International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

A Study on the Knowledge, Attitude and Demand of Labour Pain Relief Techniques among Antenatal Women in a Selected Hospital at Mangaluru with a View to Prepare a Concept Map

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ABSTRACT

Background: Labour pain is one of the most severe pain experienced by women and it is amenable to treatment. Most of the Indian parturient still suffer from the agony of labour pains due to lack of awareness, lack of availability or knowledge of availability of labour analgesia service. The objectives of the study were to assess the knowledge, attitude and demand of labour pain relief techniques among antenatal women, determine the association of knowledge and attitude with baseline variables and prepare a concept map regarding labour pain relief techniques.
Method: A quantitative descriptive approach is used to assess the knowledge, attitude and demand of labour pain relief techniques in 100 antenatal women by purposive sampling. The validated tools were used for data collection. Data was analyzed by using descriptive and inferential statistics.
Results: The findings of the study showed that majority (68%) of subjects had an average knowledge, 26% had poor knowledge and 6% had good knowledge regarding labour pain relief techniques. Majority (97%) had a favourable attitude towards labour pain relief techniques. Less than half of the subjects (34%) demanded labour pain relief techniques. There is a significant association of knowledge and previous experience of labour (p=0.030) and knowledge and previous mode of delivery (p= 0.020).
Conclusion: The majority of antenatal women had an average knowledge on labour pain relief techniques and their attitude was favourable. Concept mapping may improve knowledge and enhance attitude.
Keywords: Antenatal women, knowledge, attitude, demand, labour pain relief techniques

INTRODUCTION

Care of women and her family during labour and birth is a rewarding yet demanding specialty within nursing. The intra partum area is typically a happy place, but with lot of stress and struggle. The role of a nurse in intra partum period is very challenging. The type, safety, and effectiveness of pain relief agents would also become important topics for women and their families. [1] Labour is one of the major events in a woman's life in which uterine contractions and abdominal pressure expel the foetus and placenta from women's body. Labour and birth require the women to use all the psychological and physical coping methods that are available. Each woman has unique expectations about birth, including expectations about pain and her ability to manage it. The women who successfully deal with the pain of labour is

more likely to view her experience as a positive life event. [2]

Culture, ethnic group, age and education may have a strong influence on the knowledge and attitude towards pain relief in labour. Several studies have been conducted worldwide to determine the influence of socioeconomic and obstetric factors on the patient's knowledge and acceptance of the labour analgesia. Number of the patients who demand labour analgesia is very less in spite of service being available. [3] The low literacy levels in the urban as well as rural population of India are responsible for the status of the low acceptance of labour analgesia. Antenatal women's ignorance regarding availability of labour analgesia services, inability to access information, unawareness to stress for the right to receive these services are some of the reasons responsible for the, 'inadequate labour analgesia services' in different centres. [4]

Today, there are wide range of pharmacological and non-pharmacological techniques of pain relief available for women to avoid the pain during labour and has been widely used in recent years. These pharmacological methods known are nitrous oxide, opioids and regional analgesia techniques. The non-pharmacological methods include breathing exercises, labour support, transcutaneous electrical nerve stimulation, massaging, acupuncture, hypnosis, hydrotherapy and sterile water injections. [5] The relaxation techniques keep the abdominal wall from becoming tense, allowing the uterus to rise with contractions without pressing against the abdominal wall. These are music therapy, breathing exercise, prayer, focusing and imagery. Several herbal preparations have traditionally been used for reducing labour pain. Aromatherapy is the use of aromatic oils to complement emotional and physical well being. [6]

The American College of Gynaecologist and Obstetricians (ACOG) recommends that pain management should be provided whenever medically indicated during labour. Also, the United Kingdom (UK)'s National Institute for Clinical Excellence highly recommends provision of education for expectant mother on the option and availability of effective analgesia services in labour as a means of ensuring that they receive optimal analgesia service during childbirth. [4]

Over the past 40 years in the USA, the use of labour analgesia for childbirth has increased dramatically. The survey conducted in the USA in 2001, reported that over 60% of women received labour analgesia during labour, in Chicago 90% of expecting women receive epidural analgesia during labour. The UK's National Health Service Maternity Statistics of 2005-2006 year reported that one-third of expecting mothers chose labour analgesia during childbirth. [7]

The objectives of the study were:

1. To determine the knowledge, attitude and demand of antenatal women towards labour pain relief techniques.
2. To determine the relationship between knowledge and attitude of labour pain relief techniques by antenatal women
3. To determine the association of knowledge and attitude regarding labour pain relief techniques with baseline variables.
4. To develop a concept map on labour pain relief techniques

MATERIALS AND METHODS

Study design: A quantitative descriptive approach is used to assess the knowledge, attitude and demand of labour pain relief techniques in 100 antenatal women who met the inclusion criteria. Data was collected by purposive sampling techniques. The survey was conducted in the Father Muller Medical College Hospital (average annual delivery rate: 3,650 deliveries) in southern region of Karnataka, India from 6th March to 31st March 2017.

