

Case Report

An Individual Review on Maternal Satisfaction and Views about Biofeedback and Aromatherapy during Childbirth among Primigravida Mothers

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Abstract: The childbirth experience is a complex event and an important life experience for women, with long-term impacts throughout life. The experience influences the future well-being of the woman, her child, and their relationship, as well as the woman's relationship with her partner. The aim of the study was to assess the maternal satisfaction and views about biofeedback and aromatherapy during childbirth among primigravida mothers. In this study, 400 low risk nulliparous women were randomly divided into two groups as aromatherapy massage (n=200) and biofeedback therapy (n=200). The mothers were received either aroma therapy or biofeedback during their intrapartum period, and they were interviewed a day after their childbirth to know about their satisfaction and views about the special interventions. Results of research showed that aromatherapy provides more comfort and relaxation than biofeedback therapy (P=0.2997). Most of the mothers reported that they would like to suggest these interventions to their friends and relatives, because these interventions provide comfort and relaxation than regular interventions (P=0.225). When considering the satisfaction during childbirth 78.5% of women in aromatherapy and 68% of women in biofeedback therapy described that they were satisfied with the experience. Listening to women's views and understanding their different perspectives, the study was suggested that, non pharmacological pain relief methods like aromatherapy or biofeedback can be used in every hospitals to improve maternal satisfaction and to promote labour outcomes.

Keywords: Aromatherapy, Biofeedback, Childbirth Experience, Primigravidas

INTRODUCTION

Pain is a phenomenon that hasn't been understood and described completely yet and its clinical measurement could be really difficult. The individual experiences the pain would be considered as a reliable source for its comprehension [1]. Labour pain is one of the most severe pain which has ever been described. The fear of pain during childbirth is one of the major reasons that make women preferred for caesarean section. In a study result reported that in Iran, 37.2% of women opted for caesarean section due to fear of the labour pain [2]. Labour pain intensity and its associated distress is equivalent to pain sensitized in arthritis, phantom limb pain, and cancer [3].

Labour pain is associated with the tension reactions and it can be overcome by therapeutic and aggressive interventions [4]. Pharmacological and non pharmacological methods are the two predominant approaches employed in clinical pain management and control [5]. Pain management in the maternity ward should effectively reduce the perception of labour pain which does not interrupt the birthing process and the safety of fetus. Pharmacological treatment may cause

known side effects in the mother and fetus, such as lengthening the duration of labor, enhance the risk of neonatal respiratory distress, and decreasing infant suckling ability [6]. If the labour pain is not under control mother also faces certain risk like feeling of fear, anxiety, helplessness, and loss of control throughout the birthing process [7]. Labour pain and loss of control are the two most frequently cited unpleasant experiences of childbirth that may directly affect woman's satisfaction about childbirth, which result in alteration of self-perceptions and self-esteem [6]. In recent years, many women consider and follow non pharmacological methods to relieve and control pain during childbirth [8].

As there was no awareness among women that, non pharmacological methods are available to reduce the labour pain. So the researcher took initiative to create awareness about these methods also helping the laboring women to reduce the pain and it promotes the well being, even it gives positive experience towards childbirth. As a result, this study introduced two non pharmacological methods like aromatherapy and

biofeedback to recognize child birth experience among primigravida mothers.

MATERIALS AND METHODS

Ethical approval and permission to undertake the study were obtained from the research ethics committee of concerned hospitals. Permission for access to the units to undertake the study was obtained from the physicians in charge at the hospital and maternity units.

The study population comprised of primigravida mothers in selected hospitals at Kanyakumari Dist, Tamilnadu, India. Purposive sampling technique was used for selection of 400 samples. The samples were divided into 2 groups each 200 samples. Group I aromatherapy- received lavender oil massage over the back and abdomen throughout first stage of labour, Group II biofeedback- In which the mother asked to experience the fetal heart sound and also the variation in her uterine contractions. It helps her to consciously regulate both psychological and physical processes, such as pain, that are not usually under conscious control.

Potential participants and those meeting the study criteria were approached individually. The study purpose and procedures were carefully explained, with questions clarified prior to written consent. To maintain data confidentiality, all data related to patient identity was excised, and a code system was assigned to participants. Participants were informed of their right to withdraw from the study at any point without affecting subsequent care. Qualified participants were randomly

assigned to each group, both of which received standard maternity nursing care, with the special experiments.

After the intervention the researcher felt to conduct an interview to know about the effect of special intervention. The interviews were conducted in a quiet place without the interruption of the staffs or family members. All of the interviews were recorded completely and then prepared as the manuscript, if any confirmation was needed the researcher called or visited participants again.

