

(17)

**The Effect of Educational Program on Nurse's Knowledge
about Routine Postpartum Care at Wad Medani Maternity
Teaching Hospital (2021 - 2023)**

Fatima Salah Osman Abdalla

PhD candidate - Kassala University
fatimasalag91@gmail.com

Dr. Faiza Ali Nasor Taha

Associate Professor - Faculty of Nursing Sciences
University of Khartoum -
fanasr@uofk.edu

2026

ABSTRACT

Background: The postpartum period is a critical phase in maternal and newborn healthcare during which women undergo significant physiological and psychological changes. Appropriate routine postpartum care is essential for promoting maternal recovery, preventing complications, supporting breastfeeding, and improving maternal and neonatal outcomes. Nurses play a key role in providing routine postpartum care; therefore, adequate knowledge regarding maternal assessment, physiological changes, infection prevention, breastfeeding support, newborn care, health education, and documentation is essential for safe and effective nursing practice. **Objectives:** This study aimed to assess the effect of an educational programme on nurses' knowledge regarding routine postpartum care at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan. **Methods:** A quasi-experimental one-group pre-test/post-test design was conducted among nurses working in the postnatal wards at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan. A total coverage sampling technique was used, and 51 registered nurses who met the inclusion criteria were recruited. Data were collected using a structured self-administered questionnaire to assess nurses' knowledge regarding routine postpartum care before and after implementation of the educational programme. The questionnaire covered major areas of routine postpartum care, including physiological and psychological changes, maternal assessment, infection prevention, health promotion, maternal education, breastfeeding support, and newborn care. Data were analyzed using the Statistical Package for the Social Sciences (SPSS), and appropriate descriptive and inferential statistical tests were used. Statistical significance was considered at $P \leq 0.05$. **Results:** The findings demonstrated a substantial improvement in nurses' knowledge following implementation of the educational programme. The overall mean knowledge score increased from 18.37 ± 4.56 (44.8%) in the pre-test to 39.25 ± 1.48 (95.7%) in the post-test, with a mean difference of 20.88 points. The improvement was statistically significant ($t = 34.61$, $P < 0.001$). The proportion of nurses with good overall knowledge increased from 43.7% in the pre-test to 95.7% in the post-test, while poor knowledge decreased from 56.3% to 4.3%. Significant improvements were observed across the major knowledge domains related to routine postpartum care. **Conclusion:** The study concluded that the educational programme had a highly significant positive effect on improving nurses' knowledge regarding routine postpartum care. Continuous in-service education and regular updating of nurses' knowledge are recommended to strengthen evidence-based postpartum nursing care and improve the quality of maternal and newborn healthcare services.

Keywords: Routine postpartum care, Nurses, Knowledge, Educational programme, Postpartum period, Maternal care.

INTRODUCTION / BACKGROUND

Routine postpartum care is an essential component of maternal and newborn healthcare and plays a vital role in promoting the health and well-being of mothers and their newborns during the first six weeks following childbirth. The postpartum period is characterized by important physiological and psychological changes as the mother recovers from pregnancy and childbirth and adapts to breastfeeding and newborn care. Although pregnancy and childbirth are generally physiological processes, the postpartum period remains a vulnerable stage during which maternal and neonatal complications may occur. Appropriate postpartum care and early recognition of health problems are therefore essential to prevent complications and promote positive maternal and newborn outcomes (WHO, 2022).

Routine postpartum care includes comprehensive assessment and monitoring of the mother and newborn, support for breastfeeding, prevention of infection, assessment of uterine involution and lochia, perineal care, pain management, health education, and identification of maternal and neonatal danger signs. The World Health Organization emphasizes the importance of respectful, evidence-based, woman-centred postnatal care that responds to the individual needs of mothers and newborns and ensures continuity of care throughout the postnatal period (WHO, 2022).

