

## Labour pain management practices and associated factors among health workers in labor wards in selected hospitals in Transnzoia County, Kenya

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<https://doi.org/10.51867/ajernet.7.3.137>

### ABSTRACT

Pain experienced during childbirth is a complex, multidimensional and subjective phenomenon. Mothers having a pain free is one of the most exciting and rewarding moments both healthcare workers and the mother. However, in developing countries, women still go through painful labour despite the availability and presence of various methods of labour pain management. Transnzoia is not exceptional because a gap in labour pain management practices among health workers exists. The research aimed to determine the labour pain management practices and associated factors among healthcare workers in labour wards in selected hospitals in Transnzoia, County Kenya. The objectives that guided the study; to determine the health care workers factors that influence labour pain management, in selected hospitals in Trans-Nzoia County. Comfort Theory as stated by Katherine Kolcaba was adopted as the theoretical frame work. Analytical cross-sectional design using mixed methods for data collection was used to collect data from 144 (sample)health workers in labour ward, from selected hospitals with functional labour wards in Transnzoia County for 12 weeks. Purposive sampling techniques was used to selected hospitals with functional labour wards; the random sampling was used to selected health workers. Key informants were identified purposively. Structured questionnaires and KII (key informant interviews) were for in charges, were used for data collection. Descriptive statistics was used to analyze data. Results on respondents' level of knowledge revealed that 21.4% had poor knowledge, 38.6% fair, and 40% had a good knowledge. The majority, 73.6%, were registered nurse-midwives (RN/RM) and 96.6% used labour pain relief. However, there were significant associations between respondents' educational ( $p=0.018 < 0.05$ ), level training ( $p=0.002 < 0.05$ ), and knowledge ( $p=0.003 < 0.05$ ) of health workers ( $p<0.05$ ). The results revealed a positive attitude of offering labour pain relief, among health workers. 121(86.4%) of respondents that strongly agreed women need labour pain relief compared to 10 (7.1%) strongly agreed thus showed a negative attitude and thought pain of labour as a natural process where endurance is encouraged. Results further showed that 111(79.3%) of respondents strongly agreed that they were willing to offer any labour pain relief, whereas 6(4.3%) saw no value for non-pharmacological labour pain relief methods to mothers in labour. The role of health workers in labour pain management was acknowledged by 134 (95.7%) of respondents and 134(95.7%) of health workers desired to benefit from additional training in labour pain management. Health care workers factors play a crucial role in labour pain management practice. Level of education, training and knowledge were significant factors to practice of labour pain management. Therefore, improving knowledge and attitude of healthcare workers will improve practice of labour pain management. The study recommends, County government and ministry of health to: avail trainings for health workers on use of different methods of labour pain management, improving knowledge thus improving their practices on labour pain management.

**Keywords:** Attitude, Health Worker Factors, Labour Pain Management Practices, Knowledge

### I. INTRODUCTION

Globally, health workers factors affected practices of labour pain management. However, in developing countries, women still go through painful labour despite the availability and presence of various methods of labour pain management (Wakgari *et al.*, 2020 & Eliazaro, 2024). Management of labour pain involves assessment of pain experience that women undergo and its intensity as labour progresses, once established pharmacological and nonpharmacological approaches can be applied. Klomp *et al.* (2016) asserts healthcare worker's critical role is to apply their knowledge into practice. Reviews of different literatures show various factors play a crucial role in labour pain management practices. Hawamdeh (2019) and Melesse *et al.* (2022) argues attitude and knowledge of health care workers can affect practice labour pain management.

Obuna and Umeora (2014), in their study in Southeast Nigeria among Igbo women, reported 67.6% of women in labour needed labor pain relief but only 27% of participants received pain relief thus 73% did not receive pain relief. Thus, showing poor practice. The findings agree with other parts of Africa. In Aga Khan Teaching and Referral hospital,

showed 90 % of women requested for some form of labour pain relief but only 18% percent received (Mung'ayi *et al.*, 2008). The study did not show reason for poor practice.

