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# Midwives practices regarding standardized guidelines for prevention of postpartum hemorrhage: a cross-sectional analysis

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## Abstract

**Introduction:** Postpartum Hemorrhage is still one of the greatest dangerous and significant problems that can happen during birth. Most Postpartum Hemorrhage cases can be prevented and managed with prompt intervention and standardized protocols. **Objective:** The research aim was to assess midwives' level of practice regarding standardized guidelines for prevention of postpartum hemorrhage. **Methods:** To achieve the study's objectives, a descriptive cross-sectional design was adopted. two tools were used to collect data. The first instrument was a self-administered structured questionnaire that included questions about the demographic characteristics of midwives, and the second instrument was Observational Checklist for assess midwives' practices regarding guidelines for prevention of postpartum hemorrhage: It was an adopted from the World Health Organization's (WHO) guidelines updated in 2023, and The Iraqi Ministry of Health's guidelines for prevention of primary postpartum hemorrhage (PPH). The questionnaire was tested by professionals and showed good reliability (Cronbach alpha= 0.82). SPSS version 25 was used to code, input, and analyses questionnaire data. The chi-square test explored category variable relationships. Significant results had a p-value below 0.05. **Results:** the current findings reveal that (89.8%) of midwives had moderate practices in the prevention of postpartum hemorrhage (PPH) throughout 3rd stage of labor and immediate post-partum period. While (10.2%) had poor practices and (0.0%) had good practices, also its found that there was no correlation between the sociodemographic factors and the total level of midwives' practice. **Conclusion**: The current study concluded that most midwives demonstrated a moderate level of practice regarding standardized guidelines for postpartum hemorrhage prevention during 3rd stage of labour and immediate post-partum period. To bridge these gaps, a monitoring system should be designed and implemented to regularly assess obstetric nurses' practices to ensure best practices and identify area for improvement.

**Keywords:** Postpartum Hemorrhage Prevention, Standardized Guidelines, Practice.

## Introduction

Postpartum hemorrhage (PPH) is still one of the greatest dangerous and significant problems that can happen during birth. It is a major cause of mortality and morbidity among mothers around the world. Globally, its accounts for around 25% of maternal fatalities, leading to a highly significant incidence in countries with low or middle incomes where accessibility to proper maternity treatment is difficult **[1]**. Bleeding that begins before the placenta is born and lasts for as long as 24 hours following birth is known as primary bleeding. Bleeding that occurs over a period of 24 hours following birth is defined as secondary bleeding. Over 500 cc of lost blood throughout a vaginal birth or over 1000 cc of lost blood throughout a cesarean birth **[2,3]**.

The World Health Organization has established standardized recommendations for preventing the development of postpartum hemorrhage during 3rd stage of delivery and immediate postpartum. These recommendations include Active Management of the Third Stage of Labor (AMTSL). The use of uterotonic medication, controlled traction of the cord as well as massage of uterus, and delay of clamping the cord for less than 1 minute, especially for preterm infants. Uterotonic drugs: oxytocin is the preferred uterotonic drug for Postpartum Hemorrhage prevention due to its effectiveness and safety profile. If oxytocin is not available, other uterotonic drugs like IM or IV ergometrine, or IM oxytocin can be used. Prevention of retained placenta by examination of the placenta. Postpartum care requires close monitoring, including checking vital signs, uterine contraction strength, and the amount of vaginal discharge immediately after delivery. Early initiation of breastfeeding is encouraged, as it plays a role in promoting the contract of the uterus and reducing risk of postpartum hemorrhage. Accordingly, midwives and nurses play a pivotal role in preventing, early detecting, and controlling postpartum hemorrhage, particularly during the third-stage of labor and the earliest postpartum period, through the effective implementation of third-stage management and close monitoring of the mother's condition after delivery **[4]**.