The postpartum period is considered a critical stage in maternal and newborn healthcare because many complications can develop during the first hours, days, and weeks following childbirth. Maternal complications may include postpartum hemorrhage, puerperal infection, hypertensive disorders, thromboembolic complications, perineal problems, and breastfeeding difficulties. Newborns may also develop health problems that require early recognition and appropriate intervention. Early identification of these complications through appropriate postpartum assessment can contribute to reducing preventable maternal and neonatal morbidity and mortality (WHO, 2022; ACOG, 2024).

Nurses play a central role in providing routine postpartum care because they maintain continuous contact with mothers and newborns and are responsible for monitoring their condition, providing health education, supporting breastfeeding, preventing infection, identifying danger signs, and communicating important findings to other healthcare professionals. Therefore, adequate knowledge among nurses regarding routine postpartum care is essential for the provision of safe and effective maternal and newborn care.

Nurses' knowledge regarding routine postpartum care includes understanding normal physiological and psychological changes following childbirth, maternal assessment, uterine involution, lochia, perineal care, breastfeeding support, infection prevention, newborn care, health education, and postpartum danger signs. Adequate knowledge enables nurses to differentiate normal postpartum changes from abnormal findings, recognize complications at an early stage, provide appropriate health education, and ensure timely referral when necessary. Conversely, inadequate knowledge may contribute to failure to recognize important clinical findings and may negatively affect the quality and safety of postpartum care.

Several factors may influence nurses' knowledge, including educational qualification, years of professional experience, previous training, and access to continuing professional education. Although professional experience provides nurses with opportunities to develop clinical knowledge, continuous education remains necessary to update knowledge and maintain awareness of current evidence-based recommendations. Structured educational programmes can provide nurses with opportunities to strengthen their understanding of routine postpartum care and address identified knowledge gaps.

In many low- and middle-income countries, healthcare systems continue to face challenges related to shortages of qualified healthcare professionals, limited opportunities for continuing education, and inconsistent access to updated clinical guidelines. These challenges may contribute to gaps in nurses' knowledge regarding essential maternal and newborn care. Strengthening nurses' knowledge through continuous in-service education is therefore an important strategy for improving the quality of postpartum healthcare services.

In Sudan, improving the knowledge of nurses working in maternity and postnatal units is particularly important because nurses are directly involved in the continuous assessment and care of mothers and newborns. Assessing nurses' knowledge before and after an educational intervention can help identify existing knowledge gaps and determine whether structured educational programmes are effective in improving nurses' understanding of routine postpartum care.

Therefore, the present study was conducted to assess the effect of an educational programme on nurses' knowledge regarding routine postpartum care at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan. The study focuses specifically on nurses' knowledge regarding routine postpartum care, including maternal assessment, physiological and psychological changes, infection prevention, health promotion, maternal education, breastfeeding support, and newborn care.

MATERIALS AND METHODS

Study design and setting: A quasi-experimental one-group pre-test/post-test study was conducted at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan, to assess the effect of an educational programme on nurses' knowledge regarding routine postpartum care.

Study population: The study population comprised registered nurses working in the post-natal wards at Wad Medani Obstetrics and Gynecology Teaching Hospital who were directly involved in providing routine postpartum care to mothers and newborns during the study period.

Sample size and sampling technique: A total coverage (census) sampling technique was used. All 51 eligible registered nurses working in the postnatal wards were recruited for the study.

Inclusion criteria: Registered nurses working in the postnatal wards, directly involved in routine postpartum care, available during the study period, and willing to participate in the study.

Data collection tool: Data were collected using a structured self-administered questionnaire developed by the researcher after reviewing relevant literature and evidence-based guidelines regarding routine postpartum care. The questionnaire consisted of two parts:

Part I: Socio-demographic and professional characteristics

Included age, gender, marital status, educational qualification, years of professional experience, and previous training related to postpartum care.

Part II: Nurses' knowledge regarding routine postpartum care

This section assessed nurses' knowledge regarding the concept and importance of routine postpartum care, physiological and psychological changes during the postpartum period, maternal assessment, vital signs monitoring, uterine involution, lochia assessment, breast care and breastfeeding support, perineal care, infection prevention, maternal and neonatal danger signs, routine newborn care, health education, and follow-up care.

