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Impairments of Mother's Postpartum Care Services Provided by Healthcare Workers in Maternal and Pediatric Teaching Hospitals in Raparin Administration in Kurdistan Region /Iraq

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Abstract

Background and Objective: The postpartum period, the first six weeks following childbirth, is critical for both the mother and newborn. However, it is a neglected aspect of maternal healthcare globally, with nearly half of maternal deaths occurring after childbirth. Inadequate postpartum care can lead to severe health complications. This study aimed to assess the postpartum care provided by healthcare workers to mothers in Maternal and Pediatric Teaching Hospitals within the Raparin Administration, Kurdistan Region, Iraq.

Method: A descriptive study involved 33 healthcare workers from postpartum units in two teaching hospitals in Raparin. Data were collected using a researcher-modified questionnaire and a standardized observational checklist through direct observation and interviews between May 26 and July 20, 2022. Interrater reliability was used to ensure consistency in data collection, achieving a reliability score of 0.97.

Results: The study revealed significant inadequacies in postpartum care. Healthcare workers provided substandard care, with only a few assessments, such as urine voiding and prophylactic antibiotics, consistently performed within the first 24 hours. However, crucial assessments such as monitoring for excessive bleeding and blood pressure checks were frequently neglected. No physical assessments were conducted beyond the first 24 hours, and discharge counseling was limited to nutritional advice and hygiene practices.

Conclusion: The findings indicate that postpartum care in the studied hospitals is inadequate, with healthcare workers neglecting essential care practices beyond the first 24 hours. Comprehensive training programs and increased staffing are recommended to improve the quality of postpartum care and ensure better health outcomes for mothers.

What is already known about the topic? It is known that postpartum care services for mothers in many regions, including the Kurdistan Region of Iraq, often face challenges such as insufficient follow-up care, lack of comprehensive support for mental health, and limited education on postpartum recovery. These impairments can affect maternal health outcomes, and the quality of care provided in maternal and pediatric teaching hospitals.

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INTRODUCTION

The postpartum period is a crucial six-week interval following childbirth during which a mother's reproductive organs return to their pre-pregnancy state (Fraser, Cooper, & Nolte, 2016). Sometimes referred to as the puerperium or the "fourth trimester," this period begins at birth and typically lasts six to eight weeks, encompassing not only physiological changes but also the potential for various medical issues (Berens, 2020). It is a critical time for both the health and survival of the mother and her newborn, especially in the hours and days immediately following birth, which are often the most precarious. Despite its importance, postpartum care is frequently overlooked in modern maternity care. The World Health Organization (WHO) has highlighted the prevalence of maternal deaths during this period, many of which go unreported by both women and healthcare professionals (WHO, 2014). Globally, postpartum care has been identified as a neglected aspect of maternal and neonatal health. A significant proportion of maternal deaths—up to 30%—occur within the first few weeks after childbirth (Pallangyo, Mbekenga, Olsson, & Källestål, 2017). In response to alarming maternal morbidity and mortality rates, the WHO has established and reinforced guidelines aimed at improving postpartum care. The organization has continually advocated for the availability and utilization of recommended resources to optimize maternal health outcomes and ensure the satisfaction of individuals, families, and communities (WHO, 2022). Despite these efforts, maternal and newborn mortality and morbidity remain high during the postpartum period, with infants at greater risk of death within the first

month after birth, with an average global rate of 17 deaths per 1,000 live births in 2019 (WHO, 2022).

Providing high-quality postpartum care is essential for preventing serious health problems for mothers and their newborns. Any negligence in care during this period can result in severe complications. This study aims to assess the postpartum care provided to mothers at the Maternal and Pediatric Teaching Hospital in the Raparin administration. The objective is to evaluate the quality of care, identify the services provided, and detect any impairments or negligence in the care delivered.

Methodology

Study Design

This study employed a descriptive, cross-sectional design to assess the quality of postpartum care provided by healthcare workers in the Maternal and Pediatric Teaching Hospitals of the Raparin Administration, Kurdistan Region, Iraq. The design was chosen to provide a comprehensive snapshot of the current practices in postpartum care within these hospitals during the specified timeframe.

Study Setting

The study was conducted at two Maternal and Pediatric Teaching Hospitals located in the cities of Rania and Qaladze, both situated within the Raparin Administration of the Kurdistan Region. These hospitals serve as primary centers for maternal and neonatal healthcare in the region and were selected due to their significant role in delivering postpartum care services.

Study Population

The study population included all healthcare workers (nurses and midwives) working in the postpartum units of the two hospitals. A total of 33 healthcare workers participated in the study. These individuals were responsible for delivering postpartum

care to mothers following childbirth. Healthcare workers on maternity leave during the study period were excluded from the sample.

Data Collection Period

Data were collected over a two-month period, from May 26, 2022, to July 20, 2022.

