The findings revealed that formal BEmONC training among healthcare personnel in the Rural Health Units of Sulu remained limited, while institutional support systems, such as refresher training, supplies, equipment, and supervision, were generally inadequate. Despite

these constraints, respondents generally perceived their service delivery effectiveness in maternal and newborn care as effective. Statistical analysis showed that length of service, BEmONC training background, and the overall extent of BEmONC training were significantly associated with service delivery effectiveness. Likewise, significant differences were observed between BEmONC-trained and experience-based healthcare personnel, highlighting the importance of strengthening formal BEmONC training to improve maternal and newborn healthcare services.

SUMMARY

The study found that formal BEmONC training among healthcare personnel in selected Rural Health Units of Sulu was limited despite generally effective service delivery in maternal and newborn care. Length of service and BEmONC training were significantly associated with service delivery effectiveness, and BEmONC-trained personnel demonstrated significantly better performance than experience-based personnel.

CONCLUSIONS

Formal BEmONC training contributes to improved maternal and newborn service delivery effectiveness. Although healthcare personnel demonstrated satisfactory performance, strengthening clinical competencies through continuous professional development and institutional support remains essential to ensure consistent, evidence-based, and high-quality maternal and newborn care.

RECOMMENDATIONS

The study recommends the implementation of the Proposed BEmONC Competency Enhancement Program to strengthen healthcare personnel's knowledge, skills, and clinical competencies in maternal and newborn care. The program may serve as a guide for Rural Health Units and health authorities in enhancing formal BEmONC training, continuous professional development, and service delivery effectiveness.

ACKNOWLEDGMENTS

The author sincerely thanks Allah (SWT) for His guidance and blessings throughout this study. Special appreciation is extended to Dr. Mary Ann E. Lopez, the Graduate School of St. Bernadette of Lourdes College, the Rural Health Unit of Parang, Sulu, the study participants, and the author's family for their invaluable support and encouragement.

AI DECLARATION STATEMENT

AI tools were used only for language editing and formatting. All research content, analysis, and conclusions were independently developed by the researcher.

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