Several studies have been done on knowledge on labour pain management. According to Ogboli-Nwasor *et al.*, (2011), in study on knowledge and practice of pain management among healthcare workers in labour wards Ibadan Nigeria, found out that (66.7%) of respondents had inadequate knowledge about labour pain methods. It further showed that knowledge of labour pain management is linked to level of education. Thus, a good knowledge goes handy with good practice of labour pain management. The study however had a limitation of using only 87 participants. Bishaw *et al.* (2020), survey on healthcare providers' knowledge and use of pain relief for women in Ethiopia reported that, the general attitude of healthcare providers is that labour is a natural process. Therefore, mothers in labour are expected to cope. This is in disagreement with that in Tigray general referral hospitals that showed that non-pharmacological methods use in labour pain management were associated with level of education and a positive attitude. Sahile *et al.* (2017) further stated, that healthcare workers with MSc (higher level education) were more likely to use labour pain relief methods compared to diploma holders

In a study in Uganda, 88% of the pregnant woman requested for the pain relief methods from health workers, and 79% received pain relief methods, with only, 7% of health workers showed awareness of various option of pain management methods. However, most of health workers showed, negative attitude toward pharmacological pain relief despite effectiveness of it, due to the various side -effects, that could affect the mother and baby in labour (Loza Wondimu, 2024). In addition, Ali *et al.* (2020) stated, that developed nations embrace, the use of pain relief in labour management, focusing on different methods and their complications. However, developing nations are affected by attitude, due to culture, knowledge and education, towards labour pain relief. In Trans Nzoia County Hospitals, 61% of healthcare professionals reported to have been trained in pain assessment and its management however clinical audits done monthly revealed deficiencies in labour pain management among health care workers, with only 30% stating that they practiced labour pain management. Despite the low practice of labour pain management in the facilities, the current literature lacks information on the factors that influence the low practice of labour pain management in Transnzoia County. This research aimed to evaluated labour pain management practice and associated factors among health care workers in labour in selected Hospitals in Trans-Nzoia County, Kenya.

### 1.1 Statement of the Problem

The most rewarding and fulfilling moments for healthcare workers and the mother, is bringing of infant into arms of pain free mothers. Globally, health workers factors affected practices of labour pain management. However, in developing countries, women still go through painful labour despite the availability and presence of various methods of labour pain management (Wakgari *et al.*, 2020 & Eliazaro, 2024). Obuna and Umeora (2014), in their study in Southeast Nigeria among Igbo women, reported 67.6% of women in labour needed labor pain relief but only 27% of participants received pain relief thus 73% did not receive pain relief. The findings agree with that Kenya, in Aga Khan Teaching and Referral hospital, which found that 90 % of women requested for some form of labour pain relief but only 18% percent received (Mung'ayi *et al.*, 2008).

In Kenya, a study on factors influencing deliveries at health facilities in rural Maasai community in Magadi, found that woman delivered at home because health workers in the facility assumed them when they requested for help. (Karanja *et al.*, 2018). Which concurs with a report from Kenya National Bureau of Statistics [KNBS] and ICF (2023) which showed that 85.2% of deliveries in Transnzoia are done at facilities which is below the leading Nyeri county at 99.1%. Reports from District health information system (DHIS2) in 2023 indicated that in Trans Nzoia County Hospitals, 61% of healthcare professionals reported to have been trained in pain assessment and its management however clinical audits done monthly revealed deficiencies in labour pain management among health care workers with only 30% stating that they practiced labour pain management .It is against this background that the study evaluated labour pain management practice and associated factors among health care workers in labour in selected Hospitals in Trans-Nzoia County, Kenya.

### 1.2 Research Objective

The objective of this study was to determine health care workers' factors influencing labour pain management practices among health care workers in Transnzoia County.

## II. LITERATURE REVIEW

### 2.1 Theoretic Review

Katherine Kolcaba's Comfort Theory guide the entire study. She developed the theory in 1990's. Describing the existence of comfort in 3 forms: relief, ease, and transcendence. She further, identified 4 contexts that helps in patient's comfort that includes: physical, psycho-spiritual, environmental, and sociocultural (Lin *et al.*, 2024). Where for patient specific comfort needs to be met, for example, the relief of labour pain by administering prescribed analgesia,

the individual experiences comfort in the relief sense. Therefore, if a woman is in comfortable state of contentment, therefore the mother will experience comfort in the ease sense, for example, how one might feel after having labour pain managed that are causing anxiety addressed. Lastly, transcendence is a state of comfort where women in labour are able to rise above the pain of labour. Comfort on the other hand is being strong by having needs for relief, social and environment. Therefore, study was based on the fact good knowledge and attitude of healthcare worker leads to good practice on labour pain management.

