

Research Paper

Knowledge, attitude and utilization of parenteral opioid analgesia during labour among women in south east, Nigeria

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The use of pharmacological agents for pain relief during labour is now part of standard care in many countries all over the world. Despite its availability, many women especially in developing countries like Nigeria are not aware. The study was conducted to determine the knowledge, attitude and utilization of parenteral opioids analgesia during labour among mothers in south east of Nigeria. The study involved 200 women attending antenatal clinics in University of Nigeria Teaching Hospital Ituku Ozalla, Enugu State. Eight items questionnaire was used to evaluate study objectives. Demographic characteristics such as age, number of children, and education of the mother were also recorded. Data were analyzed using descriptive and inferential statistics. The results of the study recorded poor knowledge (32%), attitude

(34.5%), and utilization (14%) of pharmacological pain relief during labour among the participants. Few (69; 34.5%) respondents said they would want to use one of the drugs in their next maternal labour. Reasons for noncompliance were labour is a natural pain (42; 32.1%), it is a pathway to becoming a mother (36; 27.5%) and cultural belief (33; 25.2%). Number of children was correlated with the knowledge, attitude and utilization of pain relief while age, tribe and parity have significantly effect on the utilization of pain relief.

Key words: Attitude, Knowledge, utilization, parenteral opioids analgesia, labour, women

INTRODUCTION

Childbirth is a unique experience which every healthy woman would want to have. However, this unique experience is usually accompanied with varying (mild to severe) degrees of pain. However, this pain has physiological and psychosocial dimensions and its intensity can vary greatly from one woman to another (Cambic et al., 2010) based on the individual's emotional, motivational, cognitive, social and cultural circumstances (Lowe, 2002). Another study by Olayemi et al. (2005) revealed that, sociodemographic variables like parity, race, religious affiliation, and ethnicity influence pain intensity.

Pain management is an important element in obstetrical care. As a result, many pharmacological methods of labour analgesia have been adopted over the years such as epidural analgesia, injections and inhalational agents (Jones et al., 2012). However, Nigeria health care system still experiencing larger patient-few health care providers' ratio. Owing to this, parenteral opioids analgesia was choose in this study because its administration and monitoring is easy as compared to other methods such as regional anaesthesia. Pain-free labour is nearly universal in high income countries (Prakash et al., 2017).

According to the US statistics in the year 2008, 61 percent of women delivered vaginally received epidural or spinal anaesthesia (Poomalar and Lakshmi, 2016). Studies have shown that women offered analgesic during labour, report greater satisfaction with their overall birth experience (Kuti and Faponle, 2006). Besides providing analgesia in labour, analgesia may facilitate a traumatic vaginal delivery of twins, preterm neonates, and neonates with breech presentation (Satpathy et al., 2015).

Despite these, in developing countries, majority of pregnant women do not even know that labour pain can be relieved with pain killers (Anarado et al., 2015; Okeke et al., 2005). Okeke et al. (2005) also noted that, there has been strong belief grounded in culture and religion that pain is accepted during labour. However, the American college of obstetricians and Gynaecologists noted that, there is no circumstance in which it is considered accepted to experience severe pain amenable to safe pain relief, while under a physician's care (Goetzl, 2002; Goetzl et al., 2004).

Women are the one who bears the pain, logically they appears to be in better position to choose the analgesic to be giving should they have better knowledge of pharmacological methods of pain relief during labour. Hence, it is pertinent to involve them in the decision-making process concerning all facet of childbirth, including pain relief, to increase their knowledge and birth satisfaction. This study aimed to evaluate the knowledge, attitude and utilization of parenteral opioids analgesia during labour among mothers in south east Nigeria.

MATERIALS AND METHOD

This is a descriptive study carried out among mothers attending antenatal clinic in UNTH Ituku Ozalla in Enugu south east Nigeria. Convenient sampling technique was used to enroll two hundred (200) women during antenatal visit. A structured closed ended questionnaire was used for data collection. The questionnaire was constructed in simple English for easy understanding. The questionnaire comprised of eight items which addressed the objectives of the study. Those who can neither read nor write were interviewed using the content of the questionnaire. Data were analyzed using frequency and percentage. Chi-square test was used to test the significant difference on personal characteristics versus knowledge and attitude while analysis of variance (ANOVA) was used to test the significant difference on personal characteristics and utilization of pharmacological pain relief methods among the respondents. All statistical tests were considered at $P=0.05$. Ethical clearance for the conduct of the study was obtained from the Ethics Committee of the University of Nigeria Teaching Hospital Nigeria. Prior to collection of data, each prospective participant was informed of the nature of the study and its purpose. It was also made

clear to the participants that they can withhold consent at any time during the course of the study and that they will not suffer any adverse consequences for declining to participate.