Stability was obtained when the participants gave similar and consistent answers to a question which was asked differently. In this study, it was tried to avoid any prejudice about the studied phenomenon before and after the interviews, so this study became based on the reality. Descriptive data analysis was used to analyze the demographic and obstetric characteristics of participants. Association between two groups was assessed by using Fisher's exact test from Quickcalcs software.

RESULTS

The study included 400 primigravida or first time mothers with a median age of 25 yrs (range 19-36years), all are belongs south Indians. Most of the women were under graduates. 62% of women were house wife, rest were employed in various categories ranging from unskilled (Domestic workers and cleaners) to professionals (Teachers, Nurses). Most of the women had regular antenatal checkup. No mothers had previous experience about childbirth but they received information about labour pain from their relatives and friends.

Table1: Participant’s demographic characteristics

Item	Categories	Frequency	Percentage
Age	19-23 yrs	77	19%
	24-28 yrs	227	57%
	29-33yrs	90	23%
	>33 yrs	06	1%
Education	illiterate	04	1%
	Upto grade 8	19	4.75%
	Upto grade 12	96	24%
	undergraduate	187	46.75%
	Post graduate	94	23.5%
Occupation	House wife	248	62%
	Unskilled	112	28%
	professionals	28	7%
	Technicians	12	3%

Women’s satisfaction and views about biofeedback therapy and aromatherapy was received from each participant individually on next day of delivery. Majority of women (80%) from aromatherapy group stated that aromatherapy helped them to reduce their pain. But few participants reported that the pain was remains same even after aromatherapy.

Approximately same report was received from biofeedback therapy also (P=0.0045). When considering the satisfaction during childbirth 78.5% of women in aromatherapy and 68% of women in biofeedback therapy described that they were satisfied with the experience, as because of the intervention given by the midwife and the time devoted by her with

the participant throughout the labour process(P=0.0236).

Table 2: Satisfaction and views about childbirth experience

Parameters	Aromatherapy		Biofeedback therapy		P value
	No	%	No	%	
Characteristics of pain					
➤ Reduced	160	80	134	67	0.0045
➤ Remains the same	40	20	66	33	
Satisfaction					
➤ Satisfied	157	78.5	136	68	0.0236
➤ Not satisfied	43	21.5	64	32	
Provides comfort and relaxation					
➤ Feeling more comfort	138	69	121	60.5	0.2997**
➤ Provides discomfort	62	31	79	39.5	
Intervention selection In next delivery					
➤ Yes	156	78	132	66	0.0103
➤ No	44	22	68	34	
Suggest to friends and relatives					
➤ Like to suggest	172	86	162	81	0.2252**
➤ Not like to suggest	28	14	38	19	
Experience about childbirth					
➤ Pleasant experience	134	77	127	63.5	0.5288**
➤ Terrible experience	66	33	73	36.5	
The labour progress					
➤ went as I had expected	167	83.5	146	73	0.0151
➤ Not progressed	33	16.5	54	27	
My midwife's attitude					
➤ understood my needs	183	91.5	178	89	0.0838**
➤ didn't get proper care	17	8.5	22	11	

**statistically not significant with 5% level of significance

The study results revealed that aromatherapy provides more comfort and relaxation than biofeedback therapy (P=0.2997). Few mothers from both the groups reported that this intervention provides discomfort to them. Majority of mothers (156 in aromatherapy and 132 in Biofeedback therapy group) from both the groups suggested that they need this type of interventions for their next delivery also, because it gives additional support to the mother (P=0.0103). Most of the mothers reported that they would like to suggest these interventions to their friends and relatives, because these interventions provide comfort and relaxation than regular interventions (P=0.225). 77% of mothers from aromatherapy described that the childbirth was like a pleasant experience, though it was associated with severe pain. But it was eased by the continuous care given by the midwife and other supportive professionals.

Majority of mothers in both the groups were happier by the care and support given by the health care professionals and they reported that they never expected such a kind of love and care from the hospital staffs.

DISCUSSION

Traditionally it was believed that natural childbirth never can be a pleasant experience for the mother as it is associated with a variety of pain which is

starting from the fundus of uterus, and it radiates towards the sacrum. Naturally majority of women were dream for a perfect childbirth. The pain during childbirth may cause anxiety to the mother further it may leads to unpleasant childbirth experience. This is another consequence during childbirth; unintentionally it may affect the mother and fetus. Even it may leads to operative interference like caesarean section, or forceps deliveries.