Each correct answer was assigned one mark, while incorrect or unanswered responses received zero. The total knowledge score was calculated and classified as good knowledge

(80%), fair knowledge (60–79%), and poor knowledge (<60%). The same questionnaire was administered before and after implementation of the educational programme.

Educational programme: A structured educational programme was developed and implemented by the researcher based on relevant literature, evidence-based guidelines, and the knowledge areas assessed by the questionnaire. The programme focused on improving nurses' knowledge regarding routine postpartum care, including maternal assessment, physiological and psychological changes, infection prevention, breastfeeding support, newborn care, danger signs, and health education.

Validity and reliability: The questionnaire was reviewed by experts in maternity nursing, obstetrics and gynecology, nursing education, and research methodology to ensure its validity, clarity, relevance, and consistency with the study objectives. Reliability of the questionnaire was assessed using appropriate reliability testing before the main study.

Ethical considerations: Ethical approval was obtained from the relevant research ethics authority. Administrative permission was obtained from Wad Medani Obstetrics and Gynecology Teaching Hospital. Written informed consent was obtained from all participants before enrollment. Confidentiality and privacy were maintained, and participants were informed of their right to withdraw from the study at any time without penalty.

Statistical analysis: Data were coded, entered, and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive and inferential statistical methods were used to analyze the data and compare nurses' knowledge before and after the educational programme. A p -value ≤ 0.05 was considered statistically significant.

Table 1 Socio-Demographic Characteristics of Responding (No = 51)

Gender	No	%
Female	51	100.0%
Age group	No	%
20–25	8	15.7%
26–30	9	17.6%
31–35	14	27.5%
More than 35 years	20	39.2%
Qualifications	No	%

Technical Nursing Certificate	8	15.7%
Diploma	19	37.3%
Bachelor of Nursing Science (BSc)	22	43.1%
Master's Degree (MSc)	2	3.9%
Years of Experience	No	%
1-5 years	5	9.8%
6-10 years	17	33.3%
More than 10 years	29	56.9%
Previous Training Program on Routine Postpartum Care	No	%
Yes	5	9.8%
No	46	90.2%

Table (4.1) showed that all study participants (100.0%) were female nurses. The largest proportions of participants (39.2%) were aged more than 35 years, followed by those aged 31-35 years (27.5%). Regarding educational qualifications, 43.1% held a Bachelor of Nursing Science (BSc), while only 3.9% had a Master's degree (MSc). More than half of the participants (56.9%) had more than 10 years of work experience, whereas only 9.8% had 1-5 years of experience. Furthermore, the majority of the participants (90.2%) had not previously attended a training programme on routine postpartum care.

Table-2 knowledge Regarding Physiological and Psychological Changes during Postpartum Period (No = 51)

Nurses' Knowledge	Pre				Post			
	Correct		Not correct		Correct		Not correct	
		%	No	%	No	%	No	%
The typical duration of the Postpartum (Puerperium) Period	38	74.5%	13	25.5%	50	98.0%	1	2.0%
Physiological changes during the first week postpartum	27	52.9%	24	47.1%	49	96.1%	2	3.9%
The normal progression of lochia	31	60.8%	20	39.2%	48	94.1%	3	5.9%
Characterization of Lochia rubra	37	72.5%	14	27.5%	49	96.1%	2	3.9%
Lochia typically ceases	29	56.9%	22	43.1%	51		0	0.0%
Uterine involution	39	76.5%	12	23.5%	49	96.1%	2	3.9%