## 2.2 Empirical Review

Management of labour pain involves assessment of pain experience that women undergo and its intensity as labour progresses, once established pharmacological and nonpharmacological approaches can be applied. Klomp *et al.*, (2016) asserts healthcare worker's critical role is to apply their knowledge into practice. However, Hawamdeh (2019), & Melesse *et al.*, (2022) argues attitude and knowledge of health care workers can affect practice labour pain management.

### 2.2.1 Knowledge of health care workers on labour pain management

Bishaw *et al.*, (2020), study on labour pain and pharmacological pain relief practice; found that, pethidine and Epidural analgesia were the most well-known pharmacological pain relief methods, but failed to clarify if they were put into practice. Eze Ojerinde *et al.* (2016), in study on knowledge and practice of pain management among healthcare workers in labour wards in Ibadan Nigeria, found out that (66.7%) of respondents had inadequate knowledge about labour pain methods and 34.5% used back massage as a method to manage labour pain. It further showed that knowledge of labour pain management is linked to level of education. Thus, a good knowledge goes handy with good practice of labour pain management. The study however had a limitation of using only 87 participants.

Loza (2024), research in Harari region general hospitals in Ethiopia, reported 43.3% of respondents used non pharmacologic interventions, and nil practice for pharmacologic ones. The study also concluded there was poor practice of labour pain management due to poor attitudes and low qualification of healthcare workers, thus recommended importance of improving knowledge and attitude of healthcare workers. The study findings agree with that of Dhakal *et al.*, (2017) in Nepal that indicated a dire gap in knowledge and attitude in labour pain management. Eliazaro (2024) study in Moi Teaching and Referral Hospital asserts that undergraduate nurses/midwives had inadequate knowledge on non-pharmacological pain management strategies. They further found out that, pain management strategies were not well elaborated in their training curriculum. Where postgraduate nurses/midwives had knowledge on non-pharmacological management methods but did less work compared to undergraduate nurses/midwives. This calls for a review of undergraduate curriculum.

### 2.2.2 Attitude of health care workers on labour pain management

Developed nations embrace the use of pain relief in labour management, focusing on different methods and their complications. However, developing nations are affected by attitude, due to culture, knowledge and education, towards labour pain relief. (Ali *et al.*, 2020). A study in Zaria, Nigeria on awareness, attitude, and practice of health care providers on pain relief in labour found a positive attitude, where pethidine is mostly used pharmacological labour pain method compared acupuncture and hypnosis which were least used nonpharmacological labour pain methods where no specific reasons show why nonpharmacological labour pain methods were list used. Thus, a gap exists between healthcare provider's attitude and practice with no genuine reason (Ogboli-Nwaso *et al.*, 2011).

Bishaw *et al.* (2020), survey on healthcare providers' knowledge and use of pain relief for women in Ethiopia reported that the general attitude of healthcare providers is that labour is a natural process. Therefore, mothers in labour are expected to cope. This is in disagreement with that in Tigray general referral hospitals that showed that non-pharmacological methods use in labour pain management were associated with level of education and a positive attitude. Healthcare workers with MSc (higher level education) were more likely to use labour pain relief methods compared to diploma holders (Sahile *et al.*, 2017). In Uganda, results were not exceptional, were most of health workers showed, negative attitude toward pharmacological pain relief despite effectiveness of it due to the various side effect and culture that women should endure that pain of labour that could affect the mother and baby in labour and (McCauley *et al.*, 2017).

## III. METHODOLOGY

### 3.1 Study design

The study employed a cross-sectional design with a mixed method approach combining quantitative and qualitative research methods. This allowed the use of both qualitative and quantitative methods to provide a more comprehensive understanding. The approach was chosen to capture comprehensive data on health workers' knowledge, attitudes, and practices on labour pain management, as it allows collection of numerical data and in-depth insights



### 3.2 Study Area

The study area was level four (sub county) and level five hospitals (county referral hospital) in Transzoia County and the 6 private hospitals with functional labour wards. Transzoia County. Transzoia County is 380 km from northwest of Nairobi and between the Nzoia river and mount Elgon. The county's capital is Kitale town which is centrally located; it is a cosmopolitan county, with nearly all Kenyan tribes living in the county. economically the area is agriculturally county majoring in wheat, maize and dairy farming both in small scale and large scale.

### 3.3 Target population

Health workers (medical officers, clinicians and nurses) working in labour wards in selected hospitals with functional labour wards in Transzoia County. All health workers were 230 but sample of 144 was used.

