

# Reported Pain During Labour – A Qualitative Study of Influencing Factors among Parturient During Confinement in Private or Government Hospital

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## ABSTRACT

**Introduction:** Labour pain is distressing and it produces undue side effects both to the mother and the baby. The incidence is high in developing countries like India where the awareness about labour analgesia is still lacking.

**Aim:** It is to find out the incidence of labour pain and the influence of various described factors on pain with a comparison between patients admitted in a government set up with a private set up in a south Indian semi-urban area.

**Materials and Methods:** Two hundred continuous uneventful normal deliveries each in a Government (group G) and a private hospital (group P) were enrolled for the study. The reported pain during labour was noted 6-7 hours after delivery by interacting with the patient. The factors like age of the mother, sex and weight of the baby, literacy, socioeconomic status, the use of oxytocics and analgesia were evaluated.

**Results:** The incidence of severe pain was more in group G (43.5%) than group P (12%). There was no analgesic intervention in 68.5% in group G while it was 13.5% (27/200) in group P.

Even among these 27 patients who did not receive analgesics, only three parturients reported severe pain. Even administration of analgesics in a Government set up did not decrease pain to a significant extent. There were richer and more literate patients in group P. Booked cases were less in group G. Logistic regression analyses to find out factors which influenced pain in either group was used. Gravida, analgesic intervention and admission in a Govt. hospital influenced the pain experience of the parturient. There was minimal antenatal preparation in both the groups. There were no post partum complications.

**Conclusion:** Mothers suffered from labour pain to a significant extent and there is an urgent need for awareness about labour analgesia. Primigravida, admission in a Govt. set up and analgesic interventions were the factors which influenced pain than others. Patients admitted in Govt. hospitals suffered more pain with less analgesic intervention possibly due to illiteracy. The increased drug intervention in Group P was just incidental and routine on their demand and did not correlate with pain. A sincere effort to increase antenatal counseling should be initiated.

**Keywords:** Analgesia, Antenatal preparation, Labour pain

## INTRODUCTION

Labour pain is as old as human being. Labour pain is not simple but a complex phenomenon with sensory, emotional and perceptive components and can be considered as one of the most serious kinds of pain. Different strategies to approach and decrease acute labour pain have been developed. There are misconceptions about labour pain that it is physiological and nullifying such a normal physiology is not good for health [1]. There are enough evidences to state that if labour pain exceeds certain intensity and duration, it can produce harmful effects on both the mother and the fetus. The harmful effects in the mother include fear, anxiety, nausea, increased sympathetic response and hyperventilation which may lead on to in coordinate uterine action. There is an associated decreased uterine blood flow with severe labour pain to harm the fetus also [2]. Science accepts that labour pain is to be controlled to reap beneficial effects. Still developing countries like India that too even in cities, obstetric analgesia services are primitive due to various reasons and majority of mothers are mentally tuned to accept severe labour pain [3]. There are no earlier studies on the concept of reported pain in labour.

## AIM

To find out the incidence and intensity of labour pain and compare the same in a private hospital with a government hospital in a peripheral Indian set up. The other objectives were to find out the incidence of pre labour preparation on labour pain. The influence of various factors like socioeconomic status, literacy, booking and

weight and sex of the baby on labour pain, the extent of analgesia offered and to compare the factors between parturients admitted in a private set up and a Government set up.

## MATERIALS AND METHODS

Patients who were admitted for confinement in a private nursing home outside and near Puducherry, who had normal vaginal deliveries during one calendar year during 2005 January to December were selected for the study. After obtaining approval from hospital ethics committee and informed consent, 400 parturients were enrolled for the study. Parturients belonged to two groups- group G who were admitted for confinement in a Government hospital and group P, in private hospital. Parturients with dead born babies, multiple pregnancies and instrumental deliveries were excluded from the study. All the parturients filled up a questionnaire during early labour about age, literacy, gravida, socioeconomic status, booking, and the prelabour preparation. The perceived pain scores were elicited from the parturients between 6 to 7 hours after delivery (Reported pain). The use of oxytocics, analgesia offered were noted. Baby weight and the sex were recorded. The observations were made in the Govt. set up by four staff nurses during shifts and by two nurses in the private set up. All the six nurses were educated about the proforma. Socioeconomic status was defined based on the monthly income of the earning member. The literacy status was defined as: 1) Illiterate; 2) Up to fifth standard; 3) Fifth standard to tenth standard; 4) Tenth standard to graduation; 5) Post graduation and professionals.

Booking meant the parturient had visited the same hospital for monthly check up and delivered in the same hospital.

By prelabour preparation we meant that the parturients were explained about the nature of labour pain, its effects and ill effects, methods to decrease it during their monthly visits.

