

# **Pain Management Practice in Labour and Post Delivery Among Midwives in Teaching Hospitals in Ekiti State, Nigeria**

AUTHOR(S): AWE OLABISI OLAYINKA (RN, RM, RME, B.NSc)

And

Prof. SOTUNSA, JOHN OBAFEMI

## **Abstract**

The study investigated pain management practice in labour and post-delivery among midwives in teaching hospitals in Ekiti State, Nigeria. This study adopted a cross sectional survey design to investigate pain management practice in labour and post-delivery among midwives in teaching hospitals in Ekiti State. The targeted population for this research were registered midwives in teaching hospitals in Ekiti State that deals directly with women during and after labour. Total population was used as sample size but 103 copies of questionnaire were retrieved. A self-structured questionnaire was used as the tool for collecting data from the midwives. The research instrument was subjected to scrutiny by experts in the field of nursing and test and measurement experts to assess the relevance to the subject matter. Cronbach Alpha was used to determine the internal consistency of the instrument. The reliability index of 0.835 was obtained to ensure internal consistency of the instrument. The data collected from this study were analyzed using both inferential and descriptive statistics. It was revealed that the level of knowledge of midwives in labour and post-delivery pain management was high as Midwives have positive attitude towards labour and post-delivery pain management. However, there was low level of practice of labour and post-delivery pain management. In addition, knowledge of midwives in pain

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management is related to attitude of midwives in pain management. Also, midwife experience has no impact on labour and post-delivery pain management. It was recommended among others that management of teaching hospital should include policy that allows midwives to prescribe analgesics in labour and post-delivery in the organisation policy.

**Keywords:** Pain Management, Practice, Labour, Post-Delivery, Midwives,

**About Author**

Author(s):

**AWE OLABISI OLAYINKA (RN, RM, RME, B.NSc)**  
Department of Maternal and Child Health,  
School of Nursing  
BABCOCK University, Illisan-Remo,  
Ogun State, Nigeria

**And**

**Prof. SOTUNSA, John Obafemi**  
Director of Clinical Services and Training/Consultant  
Babcock University Teaching Hospital,  
Babcock University, Ogun State, Nigeria

## Introduction

Pain is defined as unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (Bonica, 2011). Pain during labour is caused by contractions of the muscles of the uterus and by pressure on the cervix. Pain stimulates the sympathetic nervous system, which causes an increase in the heart rate, blood pressure, sweat production, endocrine hyper-function, and delays the patient's prognosis. Poorly controlled labour pain resulted in negative or traumatic childbirth experiences (Hollander Hastenberg, Dillen, Miranda & Stramrood, 2017). A defining feature of midwifery care is the promotion and protection of physiological reproductive processes, during the course of pregnancy and childbirth. Midwives are constantly weighing the appropriate care for each individual woman in labour.

The role of midwives and nurses are critical in managing pain during this period but without proper education and correct practice in pain management, most women may encounter severe pain during and after labour because some of the midwives did not give adequate pain killer because of fear of side effect and feeling of dizziness in some women, although they have knowledge on drugs used for managing pain during childbirth (Aziate, Acheampong & Umoar, 2017). For a woman having her first baby, the experience of labour and her reaction to it is unpredictable. However, the midwives were of the view that they could not manage labour pains effectively because of increased workload and stress of work (Aziate, Acheampong & Umoar, 2017).

Some of the midwives thought the pain was normal and encouraged women to bear pain which further contributed to poor labour pain management (Hollander Hastenberg, Dillen, Miranda & Stramrood, 2017). The proper management of pain in labour and after delivery plays an important role in the survival of the mother and her attention to the baby. Pain during and after labour may lead to exhaustion and anxiety which increases endogenous release of catecholamine which reduces blood flow to and from the placenta, restricts fetal oxygen supply and waste removal, reduces effectiveness of uterine contraction and slow labour progress which could be a rationale for assisted delivery (Obuna & Umeora, 2014). It has also been observed that most of the time pain relief were not given to women in labour and even after delivery (Melzack & Wall, 2010).