Participants: The data collection was carried out in the Obstetrics and

Gynaecology outpatient department and antenatal ward in Father Muller Medical College hospital according to the set criteria. The subjects of the study were antenatal women with gestational age 36 weeks and above. 100 subjects who fulfilled the inclusion criteria were selected by purposive sampling method.

Data collection: After approval from the hospital ethical committee. The investigator explained the purpose of the study to the antenatal women. Confidentiality was assured and informed written consent was taken from each subjects and the prepared questionnaire was handed to the antenatal women to be filled up while waiting for the antenatal check-up or those who are admitted for safe confinement. The average time taken to complete the tool was taken 25-30 minutes. During the postnatal period, these subjects were interviewed to assess the demand for labour pain relief techniques. The average time taken to complete the structured interview schedule was 5-10 minutes. The investigator was available to explain any technical terms in the questionnaire that the participants did not comprehend. The questionnaire captured their demographics, knowledge, attitude and demand of labour pain relief techniques. Both primigravida and parous women were included in the survey.

Data analysis: Obtained data was analyzed on the basis of objectives and hypothesis. All descriptive and analytical statistics were performed using SPSS24th version. A p-value <0.05 was considered significant for all statistical tests.

RESULTS

Table 1: Frequency and percentage distribution of subjects according to their baseline characteristics. (n=100)

Variables	Frequency (f)	Percentage (%)
Age in years (Mean age 25 ± 4.92)		
a. 18 -24	44	44
b. 25- 31	47	47
c. >31	8	8
Religion		
a. Islam	75	75
b. Christianity	10	10
c. Hinduism	15	15
Educational status		
a. Up to 7th std	26	26
b. 8th std to PUC	54	54
c. Graduate and above	20	20
Occupation		
a. Home maker	82	82
b. Skilled workers	8	8
c. Professional	10	10
Monthly income of family in rupees		
a. Below 10,000	43	43
b. 10,001 -20,000	46	46
c. Above 20,000	11	11
Area of living		
a. Urban	13	13
b. Rural	87	87
Knowledge of labour pain relief techniques		
a. Yes	34	34
b. No	66	66
Source of information		
a. Previous experience	10	29
b. Health personal	5	15
c. Friends and relatives	10	29
d. Media	9	27
Previous experience of delivery		
a. Yes	39	39
b. No	61	61
Mode of previous delivery		
a. Normal	39	100
b. Caesarean	0	0
c. Instrumental delivery	0	0
Fear about labour pain		
a. Yes	62	62
b. No	38	38
Opinion about possibility to deliver without pain		
a. Yes	4	4
b. No	64	64
c. Do not know	32	32

Demographic characteristics:

Table 1 shows that little less than half (48%) of the subjects were in the age group of 25 -30years and 18 -24 (44%) only few (8%) were in the above 31 years. The mean age was 25±4.92. Majorities (75%) of the subjects were practicing Islam and almost equal number of the subjects practiced Hinduism (15%) and Christianity (10%). Little more than half (54%) of the subjects studied uptil 8th to 12th standard and almost equal number of the subjects were educated uptil 7th standard (26%) and graduation and above (20%). Majority (82%) of subjects was homemakers and only very few were professionals (10%) and skilled workers (8%). More than half of the subjects (64%) had an opinion that there is no labour without pain, 32% don't know about labour pain relief techniques and a very few (4%) had an opinion of pain free labour.

Knowledge of labour pain relief techniques:

The antenatal women have an average knowledge on labour pain and its relief techniques like deep breathing exercise, analgesia, anaesthesia, inhalation gas and acupressure.