#### 3.3.1 Inclusion criteria

Health care workers in working labour ward for more than 3 months in the selected hospitals those ready to participate and consented and available during duration of study.

#### 3.3.2 Exclusion criteria

The study excluded; health care workers working assigned to labour wards for more 3 months in the selected hospitals, who were not in position to answer the questionnaire due tight work schedule, those who fell ill during study period and unable to complete questionnaire and those who changed their mind to continue with the study.

### 3.4 Sampling and sample size

The sample size was obtained by using the sample size calculator from prevalence studies formula with finite population correction (Daniel & Cross, 1999). The calculated sample size was 144. However, 140 respondents participated in the study because 4 dropped out. The hospitals found in Transzoia were stratified into non-government and government. Then purposively sampling technique was used to selected the hospital with functional labour wards in the county. Simple random method was use to select health workers to participate on the study. The in charges interviewed were also purposively identified.

### 3.5 Data Collection

Data was obtained using structured questionnaires and KII from the extensive literature reviewed were adopted to obtain information on the sociodemographic characteristics of the respondents, practices, knowledge and attitude of health workers on labour pain management. The instrument was pretested and had a reliability coefficient of 0.7.

### 3.6 Data Analysis

Data were analyzed using SPSS version 28. Descriptive statistics were applied. Bivariate analysis was conducted as a method to measure association between independent variables and the dependent variables. Statistically critical value was considered for p value less than 0.05. Themes from key source interviews were used to analyze qualitative data.

### 3.7 Ethical Consideration

Ethical approval was gotten from institutional Scientific and ethics Review Committee of Masinde Muliro University of Science and Technology. Research permit was obtained from the National Approval Research Committee of Science and Technology in Kenya. Permission to carry out research was sought from the County research unit in Transzoia County was granted. Study participants signed informed consents, prior to participating in the study.

## IV. FINDINGS & DISCUSSION

### 4.1 Findings

#### 4.1.1 Socio-Demographic Characteristics of study participants

At total of 144 questionnaires that were administered, 140 of respondents returned a filled questionnaire, correctly and were used for analysis in this study. Table 1 indicated, 90 (64.3%) respondents being, female, aged between 22 and 29 years 89(63.6%). Most of the respondents 94(67.1%) hold a diploma, while 25(17.9%) and 21(15.1%) had attained bachelor's degree and masters respectively. With reference to marital status, 94(67.1%) of the respondents were married while 42(30.0%) and 4(2.9%) were single and divorced respectively. Majority of the respondents, 96(68.6%) worked in public health facilities. These workers attend to majority of expectant mothers due to accessibility of health facilities and cost, compared to 44(31.4%) of respondents from private facilities. Below is a summary of Table 1.

**Table 1***Socio-Demographic Characteristics of study Participants*

|                                    |               | Frequency(N) | Percentage |
|------------------------------------|---------------|--------------|------------|
| Gender                             | Female        | 90           | 64.3       |
|                                    | Male          | 50           | 35.7       |
| Age                                | 22-29         | 89           | 63.6       |
|                                    | >30           | 51           | 36.4       |
| Marital Status                     | Married       | 94           | 67.1       |
|                                    | Single        | 42           | 30.0       |
|                                    | Divorced      | 4            | 2.9        |
| Kind of health Facility            | Public        | 96           | 68.6       |
|                                    | Private       | 44           | 31.4       |
| Profession                         | Nurse         | 103          | 73.6       |
| Highest level of education         | Diploma       | 94           | 67.1       |
|                                    | Undergraduate | 25           | 17.9       |
|                                    | Masters       | 21           | 15.0       |
| Time worked in the health facility | < 5 years     | 87           | 62.1       |
|                                    | >= 5 years    | 53           | 37.9       |

#### 4.1.2 Health Care Workers' Factors Influencing Labour Pain Management Practices Among Health Care Workers in Transzoia County

To describe whether healthcare workers' factors influenced labour pain management practices, understanding of their knowledge and attitude was paramount. Knowledge was used as a factor that influenced labour pain management. The on knowledge were grouped as: adequate knowledge and inadequate knowledge. Level of knowledge adequacy, covered respondents who knew management of labour pain in general, the importance of the practices and adverse effect. Findings showed that most of the health workers 134(95.7%) working in labour ward were knowledgeable on labour pain management which is of importance to provision of quality maternal healthcare. Majority of health workers selected labour wards were aware of the techniques of managing labour pain and the adverse effects of not managing the pain of labour at 113(80.7%) and 136(97.1%) respectively. This is reflected in table 2. Knowledge of healthcare providers on pain management.