The World Health Organization (WHO) states that Postpartum Hemorrhage is the fastest killer of mothers, and this occurs in countries that are developed as well as developing. PPH can kill a healthy woman in two hours or less if it is not discovered early. Subsequently can be a potentially deadly condition that can arise unexpectedly and is rarely recognized until the mother exhibits severe symptoms. **[5]**. Adherence to postpartum care guidelines is essential for quality assessment and a core responsibility in midwifery, with non- adherence linked to poor maternal outcomes role **[6]**. Despite this, there are frequently gaps in adherence. In Egypt, nearly three-quarters of Egyptian nurses exhibit an adequate level of practice during third-stage of labor, and nearly two-thirds demonstrate the same during the early postpartum phase **[7]**.

While study found that protocols related to assessment had higher compliance rates than prevention-based protocols **[8]**. Also, half of the midwives surveyed in a Zambian study failed to adequately implement strategies to prevent and manage postpartum hemorrhage **[9]**. Despite significant progress in nursing strategies used to prevent and manage postpartum hemorrhage, evidence-based care standards are not consistently applied in all cases. Addressing this discrepancy between standards and clinical practices requires better evidence-based care guidelines implementation. Better integrating these measures into daily care may reduce PPH mortality **[10]**. In Iraq, Postpartum hemorrhage was the primary cause of maternal death **[11]**.

Therefore, this study sought to assess practices of midwives related to standardized guidelines for the prevention of postpartum hemorrhage in a maternity and child teaching hospital in Diwaniyah, Iraq.

## Methods

### Study Design

To achieve the study's objectives, a descriptive cross-sectional design was adopted, and the study was conducted during the period from 20th September 2025 to 22th March 2026.

### Study sitting

This study was performed in the gynecology and obstetrics departments in labor and postpartum units at Maternal and Children Teaching Hospital in Al-Diwaniyah City.

### Sample of the study

A convenience sample of (49) midwives who offer direct care for women during delivery and early post-partum period. the sample size was also limited, as the study was restricted to midwives working at this hospital only.

### Study Instruments

In order to conclude this study, two tools were used to collect data. The first tool was a self-administered structured questionnaire that included questions about the demographic characteristics of midwives, and the second instrument was Observational Checklist to assess midwives' practices regarding guidelines for prevention of postpartum hemorrhage: It was an adopted from the World Health Organization's (WHO) guidelines updated in 2023, and The Iraqi Ministry of Health's guidelines for prevention of primary postpartum hemorrhage(PPH). This tool included (27) items grouped into two main sections as follow: first section comprised, midwives' practices during 3rd stage of labor (13 items), while the second section comprised, midwives' practices during early post-partum period (14 items). Midwives were given a score of (2) for completely done the guidelines, (1) for incompletely done them, and (0) for not done them at all. The total score ranged from zero to 54 grades and midwives' practice were ranked as follows: poor level of practice for a total score (0 – 18); moderate level of

practice for a total score (19 – 36) and good level of practice for a total score (37-54) **[12]**.

### Validity and Reliability

Ten experts in field of (maternity nursing and obstetric medicine) assessed the questionnaire to ensure it was clear, complete, applicable, comprehensible, and suitable for the research goals as well as content and cultural validity. Expert opinion guided changes to improve clarity and relevance. (10) midwives from total sample participated in pilot research to assess internal consistency, readability, and clarity. After data analysis, pilot study midwives were excluded from the research sample. Cronbach's test alpha of 0.82 indicated good internal reliability.

### Ethical Approval

This study was approved by the International Review Board at the College of Nursing, University of Babylon. The study was registered in the Clinical Trials Registry (ClinicalTrials.gov) under the ID No. 2029. On 8/7/2025, each participant was asked for their informed consent after ensuring they understood the purpose, procedures, and their rights in the study.