Midwives play a vital role in the provision of obstetric services to women and babies globally and the midwives require expertise in various aspect of obstetric care such as pain management to achieve safe motherhood. However, it is believed that the estimation of labour pain is lower when a midwife has many years of work experience (Williams et al, 2013). In case where midwife had a lot of personal childbirth experience, her estimation of labour pain is higher. (Williams et al, 2013) Midwives must always remember pain as an individual phenomenon and employ multidimensional assessment methods for labour pain management (Klomp, Witteveen & Hutton, 2016) Pain is a distressing feeling often caused by intense stimuli. Therefore, it is necessary that a research should be done to investigate pain management practice in labour and post-delivery among Midwives in Teaching Hospitals in Ekiti State.

Based on the foregoing, the study investigated pain management practice in labour and post-delivery among midwives in teaching hospitals in Ekiti State, Nigeria. The study specifically examined:

- i. the knowledge level of midwives in labour and post-delivery pain management;
- ii. the attitude of midwives towards labour and post-delivery pain management;
- iii. the practice of midwives in labour and post-delivery pain management;

- iv. the relationship between knowledge and the attitude of midwives in pain management;
- v. the difference in labour pain management based on midwife experience; and
- vi. the difference in post-delivery pain management based on midwife experience.

### Research Questions

The following research questions were raised to guide the study:

1. What is the knowledge level of midwives in labour and post-delivery pain management?
2. What is the attitude of midwives towards labour and post-delivery pain management?
3. What is the practice of midwives in labour and post-delivery pain management?

### Research Hypotheses

The following null hypotheses were generated for this study:

1. There is no significant relationship between knowledge and the attitude of midwives in pain management.
2. There is no significant difference in labour pain management based on midwife experience.
3. There is no significant difference in post-delivery pain management based on midwife experience.

### Methodology

This study adopted a cross sectional survey design to investigate pain management practice in labour and post-delivery among midwives in teaching hospitals in Ekiti State. The targeted population for this research were registered midwives in teaching hospitals in Ekiti State that deals directly with women during and after labour. The total population of midwives working at the antenatal ward, labour room and postnatal ward in EKSUTH, is 62 midwives and FETHI, is 48 midwives with a total of 110. Total population was used as sample size but 103 copies of questionnaire were retrieved.

A self-structured questionnaire was used as the tool for collecting data from the midwives. It consisted of four sections namely sections A – D. Section A sought for socio-demographic data of the respondents. Section B consisted of questions on knowledge of the midwives towards pain management. Section C consisted of items on attitude of the midwives towards pain Management while Section D consisted of items on practice of the midwives towards pain Management.

The research instrument was subjected to scrutiny by experts in the field of nursing and test and measurement experts to assess the relevance to the subject matter. Cronbach Alpha was used to determine the internal consistency of the instrument. The reliability index of 0.835 was obtained to ensure internal consistency of the instrument. The data collected from this study were analyzed using both inferential and descriptive statistics. Pearson's Product Moment Correlation and Analysis of Variance (ANOVA) were used to test the hypotheses at 0.05 level of significance.