The respondents on knowledge of various pain management practices from the respondents were scored in a scale of 0-100%. The scale was derived from the proportion of correctly answered knowledge items. A score of below 40% was considered poor, while a score of below 65% was considered fair, and a score of above 65% was considered good. These categories were defined, prior by the researcher based on the study objectives and literature. The results showed 40% good knowledge, 38.6% fair and 21.4% poor. The finding differed with that of, Ojerinde *et al.*, (2016), in study on knowledge and practice of pain management among healthcare workers in labour wards Ibadan Nigeria, found out that (66.7%) of respondents had inadequate knowledge about labour pain methods. It further showed that knowledge of labour pain management is linked to level of education. Thus, a good knowledge goes handy with good practice of labour pain management. Also aligning with, a study in MTRH where 53.0% health care providers had poor knowledge of labour analgesia, (Eliazaro, 2024), the possible reason for knowledge of healthcare workers on pharmacological was attitude due to cultural difference between these two populations. However, the study further, differed with that of McCauley *et al.* (2017), study, that showed, 88.9% of health workers were knowledgeable about the labor pain relief method. Which is important for them to have knowledge about the pain relief in order to help women in making decision the type of pain relief to use, and to administer the pain relief in labour pain. The summary on knowledge towards labour pain management practices is as shown in Table 2. Respondents' knowledge on labour pain management practices

**Table 2***Respondents' Knowledge on Labour Pain Management Practices*

| Level of knowledge | Frequency | Percentage |
|--------------------|-----------|------------|
| Good               | 56        | 40.0       |
| Fair               | 54        | 38.6       |
| Poor               | 30        | 21.4       |
| Total              | 140       | 100.0      |

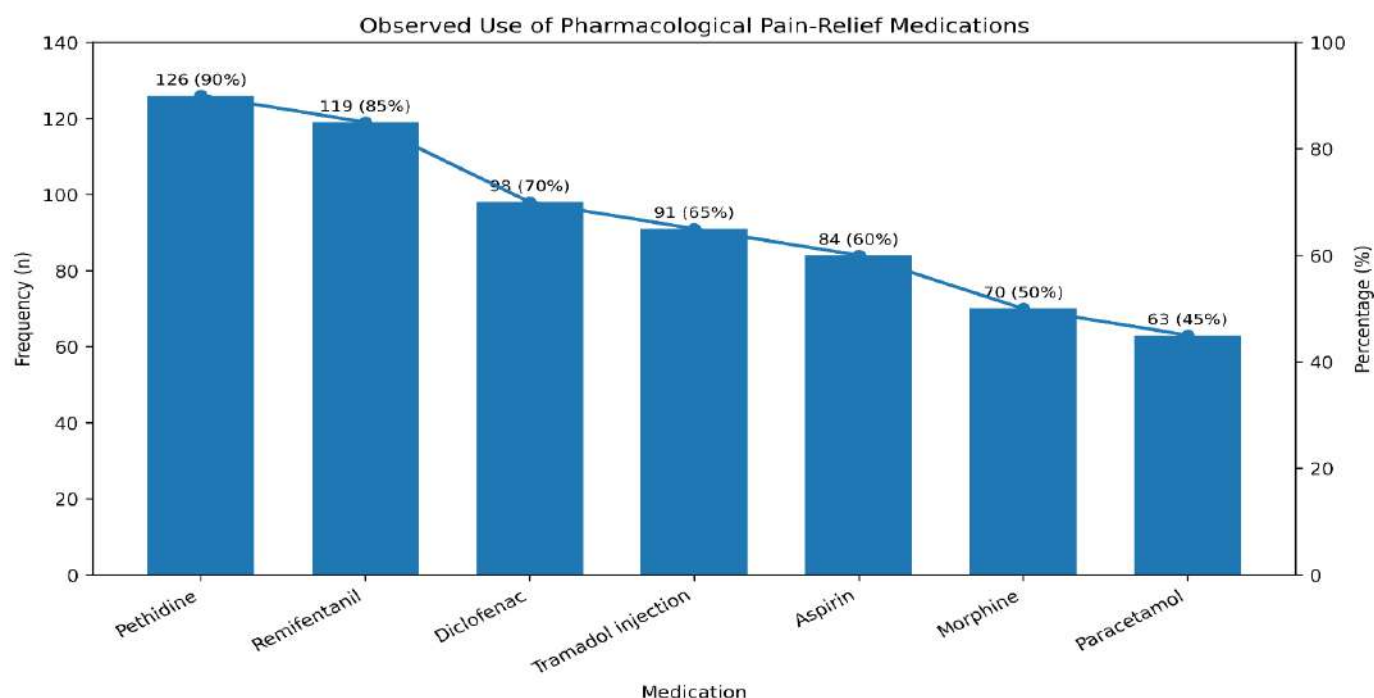
Pharmacological labour pain relief known by healthcare providers: The analysis on Pharmacological labour pain relief known by respondents were: pethidine 126(90%), remifentanil 119(85%), diclofenac 98(70%), tramadol injection, 91(65%) aspirin, 84(60%) morphine 70(50%) and paracetamol 63(45%). The finding was higher compared to a study in MTRH where 53.0% maternal health care providers had poor knowledge of labour analgesia, (Eliazaro, 2024),