Sampling Technique

A census sampling technique was used, meaning all 33 healthcare workers working in the postpartum units at the time of the study were included. This approach ensured that the entire population of interest was represented in the study.

Data Collection Tools

Two primary tools were used for data collection:

1. **Questionnaire:** A researcher-designed questionnaire was used to collect socio-demographic information and details regarding the participants' knowledge and participation in postpartum care training programs. The questionnaire consisted of two parts:

Part 1: Socio-demographic characteristics: This section included 11 items related to the healthcare workers' age, gender, qualifications, educational level, marital status, years of experience, and participation in relevant training programs.

Part 2: Postpartum Care Knowledge: This section assessed the healthcare workers' participation in postpartum care-related training, symposia, and self-learning activities.

2. **Observational Checklist:** A modified version of a standardized observational checklist was used to evaluate the postpartum care practices of the healthcare workers. This checklist consisted of three sections:

Section 1: Assessment within the first 24 hours after birth: This section included 9 items related to

essential postpartum assessments such as monitoring excessive bleeding, checking vital signs, and ensuring early voiding.

Section 2: Physical assessment beyond 24 hours after birth: This section included 11 items assessing the healthcare workers' practices related to physical evaluations such as perineal wound healing, urinary continence, and breastfeeding support.

Section 3: Discharge Counseling: This section consisted of 10 items focused on discharge counseling, including maternal nutrition advice, breastfeeding education, and emotional support.

Data Collection Procedure

Data were collected through direct observation and interviews with the healthcare workers. Each healthcare worker was observed on two separate occasions during the study period to evaluate the consistency of postpartum care practices. The interviews were conducted using the questionnaire to gather socio-demographic information and insights into the healthcare workers' knowledge of postpartum care.

The observational checklist was completed during the observation sessions, with each item being scored on a three-point scale:

"Always" (3 points): The care practice was consistently performed.

"Sometimes" (2 points): The care practice was occasionally performed.

"Never" (1 point): The care practice was not performed.

Pilot Study

A pilot study was conducted from May 26, 2022, to June 2, 2022, involving 10 healthcare workers. The purpose of the pilot was to assess the reliability of the data collection tools and ensure their appropriateness for the study. The results of the pilot study were included in

the final sample, and the reliability of the observational checklist was confirmed using interrater reliability, with a Cronbach's Alpha correlation coefficient of 0.97.

Data Analysis

The collected data were entered into the Statistical Package for Social Sciences (SPSS), version 25, for analysis. Descriptive statistics, including frequencies, percentages, and correlation coefficients, were used to summarize the data. Chi-square tests were employed to examine relationships between the healthcare workers' socio-demographic characteristics and their postpartum care practices. Reliability analysis was conducted to ensure consistency in the observational data.

Ethical Considerations

Ethical approval for the study was obtained from the Scientific Committee and Ethical Committee of the College of Nursing at Raparin University. All participants were informed of the study's purpose, and their participation was voluntary. Confidentiality of the collected data was maintained, and no identifying information was disclosed.

RESULTS

Sociodemographic Characteristics of the Study Sample

A total of 33 healthcare workers participated in the study, all of whom were female. Their ages ranged from 30 to 59 years, with the majority falling within the 45–49 age group (27.3%). Most participants were married (81.8%). In terms of educational background, more than half (51.5%) had graduated from secondary nursing school, while 30.3% had completed a medical institute education. Only 12.1% were graduates from the College of Nursing. None of the participants had obtained postgraduate qualifications (Table 1).

In terms of employment and experience, 33.3% of the healthcare workers had been employed for 27–32 years, and 36.4% had between 3 and 9 years of experience.

Participation in Postpartum Care Training and Self-Learning

More than half of the healthcare workers (54.5%) reported attending postpartum care training sessions, all of which took place inside the country. However, 75.8% of participants had not attended any postpartum care-related symposia, conferences, or seminars. The study also revealed that none of the participants had a periodic educational program in their department related to postpartum care. For those who engaged in self-learning (51.5%), the majority (76.5%) used the internet as their primary source of information, with only 23.5% utilizing books (Table 2).

Postpartum Care Practices within the First 24 Hours After Birth

The results indicated significant inadequacies in the postpartum care practices provided within the first 24 hours after birth. Only two assessments were consistently performed by the majority of healthcare workers: checking urine voiding within six hours (97%) and administering prophylactic antibiotics for perineal tears (97%). However, critical assessments, such as monitoring for excessive bleeding, were only sometimes performed by 51.5% of healthcare workers, while 36.4% never conducted this assessment. Other essential evaluations, such as checking uterine contractions, fundal height, and blood pressure, were rarely performed (Table 3).

Physical Assessments Beyond 24 Hours After Birth

None of the healthcare workers consistently performed physical assessments beyond 24 hours after birth.