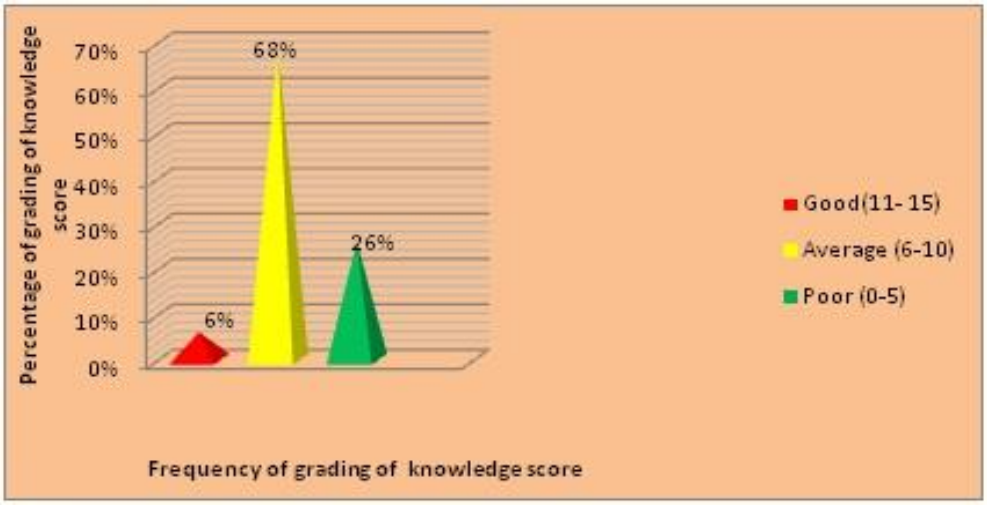

Figure 1: Frequency percentage distribution and grading of knowledge of antenatal women towards labour pain relief techniques.

Attitude of labour pain relief techniques

Majority (97%) of the participants had a favorable attitude only very few had highly favorable attitude (2%) and unfavorable attitude (1%). It is also noted that antenatal women had a highly favourable attitude towards massaging and acupressure (65.6%), anaesthesia (63.3%), inhalation gas (61.3%), deep breathing (61.8%) and a favourable attitude towards analgesia (52.5%).

The total mean percentage of the total knowledge regarding labour pain relief techniques is 46.31% and attitude is 63.15%. So, majority of the sample had average knowledge and majority had a favourable attitude towards labour pain relief techniques.

Demand of labour pain relief techniques:

Less than half of the antenatal women (34%) demanded labour pain relief techniques majority (66%) subjects had not. Among which 24 subjects (70%) were primi gravida and the rest were 10 (30%) multi gravid women. Among the primigravida, majority (41.3%) demanded for analgesia, 14.8% demanded massaging and very few (8.8%) demanded for inhalation gas and anesthesia 5.8%. the multigravida women preferred massaging (14.8%). Analgesics are more preferred among primi labouring women and massaging is more preferred in multi gravid women. Though, the women had an average knowledge and favorable attitude towards acupressure; none had demanded it as pain relief techniques.

Association of knowledge with demographic variables

Table 1 shows that the association of knowledge with demographic variables, computed p-value is greater than 0.05 level for most of the demographic information except previous experience of labour (p=0.030) and previous mode of delivery (p= 0.020). Thus the research hypothesis is accepted and null hypothesis is rejected. But in attitude there is no association

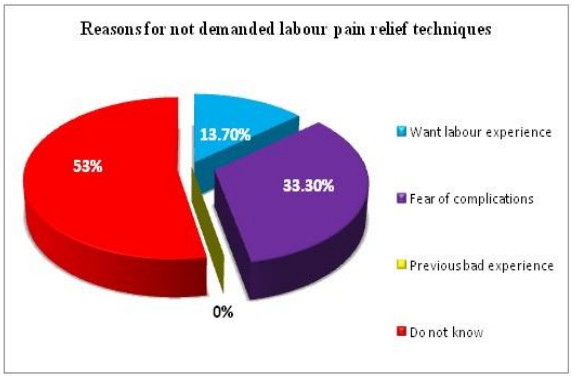

Figure 2: Reasons for non-demand of labour pain relief techniques

Correlation: Correlation between knowledge and attitude of labour pain relief techniques was (r- value is 0.014). So there is no correlation.

