

*Full Length Research Paper*

# Prevalence and factors influencing the demand for analgesia during childbirth in Northeastern Nigeria

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Labour pain is a distressing and psychologically traumatizing experience to the parturient but little data exist in the Northeastern part of Nigeria regarding pain relief in labour, despite its many advantages. To determine the knowledge, desire and access to pain relief in labour as well as perception of labour pain. This is a cross sectional study of two hundred and fifty five women in two tertiary institutions in north-eastern Nigeria. Patients attending the antenatal clinics or staying in the lying in ward of the hospital after delivery were interviewed and questionnaires filled. One hundred and ninety (74.5%) were undelivered while 65(25.5%) were in the immediate postpartum period. One hundred women were interviewed at the University of Maiduguri Teaching Hospital (UMTH) while 155 were interviewed at the Federal medical Centre Gombe. The interviews centred on their perception of pain and duration of labour. The mean age and parity were  $27.6 \pm 5.7$  and  $2.8 \pm 2.1$  respectively. About 80% of those interviewed rated labour pain as severe to agonizing, 82% had no knowledge of pain relief in labour while 81.6 and 78.8% would like pain relief and recommended same, respectively. Only 11% of those interviewed were given pain relief in labour. The majority of women, 64.7% considered their labour as not prolonged. Parity ( $P = 0.0002$ ), ethnicity ( $P = 0.020$ ) and duration of labour ( $P = 0.00017$ ) significantly influenced pain perception in labour while education ( $P = 0.25$ ) and age ( $P = 0.4$ ) had no significant influence on pain perception in labour. Although many of the women were not aware of pain relief in labour, the overwhelming majority would want and have recommended pain relief in labour.

**Key words:** Labour pain, knowledge, desire.

## INTRODUCTION

In non human primates, labour is thought to be relatively painless and of short duration, usually unassisted; although changes in behaviour in the days prior to delivery may suggest some degree of labour pains (Kaplan and Rogers, 2000). In some cultures, solitary and unassisted births are valued and seen as a source of pride (Sargent, 1989). Although many births among the Inuits are assisted, some deliver alone and claim that childbirth was relatively easy (O' Neil and Kaufert, 1990). The medicalization of the birth process and influence of westernization is gradually changing the perception and

desires for pain relief in labour (Olayemi et al., 2006). In many parts of Nigeria, even the knowledge of pain relief is sparse (Onah et al., 2007). With little or no knowledge about pain relief, the desire for such is also likely to be non-existent or rare. That labour is a painful process is not in contention (Baker et al., 2001). In fact even the Holy books attest to that.

The pain of labour is associated with reflex increases in blood pressure, oxygen consumption and liberation of catecholamines, all of which could adversely affect uterine blood flow. Pain relief on the other hand could minimise these untoward effects. The provision of pain relief in labour varies in different cultures, with some avoiding analgesia altogether while others do not want to feel pain at all in labour (Lee and Essoka, 1998; Kuti and Faponle, 2006). It is this variation in culture that informed

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**Table 1.** Socio-demographic characteristics (n = 255).

Factors	Number	Frequency
<b>Age</b>		
15-19	16	6.3
20-24	61	23.9
25-29	84	32.9
30-34	53	20.8
≥ 35	41	16.1
<b>Parity</b>		
1 - 4	213	83.5
≥ 5	42	16.5
<b>Education</b>		
Nil	26	10.2
Islamic	29	11.4
Primary	25	9.8
Secondary	106	41.6
Tertiary	69	27.1
<b>Occupation</b>		
Civil servant	61	23.9
Trader	35	13.7
House wife	141	55.3
Student	18	7.1
<b>Ethnicity</b>		
Hausa	29	11.4
Fulani	49	19.2
Kanuri	24	9.4
Igbo	18	7.1
Yoruba	5	2.0
Others	70	27.5
Not stated	60	23.5

our decision to carry out a study on labour pain in North-eastern Nigeria. This is also against the backdrop that most studies on labour pains in Nigeria were carried out in the Eastern and Western parts of the country which have different cultural settings to those of northern Nigeria. These cultural differences may influence the knowledge, perception and desire for pain relief in labour.