All the items in this category, including assessments of micturition, bowel function, perineal wound healing, and breastfeeding, were not performed by any of the healthcare workers. These findings highlight a severe deficiency in the continuation of postpartum care beyond the immediate postpartum period (Table 4).

Discharge Counseling Practices

The results also revealed that discharge counseling practices were limited. Only two areas—maternal nutritional advice (51.5% sometimes performed, 30.3% always performed) and breast care and personal hygiene (42.4% sometimes performed, 48.5% always performed)—were consistently addressed during

discharge. Other essential counseling areas, such as family planning, recognition of danger signs, resumption of sexual activity, and follow-up appointments, were never addressed by any healthcare workers (Table 5).

Relationship Between Sociodemographic Characteristics and Postpartum Care Practices

Chi-square tests revealed no statistically significant relationships between the healthcare workers' sociodemographic characteristics (such as age, education level, and years of experience) and the adequacy of postpartum care provided. This suggests that inadequate care was prevalent across all demographic groups in the study.

Table 1: Distribution of the sociodemographic characteristics of the study sample according to their age, gender, qualification type, level of education, and marital status.

Variables	Frequency	Percentage (%)
Age Groups		
30 - 34	6	18.2
35 - 39	6	18.2
40 - 44	3	9.1
45 - 49	9	27.3
50 - 54	7	21.2
55 - 59	2	6.1
Total	33	100
Qualification Type		
Nurse	19	57.6
Midwife	14	42.4
Gender		
Female	33	100
Male		
Level of Education		
Graduate of primary nursing school	2	6.1
Graduate of secondary nursing school	17	51.5
Graduate of the medical institute	10	30.3
Graduate of the College of Nursing	4	12.1
Postgraduate (MSc, PhD) in nursing		
Total	33	100
Years of Employment (Groups)		
9 - 14	11	33.33
15 - 20	6	18.18

21 - 26	3	9.09
27 - 32	11	33.33
33 - 38	1	3.03
39 - 44	1	3.03
Years of Experience (Groups)		
3 - 9	12	36.36
10 - 15	11	33.33
16 - 21	3	9.09
22 - 27	2	6.06
28 - 33	3	9.09
34 - 44	2	6.06
Total	33	100
Marital Status		
Single	5	15.2
Married	27	81.8
Widow		
Divorced	1	3.0

Table 2: Description of Healthcare Workers Participation in Activities Related to Postpartum Care

Variables	Categories	Frequency	(%)
Did you get training sessions about Postpartum care	yes	18	54.50
Did you get training sessions about Postpartum care	no	15	45.50
Where you get a training course	inside country	18	100.00
Where you get a training course	outside country		
Total		33	100
Did you have periodic educational program in your department regarding postpartum care?	yes		
Did you have periodic educational program in your department regarding postpartum care?	no	33	100.00
Did you attend any symposia, conference, seminar regarding postpartum care	yes	8	24.20
Did you attend any symposia, conference, seminar regarding postpartum care	no	25	75.80
If yes, where you attend	inside country	8	100.00
If yes, where you attend	outside country		
Continues self-learning	yes	17	51.50
Continues self-learning	no	16	48.50
If yes, by what?	Books	4	23.50
If yes, by what?	Magazine		
If yes, by what?	Internet	13	76.50
If yes, by what?	Other		
Total		33	100

Table 3: Postpartum Assessments Provided by Healthcare Workers Within the First 24 Hours After Birth

Provision of Postpartum Care	Never Done No. (%)	Sometimes Done No. (%)	Always Done No. (%)
1 - Check for excessive bleeding	12 (36.4)	17 (51.5)	4 (12.1)
2 - Checking uterine contraction	33 (100)		
3 - Check fundal height	33 (100)		
4 - Check temperature, heart rate	33 (100)		
5 - Check blood pressure within 6 hours after birth	28 (84.8)	5 (15.2)	
6 - Check blood pressure after 6 hours	33 (100)		
7 - Check urine void in 6 hours		1 (3)	32 (97)
8 - Use of prophylactic antibiotics in perineal tear to prevent infection		1 (3)	32 (97)
9 - After vaginal birth, mothers receive care at the facility for at least 24 hours after birth	33 (100)		

Table 4: Postpartum Physical Assessments Provided by Healthcare Workers Beyond 24 Hours After Birth

Provision of Postpartum Care	Never Done No. (%)	Sometimes Done No. (%)	Always Done No. (%)
1 - Micturition and urinary continence	33 (100)		
2 - Bowel function	33 (100)		
3 - Healing of perineal wound	33 (100)		
4 - Headache	33 (100)		
5 - Fatigue	33 (100)		
6 - Back pain	33 (100)		
7 - Perineal hygiene	33 (100)		
8 - Breast pain	33 (100)		
9 - Breastfeeding	33 (100)		
10 - Uterine tenderness	33 (100)		
11 - Lochia	33 (100)		