### Data Collection

The researcher was present at maternity and children's teaching hospitals in the labor and postpartum wards in Al-Diwaniyah city during three distinct shifts to observe the practices of each midwife while caring of women through the 3rd stage of delivery and the early post-partum period, subsequently calculating the mean level of practice. It took between 10 and 30 minutes to observe the 3rd stage of labor. The observation during the early postpartum period started when the woman was admitted to the postpartum ward. After finishing the observations with tool II, tool I was finished with an individual interview with each midwife. The Research Ethics Committee of the Faculty of Nursing at Babylon University provided ethical approval, ensuring that the ethical principles for research involving human subjects were properly followed.

### Statistical Analysis

SPSS version 25 was used to code, input, and analyses questionnaire data to perform a full statistical analysis of the study sample and provide accurate results. The chi-square test explored category variable relationships. We used correlations to test relationships between factors. Significant results had a p-value<0.05.

## Results

Table 1 reveals that (40.8%) of midwives were 23–30 years old, whereas (4.1%) were 38–44 years old. Over three fifths (61.2%) had a high school nursing degree, whereas only 2.0% had a bachelor**.**

Table 1. Frequency distribution of midwives studied based on their general characteristics (n=49).

| Characteristic | F | P. |
|---|---|---|
| Age Groups | Frequency | Percent |
| 23 - 30 Years | 20 | 40.8 |
| 31 - 37 Years | 6 | 12.2 |
| 38 - 44 Years | 2 | 4.1 |
| 45 - 51 Years | 12 | 24.5 |
| 52 - 60 Years | 9 | 18.4 |
| **Total** | **49** | **100.0** |
| Levels of Education | | |
| Licensed Midwife | 12 | 24.5 |
| High School of Nursing | 30 | 61.2 |
| Diploma Nursing (Midwife) | 2 | 4.1 |
| Diploma Nursing | 4 | 8.2 |
| Bachelor's degree | 1 | 2.0 |
| **Total** | **49** | **100.0** |

F=Frequency, %= Percent.n. Source: Own authorship.

Table 2 revealed that (57.1%) of midwives had experience between 1 and 8 years, Additionally, 65.3% of midwives worked more than 8 hours per day, while 34.7% worked fewer than 8 hours. Also revealed that 55.1% of midwives attended postpartum hemorrhage training courses, while 44.9% had not. Furthermore, revealed that 75.5% of midwives managed postpartum hemorrhage.

Table 2. Frequency Distribution of Midwives Studied based to their Work-Related Variables.

| Characteristic | F. | P. |
|---|---|---|
| years of experience | | |
| 1 - 8 years | 28 | 57.1 |
| 9 - 15 Years | 7 | 14.3 |
| 16 - 22 Years | 7 | 14.3 |
| 23 - 29 Years | 3 | 6.1 |
| 30 and 38 Years | 4 | 8.2 |
| **Total** | **49** | **100.0** |
| Daily working Hours | | |
| Less Than 8 Hours | 17 | 34.7 |
| More Than 8 Hours | 32 | 65.3 |
| **Total** | **49** | **100.0** |
| Training Courses on PPH | | |
| Yes | 27 | 55.1 |
| No | 22 | 44.9 |
| **Total** | **49** | **100.0** |

| | | |
|---|---|---|
| No. of Training Courses | | |
| No Training | 22 | 44.9 |
| 1 - 2 Courses | 19 | 38.8 |
| 3 - 4 Courses | 5 | 10.2 |
| 5 - 6 Courses | 3 | 6.1 |
| **Total** | **49** | **100.0** |
| Have Management Experience event | | |
| No | 12 | 24.5 |
| Yes | 37 | 75.5 |
| **Total** | **49** | **100.0** |

F=Frequency, %= Percent. Source: Own authorship.

Table 3 showed midwives' checklist items for third-stage labor techniques, including applied and non-applied techniques. Several key practices are applied at low rates, as seen in the table. For example, (75.5%) of midwives didn't palpate uterus to check the presence of undiagnosed twins, also the results showed that bladder emptying during labor and delay clamping the umbilical cord for (1-3) minutes after birth were not practiced by (63.3%) of midwives. While pulled the umbilical cord downwards after a strong uterine contraction and hold the placenta with both hands and tie the membranes were not practiced by (59.2%). Furthermore, (38.8%) did not gently apply pressure to the pubic bone with one hand to stabilize the uterine. Additionally, none of the midwives (100%) removed the remaining membranes using sponge forceps, and (81.6%) did not examine the placenta to confirm its completeness.