the possible reason for knowledge of healthcare workers on pharmacological was attitude due to cultural difference between these two populations.

Commenting on pain relief methods award in charge respondent as follows during an interview with the researcher

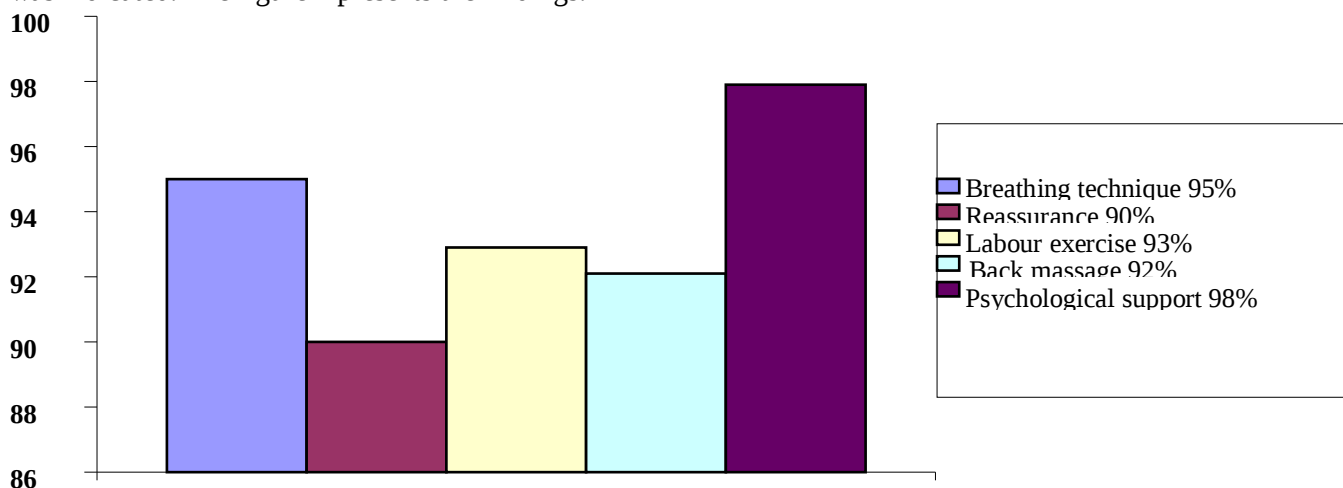
*“.... health workers desire to offer several drugs, but are not available in health facilities except for tramadol, diclofenac and paracetamol...”* KII.3, (2023, March ,22)

The figure 1 below shows the pharmacological relief methods known by healthcare workers in labour ward in selected hospitals in Transnzoia county Kenya.



**Figure 1**  
*Pharmacological Relief Methods Known by Healthcare Workers*

Non-Pharmacological labour pain relief known by healthcare providers: The results indicated that health care workers knew several non-pharmacological labour pain relief techniques: Psychological support at 137(98%), breathing techniques 133(95%), labour exercises 130(93%), back massage 128(92%) and reassurance 126(90%) of respondents. The techniques were put in practice and health workers reported it worked. This was similar to a study carried in MTRH (Eliazaro, 2024) where psychological, breathing, labour exercise, back massage and reassurance were preferred non-pharmacological relief techniques Respondents had a space to add other non-pharmaceutical labour pain relief, but none was indicated. The figure 2 presents the findings.