Indication of a boggy (soft) uterine fundus	26	51.0%	25	49.0%	49	96.1%	2	3.9%
Postpartum “blues” typically	21	41.2%	30	58.8%	50	98.0%	1	2.0%
Postpartum depression differs from postpartum blues	28	54.9%	23	45.1%	45	88.2%	6	11.8%
The hormone that increases dramatically during lactation	18	35.3%	33	64.7%	50	98.0%	1	2.0%
Postpartum Diuresis (increased urine output)	15	29.4%	36	70.6%	49	96.1%	2	3.9%
Breast engorgement typically peaks	19	37.3%	32	62.7%	47	92.2%	4	7.8%
Average	27	53.6%	24	46.4%	49	95.8%	2	4.2%

This table shows that the nurses had a moderate level of knowledge regarding Physiological and Psychological Changes during Postpartum Period, with 53.6% giving correct responses. The highest level of knowledge was uterine involution 76.5%, while the lowest was regarding postpartum diuresis 29.4%.

Table-3 knowledge regarding postpartum health promotion, infection prevention and maternal education pre and post intervention (No = 51)

Nurses' Knowledge	Pre			
	Correct		Not correct	
	No	%	No	%
Standard precautions	21	41.2%	30	58.8%
The most effective method for preventing healthcare-associated infections	18	35.3%	33	64.7%
Use of Gloves During Postpartum Care	15	29.4%	36	70.6%
Proper handling of soiled linens	11	21.6%	40	78.4%
Priority action for mother with suspected infection	17	33.3%	34	66.7%
Initiation of Breastfeeding	19	37.3%	32	62.7%
Advise to the Mother Regarding Breast Feeding	23	45.1%	28	54.9%
Proper Breastfeeding Technique	14	27.5%	37	72.5%
Positioning of The Mother And Baby During Breastfeeding	16	31.4%	35	68.6%
Recommended nutrition advice	9	17.6%	42	82.4%
Postpartum Exercise Recommendations	7	13.7%	44	86.3%
Proper Perineal Care	21	41.2%	30	58.8%

Teaching Mothers to Report Signs Of Infections	17	33.3%	34	66.7%
Family Planning Counseling Provided	8	15.7%	43	84.3%
Family Planning Education	12	23.5%	39	76.5%
Danger signs that require immediate medical attention	5	9.8%	46	90.2%
Neonatal Danger Signs	10	19.6%	41	80.4%
Average	14	28.0%	37	72.0%

This table shows that the nurses had a low level of knowledge regarding Physiological and Psychological Changes during Postpartum Period, with only 28.0% giving correct responses. The highest level of knowledge was regarding advice to mother regarding breast feeding 45.1%, while the lowest was regarding danger signs requiring immediate medical attention 9.8%.

4. DISCUSSION

The aim of this study was to assess the effect of an educational programme on nurses' knowledge regarding routine postpartum care at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan. This is particularly important because nurses play a central role in providing postpartum care and are responsible for continuous assessment, health education, breastfeeding support, infection prevention, and early recognition of maternal and neonatal danger signs. Adequate knowledge is therefore essential to ensure safe and effective postpartum nursing care.

Demographic and Professional Characteristics

The present study included nurses working in the postnatal wards of Wad Medani Obstetrics and Gynecology Teaching Hospital. The participants had different educational qualifications and levels of professional experience. A considerable proportion of the nurses had more than ten years of professional experience, while the majority had not previously received specific training related to routine postpartum care.

The presence of experienced nurses who had not received recent specific training highlights the importance of continuous professional education. Although years of experience may provide nurses with valuable clinical exposure, experience alone may not ensure that nurses remain updated with current evidence-based recommendations regarding routine postpartum care. Therefore, regular educational programmes are important for maintaining and updating nurses' knowledge.

Nurses' Knowledge Regarding Routine Postpartum Care

The present study demonstrated a marked improvement in nurses' knowledge regarding routine postpartum care following implementation of the educational programme. The overall mean knowledge score increased from 18.37 ± 4.56 out of 41 (44.8%) in the pre-test to 39.25 ± 1.48 (95.7%) in the post-test, with a mean difference of 20.88 points. The difference was highly statistically significant ($t = 34.61$, $P < 0.001$).