Table 2: Association of knowledge with demographic variables (n=100)

Variables	Knowledge Median<7	Median≥7	Chi square test (p) value
Age in years(Mean age 25± 4.92)			
a. 18-24	15	30	
b. 25-31	24	23	0.142
c. Above 31	2	6	
Religion			
a. Islam	33	42	
b. Christianity	3	7	0.564
c. Hinduism	5	10	
Educational status			
a. Up to 7th std.	15	11	
b. 8th to PUC`	21	33	0.074
c. Degree and above	5	15	
Occupation			
a. Home maker	34	48	
b. Skilled worked	4	4	0.674
c. Professional	3	7	
Monthly income in rupees			
a. Up to 10,000	17	26	
b. 10,001to 20,000	21	25	0.520
c. Above 20,000	3	8	
Area of living			
a. Urban	4	9	
b. Rural	37	50	0.191
Knowledge of labour pain relief techniques			
a. Yes	16	18	
b. No	28	36	0.099
Source of Information			
a. Previous experience	10	3	
b. Health personnel	3	2	0.45
c. Friends & relatives	6	8	
d. Medias	2	6	
Previous experience of delivery			
a. Yes	21	18	
b. No	20	41	0.030*
Number of deliveries			
a. One	10	8	
b. Two	9	7	
c. Three	2	2	0.157
d. More than Three	-	1	
Mode of previous delivery			
a. Normal	17	22	
b. Caesarean	-	-	0.020*
c. Instrumental delivery	-	-	
Fear about delivery			
a. Yes	26	36	
b. No	15	23	0.488
Opinion of possible to deliver without pain			
a. Yes	1	3	
b. No	23	41	0.218
c. Do not know	17	15	

P <0.05 tests used Chi square test *significant

Association of knowledge and attitude with demand of labour pain relief technique

Computed 'p' value is greater than 0.05 for the demand information except gravida of antenatal women (p=0.025). So the research hypothesis accepted and null hypothesis rejected. There is no association of attitude with demand of labour pain relief techniques.

Preparation of Concept Map

After the final study and analysis, the investigator prepared a concept map on various labour pain relief techniques by referring and reviewing the recent published books, reviews of journals of related study and available pain relief measures practiced in the selected hospital. Concept map displayed in the passive section of the labour room in the selected hospital. Prior to the display of concept map investigator obtained permission from the hospital authority

DISCUSSION

In the present study, equal number of subjects belonged to the age group of 25-31 (47%). Large numbers of participants were Muslims (75%) and majority (54%) of the participants studied between 8th std to PUC. Majorities (82%) of the women were homemakers and monthly income of family ranged between Rs. 10,000 to 20,000 (46%). Majority of the participants (87%) were residing in rural area and only 34% were aware of labour pain relief techniques and the source of information was friends and relatives (29%), media (27%), previous experience (29%), health personnel (15%). There were 61% of primigravid women and 39% multigravid mothers and all of them 100% had a previous experience of normal delivery. A very least number of participants (4%) knew that delivery is possible without suffering from labour pains.

The findings of the current study were found consistent with the findings of another study conducted at Pravara Institute of Medical Sciences, Loni India where they found that majority of the participants (85%) were between 19-25 years and 89.5% of them belonged to the rural area. Majority of the participants (72.5%) were able to read and write where 50% of them had completed their primary school education. Majority (57%) belonged to middle income group having an average monthly income of Rs.10, 001 to 50,000. It also revealed that not a single participant was aware that delivery is possible without suffering from labour pains; only 3 (1.5%) were of the opinion that it was impossible; and 196 (98%) did not know whether it is possible or not. An equal number had no idea about labour analgesia. 95% of the participants expressed their interest to listen to the information about labour analgesia, while 5% of them showed complete lack of interest. [8]

Another study conducted in Mulago National Referral Hospital among 1293 antenatal women attending antenatal clinic found that majority (47 %) of women who knew about labour analgesia got the information from friends and family, previous labour (26%), media (7%) and literature (1%). [9]

The present study revealed that majority (68%) of the participants had average knowledge and 26% of the subjects had a poor knowledge on labour pain relief techniques. Only 6% had good knowledge. The mean knowledge score of antenatal women was 6.92 ± 2.12 with a mean percentage of 46.31%.

These findings were congruent to the findings found in the study conducted in Enugu. Where the knowledge mean scores of each method of labour pain relief techniques ranged from 0.00 to 0.9 with breathing exercises (0.98) as the highest. [10]

The finding of the present study showed that that 97% of the participants had favourable attitude and 2% had highly favourable attitude but 1% had an unfavourable attitude towards labour pain relief techniques. The attitude of antenatal women was highest in overview of labour pain relief techniques (74.4%), as compared

to acupressure and massaging (65.6%), anaesthesia (3.3%), inhalation gas (61.3%), deep breathing (61.8%) and analgesia (52.5%).

