International Journal of Medical and All Body Health Research

International Journal of Medical and all body Health Research
ISSN: 2582-8940
Received: 01-01-2020; Accepted: 15-01-2020
www.allmedicaljournal.com
Volume 1; Issue 1; January-march 2020; Page No. 01-04

Hospital policies and educational qualifications as predictors of management of labour pain by midwives in two selected teaching hospitals in Ekiti State, Nigeria

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Abstract
Women in labour go through a lot of pain which needs to be relieved in other to enjoy the birth experience. If there is no adequate pain relief in labour, this could lead to a negative birth experience. Labour pain is managed primarily by attending midwives, however, there are some factors influencing the management of labour pain by midwives. This study assessed hospital policies and educational qualification as predictors of midwives management of labour pain in the tertiary hospitals in Ekiti State.

The study employed a descriptive cross sectional survey carried out in the three tertiary hospitals in Ekiti State. A total enumeration of midwives (178) working at the obstetric and gynaecological units of the hospitals was used for the study. Face and content validity of the instrument were ensured by the researcher's supervisor and other expert in the field of research and statistics.. Multiple Regression and Pearson product moment correlation was used to test the hypotheses at 0.05 level of significance.

Findings revealed that 172 questionnaires were retrieved and validated for analysis, making 96.6% return rate. Demographic variable revealed that 103(59.9%) respondents were between the ages of 31-50yearswith the mean age of 39.7 ± 9.83 years and standard deviation of 2.2±1.0. Majority were female 166(96.5%) and 120(69.7%) respondents had a minimum of 6years working experience. The result showed that hospital policies did not predict midwives management of labour pain ($F_{(1, 170)}$ = 3.360, p=.069>0.05), while educational qualification correlates with midwives management of labour pain (X^2 = 6.268, p = 0.014<0.05).

In conclusion, this study revealed that nursing education had direct influence on nursing practice, and necessary areas covered in the nursing education curriculum which translates to better practice and vice-versa. Also, educational qualifications is a potent factor compared to hospital policies in predicting midwives management of labour pain. Therefore, it is recommended that continuing education of midwives about the current trends in labour pain management would further maximize midwives ability to manage pain in labour individually and with empathy.

Keywords: Educational qualification, hospital policies, midwives, labour pain management

Introduction

Labour is a normal phenomenon and a natural part of giving birth that is linked to the bringing forth of a new life which is frequently accompanied by pain and felt as a strong cramping at the abdomen, groin and back as well as feelings of aches at the sides. Childbirth is a critical time in the life of majority of women during which they experience high level of pain. However, labour pain is a major concern for most women even before the day of delivery as they become anxious about the pain that may be encountered during delivery and wants it relieved. Unmet expectation of pain management and a negative birth experience seem to affect women's decision about subsequent delivery, thereby opting for a caesarean section.

Labour pain is a result of complex and subjective interaction of multiple physiological and psychological factors on a woman's individual interpretation of labour stimuli [1]. Labour pain occur as a result of the force exerted on the cervix, vagina and perineum by the foetal presenting part. This stimulates the respiratory system, ventilation and oxygen consumption increase and hyperventilation which may cause respiratory alkalosis and reduction in the amount of blood transported to the foetus. Moreover, pain, anxiety and stress during labour affect uterine oxygen consumption as well as uterine contractility and this increases peripheral resistance, cardiac output and blood pressure as a result of increased adrenaline secretions. This can lead to an increase release of catecholamine and cortisol into the circulation causing widespread vasoconstriction [2]. It is therefore essential that labour pain must be managed effectively.

One of the major determinants of maternal satisfaction in labour is adequate pain relief and the woman being able to cope with the pain.

Comfort in labour is not merely an emotional or physical relieving of malaise and pain, it is a method in which the midwife combine research based knowledge, skills with warmth empathy and sensitivity in order to provide a birth environment which is safe, caring and conducive to satisfying birth experience [3].

Factors in the birth setting environment influences midwives management of labour pain, such as knowledge of midwife on labour pain management, attitude of midwives towards pain relief in labour, availability of drugs, shortage of staff as well as the hospital policies. Childbirth in Nigeria has been identified as an event with mixed feelings because there is an unmet need for pain relief in labour [4]. Each woman has her own level of pain tolerance that may vary depending on the circumstances and her previous experiences. Psychologically, labour pain makes the woman and her family members perceive labour as struggle for survival rather than an enjoyable experience [5]. One thing that women recall about labour is high intensity of pain and health care providers need to respond appropriately to the woman's report of pain. All methods of pain relief enhance labour progress by reducing maternal discomfort and anxiety, resulting in a positive birthing experience. Unmet pain management need often lead to psychological trauma and subsequent feto-maternal mortality.