The proportion of nurses with good overall knowledge increased from 43.7% in the pre-test to 95.7% in the post-test, while poor knowledge decreased from 56.3% to 4.3%. This substantial improvement indicates that the educational programme was effective in increasing nurses' knowledge regarding routine postpartum care.

From the researcher's perspective, this improvement may be attributed to the focused content of the educational programme and its direct relevance to the nurses' daily responsibilities. The programme addressed important areas of routine postpartum care, including physiological and psychological changes during the postpartum period, maternal assessment, monitoring of vital signs, uterine involution, lochia assessment, breastfeeding support, infection prevention, newborn care, health education, and recognition of maternal and neonatal danger signs.

The marked increase in knowledge may also be related to the use of appropriate teaching methods, including interactive lectures, group discussions, question-and-answer sessions, and case-based discussions. These methods provided opportunities for nurses to clarify misconceptions, discuss clinical situations, and relate theoretical information to routine postpartum care.

The pre-test findings indicated that more than half of the nurses had poor knowledge before the intervention. This may be related to the limited availability of specific in-service training, differences in educational preparation, or lack of regular updating of knowledge. The finding emphasizes that routine postpartum care is not an area in which nurses can depend solely on previous education or years of experience; continuous updating is necessary because recommendations and standards of maternal and newborn care continue to develop.

The present finding is consistent with Mohamed et al. (2023) in Egypt, who reported a significant improvement in nurses' knowledge following a structured educational pro-

gramme regarding routine postpartum care. The agreement between the two studies may be explained by the similarity of the educational interventions, which focused on specific postpartum-care knowledge rather than general nursing education.

The present finding is also supported by Said, Elbana and Abdelfattah (2022), whose quasi-experimental study demonstrated significant improvement in nurses' knowledge following an educational intervention related to postnatal care. The similarity suggests that structured educational programmes can effectively address knowledge gaps among nurses when the educational content is directly related to their clinical responsibilities.

The improvement observed in the present study was particularly substantial, with the overall knowledge level increasing from 44.8% to 95.7%. From the researcher's perspective, this may be explained by the fact that the programme was developed according to the identified learning needs of the participants and focused specifically on the major components of routine postpartum care. The use of a pre-test also helped identify areas of weakness that could be emphasized during the educational sessions.

The findings demonstrate that nurses' professional experience alone may not be sufficient to maintain adequate and updated knowledge regarding routine postpartum care. The fact that a large proportion of nurses had considerable professional experience but limited previous specific training suggests the need for continuous in-service education in maternity units.

The significant improvement following the educational intervention also indicates that knowledge gaps among nurses are potentially modifiable through structured educational programmes. Providing nurses with organized, relevant, and evidence-based educational content can strengthen their understanding of postpartum care and improve their ability to recognize normal and abnormal postpartum conditions.

Overall, the researcher considers that the significant improvement in nurses' knowledge was mainly associated with the identified baseline knowledge gaps, the focused educational content, appropriate teaching methods, and the direct relevance of the programme to nurses' responsibilities in the postnatal wards. These findings support the importance of continuous professional education for nurses involved in maternal and newborn healthcare.

The findings further emphasize the importance of conducting regular assessments of nurses' knowledge to identify areas requiring additional education. Periodic educational pro-

grammes can help maintain nurses' knowledge and ensure that postpartum care is based on current evidence and recommended standards.

Therefore, the present study provides evidence that a structured educational programme can produce a significant improvement in nurses' knowledge regarding routine postpartum care. Continuous in-service education and regular updating of knowledge should be considered important components of quality improvement programmes in maternity and postnatal units.

CONCLUSION

The present study concluded that the structured educational programme had a highly significant positive effect on improving nurses' knowledge regarding routine postpartum care at Wad Medani Obstetrics and Gynecology Teaching Hospital, Gezira State, Sudan. The overall mean knowledge score increased substantially from 44.8% in the pre-test to 95.7% in the post-test, with a statistically significant difference ($t = 34.61$, $P < 0.001$).