### Results

#### Descriptive Analysis

**Research Question 1:** What is the knowledge level of midwives in labour and post-delivery pain management?

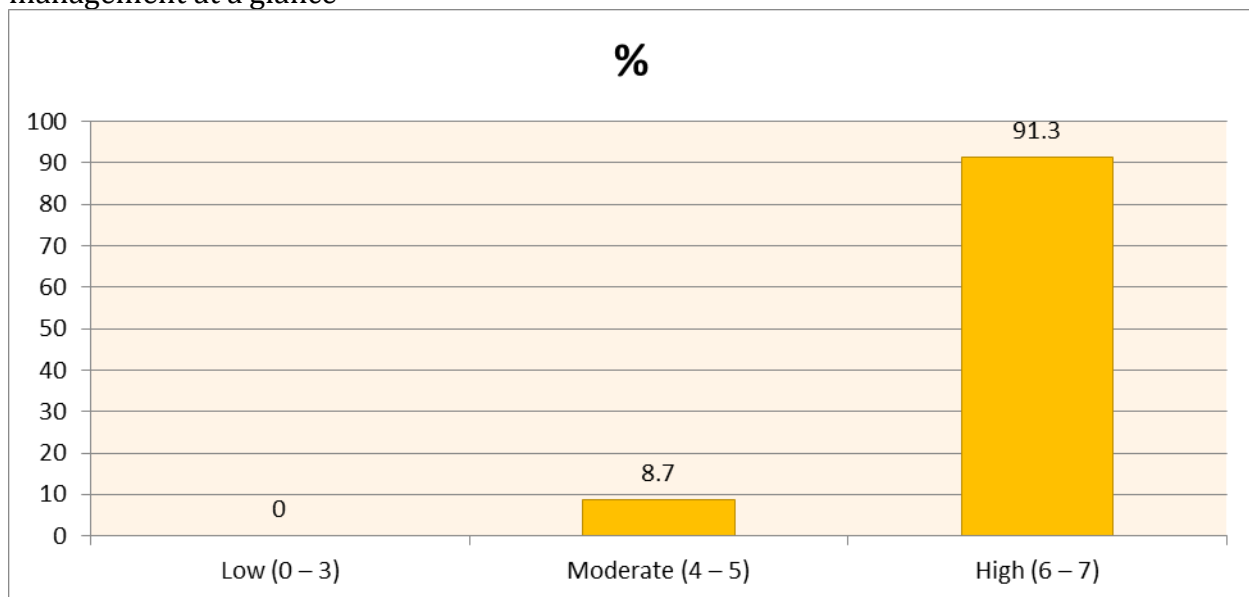
In answering this question, data on knowledge of midwives in labour and post-delivery pain management were collected from the responses of the respondents to items under Section H (items 44 – 50) in the questionnaire. The low level of knowledge of midwives in labour and post-delivery pain management were those who scored less than 50% of the 7 item which ranges from 0 to 3. The moderate level were those who scored between 50% and

75% of the 7 items and it ranges from 4 to 5. The high level of knowledge of midwives in labour and post-delivery pain management were those who scored above than 75% of the 7 items which ranges from 6 to 7. Level of knowledge of midwives in labour and post-delivery pain management was presented in table 1

**Table 1:** Level of knowledge of midwives in pain management

| Levels of knowledge of midwives in pain management | No of Respondents | Percent age |
|--|-------------------|-------------|
| Low (0 - 3)  | 0                 | 0           |
| Moderate (4 - 5)                                   | 9                 | 8.7         |
| High (6 - 7)                                       | 94                | 91.3        |
| <b>Total</b>                                       | <b>103</b>        | <b>100</b>  |

Table 1 revealed the level of knowledge of midwives in labour and post-delivery pain management. Out of 103 respondents, none of the respondents had low level of knowledge of midwives in labour and post-delivery pain management while 9 representing 8.7 of the respondents had moderate level of knowledge of midwives in labour and post-delivery pain management and 94 representing 91.3 of the respondents had high knowledge of midwives in labour and post-delivery pain management. The findings showed that the level of knowledge of midwives in labour and post-delivery pain management was high. Figure i further revealed the level of knowledge of midwives in labour and post-delivery pain management at a glance



**Figure i:** Bar Chart showing level of knowledge of midwives in pain management

**Research Question 2:** What is the attitude of midwives towards labour and post-delivery pain management?

The mean cut-off point was derived by finding the average marks assigned to the options available for the items  $(5+4+3+2+1)/5 = 3$

**Table 2:** Attitude of midwives towards labour and post-delivery pain management

| S/N | Attitude  | N   | Mean | SD   | Remark   |
|-----|---|-----|------|------|----------|
| 1.  | Empathy should be shown to patient in labour?                                   | 103 | 3.76 | 0.86 | Positive |
| 2.  | I feel pain management should be used for pregnancy in labour and post delivery | 103 | 3.47 | 1.05 | Positive |

|    |  |     |      |      |          |
|----|--|-----|------|------|----------|
| 3. | Are you of the opinion midwives should be trained in pain management in labour and post delivery               | 103 | 4.31 | 0.69 | Positive |
| 4. | Labour pain should be minimized at all   | 103 | 3.90 | 0.83 | Positive |
| 5. | Labour pain can be minimized by giving the patient psychological support and rubbing/massaging the client back | 103 | 4.02 | 0.73 | Positive |
| 6. | It can also be minimized by allowing the husband/relative to be with the woman                                 | 103 | 3.30 | 1.02 | Positive |
| 7. | Labour pain is normal so women can be left alone to manage pain  | 103 | 3.90 | 0.83 | Positive |

