

International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622
© Gynaecology Journal
www.gynaecologyjournal.com
2025; 9(2): 113-117
Received: 05-02-2025
Accepted: 07-03-2025

Sapira-Ordu L

a) Department of Obstetrics and Gynaecology, Rivers State University, Port Harcourt, Rivers State, Nigeria
b) Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

John DH

a) Department of Obstetrics and Gynaecology, Rivers State University, Port Harcourt, Rivers State, Nigeria
b) Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Awoye-Godspower H

a) Department of Obstetrics and Gynaecology, Rivers State University, Port Harcourt, Rivers State, Nigeria
b) Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Wekere FCC

Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Amadi SC

a) Department of Obstetrics and Gynaecology, Rivers State University, Port Harcourt, Rivers State, Nigeria
b) Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Mba AG

Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Corresponding Author:

John DH

a) Department of Obstetrics and Gynaecology, Rivers State University, Port Harcourt, Rivers State, Nigeria
b) Department of Obstetrics and Gynaecology, Rivers State University Teaching Hospital, Port Harcourt, Rivers State, Nigeria

Labour pain perception: The experience among parturients at a tertiary centre in south-south Nigeria

Sapira-Ordu L, John DH, Awoye-Godspower H, Wekere FCC, Amadi SC and Mba AG

DOI: <https://www.doi.org/10.33545/gynae.2025.v9.i2b.1605>

Abstract

Background: Labour pain is acknowledged as one of the most intense pains experienced, yet individual responses vary according to each parturient's perceived severity.

Objectives: This study aimed to assess the perception of labour pain among parturients at a tertiary centre in Port Harcourt.

Methodology: A cross-sectional study was conducted with 393 women who underwent spontaneous vaginal delivery at Rivers State University Teaching Hospital. Consenting participants were recruited consecutively within 24 hours postpartum, ensuring a recent recall of their pain experience. Data were collected via an interviewer-administered semi-structured questionnaire, with pain severity evaluated using the Visual Analogue Scale. Statistical analysis was performed using SPSS 20.

Results: The respondents' mean age was 30.30±5.01 years (median 30). Most participants had secondary education (52.4%), followed by tertiary education (40.5%). While age, tribe, parity, and religion did not significantly influence pain perception, educational level, employment status, and gestational age showed statistically significant effects ($p=0.0001$, 0.047, and 0.0001, respectively). A large majority (80.9%) desired pain relief during labour. Moreover, 88.3% perceived the pain as severe, 10.4% as moderate, and 1.3% as mild. Significant associations were also observed between pain perception and both the use of oxytocics and the occurrence of perineal laceration ($p=0.0001$ and 0.0019, respectively).

Conclusion: Given that most parturients perceive labour pain as severe, effective analgesia is essential to improve the labour experience and foster better outcomes.

Keywords: Perception, labour, pain, parturient, analgesia

Introduction

The perception of labour pain is said to be the interpretation of the noxious sensory stimuli transmitted during the child birth process ^[1]. The interpretation varies based on personal experience with both emotional and physical distress components. The pain that occurs during labour is largely physiological arising from the uterine contraction and the accompanying cervical dilatation ^[2]. This is different from the other types of pain that may be due to injuries or pathological processes occurring in the affected organs.

Labour pain is rated as one of the most severe forms of pain often necessitating the administration of pain relieving medications. Majority of the parturients globally rate labour pain as being severe, however, a few women consider it to be normal ^[3, 4]. Despite the intensity of the pain, studies have shown that there is poor request for analgesia in labour by parturients and this has been attributed to several reasons, ranging from ignorance, cultural practices, fear of side effects, cost and so on ^[5, 6].

Certain factors have been noted to affect the intensity as well as the perception of labour pain. These include; the physiological, psychosocial and environmental factors ^[1]. The physiological factors are those of the uterine contractions, cervical dilatation, vaginal as well as perineal distension. The psychosocial factors include; culture/ethnicity, educational status, fear, anxiety, sense of abandonment and stress ^[1, 5, 7], while the environmental factors include; place of delivery, availability of support/companionship and presence of equipment ^[1, 5]. The other factors such as induction/augmentation of labour, increased fetal and maternal weight, younger maternal age and labour dystocia have been associated with increased perception of labour pain ^[7]. Women from certain cultures like the Hausas in Northern Nigeria are made to believe that the ability to endure labour pain is a sign of womanhood, endurance however, does not entirely mean that the

pain is not severe, and so there is still need for analgesia in labour.