Modern medicines has been introduced many non-invasive methods to relieve pain during childbirth. Among this aromatherapy is a most popular complementary therapy during child birth, it is the use of essential oils and used for massage over the abdomen and back [9]. The effect of aromatherapy can relieve stress, provides relaxation, improves metabolism, and gives the mother a sense of well being [10]. When aroma massage is applied over the skin and it is entering into the bloodstream through the skin pores and it provides a sense of well being and it reduces the need for invasive methods of pain relief [11].

Caroll *et al.* also reported that aromatherapy helps to relieve pain, anxiety, depression, fatigue and it creates confidence and creativity. The participants of present study also stated that aromatherapy provides

relaxation and it promotes comfort for the mothers during childbirth [12]. Shellie Enteen stated that, the most famous essential oil for pain relief and relaxation is lavender oil. It can be applied over the skin or through inhalation to promote physical and psychological well being of the mother [13].

Biofeedback is a valuable tool in reducing labour pain which facilitates psychological interventions that aid developing greater skills for coping and improved functioning on measures of pain intensity, adaptive beliefs about pain and the level of depression [14]. Moreover when used as an adjunct to other therapeutic interventions it shown as an effective treatment for reducing or eliminating symptoms of several pain-related conditions, including low back pain [15]. So the researcher achieved the main aim of this study by stating that aromatherapy and biofeedback were helped the mother to have more positive experience towards childbirth.

CONCLUSION

This report is based on data collection and analysis of items of current interest, particularly from women had delivery in different hospitals at Kanyakumari Dist, Tamilnadu, South India. The findings provide a broad picture of women's recent experience of care and their views about aromatherapy and biofeedback during childbirth. This study showed that all women wished to have non invasive methods of pain relief methods and they want to be treated with kindness and respect by skilled staff. Listening to women's views and understanding their different perspectives the study was suggested to use non pharmacological pain relief methods in every hospitals to improve maternal satisfaction about childbirth.

REFERENCES

1. Du Gas BW; Introduction to patient care: a comprehensive approach to nursing. 4th edition, Philadelphia, W.B Saunders, 1983: 528-530.
2. Beigi NMA, Broumandfar K, Bahadoran P, Abedi HA; Women's experience of pain during childbirth. *IJNMR*, 2010; 15(2):77-82.
3. Escott D, Slade P, Spiby H; Preparation for pain management during childbirth: The psychological aspects of coping strategy development in antenatal education. *Clinl Psychol Rev.*, 2009; 29(7):617-622.
4. Niven N; Health psychology for health care professionals. 3rd revised edition, Philadelphia: Churchill Livingstone, 1999: 70.
5. Raju J, Singh M; Effectiveness of biofeedback as a tool to reduce the perception of labour pain among Primigravidas: Pilot Study. *Turkish Journal of Family Medicine and Primary Care*, 2013; 7(3): 87-90.
6. Lee SL, Liu CY, Lu YY, Gau ML; Efficacy of Warm Showers on Labor Pain and Birth Experiences during the First Labor Stage. *JOGNN*, 2013; 42(1): 19-28.
7. Simkin P, Hull K; Pain, suffering, and trauma in labor and prevention of subsequent posttraumatic stress disorder. *Journal of Perinatal Education*, 2011; 20(3): 166-176.
8. Fenwick J, Hauck Y, Downie J, Butt J; The childbirth expectations of a self-selected cohort of Western Australian women. *Midwifery*, 2011; 21(1): 23-35.
9. Alehagen S, Wijma K; Fear during labor. *Acta Obstet Gynecol Scand.*, 2001; 80: 315-320.
10. Tracey; What is aromatherapy? *Health resources*, 2011; 14(2): 23-25.
11. Burns E, Blamey C, Ersser SJ, Lloyd AJ, Barnetson L; The use of aromatherapy in intrapartum midwifery practice an observational study. *Complement Ther Nurs Midwifery*, 2000; 6(1): 33-34.
12. Carrol D, Bowsher D; Pain management and nursing care. Butterworth Heinemann. Oxford, UK.1993:123-134.
13. Enteen S; Essential Oils for Pain Relief. *Massage Today*, 2005; 5 (2):15-17.
14. Newton-John TR, Spence SH, Schotte D; Cognitive-behavioural therapy versus EMG biofeedback in the treatment of chronic low back pain. *Behaviour Research and Therapy*, 1995; 33: 691-697.
15. Nielsen PE, Howard BC, Hill CC, Larson PL, Holland RH, Smith PN; Comparison of elective induction of labor with favorable Bishop scores versus expectant management: a randomized clinical trial. *J Matern Fetal Neonatal Med.*, 2005; 18(1): 59-64.