**Mean Cut-off: 3.0**

Table 2 revealed the attitude of midwives towards labour and post-delivery pain management. Based on the mean cut-off of 3.0, all the items were accepted. From the table, it implies positive attitude of midwives towards labour and post-delivery pain management. It can be deduced that midwives have positive attitude towards labour and post-delivery pain management.

**Research Question 3:** What is the practice of midwives in labour and post-delivery pain management?

**Table 3:** Practice of midwives in labour and post-delivery pain management

| S/N | Practice  | N   | Yes (%)    | No (%)    | Mean |
|-----|---|-----|------------|-----------|------|
| 1.  | Have you ever been involved in pain management of your client in labour or post-delivery? | 103 | 35 (34.0)  | 68(66.0)  | 1.34 |
| 2.  | Do you receive this training at this hospital?  | 103 | 0 (0)      | 103 (100) | 1.00 |
| 3.  | Do you give full support to help woman in pain during normal labour?                      | 103 | 35 (34.0)  | 68 (66.0) | 2.00 |
| 4.  | Do you give full encouragement to women to cope with pain in normal labour?               | 103 | 99 (96.1)  | 4 (3.9)   | 1.96 |
| 5.  | Are you a partner of women in labour pain?  | 103 | 103 (100)  | 0 (0)     | 2.00 |
| 6.  | Are you vigilant and attentive to the needs of woman in pain?                             | 103 | 98 (95.1)  | 5 (4.9)   | 1.95 |
| 7.  | Do you evaluate labour pains objectively?   | 103 | 100 (97.1) | 3 (2.9)   | 1.97 |

Table 3 revealed the practice of midwives in labour and post-delivery pain management. The table shows that almost all the respondents had been involved in pain management of client in labour or post-delivery and as such cannot give full support to help woman in pain during normal labour, but a large number of this respondents give full encouragement to women to cope with pain in normal labour and are partner of women in labour pain. Most respondents are also to be vigilant and attentive to the needs of woman in pain, they are also able to evaluate labour pains objectively. However, all respondents claimed not to have received any training for labour and post-delivery pain management at the hospital.

### Testing of Hypotheses

**Hypothesis 1:** There is no significant relationship between knowledge and the attitude of midwives in pain management.

**Table 4: Relationship between knowledge and the attitude of midwives in pain management**

| Variables                                    | N   | Mean  | Stand Dev | r-cal  | P-value |
|--|-----|-------|-----------|--------|---------|
| Knowledge of Midwives in Pain Management     | 103 | 6.56  | 0.64      | 0.451* | 0.002   |
| Attitude of Midwives towards Pain Management | 103 | 26.66 | 3.01      |        |         |

\*P<0.05

Table 4 showed relationship between knowledge and the attitude of midwives in pain management. The r-calculated value of 0.451 is significant at 0.05 level ( $r = 0.451$ ,  $n = 103$ ,  $p < 0.05$ ). This indicated that there was significant relationship between knowledge and the attitude of midwives in pain management. Knowledge of midwives in pain management is positively and moderately related to attitude towards midwives in pain management.