On the other hand, some practices demonstrated a good level of application due to high adherence rates. For instance, (67.3%) of the midwives administered 10 units of oxytocin intramuscularly within one minute of the baby's birth. In addition, (40.8%) of them release cord traction between contractions, while (61.2%) stop traction when resistance exists. Furthermore, (93.9%) of the midwives examined upper vagina and cervix with a gloved hand, while (61.2%) of them referring the women to a specialist if a retained or immobilized placenta was suspected.

Table 3. Midwives' practices regarding standardized guidelines for postpartum hemorrhage prevention (PPH) during 3rd stage of labor.

| Practices during 3rd stage of labor | Poor Practice | | Moderate Practice | | Good Practice | |
|---|---|---|---|---|---|---|
| | f | % | f | % | f | % |
| Palpate the uterus to check for an undiagnosed twin. | 37 | 75.5% | 3 | 6.1% | 9 | 18.4% |
| Administer 10 units of oxytocin intramuscularly within one minute of the baby's delivery. | 13 | 26.5% | 3 | 6.1% | 33 | 67.3% |
| Bladder empty | 31 | 63.3% | 7 | 14.3% | 11 | 22.4% |
| Delay clamping the umbilical cord for 1–3 minutes. | 31 | 63.3% | 0 | 0.0% | 18 | 36.7% |
| Gently apply pressure to the pubic bone with one hand to stabilize the uterus. | 19 | 38.8% | 12 | 24.5% | 18 | 36.7% |
| Pull the umbilical cord downwards after a strong uterine contraction. | 29 | 59.2% | 3 | 6.1% | 17 | 34.7% |
| Relaxed the umbilical cord between contractions. | 17 | 34.7% | 12 | 24.5% | 20 | 40.8% |
| Stop pulling the cord when there is resistance | 9 | 18.4% | 10 | 20.4% | 30 | 61.2% |
| Hold the placenta with both hands and tie the membranes | 29 | 59.2% | 1 | 2.0% | 19 | 38.8% |
| Examine the upper vagina and cervix using a gloved hand. | 1 | 2.0% | 2 | 4.1% | 46 | 93.9% |
| Remove any remaining membranes with a sponge forceps. | 49 | 100.0 % | 0 | 0.0% | 0 | 0.0% |
| Examine the placental contents to confirm they are complete. | 40 | 81.6% | 0 | 0.0% | 9 | 18.4% |
| Referring the women to a specialist if a retained or immobilized placenta was suspected. | 19 | 38.8% | 0 | 0.0% | 30 | 61.2% |

F=Frequency, %= Percent. Source: Own authorship.

Table 4 showed midwives' checklist items for immediate post-partum practices, including applied and non-applied tasks. Several key practices are applied at low rates, as seen in the table. For example, (95.9%) of midwives did not check temperature every 4 hours, while (67.3%) of them did not apply uterine massage every 15 minutes, and encouraging mothers to empty their bladders. Additionally, (85.7%) did not assess fundal level every 15 minutes after delivery and none of the midwives recording intake/output chart/2 hours. Furthermore, the results showed that (57.1%, 55.1% and 71.4%) of midwives, respectively, did not initiating breast feeding as soon as possible, relieve anxiety by explaining her condition and encourage mother for early ambulation. In contrast, (57.1%) of midwives demonstrated moderate level of practice in measuring pulse and (BP) blood pressure every 15 minutes and documenting the readings. On the other hand, some practices are good because they have high application rates. For instance, (79.6%) of midwives placed the women in a comfortable position after birth, avoiding the back-lying position, and (81.6%) of them check the lochia (postpartum discharge) for quantity and consistency. Additionally, the results showed that (98.0%) of midwives administered the prophylactic antibiotics prescribed by physicians to reduce the risk of infection. Furthermore, (98.0% and 79.6%) of them respectively, assessing perineum and care for episiotomy if present and observations notified to the physician.