## SUBJECTS AND METHODS

This is a cross sectional study of two hundred and fifty five women in two tertiary institutions in north-eastern Nigeria. One hundred and ninety (74.5%) were undelivered while 65 (25.5%) were in the immediate postpartum period. One hundred women were interviewed at the University of Maiduguri Teaching Hospital (UMTH) while 155 were interviewed at the Federal medical Centre Gombe. Those who did not give consent and those delivered via caesarean section were excluded from the study. The study population included multigravid women at the antenatal clinic and

those in the lying-in ward who had delivered 24 h earlier. Data were collected between 1<sup>st</sup> October 2006 and 31<sup>st</sup> December 2006 after ethical approval for the study was obtained. The interviews centred on their knowledge, desire and access to pain relief in labour as well as their perception of pain and duration in labour. Other information obtained were the socio-demographic characteristics of the women. A 3-point verbal pain rating was used viz: mild, severe and agonizing. As most are non-literate, the questionnaires were filled by the study team. Chi-square was used to test for significance and a  $P < 0.05$  was considered significant.

## RESULTS

Two hundred and fifty five women were interviewed during their antepartum or postpartum period regarding their knowledge of pain relief in labour, their attitude to its use and previous utilisation. Their mean age was  $27.6 \pm 5.7$  years and a mean parity of  $2.8 \pm 2.1$ . Only 27.1% had tertiary education and 55.3% were unemployed housewives (Table 1).

Table 2 revealed that although 10.2% requested for pain relief only 4.3% had their request granted. Only 18.0% had knowledge of pain relief in labour but 81.6% would like to be given pain relief while 78.8% recommended its usage. An insignificant number, 7.5% were counselled for pain relief.

As detailed in Table 3 the majority, 64.7% of the women did not consider their labours as prolonged. However, 80% consider labour pain as severe/agonizing. Interestingly, 4.7% of those interviewed ante-partum had forgotten the severity of pain during their last confinement. Many reacted to pain by being calm (39.8%) while others shouted (26.7%) and some rolled on the floor (12.5%). Most, 74.5% of those interviewed were undelivered and the majority were of the Hausa/Fulani ethnic group (30.6%).

Parity ( $P = 0.0002$ ), ethnicity ( $P = 0.020$ ) and duration of labour ( $P = 0.00017$ ) significantly influenced pain perception in labour while education ( $P = 0.25$ ) and age ( $P = 0.4$ ) had no significant influence on pain perception in labour as depicted in Table 4.

## DISCUSSION

Only 27% of women studied had tertiary education but the overall number of those who had at least secondary education was 68.7%. Previous studies (Sheiner et al., 1999; Olayemi et al., 2003; Faponle and Kuti, 2004) have shown that pain perception of parturient were higher with higher educational attainment. These findings are in sharp contrast to our finding which did not show a significant relationship between education and pain perception in labour. Another study (Kuti and Faponle, 2006) also reported no relationship between educational level and pain perception. That education had no influence on pain perception in labour in our study may suggest some ethno-cultural influence on pain perception

**Table 2.** Knowledge and desire for pain relief (n = 255).

Factors	Number	Frequency
<b>Previous ANC</b>		
No	24	9.4
Yes	231	90.6
<b>Place of last ANC</b>		
Nil	24	9.4
Private	22	8.6
PHC	33	12.9
SSH	81	31.8
Tertiary	95	37.3
<b>Place of index ANC</b>		
UMTH	108	42.4
FMCG	147	57.6
<b>Counselled for pain relief</b>		
No	236	92.5
Yes	19	7.5
<b>Knowledge of pain relief</b>		
No	229	82.0
Yes	46	18.0
<b>Pain relief given</b>		
No	227	89
Yes	28	11
<b>Request for pain relief</b>		
No	229	89.8
Yes	26	10.2
<b>Pain relief given on request</b>		
No	15	5.9
Yes	11	4.3
NA	229	89.8
<b>Beneficial</b>		
Yes	11	4.3
NA	244	95.7
<b>Would like pain relief</b>		
No	43	16.9
Yes	208	81.6
DK	4	1.6
<b>Recommend pain relief</b>		
No	48	18.8
Yes	201	78.8
DK	6	2.4

**Table 2.** Contd.

Factors	Number	Frequency
<b>Reason for/against pain relief</b>		
Comfort	142	55.7
Necessary experience	27	10.6
God's injunction	11	4.3
No interference	6	2.4
No reason	68	26.7
Delays delivery	1	0.4

**Key:** ANC- Antenatal clinic, UMTH- University of Maiduguri Teaching Hospital, DK- Do not know, FMCG- Federal Medical Centre Gombe, PHC- Primary health care centre, SSH- State specialist hospital, NA- Not applicable.