This research is aimed at assessing the perception of labour pain by the women delivering at Rivers State University Teaching Hospital so as to advocate for a standard protocol for obstetric analgesia in the unit if necessary.

Materials and Methods

This was a cross-sectional study conducted at the labour ward of the Rivers State University Teaching Hospital between January 2021 and December 2022 in which 393 consenting women who had spontaneous vaginal delivery were recruited within 24 hours of delivery.

The sample size was determined using $N = \frac{Z^2 P (1-P)}{d^2}$ [8] where, N- Sample size, Z- Proportion of normal distribution corresponding to the required significance level (5%) which is 1.96, P- a previous study done in Port Harcourt four years ago showed that the proportion of women who perceived labour pain as severe was 75% (0.75) [4] and d- Margin of error (0.05). The minimum sample size obtained using the formula above was 288, however this was increased to 393. Women who had emergency caesarean section, instrumental delivery, abruptio placentae and gestational age less than 28 weeks were excluded from the study and the research was explained to those who met the eligibility criteria and gave consent for the study. The women were recruited consecutively until the sample size was obtained.

The data was collected using an interviewer administered semi-

structured questionnaire which had sections for socio-demographic characteristics, labour characteristics and the Visual Analogue Scale (VAS) for the assessment of pain perception. Some of the information about induction of labour/use of oxytocics, birth weight, Apgar scores and duration of labour were obtained from the patients' folders. The data collected was entered into the excel sheet and exported to SPSS 20 which was used for the analysis. The results were represented on tables and charts. Test of association was done with chi square and Fishers exact tests, with level of significance set at $p < 0.05$.

Results

The mean age distribution of the respondents was 30.30 ± 5.01 , mean gestational age at delivery was 38.12 ± 3.63 and the median Parity was Para 1. The sociodemographic characteristics of the respondents are shown on Table 1. Majority of the respondents had secondary and tertiary education accounting for 52.4.5 and 40.5% respectively. Most (59.5%) of them are self-employed with the ethnic groups belonging to Rivers upland (40.7%) and the Igbos (30.1%) were in the majority. They were mostly Christians (98.2%). From Figure 1, 88.3% of the women perceived labour pain to be severe, 10.4% moderate and 1.3% mild. Educational status, employment status and gestational age at delivery showed statistically significant association with perception of labour pain with p-values of 0.0001, 0.047 and 0.0001 respectively as shown on Table 1.

Table 1: Socio-demographics/obstetric characteristics and labour pain perception among parturients at RSUTH

Variables (N = 393)	Labour pain perception			Total n (%)
	Mild n (%)	Moderate n (%)	Severe n (%)	
Age in years				
<25 years	0 (0.0)	7 (17.1)	39 (11.3)	46 (11.7)
25 - 29 years	3 (60.0)	8 (19.5)	110 (31.7)	121 (30.8)
30 - 34 years	0 (0.0)	16 (39.0)	125 (36.0)	141 (35.9)
35 - 39 years	2 (40.0)	9 (22.0)	65 (18.7)	76 (19.3)
≥40 years	0 (0.0)	1 (2.4)	8 (2.3)	9 (2.3)
Fisher's exact test = 8.723; p-value = 0.301				
Educational level				
Primary	1 (20.0)	0 (0.0)	9 (2.6)	10 (2.5)
Secondary	3 (60.0)	11 (26.8)	192 (55.3)	206 (52.4)
Tertiary (Undergraduate/Graduate/Postgraduate)	1 (20.0)	23 (56.1)	135 (38.9)	159 (40.5)
Not specified	0 (0.0)	7 (17.1)	11 (3.2)	18 (4.6)
Fisher's exact test = 24.985; p-value = 0.0001*				
Employment status				
Unemployed/Housewife	0 (0.0)	6 (14.6)	39 (11.2)	45 (11.5)
Student/Youth Corp member	0 (0.0)	8 (19.5)	23 (6.6)	31 (7.9)
Employee	0 (0.0)	10 (24.4)	73 (21.0)	83 (21.1)
Self-employed	5 (100.0)	17 (41.5)	212 (61.1)	234 (59.5)
Fisher's exact test = 11.363; p-value = 0.047*				
Tribe				
Igbo	2 (40.0)	15 (36.6)	113 (32.6)	130 (33.1)
Yoruba	0 (0.0)	2 (4.9)	10 (2.9)	12 (3.1)
Hausa	0 (0.0)	0 (0.0)	6 (1.7)	6 (1.5)
Rivers Upland (Ikwerre/Ogoni/Etche/Elleme/Ahoada)	2 (40.0)	9 (22.0)	149 (42.9)	160 (40.7)
Rivers Island/Ijaw (Andoni/Kalabari/Okirika/Buguma)	1 (20.0)	6 (14.6)	21 (6.1)	28 (7.1)
Urhobo	0 (0.0)	0 (0.0)	8 (2.3)	8 (2.0)
Others	0 (0.0)	9 (22.0)	40 (11.5)	49 (12.5)
Fisher's exact test = 16.594; p-value = 0.111				
Religion				
Christianity	5 (100.0)	41 (100.0)	340 (98.2)	386 (98.2)
Islam	0 (0.0)	0 (0.0)	7 (2.0)	7 (1.8)
Fisher's exact test = 0.975; p-value = 1.000				