The findings of the current study were found consistent with the findings of another study conducted in Africa. Where 87.8 % of the participants felt that labour should be pain-free and 10 % felt that labour pain is natural and should be experienced. Of those with experience of previous labour, 686 (66.7 %) described the pain as severe. [11]

The findings of the current study were found consistent with another study conducted in South Africa among 151 antenatal women showed that the attitude and beliefs felt that (51.7%) should experiences pain. As 55.7% had experienced severe pain and 65.3% found the experience to be unacceptable. [12]

In this study among the100 subjects, 34% demanded labour pain relief techniques. Among that 24 subjects (70%) were primigravida women and 10 subjects (30%) were multigravid mothers. The primigravida women demanded for analgesia (41.3%), massaging (14.8%), inhalation gas (8.8%), anaesthesia (5.8%), whereas the multigravid mothers preferred massaging (14.8%), inhalation gas (5.8%), and analgesia, anaesthesia and deep breathing exercise (2.9%).

The findings of the current study were found consistent with the findings of another study conducted in the Maternity unit of the University of Uyo Teaching Hospital, Nigeria where 96.7% preferred to deliver vaginally. A few (14.4%) of the respondents demanded for labour anesthesia while the majority (67.6%) were not sure if they could demand labour analgesia. Eighty-nine (20.3%) mothers would not accept a medically indicated caesarean section even as the only safe option for delivery. [13]

Another study was conducted among 98 antenatal women to assess the maternal expectations and experience of labour analgesia with nitrous oxide found that women receiving entonox gas had less labour pain (91.8%), and were satisfied with it (98%). [14]

The result of present study showed that there is significant association between knowledge and selected baseline variables such as previous experience of labour (p=0.030) and mode of previous delivery (p=0.020).

The findings of the current study were found consistent with the findings of another study conducted in Pondicherry, where 89.8% had no idea about usage of pain relief in labour. Only 10.2% had some idea about pain relief in labour. Upon analysing the various socio demographic factors age, religion and educational status of women did not have association with knowledge about labour analgesia significantly. [15]

In the present study, the result showed that 66 participants not demanded labour pain relief techniques. Majority (53%) did not know about it, 33.3% had fear of complications and 13.7% wanted to experience labour pain and there was none who previous bad experience.

Poomalar G K et.al conducted a study which showed that 25% wanted labour experience, 35% believed that labour analgesia may cause harm to the baby and 40% did not believe that labour pain relief techniques caused pain relief. [15]

CONCLUSION

This descriptive study revealed that participants had average knowledge and favourable attitude towards labour pain relief techniques. However there is lack of confidence in demanding labour pain relief techniques. The limitations of the present study were, it was limited to only one setting, the sample was small and likeminded, the sample were illiterate on labour pain relief techniques as there is a poor promotion of knowledge on labour relief techniques and most of the samples selected were from patriarchal families where the women have no voice.

As recommendations:

- Effective interventions for improving the knowledge and attitude of antenatal women and their family on labour pain relief techniques can be planned and organized in various settings.
- Nurses can practice the various methods of labour pain relief techniques on the women depending on convenience and choice of the women.
- Nurse educators can also prepare education material and information materials in order to improve the knowledge of labour process and different kinds of labour pain relief techniques.
- The knowledge of pregnant women may also be improved by the provision of informational leaflets, manuals, websites and childbirth preparation classes during the antenatal period.
- The nurse administrator should provide adequate information on labour pain relief techniques in pain clinics set up near the obstetrics and gynecology outpatient department.
- The nurse administrator has the role of collaborating with each health care professional in the obstetrics department in providing information regarding labour pain relief techniques and its availability in the birthing suite.
- The nurse researcher should be aware of the new trends in the existing health care system.

ACKNOWLEDGEMENT

I would like acknowledge Ms Darryl Monica Serafine Aranha (Assistant professor, Dept. of OBG Nursing, Father Muller College of Nursing) for her expert and untiring guidance, constructive suggestions, concern and constant encouragement. I also express my sincere gratitude to my Co-guide Mrs. Priya Janifer Fernandes (Lecturer, Dept. of Pediatric Nursing, Father Muller College of Nursing, Mangaluru).

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How to cite this article: Mattamundayil AJ, Aranha DMS, Fernandes PJ. A study on the knowledge, attitude and demand of labour pain relief techniques among antenatal women in a selected hospital at Mangaluru with a view to prepare a concept map. Int J Health Sci Res. 2017; 7(11):158-166.

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