Effective management of women during labour cannot be overemphasized as the pain wears the woman out particularly during the second stage of labour, making it difficult for such woman to bear down, whereas women in labour whose pain were effectively managed found it easier to cope with the second stage of labour by bearing down as at when due without being worn out or tired, thus making the experience a unique one [6].

In a study conducted in the united State,70-80% of women whose pain were not managed had difficulties during delivery due to extreme and unbearable pain and about 10% of women not well managed for labour pains had postpartum depression after giving birth [7]. Also in a study conducted in Zaria, Nigeria, 94.8% of health practitioners agreed that pain relief is needed in labour because if labour pain is not relieved, it could lead to a negative birth experience and possible complications in labour but if the pain is relieved, the woman would have a positive birth experience, avoid complications in labour and prevent postpartum blues [8].

The researcher also observed in her years of experience that not all women in labour were being relieved of pain by midwives and this could be as a result of certain factors such as knowledge of midwife on labour pain management, attitude of midwives towards pain management, availability of drugs and equipment, shortage of staff and hospital's policy. This remain a problem that cannot be underrated. The experience of pain is inherent in childbearing process, unrelieved labour pain can result in negative consequences for the expectant mother, the foetus as well as her family. Apart from maternal consequences such as heightened stress, fear, depression, confusion, hypertension, hypoglycaemia and tight and tense throat due to extreme screaming, unrelieved labour pain can also compromise placental perfusion leading to asphyxia, late decelerations and its resultant foetal distress. These create feelings of helplessness for the woman and her family as well as a lack of confidence in the abilities of healthcare providers and systems in general [9].

Although pain management is one of the most critical aspect of patient's care and it is relevant to all skilled health attendants, there have been few published pain management research studies focusing specifically on midwives working in maternity unit or labour wards. This study therefore assessed hospital policies and educational qualification as predictors of midwives management of labour pain in tertiary hospitals in Ekiti State.

Hypotheses

The following hypothesis was tested in the study:

1. There is no significant influence of hospital policies on management of labour pain by midwives.
2. There is no significant relationship between educational qualification and midwives management of labour pain.

Methodology

Sampling Technique: Total enumeration method (purposive sampling) was employed to select all midwives in the units. In FTH (69 midwives), EKSUTH (67 midwives), ABUAD (42 midwives), making a total of 178 midwives working in Obstetrics and gynaecology units that participated in the study.

Instrumentation: Data was collected using a self-developed questionnaire. The questionnaire consists of four sections. Sections A to C with thirty-seven items was used as the tool for collecting information from the registered midwives. Section A: assessed the socio-demographic data (7 items) indicating personal information about the subjects (midwives). Section B: assessed the level of knowledge of midwives on labour pain management. There are 11(eleven) items assessed with multiple choice questions with four (4) options (A-D) in which only one of the options give the correct answer. The score ranges between 0-11, where any respondents with 0-3 has low knowledge, 4-7 moderate knowledge and 8-11 high knowledge. Section C: assessed hospital policies as determinants of labour pain management by midwives with 3 items. The questionnaire was validated and reliability index using Chronbach alpha coefficient .803.

Inclusion criteria

All midwives working at the obstetric and gynaecological unit of the tertiary hospitals and are willing to participate in the study.

Exclusion criteria

Midwife not working at the obstetric and gynaecological unit as at the period of carrying out this research, and 2) Midwives on annual or maternity leave were excluded as they may not be available within the environment.

Method of Data Analysis

The collected data were coded into the computer using a statistical software Statistical Package for the Social Sciences (SPSS) version 23. The research questions were answered using descriptive statistics (percentages, mean score and frequency counts) while inferential statistics of Pearson correlation was used to test the two hypotheses at 0.05 level of significance.

Results

The respondents' demographic characteristics revealed that the age spectrum was between 21 to 51years and above with a mean age of 36years. Majority 55(32%) of the participants

were between 31 to 40years followed by 41 to 50 years (27.9%). Most 166 (96.5%) were female, 143 (83.1%) were Christians, 127 (73.8%) were married, while 89 (51.7%) of the participants were BNSc holders. In reference to work experience, most 120 (69.8%) of midwives had a minimum of 6 years working experience.