**Hypothesis 2:** There is no significant difference in labour pain management based on midwife experience.

**Table 5:** Analysis of Variance for difference in practice of labour pain management based on midwife experience

| Groups         | Sum of Squares | Df  | Mean Square | F     | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | .212           | 3   | .071        | 0.532 | .661 |
| Within Groups  | 13.147         | 99  | .133        |       |      |
| <b>Total</b>   | 13.359         | 102 |             |       |      |

P > 0.05

The result presented in Table 5 showed that  $F_{cal}$  value of 0.532 was not significant because the P value (0.532) > 0.05 at 0.05 level of significance. Hence, the null hypothesis was not rejected. Therefore, there was no significant difference in practice of labour pain management based on midwife experience. Hence, this implies that working experience does not influence midwives' practice of labour management

**Hypothesis 3:** There is no significant difference in post-delivery pain management based on midwife experience.

**Table 6:** Analysis of Variance for difference in post-delivery pain management based on midwife experience

| Groups         | Sum of Squares | Df  | Mean Square | F     | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | .489           | 3   | .163        | 0.631 | .597 |
| Within Groups  | 25.569         | 99  | .258        |       |      |
| <b>Total</b>   | 26.058         | 102 |             |       |      |

P > 0.05

The result presented in Table 6 showed that  $F_{cal}$  value of 0.631 was not significant because the P value (0.597) > 0.05 at 0.05 level of significance. Hence, the null hypothesis was not rejected. Therefore, there was no significant difference in post-delivery pain management

based on midwife experience. Hence, this implies that working experience does not influence post-delivery pain management

### **Discussion**

The findings of the study showed that the level of knowledge of midwives in labour and post-delivery pain management was high, this is in contrast with the work of Klomp, Witteveen and Hutton (2016) which revealed the midwives in the study didn't have enough knowledge of pain management in labour, it was emphasized that the knowledge of midwives in pain management is of utmost importance as it is what they have that they can give. Klomp, Witteveen and Hutton (2016) showed that some midwives did not have much knowledge about pain management and facts related to pain management like poor documentation of pain assessment, in spite of all these challenges education of midwives can improve management of labour pain and midwives should be undergo an educational training on pain management.

The findings of the study revealed that midwives have positive attitude towards labour and post-delivery pain management. Attitude of the midwives about pain management process at the first meeting with the midwives play a major supportive role in alleviating labour pains especially in situation of positive discussion with women in labour by showing care and encouraging attitude to women having labour pains (Williams, et al, 2013). However, some of the women faced with negative attitude of midwives which are shouting and lack of empathy may not seek professional health care during labour (Hollander et al, 2017).

The study revealed that there was significant relationship between knowledge and the attitude of midwives in pain management. This is in support of the study of McCauley (2017) who found relationship between healthcare providers' knowledge and attitudes to the need for pain relief for women in labour. Wiruchpongsonon (2016) found a relationship between the knowledge levels and attitudes regarding pain management among nurses.

The study however revealed that there was no significant difference in practice of labour management based on midwife experience. This is in contrast with Gentz (2011) in her research work, it revealed that most of the midwives had previous experience of labour pain management but differs based on their experiences. The study also revealed that there was no significant difference in post-delivery pain management based on midwife experience. This is in contrast with the study of Leap, Dodwell and Newburn (2010) who found difference in post-delivery pain management based on midwife experience.

### **Summary of Major Findings**

The following are the major findings of the study:

1. The level of knowledge of midwives in labour and post-delivery pain management was high
2. Midwives have positive attitude towards labour and post-delivery pain management.
3. There was low level of practice of labour and post-delivery pain management as less than half of the respondents have administered pain relief in labour before
4. There was significant relationship between knowledge and the attitude of midwives in pain management.
5. There was no significant difference in labour pain management based on midwife experience.
6. There was no significant difference in post-delivery pain management based on midwife experience.



## Conclusion

It is concluded that the level of knowledge of midwives in labour and post-delivery pain management was high as Midwives have positive attitude towards labour and post-delivery pain management. However, there was low level of practice of labour and post-delivery pain management. In addition, knowledge of midwives in pain management is related to attitude of midwives in pain management. Also, midwife experience has no impact on labour and post-delivery pain management.

## Recommendations

As a result of findings of this study, the following recommendations were made:

1. Management of teaching hospital should include policy that allows midwives to prescribe analgesics in labour and post-delivery in the organisation policy.
2. There should be on-the-job training targeted at equipping midwives with current skills and knowledge on labour and post-delivery pain management practices.
3. Government should subsidise the amount of this drugs or completely make them free for labour and post-delivery pain management.

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