The intensity of labour pain was classified as: 1) Easily tolerable (mild); 2) Tolerate with difficulty (moderate); 3) Distressing (severe); 4) Unbearable (very severe).

(Less severe = 1, 2) (More severe = 3, 4)

### STATISTICAL ANALYSIS

The data was analysed using SPSS version 19 and Microsoft Excel 2010. The following statistical tests were used for analysis. Demographic Data: t-Test, Non parametric data by chi-square test and correlation of each factor with pain by logistic regression analysis.

### RESULTS

All the 400 patients completed the study. The incidence of severe reported pain (scores 3 and 4) in group G was 43.5% while in group P was 12%. No patient of group G received antenatal preparation and 10 out 200 received the same in Group P. A 134 parturients of 200 in Group G while only 27 in Group P were not given any form of analgesic intervention. Group G patients had 6.548 times more pain than group P patients (p<0.001)\*and primigravida experienced 4.358 times more pain compared to Multi (p<0.001)\*Patients who has not received analgesics experienced 2.392 times more pain compared to patients who received analgesics (p = 0.006)\* Even though patients aged greater than 30 years had 1.58 times more pain compared to patients aged<30 years. Literates and Unbooked patients experienced more pain than the illiterates and booked cases but without statistical significance. Parturients who received oxytocics and had given birth to female kids reported more pain but it was statistically insignificant. Regarding baby weight, there was no difference. \* = statistical significance [Table/Fig-1]. Booked patients, literates and patients of higher income group were statistically more in Group P. There were more primigravida in group P than group G. Analgesia was administered more often to patients of group P [Table/Fig-2]. The analgesic intervention was in the form of intravenous tramadol in group P while it was intramuscular pentazocine in group G. Four parturients of group G received electro acupuncture. Only 3 out of 27 patients who did not receive analgesic intervention in Group P had severe pain, but 24 out of the remaining 173 patients who received analgesic intervention had severe pain. It can be inferred that patients of

		B	S.E.	Wald	df	Sig.	Odds ratio	95.0% C.I.for EXP(B)	
								Lower	Upper
Step 1a	G cat(1)	1.879	.341	30.295	1	.000	6.548	3.354	12.786
	Age cat(1)	.057	.409	.019	1	.890	1.058	.475	2.360
	Lit cat(1)	.457	.314	2.116	1	.146	1.580	.853	2.925
	Gravid acat(1)	1.472	.308	22.797	1	.000	4.358	2.381	7.974
	Booked cat(1)	.430	.279	2.369	1	.124	1.537	.889	2.658
	Oxytocics cat(1)	.301	.325	.855	1	.355	1.351	.714	2.555
	Drug cat(1)	.872	.318	7.531	1	.006	2.392	1.283	4.459
	Baby sex cat(1)	.139	.256	.293	1	.588	1.149	.695	1.897
	Baby Weight cat(1)	.066	.398	.028	1	.868	1.069	.490	2.331

[Table/Fig-1]: Showing Variables in the Equation with odds ratio. a. Variable(s) entered on step 1: Freecat, Agecat, litcat, Gravidacat, Bookedcat, oxytocicscat, drugcat, sexcat, Weightcat.

FACTOR		Group G	Group P	p-VALUE, x <sup>2</sup>
AGE	<30	179	167	p=0.079
	>30	21	33	
LITERACY	ILLITERATE	70	9	p<0.001
	LITERATE	130	191	
GRAVIDA	PRIMI	67	107	p<0.001
	MULTI	133	93	
BOOKED STATUS	BOOKED	125	168	p<0.001
	UNBOOKED	75	32	
OXYTOCICS	YES	31	88	p<0.001
	NO	169	112	
DRUG INTERVENTION	NO	134	27	p<0.001
	YES	66	173	
PAIN	Less severe= 1,2	113	176	p<0.001
	More severe=3,4	87	24	
BABY SEX	MALE	95	107	p=0.271
	FEMALE	105	93	
WEIGHT OF BABY	<3.5KGS	177	175	p=0.878
	>3.5KGS	23	25	

[Table/Fig-2]: Showing comparison between groups.