Table 5: Counseling Assessments Provided by Healthcare Workers While Discharging

Provision of Postpartum Care	Never Done No. (%)	Sometimes Done No. (%)	Always Done No. (%)
1 - Physiology of puerperium	33 (100)		
2 - Healthy timing and spacing of pregnancies	33 (100)		
3 - Family planning, including Lactational Amenorrhea/transition	33 (100)		
4 - Maternal nutritional advice	6 (18.2)	17 (51.5)	10 (30.3)
5 - Breast care and personal hygiene	3 (9.1)	14 (42.4)	16 (48.5)
6 - Danger signs	33 (100)		
7 - Resumption of sexual intercourse	33 (100)		
8 - Follow-up appointment	33 (100)		
9 - Emotional support	33 (100)		
10 - Documentation	28 (84.8)	5 (15.2)	

DISCUSSION

This study evaluated the postpartum care practices of 33 healthcare workers in maternal units. All participants were female, reflecting sociocultural and religious beliefs that discourage male healthcare workers from participating in this area. The healthcare workers were aged between 30 and 59, with most being married and employed for 27–32 years, possessing an average of 12 years of experience. Their educational background ranged from primary nursing school to the College of Nursing, with half graduating from secondary nursing school. This is attributed to the limited availability of higher education in the region before 2000, compounded by economic and political crises that stalled employment of college and institute graduates.

The study revealed significant gaps in postpartum care. Observations showed that only two essential postpartum assessments were consistently provided by healthcare workers—checking urine voiding within six hours and administering prophylactic antibiotics for perineal tears to prevent infection. Other crucial assessments, such as monitoring excessive bleeding and blood pressure six hours after birth, were performed inconsistently. The remaining assessments were often neglected. Overall, the postpartum care provided was inadequate, failing to meet the essential standards for detecting and preventing postpartum health complications. These findings align with a study by Ali and Ghafel (2022), which demonstrated that nurse-midwives provided immediate postpartum care for mothers but required further training to enhance their practices and ensure the provision of high-quality care.

The current study also found that no physical assessments beyond 24 hours

after birth were performed by healthcare workers, despite WHO's recommendations for such assessments as part of standard postpartum care. Similar findings were reported in research by Nuriy and Ahmed (2018) at Erbil Maternity Teaching Hospital, where nurses and midwives did not provide all necessary procedures for postpartum mothers.

Regarding discharge counseling, healthcare workers only provided advice on maternal nutrition and breast care, with some offering personal hygiene guidance. These topics were discussed primarily because mothers inquired about them during discharge. The results of this study are consistent with global findings, which indicate that postpartum care is an overlooked component of maternal and neonatal health, with many maternal deaths occurring during the first few weeks after childbirth (WHO, 2014). The routine postpartum care provided in this study fell below the standards set by WHO, and similar substandard care was identified in research conducted in Austria by Luegmair, Zenzmaier, and Oblasser (2018), which highlighted deficits in postpartum care and counseling.

The inadequate care observed in this study may be due to a lack of hospital policies and guidelines specific to postpartum care, insufficient training for healthcare workers, and outdated practices. Most healthcare workers had not attended any training sessions, symposia, or seminars on postpartum care. Additionally, the hospitals lacked periodic educational programs for postpartum care, leading to further deficiencies in care provision. Another contributing factor could be the absence of clearly defined job specifications and inadequate resources, such as a shortage of healthcare workers and insufficient

beds for patients. Moreover, there is a lack of follow-up policies by hospital administrations and the Ministry of Health to address poor or inadequate care.

Conclusion

The findings of this study revealed that postpartum care in Raparin's maternal and pediatric hospitals is substandard and inadequate. Healthcare workers failed to provide the necessary postpartum care, with the exception of some assessments during the first 24 hours after birth and limited discharge counseling. The neglect of essential care during other postpartum periods places mothers at significant risk of health complications, as postpartum mortality remains high. It is crucial to implement comprehensive training programs on postpartum care guidelines and standards for healthcare workers. Continuous education, supported by the Ministry of Health and hospital administrations, is necessary to raise awareness and improve the quality of care provided. Additionally, increasing the number of healthcare workers and expanding postpartum care facilities are vital steps toward improving maternal health outcomes.

Ethical Considerations

Ethical approval was obtained from the Scientific and Ethical Committees of the College of Nursing at Raparin University. The researcher adhered to ethical standards throughout the study, including ensuring the privacy and confidentiality of participants.

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Author Contributions

All authors contributed to the study's concept, data collection, original draft

writing, data analysis, and final manuscript review.

Disclosure Statement

The authors declare no conflict of interest.

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