Parity				
Para 0	1 (20.0)	4 (9.8)	38 (11.0)	43 (10.9)
Para 1 - 2	1 (20.0)	26 (63.4)	249 (71.8)	276 (72.0)
Para 3 - 4	3 (60.0)	11 (26.8)	58 (16.7)	72 (18.3)
Para ≥5	0 (0.0)	0 (0.0)	2 (0.6)	2 (0.5)
Fisher's exact test = 11.350; p-value = 0.081				
Gestational age at delivery				
≤36 weeks	1 (20.0)	2 (4.9)	51 (14.7)	54 (13.7)
36 - 40 weeks	2 (40.0)	25 (61.0)	241 (69.5)	268 (68.2)
>40 weeks	1 (20.0)	4 (9.8)	46 (13.3)	51 (13.70)
Not specified	1 (20.0)	10 (24.4)	9 (2.6)	20 (5.1)
Fisher's exact test = 28.956; p-value = 0.0001*				
Medical condition in pregnancy				
Yes	2 (40.0)	8 (19.5)	63 (18.2)	73 (18.6)
No	3 (60.0)	33 (80.5)	284 (81.8)	320 (81.4)
Fisher's exact test = 1.909; p-value = 0.356				

*Statistically significant ($p < 0.05$)

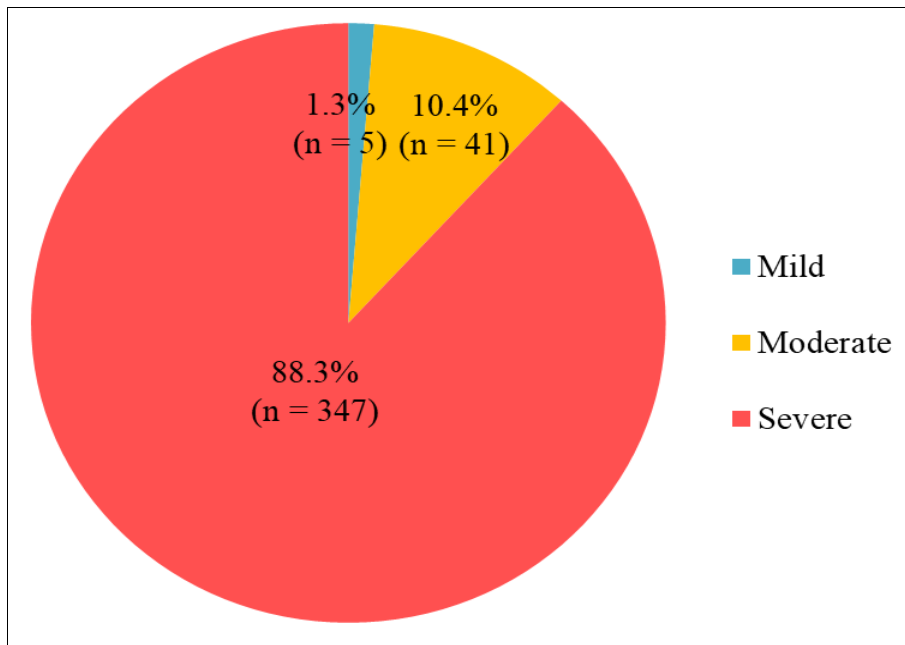


Fig 1: Perception of labour pain

The mean duration of labour was 8.91 hours (SD=5.43) with a range of 10 minutes to 24.4 hours. Table 2 shows the association of labour pain perception with certain events of labour. The mode of onset of labour, duration of labour as well as episiotomy did not significantly affect the perception of labour

pain, however, it was affected significantly by use of oxytocics and presence of perineal lacerations with p-values of 0.0001 and 0.019 respectively. The proportion respondents that had induction of labour was 5.9%-