Table 4. Midwives' practices regarding standardized guidelines for the prevention of (PPH) during immediate post-partum.

| Practices during Early Post-Partum Period | Poor Practice | | Moderate Practice | | Good Practice | |
|---|---|---|---|---|---|---|
| | F | % | f | % | f | % |
| Record and document the pulse and blood pressure every 15 minutes. | 21 | 42.9% | 28 | 57.1% | 0 | 0.0% |
| Check the temperature every 4 hours. | 47 | 95.9% | 2 | 4.1% | 0 | 0.0% |
| Massage the uterus every 15 minutes. | 33 | 67.3% | 16 | 32.7% | 0 | 0.0% |
| Placed the women in a comfortable position after birth, avoiding the back -lying position, | 9 | 18.4% | 1 | 2.0% | 39 | 79.6% |
| Assess the fundus of the uterus every 15 minutes after delivery. | 42 | 85.7% | 7 | 14.3% | 0 | 0.0% |
| Check the lochia (postpartum discharge) for quantity and consistency. | 7 | 14.3% | 2 | 4.1% | 40 | 81.6% |
| Encourage the mother to empty her bladder regularly. | 33 | 67.3% | 4 | 8.2% | 12 | 24.5% |
| Record Intake and output chart /2 hours | 49 | 100.0% | 0 | 0.0% | 0 | 0.0% |
| Initiate breastfeeding as soon as possible. | 28 | 57.1% | 6 | 12.2% | 15 | 30.6% |
| Administer the prophylactic antibiotics prescribed by physicians to reduce the risk of infection | 0 | 0.0% | 1 | 2.0% | 48 | 98.0% |
| Relieve the mother's anxiety by explaining her condition and how to manage it. | 27 | 55.1% | 7 | 14.3% | 15 | 30.6% |
| Encourage the mother for early ambulation | 35 | 71.4% | 4 | 8.2% | 10 | 20.4% |
| Assess the perineum and care for any episiotomy if present | 1 | 2.0% | 0 | 0.0% | 48 | 98.0% |
| Observations notified to the physician. | 9 | 18.4% | 1 | 2.0% | 39 | 79.6% |

F=Frequency, %= Percent. Source: Own authorship.

Table 5 reveals that (89.8%) of midwives had moderate practices in the prevention of (PPH) throughout 3rd stage of labor and immediate post-partum. while (10.2%) had poor practice and (0.0%) had good practices.

Table 5. Midwives' Overall practices regarding Postpartum Hemorrhage Prevention(PPH) guidelines during 3rd stage of labor and immediate post-partum.

| Practice | practices during 3rd stage of labor | | practice during immediate post-partum | | Overall Practice | |
|---|---|---|---|---|---|---|
| | F | Percent | F | Percent | F | Percent |
| Poor Practice | 7 | 14.3% | 4 | 8.2% | 5 | 10.2% |
| Moderate Practice | 34 | 69.4% | 44 | 89.8% | 44 | 89.8% |
| Good Practice | 8 | 16.3% | 1 | 2.0% | 0 | 0.0% |
| **Total** | **49** | **100.0%** | **49** | **100.0%** | **49** | **100.0%** |

F=Frequency, %= Percent. Source: Own authorship.

Table 6 shows the relationship between Midwives' Practices Regarding Standardized Guidelines for Prevention of Postpartum Hemorrhage and their Sociodemographic Information.