Table 1: Influence of hospital policies on management of labour pain by midwives

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3.629	1	3.629	3.360	**.069[b]**
Residual	183.598	170	1.080		
Total	187.227	171			

R= 0.139
R Square = .019
Adjusted R Square = .014

Table 1 showed an insignificant positive influence of hospital policies on midwives management of labour pain at the tertiary hospitals in Ekiti State ($F_{(1, 170)}$ = 3.360, p=.069>0.05). The independent variable (hospital policies) yielded a coefficient of regression (R) of 0.139, meaning that about 13.9% of the variation is accounted to the influence of hospital policies on pain management. The result further revealed an insignificant influence of hospital policies on pain management for (P=.069; P>0.05). Hence, by this findings, null hypothesis is hereby accepted.

Table 2: Relationship between educational qualifications of midwives and labour pain management

	Pain management					
Educational qualification	**Adequate**	**Inadequate**	**X^2**	**Df**	**Sig**	**Remark**
RM	35(20.3%)	39(22.7%)	6.268	3	.014	Significant
BNSc	65(37.8%)	24(14%)				
Msc	7(4%)	1(0.6%)				
PhD	-	1(0.6%)				

Table 2 revealed a significant relationship between educational qualification and labour pain management, for X^2 = 6.268, p = 0.014<0.05. Highest percentage 65(37.8%) of the respondents with adequate management skills were midwives with BNSc compared to others RM (20%), Msc (4%). Therefore, null hypothesis is hereby rejected by this findings, for p<0.05.

Discussion of findings

The findings of the study revealed no significant influence of hospital policies on labour pain management. This findings contradicted the study conducted by McCauley et al. about labour pain management and its restriction on midwives autonomy in which some hospital policies only limit the midwives to offer only non-opioid drugs while the administration of nerve block, epidural and nitrous oxide use are been left out [10]. It could also be said that this result is in line with the study conducted on midwives in Ghana by Azaito et al. in which certain factors such as shortage of health staff, inadequate resources, stressful work setting cause midwives' burnout and not necessarily the hospital policies may hinder adequate labour pain management [11].

The outcome of the study revealed that there is significant relationship between educational qualification of midwives and management of labour pain. This result correlate with a study conducted by Sahile et al. who reported that skilled attendants who were MSc intern (higher level qualification) were 2.87 times more likely to use labour pain management methods than professionals who had diploma (low level qualification) [12]. Inversely, the study led by Bitew et al. at Amhara regional state referral hospitals reported that Obstetric care givers who had diploma (low level qualification) were 2.69 times more likely to use obstetric analgesia methods than professionals who had second degree (high level qualification) [13].

This result on the relationship between educational qualification of midwives and management of labour pain will in turn may influence the midwives attitude towards the management of labour pain. This lend credence to a study conducted by Ohaeri et al. who established a safe and optimal labour pain experience utilizes pharmacological and non-pharmacological interventions in achieving painless labour and it is explicitly anchored by nurse-midwives [4]. Also, Ogboli-Nwasor et al. discovered a positive attitude toward the use of pain-relief agents during labour, coupled with the high awareness of the agents [8]. On the contrary, a study led by Geltore et al. found out that many developing countries had negative attitude towards pain relief during labour it is often neglected because it is considered a natural process and women should be able to cope and this might also be as a result of the midwives misconception on labour pain as a normal pain [14].

Conclusion

Childbirth is a critical time in the life of majority of women during which they experience high level of pain. One of the major determinants of maternal satisfaction in labour is adequate pain relief and the woman being able to cope with the pain. Poor management of pain in labour could have a negative impact on the outcome of labour and there is the necessity for appropriate assessment and management of labour pain to ensure that the experience of women remain positive. The goal of pain management is to choose a method that will reduce the pain to a level in which women in labour are able to cope and simultaneously give them the possibility to participate in the birth experience**.** This study concluded that nursing education had direct influence on nursing practice, and necessary areas covered in the nursing education curriculum translates to better practice and vice-versa. Also, educational qualifications is a potent factor compared to hospital policies in predicting midwives management of labour pain.

Recommendations

Based on the findings from this study, the researcher recommended the following:

1. Continuing education of midwives about the current trends in labour pain management would further maximize midwives ability to manage pain in labour individually and with empathy
2. More midwives should be employed to ensure ease in management of labour pains in the health institutions.
3. Policy makers and healthcare administrators should develop policies that will facilitate midwives autonomy in labour pain management.

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