Table 2: Labour-related characteristics and labour pain perception among parturients at RSUTH

Labour pain perception				
Variables (N = 393)	Mild n (%)	Moderate n (%)	Severe n (%)	Total n (%)
Mode of labour onset				
Spontaneous	5 (100.0)	35 (85.4)	313 (90.2)	353 (89.8)
Induced	0 (0.0)	2 (4.9)	21 (6.1)	23 (5.9)
Not specified	0 (0.0)	4 (9.8)	13 (3.7)	17 (4.3)
Fisher's exact test = 3.395; p-value = 0.421				
Duration of labour				
<8 hours	1 (20.0)	13 (31.7)	88 (25.4)	102 (26.0)
8 - 11 hours	0 (0.0)	5 (12.2)	53 (15.3)	58 (14.8)
12 - 24 hours	0 (0.0)	10 (24.4)	51 (14.7)	61 (15.5)
Not specified	4 (80.0)	13 (31.7)	155 (44.7)	172 (43.8)
Fisher's exact test = 6.173; p-value = 0.339				
Oxytocic use at labour				
Yes	4 (80.0)	22 (53.7)	290 (83.6)	316 (80.4)
No	1 (20.0)	19 (46.3)	57 (16.4)	77 (19.6)

Fisher's exact test = 17.742; p-value = 0.0001*				
Perineal laceration at labour				
Yes	2 (40.0)	12 (29.3)	52 (15.0)	66 (16.8)
No	3 (60.0)	29 (70.7)	295 (85.0)	327 (83.2)
Fisher's exact test = 7.220; p-value = 0.019*				
Episiotomy given				
Yes	1 (20.0)	14 (34.1)	106 (30.5)	121 (30.8)
No	4 (80.0)	27 (65.9)	241 (69.5)	272 (69.2)
Fisher's exact test = 0.466; p-value = 0.857				

*Statistically significant ($p < 0.05$)

Table 3: Neonatal characteristics and labour pain perception among parturients at RSUTH

Labour pain perception				
Variables (N = 393)	Mild n (%)	Moderate n (%)	Severe n (%)	Total n (%)
Fetal Birth weight				
≤2.5Kg	1 (20.0)	3 (7.3)	46 (13.3)	50 (12.6)
2.6 - 3.9Kg	3 (60.0)	30 (73.2)	278 (80.1)	311 (79.1)
≥4.0Kg	0 (0.0)	4 (9.8)	15 (4.3)	19 (4.8)
Not specified	1 (20.0)	4 (9.8)	8(2.3)	13 (3.3)
Fisher's exact test = 13.372; p-value = 0.024*				
APGAR score (5 minutes)				
Poor (<7)	0 (0.0)	3 (7.3)	37 (10.7)	40 (10.2)
Good (≥7)	4 (80.0)	29 (70.7)	298 (85.9)	331 (84.2)
Not specified	1 (20.0)	9 (22.0)	12 (3.5)	22 (5.6)
Fisher's exact test = 18.864; p-value = 0.0001*				

*Statistically significant ($p < 0.05$)

Table 3 shows that perception of labour pain significantly affects the Apgar scores with p-value of 0.0001. There is also significant association between birth weight and perception of labour pain. (P-value=0.024). The mean birth weight was 3.01kg (SD=0.72kg). The median Apgar score at the first minute was 8 while that at the fifth minute was 9.

Discussion

The perception of labour pain varies largely from one individual to another due to the fact that it involves individual interpretation of the sensory stimulus which is affected by variety of factors. Despite this, most parturients perceive labour pain to be severe. This study has shown that 88.3% of the women that delivered at Rivers State University Teaching Hospital rated labour pain as being severe. This is similar to findings (91.3%) reported in Southeastern Nigeria by Ezebialu *et al.* [2] and 75% reported by Unamba *et al.*, [4]. A relatively lower proportion was reported by Akadri *et al.* in Southwestern Nigeria where 50% rated the pain as severe [1], however a sharply contrasting report was made in Cameroon where only 27.67% rated labour pain as severe [3]. This is because the women believed that labour pain was normal, and sent by God. Majority of the parturients in Finland also rated labour pain as severe with a mean pain score of 8 [7]. On a scale of 0 to 10⁹ while a score of 8.99 was reported in Iran [10].