**Figure 2**  
*Non-Pharmacological Labour Pain Relief Known by Healthcare Providers*  
Source: (Researcher, 2023)

Attitude of healthcare providers on pain management: A five-point Likert's scale based on response of 8 running statements was used to measure the attitude of healthcare providers on pain management. Score of 50% and above was considered positive and below 50% negative. The results revealed a positive attitude of offering labour pain relief, among health workers. 121(86.4%) of respondents that strongly agreed women need labour pain relief compared to 10 (7.1%) showed a negative attitude and thought pain of labour as a natural process where endurance is encouraged. Results further showed that 111(79.3%) of respondents were willing to offer any labour pain relief, whereas 6(4.3%) saw no value for non-pharmacological labour pain relief methods to mothers in labour. The role of health workers in labour pain management was acknowledged by 134 (95.7%) of respondents and 134(95.7%) of health workers desired to benefit from additional training in labour pain management. The research findings further, revealed 121 (86.4%) health care workers showed positive attitude towards assisting women during labour by minimize discomfort associated labour process. The results concur with findings, in Ethiopia (Loza, 2024), in Nigeria (Ogboli-Nwasor *et al*, 2011) and Eliazaro (2024) in MTRH, Kenya, found a positive attitude towards pain relief during labour, stating that it is important and health workers should use it to manage the labour pains. Despite the positive attitude, a small percentage 7.1% of health workers in the present study, held the view that labour pain is a natural process and should be endured. Similarly, studies in Ethiopia (Loza, 2024) and in Kenya (Eliazaro, 2024) have shown a small group had negative attitude where they believe labour is a natural process and needs to be endured. This may signify culture divergence between the study populations.

The study findings further showed, health workers are denied opportunity to acquire additional training on labour pain relief techniques. and that only a few are offered, and selection criteria of participants is invaded by biasness.

*“... training opportunities offered by government and non –governmental organizations are few. Selection of participants is the responsibility of matron in charge of facility, who are biased on criteria of selection. As such most nurses fail to get additional training....”* KII 2(2023, March, 15)

The results are summarized in Table 3.

**Table 3**

*Attitude of Healthcare Providers on Pain Management*

| Variable                                                                                                       | SA (%)     | A (%)     | U (%)   | D (%)     | SD (%)    |
|----------------------------------------------------------------------------------------------------------------|------------|-----------|---------|-----------|-----------|
| Women need pain relief during labour and delivery                                                              | 121 (86.4) | 16 (11.4) | 3 (2.1) | 0 (0.0)   | 0 (0.0)   |
| Training on issues related to labour pain management methods should be given for healthcare providers          | 134 (95.7) | 5 (3.6)   | 1 (0.7) | 0 (0.0)   | 0 (0.0)   |
| Labour pain management helps the laboring mother                                                               | 116 (82.9) | 23 (16.4) | 1 (0.7) | 0 (0.0)   | 0 (0.0)   |
| I am willing to provide labour pain management methods to mothers in labour                                    | 111 (79.3) | 25 (17.9) | 1 (0.7) | 1 (0.7)   | 2 (1.4)   |
| Labour pain is natural, and all women should face it                                                           | 10 (7.1)   | 3 (2.1)   | 8 (5.7) | 39 (27.9) | 80 (57.1) |
| Use of non-pharmacological labour pain management methods has no value to mothers in labour                    | 6 (4.3)    | 3 (2.1)   | 6 (4.3) | 40 (28.6) | 85 (60.7) |
| Women should benefit from pain relief during labour and childbirth                                             | 117 (83.6) | 19 (13.6) | 2 (1.4) | 1 (0.7)   | 1 (0.7)   |
| The health workers have a vital role in pain management as he/she spends the most hours with mothers in labour | 134 (95.7) | 5(3.6)    | 1 (0.7) | 0 (0.0)   | 0 (0.0)   |