**Table 3.** Pain perception in labour (n = 255).

Factors	Number	Frequency
<b>Perception of duration of labour</b>		
Prolonged	78	30.6
Not prolonged	165	64.7
Uncertain	12	4.7
<b>Perception of pain in labour</b>		
Mild	70	27.5
Severe	166	65.1
Agonising	38	14.9
Nil	7	2.7
Can not Remember	12	4.7
<b>Reaction to pain</b>		
Rolling	32	12.5
Praying	27	10.6
Shouting	68	26.7
Vomiting	23	9.0
Waking up/down	5	2.0
Nil/calm	100	39.8
<b>Period</b>		
Antepartum	190	74.5
Postpartum	65	25.5

(Lee and Essoka, 1998; Niven and Murphy, 2000).

Although most women studied had no knowledge of pain relief in labour, the overwhelming majority would want pain relief given and recommended same for wider usage. Our finding is contrary to findings in the southern part of Nigeria where women perceive labour pain as divine and a source of joy and are averse to complete elimination of labour pain (Faponle and Kuti, 2004). In keeping with an earlier study (Olayemi et al., 2005) parity was shown to significantly influence pain perception with those of low parity reporting more severe/agonizing pain

**Table 4.** Factors affecting perception of labour pain (n = 243)\*.

	Nil/Mild	Severe/Agonising	X <sup>2</sup>	P-value
<b>Parity</b>				
1 - 4	61	141	14.12	0.0002
>5	25	16		
<b>Ethnicity</b>				
Fulani	8	40		
Hausa	6	23		
Kanuri	8	14	13.38	0.02
Igbo	8	10		
Yoruba	0	5		
Others	47	74		
<b>Duration</b>				
Prolonged	12	66	14.10	0.00017
Not prolonged	65	100		
<b>Reaction</b>				
Calm/Nil	46	42	32.14	0.000006
Shouting	17	51		
Rolling	5	27		
Vomiting	7	16		
Praying	2	25		
Walking up/down	0	5		
<b>Would like pain relief</b>				
No	27	18	19.02	0.00001
Yes	52	146		
<b>Recommend</b>				
No	21	27		
Yes	52	138	10.26	0.006
Do not know	4	1		

\*12 patients were not sure of their perception of pain during labour.

compared with the grandmultipara. This is contrary to a study by Faponle et al. (2004) and Kuti et al. (2006) who found no significant relationship between parity and pain perception. The “experience” of the grand multipara may explain the reduced pain threshold or adaptation to same in our study. In contrast to other studies (Sheiner et al., 1999; Olayemi et al., 2005, 2006) age was not found to influence pain perception in our study. Onah et al. (2007) and Kuti et al. (2006) also found no correlation between maternal age and pain perception. In agreement with Sheiner et al. (1999), ethnicity also influenced pain perception in our study. Our study also showed that the duration of labour had a significant influence on pain perception with those who had longer labours complaining of more pains than those who thought their labours were not prolonged. The majority of our women perceive labour pain as severe/agonizing and would want

some pain relief. This is similar to an earlier study in southwestern Nigeria (Kuti and Faponle, 2006).

In consonance with an earlier study on memory of labour pain (Niven and Brodie 1995), 12 (4.7%) of the women in our study could not recall pain perception in their last confinement. Only 11% of our study population received pain relief in labour. This is lower than 22% reported from eastern Nigeria by Onah et al. (2007).

In conclusion, the fact that the majority 81.6% of women studied would like to be given pain relief in labour and that only 11% had received pain relief suggest a large unmet need for pain relief in labour in northeastern Nigeria. It is therefore recommended that pain relief in labour be an integral part of antenatal care classes and that any parturient who request for pain relief should not be denied provided there are no contraindications to its use.

The limitation of this study is the subjective assessment of pain perception. Other unmeasured confounders might also have influenced pain perception.

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