Table 6. Relationship between Midwives' Practices Regarding Standardized Guidelines.

| Age | Overall Practice | | Total | Chi-Square | p-value |
|---|---|---|---|---|---|
| | Poor Practice | Moderate Practice | | | |
| 23 - 30 Years | 2 | 18 | 20 | 5.504 | 0.158 |
| 31 - 37 Years | 0 | 6 | 6 | | |
| 38 - 44 Years | 0 | 2 | 2 | | |
| 45 - 51 Years | 0 | 12 | 12 | | |
| 52 - 60 Years | 3 | 6 | 9 | | |
| **Total** | **5** | **44** | **49** | | |
| **Levels of Education** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| Licened Midwife | 3 | 9 | 12 | 4.119 | 0.341 |
| High School of Nursing | 2 | 28 | 30 | | |
| Diploma Nursing (Midwife) | 0 | 2 | 2 | | |
| Diploma Nursing | 0 | 4 | 4 | | |
| Bachelor Degree | 0 | 1 | 1 | | |
| Total | 5 | 44 | 49 | | |
| **Years of Experience** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| 1 - 8 years | 4 | 24 | 28 | 3.262 | 0.391 |
| 9 - 15 Years | 0 | 7 | 7 | | |
| 16 - 22 Years | 0 | 7 | 7 | | |
| 23 - 29 Years | 1 | 2 | 3 | | |
| 30 and 38 Years | 0 | 4 | 4 | | |
| Total | 5 | 44 | 49 | | |
| **Working Hours** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| Less than 8 hours | 2 | 15 | 17 | 0.069 | 0.793 |
| More than 8 hours | 3 | 29 | 32 | | |
| Total | 5 | 44 | 49 | | |
| **Training Courses** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| Yes | 3 | 24 | 27 | .054 | 0.816 |
| No | 2 | 20 | 22 | | |
| Total | 5 | 44 | 49 | | |
| **Previous Management Experience** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| No | 0 | 12 | 12 | 1.806 | 0.179 |
| Yes | 5 | 32 | 37 | | |
| Total | 5 | 44 | 49 | | |
| **Barriers of Care** | **Overall Practice** | | **Total** | **Chi-Square** | **p-value** |
| | **Poor Practice** | **Moderate Practice** | | | |
| Shortage of Staff | 1 | 10 | 11 | 11.868 | 0.159 |
| Unavailability and maintenance of equipment | 0 | 7 | 7 | | |
| Too much sudden increased number of patients (Workload) | 2 | 5 | 7 | | |
| Limited Training Opportunities | 0 | 10 | 10 | | |
| Shortage of Staff & Workload | 1 | 0 | 1 | | |
| Shortage of Staff & Limited Training | 1 | 4 | 5 | | |
| Workload & Limited Training | 0 | 5 | 5 | | |
| Shortage of Staff, Unavailability and maintenance of equipment, and Limited Training | 0 | 1 | 1 | | |
| Shortage of Staff, Working Load, and Limited Training | 0 | 1 | 1 | | |
| Shortage of Staff, Unavailability and maintenance of equipment, Workload, and Limited Training | 0 | 1 | 1 | | |
| Total | 5 | 44 | 49 | | |

Significance: p-value < 0.05. Source: Own authorship.

## Discussion

Based on the World Health Organization, post-partum hemorrhage, is the fastest maternal killer, both in developed and developing countries. Even for a healthy woman, PPH can be deadly within two hours, if not detected early. It is a potentially fatal situation that may occur without any warning and is frequently missed until the mother develops serious symptoms **[13]**. Which stated that all nurses and midwives should follow clinical practice recommendations to improve mother and newborn health. According to this study, the highest percentage of midwives' age were in the 23–30 age group, as well as more than three fifths of them had a high school nursing degree, whereas only 2.0% of them held a bachelor's degree.