#### 4.1.3 Healthcare Factors Associated with Labour Pain Management Practices

The health worker response on factors affecting the labour pain management practices, showed that labor pain management practices were mostly affected by level of education ( $p=0.018 < 0.05$ ), knowledge ( $p=0.003 < 0.05$ ), and training ( $p=0.002 < 0.05$ ). Where health workers holding, BSc and above are 2.1 times more likely to practice labour pain management compared to those holding diploma (AOR 2.1;95%CI:1.3-3.2;  $p=0.018$ ). For health workers with inadequate knowledge had a probability 0.7 unlikely to practice labour pain management equated to those with adequate knowledge on labour pain management (AOR1.56;95% CI:(0.4-1.3);  $p=0.002$ ). It further shows that health workers trained on labour pain management had a probability 1.56 times to practice labour pain management compared to those not trained on labour pain management. (AOR 1.56;95%CI:(0.4-1.4);  $p=0.002$ ). This was in line to a study conducted in the Harari region, public hospital (Loza, 2024) and in Debre Markos Comprehensive Specialized Hospital, Ethiopia (Melesse *et al.*, 2022), where a higher level of qualification was found to be significantly associated with labour pain management practice ,but their experience impacted on chances of practicing labour pain management, where those with >5years were less likely to practice effective labour pain management compared to <5years experience which is similar to a study in Ethiopia where >5 years' experience was negatively associated with labour pain management practice. Providers who reported receiving specific training in labour pain management practices, were significantly

more likely to report the practice, while lack of training remained a major barrier (Sahile *et al.*, 2017). This might be because those who have more experience may not employ pharmacological methods, such as analgesia, and instead use non-pharmacological labour pain management techniques, which are very common in Ethiopia (Bishaw *et al.*, 2020). Table 5 below represents the findings.

**Table 5**

*Bivariate Analysis Of Healthcare Worker's Factors Associated Labour Management Practices*

| Variables                                        |               | Utilization of labor management practices |    | COR (95% CI)  | AO4R (95% CI) | p value |
|--------------------------------------------------|---------------|-------------------------------------------|----|---------------|---------------|---------|
|                                                  |               | Yes                                       | No |               |               |         |
| Age                                              | 20-29         | 32                                        | 57 | 1.00          | 1.00          | 0.073   |
|                                                  | ≥ 30          | 24                                        | 27 | 1.6(1-1.16)   | 1.04(0.6-1.7) |         |
| Gender                                           | Female        | 57                                        | 33 | 1.00          | 1.00          | 0.053   |
|                                                  | Male          | 27                                        | 23 | 2.02(1.2-2.2) | 0.71(0.2-1.3) |         |
| Level of education                               | Diploma       | 21                                        | 73 | 1.00          | 1.00          | 0.018   |
|                                                  | BSc and above | 20                                        | 26 | 0.37(1.9-3.1) | 2.1(1.3-3.2)  |         |
| Time worked in the health facility (Experienced) | < 5 years     | 47                                        | 40 | 1.00          | 1.00          | 0.261   |
|                                                  | ≥ 5 years     | 30                                        | 23 | 0.90(0.3-2.1) |               |         |
| Profession                                       | Nurse/midwife | 54                                        | 49 | 1.00          | 1.00          | 0.812   |
|                                                  | Others        | 25                                        | 21 | 0.93(1.1-2.1) | 1.1(1.4-3.6)  |         |
| Knowledge                                        | Adequate      | 31                                        | 54 | 1.00          | 1.00          | 0.003   |
|                                                  | Inadequate    | 26                                        | 29 | 0.64(0.7-1.5) | 0.7(1.3-2.1)  |         |
| Attitude                                         | Negative      | 31                                        | 45 | 1.00          | 1.00          | 0.164   |
|                                                  | Positive      | 34                                        | 30 | 0.61(0.2-0.8) | 0.7(0.3-1.2)  |         |
| Training                                         | Yes           | 42                                        | 27 | 1.00          | 1.00          | 0.002   |
|                                                  | No            | 41                                        | 30 | 1.14(0.6-1.1) | 1.56(0.4-1.3) |         |

## V. CONCLUSION & RECOMMENDATIONS

### 5.1 Conclusion

The findings, on health workers' factors shows that education, knowledge, and training are significant indicators of healthcare factors influencing labour pain management practices. It further, points a positive attitude among health workers on provision labour pain relief techniques. However, Labour pain management practice of a few health workers was affected by belief of labour pain being a natural process and need endurance. Further signifying disparity in culture between the study populations. Thus, creating research gap for further research on effect of culture on labour pain management.

### 5.2. Recommendations

County government and ministry of health to avail trainings for health workers on use of different methods of labour pain management, improving knowledge thus improving their practices on labour pain management.

### Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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