RESULTS

Demographic characteristics

The age of the 200 respondents ranged between 15 to 49 years with the mean and standard deviation of 35.8+ 4.7 years. Majority of the respondents were Igbos (184; 92%). Most of them (128; 64%) had given birth 2-4 times. Greater portion (107; 53.5%) had tertiary education. Over half of them (104; 52.0%) were civil/public servants, (6; 3%) farmers and (8; 4%) artisans. Christians dominate (197; 98.5%) (Table 1).

Table 1. Demographic characteristics of the respondents (N=200).

Variables	Parameters	Frequency (%)
Age range	15-20	15 (7.5)
	21-30	50 (25.0)
	31-40	106 (53.0)
	41-49	29 (14.5)
Tribe	Igbo	184 (92.0)
	Hausa	5 (2.5)
	Yoruba	11 (5.5)
Parity	One	48 (24)
	Two-four	128 (64)
	Five above	24 (12)
Education level	primary	15 (7.5)
	Secondary	78 (39.0)
	Tertiary	107 (53.5)
Occupation	trading	60 (30.0)
	Farming	14 (7.0)
	Civil servant	104 (52.0)
	House wife	22 (11.0)
Religion	Christianity	197 (98.5)
	Muslim	3 (1.5)

Knowledge of parenteral opioids analgesia in labour

Very few (32%) participants had knowledge of use of pharmacological pain relief during labour. Out of those that had knowledge of use of parenteral opioid analgesia during labour, the most common analgesics they know were; Tramadol (37.5%), Fentanyl (26.6%) and diclofenac (18.8%) (Table 2).

Attitude of the respondents towards use of parenteral opioids analgesia

Majority of the participants described labour pain as moderate (109; 54.5%), only five (2.5%) participants

Table 2. Knowledge of parenteral opioids analgesia in labour among the respondents.

Questions	Options	Frequency (%)
Have you heard of the use of pain relief drugs during labour?	Yes	64 (32 %)
	No	136 (68 %)
If yes, which of the following do you know as pain relieving agent during labour?	Remifentanil	8 (12.5%)
	Tramadol	24 (37.5%)
	Pentidine	3 (4.7%)
	Diclofenac	12 (18.8%)
	Fentanyl	17 (26.6%)

Table 3. Attitude of the respondents towards utilization parenteral opioids analgesia.

Questions	Options	Frequency (%)
How best can you describe your last labour pain?	Mild	46 (23.0)
	Moderate	109 (54.5)
	Severe	40 (20.0)
	Highly severe	5 (2.5)
Would you want to use one of the drugs in your next labour?	Yes	69 (34.5)
	No	131 (65.5)
If no, what are the reasons?	Is a natural pain	42 (32.1)
	Pathway for motherhood	36 (27.5)
	Against culture	33 (25.2)
	No reason	20 (15.3)

perceived it as highly severe. Few (69; 34.5%) respondents said they would want to use one of the drugs in their next maternal labour while majority (131; 65.5%) said they would not want to use it at all. The major reasons for decline in the use of parenteral opioids analgesia in subsequent labour where; labour is a natural pain (42; 32.1%), it is a pathway to become mother (36; 27.5%) and cultural belief (33; 25.2%) (Table 3).

Utilization of parenteral opioids analgesia

The use of parenteral opioids analgesia during labour was very poor (28; 14%). For those who uses drugs, the commonly utilize were remifentanil (39.3%), diclofenac (32.1%) fentanyl (21.4%) and tramadol (7.1%). Other methods apart from pharmacological agents preferred by participants were mostly massaging of the lower back (42%) and changing of position (36.5%) (Table 4).

Knowledge and attitude of parenteral opioids analgesia and demographic variables

The statistical test revealed a large relationship between knowledge and attitude of pain relief on parity among the participants (Table 5).

Utilization of parenteral opioids analgesia and personal variables

The statistical test shows that age, tribe and parity have

significantly effect on the utilization of pain relief (Table 6).

DISCUSSION

Uterine contractions, cervical dilatation and stretching of the lower uterine segment are responsible for labour pain (James et al., 2012). Visceral afferent C-type fibres accompanying the sympathetic nerves carry the pain impulses and enter the spinal cord at the T10 to L1 levels. In the second stage of labour, somatic afferent fibres from the vagina and perineum convey pain impulses in the pudendal nerves to the S2 –S4 spinal nerve roots (Ferne et al., 2009).

In our present study, we found poor knowledge of parenteral opioids analgesia during labour (Table 4). This is the same with available literature from Nigeria based study (Nwasor et al., 2011) Nairobi (Mung'ayi et al., 2008) and South Africa (Mugambe et al., 2007). Also, another study (Nabukenya et al., 2015) among women in a low-income country antenatal clinic shows that out of 1293 participants interviewed, only 7% of the participants had knowledge of labour analgesia. Although, study conducted in Chennai, India (James et al., 2012) reported that most of the women had heard about methods to relieve labour pain. This indicates need for more information by the healthcare providers during antenatal visit on the available methods of analgesia.