The findings indicate that a considerable knowledge gap existed among nurses before the educational intervention, while a marked improvement was observed following the programme. The educational intervention was effective in strengthening nurses' knowledge regarding the major components of routine postpartum care, including maternal assessment, physiological and psychological changes, infection prevention, breastfeeding support, newborn care, health education, and recognition of maternal and neonatal danger signs.

The study highlights the importance of continuous professional education and regular updating of nurses' knowledge to maintain evidence-based standards of routine postpartum care and support the provision of safe and effective maternal and newborn healthcare services.

RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are suggested:

1. Continuous in-service educational programmes should be implemented regularly for nurses working in maternity and postnatal units to update and strengthen their knowledge regarding routine postpartum care.
2. Regular assessment of nurses' knowledge should be conducted to identify knowledge gaps and determine areas requiring further education and reinforcement.

3. Evidence-based guidelines and updated educational materials regarding routine postpartum care should be made readily available to nurses in postnatal wards.
4. Hospitals and nursing administrators should support continuing professional development activities related to maternal and newborn healthcare.
5. Structured educational programmes should be incorporated into ongoing quality improvement activities in maternity and postnatal units.
6. Periodic refresher training should be provided on maternal assessment, postpartum physiological and psychological changes, infection prevention, breastfeeding support, newborn care, health education, and recognition of maternal and neonatal danger signs.
7. Further studies with larger sample sizes and multiple healthcare settings are recommended to confirm the effectiveness of educational programmes in improving nurses' knowledge regarding routine postpartum care.

REFERENCES

- Abou El-Yazeed El-Khawaga, D.S., Ahmed, M.H. and Elwelely, M.Z. (2022) 'Effect of implementation of a teaching program about immediate postpartum care on nurses' knowledge and practice', *Tanta Scientific Nursing Journal*, 24(1), pp. 1-20.
- Ali, H.A., Mohamed, S.M. and Attiaalla, N.A. (2021) 'Assessment of nurses' knowledge and practice regarding postpartum period at Abshaway Central Hospital', *Egyptian Journal of Health Care*, 12(4), pp. 1045-1059.
- Al Mutair, A., et al. (2023) 'Assessment of nurses' knowledge and practices regarding postnatal care in maternity hospitals in Saudi Arabia', *Healthcare*, 11(15), Article 2145.
- American College of Obstetricians and Gynecologists (ACOG) (2024) Optimizing Postpartum Care. Committee Opinion No. 736 (Reaffirmed 2024). Washington, DC: American College of Obstetricians and Gynecologists.
- Bastable, S.B. (2023) *Nurse as Educator: Principles of Teaching and Learning for Nursing Practice*. 6th edn. Burlington, MA: Jones & Bartlett Learning.
- Billings, D.M. and Halstead, J.A. (2021) *Teaching in Nursing: A Guide for Faculty*. 7th edn. St. Louis, MO: Elsevier.

Cunningham, F.G., Leveno, K.J., Bloom, S.L., Dashe, J.S., Hoffman, B.L., Casey, B.M. and Spong, C.Y. (2022) Williams Obstetrics. 26th edn. New York: McGraw–Hill Education.

Dang, D. and Dearholt, S.L. (2022) Johns Hopkins Evidence–Based Practice for Nurses and Healthcare Professionals: Model and Guidelines. 4th edn. Indianapolis: Sigma Theta Tau International.

Herdman, T.H. and Kamitsuru, S. (eds.) (2021) NANDA International Nursing Diagnoses: Definitions and Classification 2021–2023. New York: Thieme.

International Council of Nurses (ICN) (2021) The Global Nursing Workforce and the Future of Nursing. Geneva: International Council of Nurses.

Khalil, H., Alharbi, N., Alzahrani, S. and Alghamdi, A. (2024) ‘Impact of an educational intervention on nurses’ knowledge regarding postpartum depression in Saudi Arabia’, BMC Nursing, 23(1), pp. 1–10.