Some researchers reported that the presence of diseases in pregnancy can affect the perception of labour pain¹⁰ but this was different from the results obtained from this study as there was no association between medical conditions and perception of labour pain as seen in table 1. This study has also shown that educational status, employment status and gestational age at delivery have statistically significant association with perception of labour pain. Akadri *et al.*, reported that secondary level of education, gestational age of 37 weeks or more, occupation and baby's birth weight had significant association with perception of labour pain [1],

Massoudifar *et al.*, reported that there was an association

between the number of deliveries and perception of labour pain [11], however, in the index study, parity was found not to be significantly associated the perception of labour pain. The use of oxytocic agents for induction or augmentation of labour and perineal laceration had statistically significant association with labour pain perception from this study. This was largely supported by findings from Enugu by Onah *et al* where they noted that induction or augmentation of labour had significant effect on labour pain perception [12]. This study did not demonstrate any statistically significant association between maternal age, tribe, religion, parity, duration of labour, medical conditions in pregnancy and perception of labour pain.

Conclusion

The travail of vaginal delivery indeed creates significant need for effective and adequate analgesia in labour. This is evidenced by majority of parturients rating labour pain as severe in this research as well as most of other studies conducted globally. Educational status, occupation, gestational age, use of oxytocic, and baby's birth weight were significant mediating factors for perception of labour pain which in turn had significant effect on neonatal outcome.

Declaration

The Authors declares no conflict of interest.

References

1. Akadri AA, Odelola OI. Labour pain perception: experiences of Nigerian mothers. Pan African Medical Journal. 2018;30:288.
2. Ezebialu IU, Ezenyeaku CC, Umeobika J, Ikeako LC, Ubbo GU, *et al.* Pain perception and desire for pain relief in labour among parturients in a tertiary health facility in Southeastern Nigeria. Orient Journal of Medicine. 2018;30(1-2):23-29.
3. Tchounzou R, Innah R, Tatah HN, Ngalame A, Kamdem DS. Awareness of epidural analgesia in labour and its

- acceptability by parturients in a tertiary hospital in Cameroon. *PAMJ Clinical Medicine*. 2020;3:175. doi:10.11604/pamj-cm.2020.3.175.23245.
4. Unamba NN, Unamba BC, Fiebai P. Perception of labour pain among parturients at University of Port Harcourt Teaching Hospital, Southern Nigeria. *The Nigerian Health Journal*. 2020;19(1):37-45.
 5. Aziato L, Acheampong AK, Umoar KL. Labour pain experiences and perceptions: a qualitative study among post-partum women in Ghana. *BMC Pregnancy and Childbirth*. 2017;17:73. doi:10.1186/s12884-017-1248-1241.
 6. Faponle AF, Kuti O. Perception of labour pain by pregnant women in Southern Nigeria. *Tropical Journal of Obstetrics and Gynaecology*. 2004;21:153-155.
 7. Obuna JA, Umeora OJ. Perception of labour pain and utilization of obstetric analgesia by Igbo women in Southeastern Nigeria. *Obstetric Anaesthesia and Critical Care*. 2014;4:18-22.
 8. Pourouseingholi MA, Vahedi M, Rahimzadeh M. Sample size calculation in medical studies. *Gastroenterology and Hepatology From Bed to Bench*. 2013;6(1):14-17.
 9. Rantala A, Hakala M, Polkki T. Women's perception of the pain assessment and non-pharmacological pain relief methods used during labour: A cross-sectional survey. *European Journal of Midwifery*. 2022;6:21. doi:10.18332/ejm/146136.
 10. Naghdipour Mirsadeghi M, Hamidi Madani Z, Boostan A, Massoudifar A. Pain perception at birth depending on the personality of the parturient woman. *Journal of Obstetrics, Gynecology and Cancer Research*. 2022;7(6):543-547.
 11. Massoudifar A, Alimi N, Boostan A, Etezadi A, Haji Seid Javadi E, *et al*. Investigating the relationship between the perception of labour pain and the number of deliveries. *Journal of Obstetrics, Gynecology and Cancer Research*. 2023;8(6):549-555.
 12. Onah HE, Obi SN, Oguanuo TC, Ezike HA, Ogbuokiri CM, *et al*. Pain perception among parturients in Enugu, South-Eastern Nigeria. *Journal of Obstetrics and Gynaecology*. 2007;27:585-588.

How to Cite This Article

Sapira-Ordu L, John DH, Awoye-Godspower H, Wekere FCC, Amadi SC, Mba AG. Labour pain perception; the experience among parturients at a tertiary centre in south-south Nigeria. *International Journal of Clinical Obstetrics and Gynaecology* 2025;9(2):113-117.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.