		Pain	
		Mild Group G	Severe (Group P)
Analgesic	No	59 (24)	66 (2)
	Yes	54 (152)	21 (22)

[Table/Fig-3]: Showing results of varying degrees of pain with or without analgesic intervention in either group.

group P received analgesic intervention during labour as a routine treatment and reported less pain after 8 hours on the whole but there was no correlation of pain with intervention possibly because of their literacy. In Group G, out of the 59 parturients who received inj. Pentazocine, 20 had severe pain which means even with analgesics, one third of patients admitted in Govt. hospital suffered from severe pain [Table/Fig-3]. But considering all the 400 parturients, with pain as a fixed variable, a one by one introduction of various factors by logistic regression revealed primigravida, parturients admitted in Govt. hospital and analgesic intervention were the factors which influenced pain than other factors

### DISCUSSION

The overall pain suffering in the Pain Rating Index (PRI) in parturients differs with gravida. Melzack in his study has proved that primigravida experience more pain than multi gravida which goes along with our findings [4,5].The incidence of severe labour pain is lower in Group P than Group G. The incidence of severe pain even in the Group P itself is 12% which also needs attention. Even though Moron et al., reported longer duration of labour pain in parturients with higher education [6], they have not reported intensity differences. In our study, the intensity of labour pain is less in higher education group probably due to increased incidence of intervention in this group. Even though the literates suffered less pain it is not statically significant. E Ogboli-Nwasor et al., in their study in Nigerian population found out that even though the mothers want pain relief, providers are hesitant to offer the same and there is continual suffering of antenatal mothers during labour [7]. This component was not a part of our study. Group P patients received more analgesic intervention than G patients, which suggests that the pain of patients admitted in the government set up was not taken care of satisfactorily. If we consider results in [Table/Fig-3], we can deduce that patients who had severe pain in spite of demanding and getting analgesic were equal in both the groups (21:22). Out of the 24 patients without analgesic intervention

[Table/Fig-3] only four were primigravida. They reported less pain only to establish that gravida may play a lesser role in reported pain than interventions. A patient who didn't demand analgesic but had severe pain is significantly more in Group G. (66:2). Possibly they are not aware that they can make a demand. Out of the 66 parturients, 62 were illiterate, but 32 were primigravida and 34 were having babies more than 3 kg. The reported pain is severe in illiterate patients which influences the pain more than the gravida and the weight of the baby. Hence literacy plays a major factor to demand and get analgesics. Mothers who delivered male babies had less pain than who delivered female babies. There is a traditional belief in South India to regard male babies as their heirs [8]. As our study involves a reported pain after a few hours, there is an immense happiness about delivery of male babies. This factor accounts for less pain in mothers who delivered male babies which is more in Group P but yet without statistical significance. The more number of literates and better economic status among group P patients is natural. There is no concept about antenatal preparation and discussion about pain in the Group G while it is also minimal in the Group P (0% vs 5%). Nabukenya et al., in his work found out that of the 1293 participants interviewed, only 7% of the participants had knowledge of labour analgesia [9]. This was a study done in the rural population in Uganda. In our study, no patient of group G knew about labour analgesia and 5% knew in group P. Hence it is impossible to study the influence of the same. Shidhaye RV et al., described that majority of women suffered from labour pain and this could be possible because of lack of awareness [10]. Hodnett et al., concluded that the influence of pain, pain relief and medical interventions during labour on later satisfaction are neither as obvious, nor powerful as the influences of the behaviours and attitudes of the caregivers [11]. We did not study this aspect of attitude of caregivers in labour analgesia in our project. Melzack R et al., in their study of factors influencing labour pain have mentioned heavier babies causing more pain [4]. The increasing weight of the baby may cause more pain, but in our study, it was more significant in group P but not in the Group G. Overall, considering two groups, the weight of the baby was not influencing pain in our findings induction with oxytocin was common in the group P and this influenced pain more in Group P. In a study of antenatal women, one third of patients received oxytocin. In our study around 15.5 patients of group G and 44 % of group P received oxytocin which is obviously less than one third of the sample size. Klusman in his study has found out that reduction of anxiety before labour significantly decreases pain [12]. This goes along with our study that unbooked cases had more pain. The study by Lowe et al., showed that less pain is experienced in confident and educated mothers [13-15]. Norr et al., in their study showed that women with higher social status, less traditional attitudes toward sex roles, and greater marital closeness are more likely to prepare for childbirth [16], they had their husband's help during labour and delivery, which resulted in less pain and more enjoyment during birth. Social support during labour is a critical factor in improving birth experiences. Increasing the availability of preparation classes and encouraging greater support from relatives during birth could improve birth experiences for many women.

## LIMITATION

The limitation of our study is that it's more of a qualitative than a quantitative one.

## CONCLUSION

Mothers hailing from peripheral semi urban India suffered from labour pain to a significant extent and there is an urgent need for awareness about labour analgesia. Primigravida, confinement in a Govt. hospital and analgesic interventions were the three factors which influenced pain than others. Overall that literates demanded analgesics, received the same to report less pain. But parturients, who knew that the process of labor would be painful possibly from their elders, admitted in Govt. hospital demanded less analgesics but reported more pain later. Antenatal preparation was minimal in both groups. We suggest a proper booking with counseling about labour pain, modes of its reduction should be explained to parturients in the antenatal period.

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