There is significant relationship between knowledge of pain relief and parity. In the same vein, study (Poomalar and Lakshmi, 2016) has identified various factors such as order of pregnancy, income and occupational status had

Table 4. Utilization of parenteral opioids analgesia.

Questions	Options	Frequency (%)
Use of pain relief agent during labour	Yes	28 (14)
	No	172 (86)
Parenteral opioids analgesia used	Remifentanil	11(39.3)
	Tramadol	2(7.1)
	Diclofenac	9(32.1)
	Fentanyl	6(21.4)
Non pharmacological methods used	Lower back massage	84(42)
	Reassurance	43(21.5)
	Changing position	73(36.5)

Table 5. Relationship between personal variables and knowledge and attitude towards parenteral opioids analgesia.

Variables	Parameters	Good	Poor	X ²	Attitude		X ²	Decision
					Good	Poor		
Knowledge				Attitude				
Age range	15-20	9	6	0.47	11	4	2.39	Accepted
	21-30	31	19	7.82	28	22	7.82	
	31-40	70	36		71	35		
	41-49	19	10		19	10		
Tribe	Igbo	102	82	0.32	91	93	5.97	Accepted
	Hausa	3	2	5.99	4	1	5.99	
	Yoruba	7	4		9	2		
Parity	One	18	30	6.33	14	34	26.2	Rejected
	Two-four	73	55	5.99	77	51	5.99	
	Five above	15	9		15	9		
Education	primary	7	8	0.58	9	6	1.17	Accepted
	Secondary	44	34	5.99	45	33	5.99	
	Tertiary	61	46		65	42		
Occupation	Trading	29	31	6.11	33	27	4.71	Accepted
	Farming	3	3	9.49	73	31	9.49	
	Civil servant	43	61		4	2		
	House wife	15	7		15	7		
	Others	5	3		4	4		
Religion	Christianity	108	89	0.17	109	88	0.15	Accepted
	Muslim	2	1	3.84	2	1	3.84	

statistically significant influence on knowledge about labour analgesia.

This current study shows high negative attitude towards use of parenteral opioids analgesia in labour. This was not surprising, because, the low knowledge found among the participants will affect their attitude toward it. Similar finding was reported in the revealed literature that, many respondents were not willing to use pharmacological pain relief (Kuti and Faponle, 2006). The major reason that contributed to poor attitude was that labour is a natural pain. Similar reason was giving in the previous study (James et al., 2012). Statistical test in this study shows a significant relationship between attitudes toward pain relief and parity (Tables 4-6). Prior to this study, it has been noted that willingness to use the methods was positively associated with increasing parity (Kuti and Faponle, 2006). Regardless of cultural belief, many women after experience first labour pain will like to seek for available methods that can reduce the pain in the

subsequent labour.

This study shows poor utilization of the pain relief methods. The same finding was documented in the previous study where less than half of the respondents had used pain relief in labour (Nwasor et al., 2011). The study also finds out that age, tribe and parity have significantly influence on the use of pain relief. This finding portray that use of pharmacological pain relief during labour depends on the age, culture and order of pregnancy. Like in northern part of Nigeria, many women agreed that pain relief is needed during labour (Nwasor et al., 2011).

Although, this study did not analyze the association between knowledge and utilization however, previous study established that there is association between knowledge and utilization of pharmacological pain relief (Obuna and Umeora, 2014). This signifies that, good knowledge void of negative cultural perception of pharmacological pain relief is a prerequisite to its utilization.

Table 6. ANOVA showing the relationship between personal variables and utilization of parenteral opioids analgesia.

Variables	Source of variance	df	SS	MS	F-cal	F-tab	Sig.
Age range	Between groups	5	1251609.30	250321.80	1639.22	3.11	S
	Within groups	12	1832.50	152.71			
	Total	17	1253441.80				
Tribe	Between groups	5	3072740.90	61458.18	575.36	4.39	S
	Within groups	6	6408.68	1068.11			
	Total	11	3066332.20				
Parity	Between groups	5	19194	3838.93	11.73	4.39	S
	Within groups	6	1963.35	327.23			
	Total	11	17231.30				
Education	Between groups	5	13806.67	2761.33	2.52	4.39	N
	Within groups	6	6569.68	1094.95			
	Total	11	7236.99				
Religion	Between groups	5	32862.75	6572.55	1.98	19.30	N
	Within groups	2	6630.50	3315.25			
	Total	7	26232.25				

Note that, df-degree of freedom, SS-sum of square, MS-mean square, Sig-significant.

Conclusion

Knowledge, attitude and utilization of pharmacological pain relief methods during labour among mothers were inadequate hence, there is needed to educate women during antenatal visit on the benefit and available pharmacological pain relief to improve quality of life of the mothers during and after childbirth. Also, in the choice of method, women should be involved in the process of decision making for adequate health history.

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