Also, this study revealed that over half of the midwives surveyed had between 1 and 8 years of experience. In terms of postpartum hemorrhage training courses attended, this investigation revealed that over half of the midwives surveyed had attended courses on postpartum hemorrhage. Concerning midwives' practices regarding standardized guidelines for prevention of postpartum hemorrhage during 3rd stage of labor, the current study indicates that more than two thirds of midwives exhibited a moderate level of practice. This accordance with **[7]**, they demonstrated that around three-quarters of participated nurses displayed a similar level of adherence to the standardized protocol for reduction of Postpartum hemorrhage during 3rd stage of labor. While, these findings contradict the reports by other authors, which indicated firm adherence to the majority of practices associated with AMTSL principles **[14,15]**.

Concerning midwives' practices regarding standardized guidelines for prevention of (PPH) during immediate post-partum period, the current investigation clarified that majority of midwives demonstrated a moderate level of practices. This was supported by E. Abd-Elaziz et al. (2024), who found that two thirds of nurses participated in the study, prevented postpartum hemorrhage fairly. While other authors found that more than (50%) of respondents have accurate postpartum hemorrhage skills **[16,17]**. Contrary to findings submitted by Bidiru et al. (2025) **[18]**, which indicated that the majority of respondents exhibited inadequate practices regarding management of postpartum hemorrhage. There are a number of possible explanations for this, such as insufficient guidelines, inadequate supervision, and periodic assessment of midwives' work, shortage of staff, unavailability and maintains of equipment, limit training opportunities about prevention and management of postpartum hemorrhage, those programs help midwives and nurses perform better and raise knowledge of their responsibilities in postpartum hemorrhage prevention. Additionally, too much sudden increased number of patients may lead to overload of work on midwives.

This study investigated the relationship between midwives' practices of standardized guidelines for postpartum hemorrhage prevention and sociodemographic factors such as age, years of experience, working hours, postpartum hemorrhage training courses). The results showed that there was no correlation between the sociodemographic factors and the practice of midwives. This absence of a relationship suggests that training, availability of guidelines, and resources may influence practice more than demographics factors. These findings support a study conducted by Zimba in 2020 **[9]** which found no substantial relationship between demographic variables such as age, sex, professional qualifications, and years of experience and practice for postpartum hemorrhage prevention and management. On the other hand, a study by **[18]**, indicated that postpartum hemorrhage care was significantly impacted by factors such as age, education level, training, supply availability, and protocol adherence.

### Limitations

The study faced some limitations, including an increased data collection time due to work pressure, noise, and frequent interruptions within the work environment. This necessitated additional effort and time to complete the study requirements. On top of this, the study was conducted at the only specialized government maternity hospital in the city center of Diwaniyah, which may limit the generalizability of the results. Additionally, the sample size was also limited, as the study was restricted to midwives working at this hospital only.

## Conclusion

The current study concluded that more than two thirds of midwives demonstrated a moderate level of practices regarding standardized guidelines for prevention of postpartum hemorrhage during 3rd stage of labour. In addition, the majority of them demonstrated a moderate level of practice regarding standardized guidelines for (PPH) prevention during immediate postpartum, also its found that there was no correlation between the sociodemographic factors and the total level of midwives' practice. To bridge these gaps, a monitoring system should be designed and implemented to regularly assess obstetric nurses' practices to ensure best practices and identify area for improvement.

## CRediT

**Author contributions:** Mi., Mo.: Conceptualization of the study, literature search, data collection, statistical analysis, manuscript writing and editing. Wa, Ah, Am: contributed to the conceptualization of the study, assisted in data collection and analysis, participated in drafting and revising the manuscript, provided critical feedback throughout the research process and helped shape the final version of the article. All authors equally contribute to this study.

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## Ethical Approval

Study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study included the fact that participation was entirely optional.

## Informed Consent

It was applicable.

## Funding

Not applicable.

## Data Sharing Statement

The numerical data generated during this research is accessible through the respective journals or public repositories.

## Conflict of Interest

The authors declare no conflict of interest.

## Similarity Check

It was applied by Ithenticate@.

## Application of Artificial Intelligence (AI)

Not applicable.

## Peer Review Process

It was performed.



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