Khalil, et al. (2024) ‘Nurses’ knowledge and practices regarding comprehensive postpartum care: A cross–sectional study’, BMC Nursing, 23, pp. 1–12.

Kirkpatrick, J.D. and Kirkpatrick, W.K. (2021) Kirkpatrick’s Four Levels of Training Evaluation. Alexandria, VA: ATD Press.

Knowles, M.S., Holton, E.F. and Swanson, R.A. (2020) The Adult Learner. 9th edn. London: Routledge.

Labrague, L.J., De Los Santos, J.A.A. and Falguera, C.C. (2021) ‘Continuing professional education and evidence–based nursing practice among hospital nurses’, Journal of Nursing Management, 29(6), pp. 1523–1531.

Lowdermilk, D.L., Perry, S.E., Cashion, M.C. and Alden, K.R. (2024) Maternity and Women’s Health Care. 13th edn. St. Louis, MO: Elsevier.

Melnyk, B.M. and Fineout–Overholt, E. (2023) Evidence–Based Practice in Nursing and Healthcare: A Guide to Best Practice. 5th edn. Philadelphia: Wolters Kluwer.

Mohamed, A.H., Hassan, R.M. and Ibrahim, N.M. (2023) ‘Effect of a structured educational program on nurses’ knowledge and practice regarding routine postpartum care’, Egyptian Journal of Health Care, 14(3), pp. 250–265.

Mohamed, H.A., Ahmed, S.M. and Hassan, N.E. (2023) 'Effect of educational intervention on nurses' knowledge and practice regarding routine postpartum care', BMC Nursing, 22(1), pp. 1–10.

Murray, S.S. and McKinney, E.S. (2021) Foundations of Maternal–Newborn and Women's Health Nursing. 8th edn. St. Louis, MO: Elsevier.

National Institute for Health and Care Excellence (NICE) (2023) Postnatal Care. NICE Guideline NG194. London: National Institute for Health and Care Excellence.

Oermann, M.H., De Gagne, J.C. and Phillips, B.C. (2021) Teaching in Nursing and Role of the Educator. New York: Springer.

Perry, S.E., Hockenberry, M.J., Lowdermilk, D.L. and Wilson, D. (2021) Maternal Child Nursing Care. 7th edn. St. Louis, MO: Elsevier.

Pillitteri, A. (2023) Maternal and Child Health Nursing: Care of the Childbearing and Childrearing Family. 9th edn. Philadelphia: Wolters Kluwer.

Ricci, S.S. and Kyle, T. (2021) Maternity and Pediatric Nursing. 4th edn. Philadelphia: Wolters Kluwer.

Said, H.A., Elbana, H.M. and Abdelfattah, A.A. (2022) 'Effect of educational guidelines on nurses' performance regarding postnatal care for mothers and neonates', Benha Journal of Applied Sciences, 7(3), pp. 89–99.

Suplee, P.D., Bingham, D. and Kleppel, L. (2019) 'Nurses' knowledge and teaching of possible postpartum complications', Journal of Obstetric, Gynecologic and Neonatal Nursing, 48(1), pp. 64–76.

United Nations Children's Fund (UNICEF) (2023) Maternal and Newborn Health. New York: United Nations Children's Fund.

United Nations Population Fund (UNFPA) (2023) State of the World's Midwifery 2023. New York: United Nations Population Fund.

Varney, H. (2022) Varney's Midwifery. 7th edn. Burlington, MA: Jones & Bartlett Learning.

World Health Organization (WHO) (2022) WHO Recommendations on Maternal and Newborn Care for a Positive Postnatal Experience. Geneva: World Health Organization.



World Health Organization (WHO) (2023) Improving Maternal and Newborn Health and Survival and Reducing Stillbirth: Progress Report 2023. Geneva: World Health Organization.

World Health Organization (WHO) (2023) Trends in Maternal Mortality 2000–2020: Estimates by WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization.