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Original Research Article

A comparative study on child birth experience of mothers at tertiary care hospital

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ABSTRACT

Background: Women's childbirth experience can profoundly impact their overall well-being and health. Evaluating maternal satisfaction with childbirth services is essential for assessing the quality of healthcare. Childbirth satisfaction is multifaceted, influenced by antepartum, intrapartum, and postpartum factors. Midwives play a pivotal role in guiding women's birthing choices. Aim was to assess the impact of antepartum, intrapartum, and postpartum interventions on maternal satisfaction in a tertiary care teaching hospital.
Methods: A prospective cohort study was conducted with 126 women divided into two groups: Group A (Booked) and Group B (Unbooked). Group A received comprehensive care, including antenatal exercises, breastfeeding counselling, education on alternative birthing positions, and non-pharmacological pain management during labor, leading to deliveries in alternative positions. Group B received standard antenatal care, delivered in the conventional lithotomy position, and used pharmacological pain management.
Results: Midwife-led counselling during antepartum, intrapartum, and postpartum phases positively influenced childbirth experiences. Group A showed lower postpartum pain scores, quicker initiation of breastfeeding, reduced episiotomy needs, shorter second-stage labour, and higher antepartum satisfaction compared to Group B.
Conclusions: Among healthy pregnant women, midwife-led care, including antenatal counselling, alternative birthing positions, exercises, and non-pharmacological pain management, correlated with shorter labor duration, decreased pain levels, higher satisfaction, reduced episiotomy rates, earlier breastfeeding initiation, and better APGAR scores. This underscores the positive impact of midwives in delivering patient-centered care and enhancing overall care quality.

Keywords: Positive childbirth experience, Childbirth services, Midwives, Maternal satisfaction, Counselling

INTRODUCTION

In a developing country like India, measurement of beneficiaries' satisfaction with healthcare including childbirth services serves as a cheap and universal method for service quality evaluation.[1] By early identification and addressal of risks, comorbidities and complications, a healthy outcome for both mother and the baby and a positive pregnancy experience for the mother is ensured.[2-4] The first step towards positive pregnancy experience is delivery of a continuum of optimal care and reasonable information, starting from conception and smoothly transitioning into labor and healthy puerperal experience. The next step can be conformation of care to align with sociocultural beliefs of the mother and facing the physical challenges of pregnancy within reasonable limits. This positive experience should further extend to maternal mental health and competence that confides in self-belief about her ability to take care of self and the newborn and rely at different levels of healthcare providers to make such informed decisions that promotes better outcomes. To achieve such positive experience, the incumbents should follow WHO's recommendations for midwife-led continuity of care models for pregnant women which

translates to effective utilisation of ASHA and Anganwadi workers in Indian scenario.[5] The focus should be to deliver a respectful, individualised, person-centred care that incorporates communication in language of mother informed consent and emotional assistance. By holistic focus on all the above-mentioned domains, we can ensure a positive and empowering pregnancy experience and better neonatal outcomes.

Objectives

Objectives of current study were to assess satisfaction of childbirth experience of mothers who were counselled in antenatal period regarding antenatal exercises, breastfeeding and alternative birthing position and to assess satisfaction of childbirth experience during intranatal and postnatal period by assessing duration of 2nd stage of labor, need for episiotomy, postpartum pain score, APGAR score at birth and initiation of breastfeeding within one hour.

METHODS

Study design, location, duration and sample size

Prospective comparative interventional cohort was conducted at OPD and labour room, department of obstetrics and gynaecology, Baroda medical college, SSG hospital on 126 (63 in each group) patients for 8 months from April 2022 to December 2022.

Inclusion criteria

Patient enrolled in midwife led SSG hospital (low risk primigravida women) were included.

Exclusion criteria

High risk pregnancy, abnormal fetal heart rate patterns necessitating emergency C-section or NICU admission were excluded from the study.

Procedure

In the antenatal care unit of SSGH, a Midwife-led care approach was implemented to provide comprehensive support and education to pregnant women. The program aimed to empower expecting mothers with knowledge and practical guidance throughout their pregnancy journey.

Pregnancy do's and don'ts: Expectant mothers enrolled in Midwife-led care received counselling on essential pregnancy do's and don'ts, equipping them with valuable information to ensure a healthy pregnancy.

Physiological changes in pregnancy: Common physiological changes and associated problems in pregnancy were discussed, emphasizing nonpharmacological remedies to alleviate discomfort and ensure well-being.

Diet and medications: Women were educated about the importance of proper nutrition during pregnancy and lactation. Detailed guidance on suitable diet was provided to promote the health of both mother and baby.

Physical activity during pregnancy: Expecting mothers were encouraged to maintain an active lifestyle during pregnancy. Information on proper posture, safe exercises, meditation, and yoga was shared to enhance physical and mental well-being.

Table 1: Criteria for distribution into Cohort (n=126).

Group A (Booked, n=63)	Group B (Unbooked, n=63)
Routine antenatal care+(antenatal exercises and breastfeeding counselling). Education and consent about alternate birthing position+ Non pharmacological methods of pain management delivery in alternate birthing position (after consent).	Routine antenatal care+(didn't receive breastfeeding counselling and antenatal exercises). Delivery in conventional lithotomy position and didn't give consent for delivery in alternate birthing position. Pharmacological methods of pain management.

Process of labour: A comprehensive explanation of the labor process, including vaginal and caesarean section deliveries, was provided to ensure mothers were well prepared and informed about what to expect.

Alternative birthing positions: Women were given choices regarding birthing positions, including recumbent, upright, squatting, sitting, and the "on all fours" position. This empowered them to choose the most comfortable and suitable position during labor.

Breastfeeding: The importance of breastfeeding was emphasized, along with guidance on proper positioning, addressing common breastfeeding problems, and offering solutions to ensure successful breastfeeding experiences.

Postnatal care and exercises: Postnatal care, including exercises, episiotomy care, and dietary counselling, was provided to support the recovery of mothers after childbirth.

Family planning options: Expectant mothers were educated about family planning options, allowing them to make informed decisions about contraception after childbirth.

Warning symptoms: Women were educated about warning symptoms during pregnancy, ensuring they were aware of when to seek medical attention if any complications arose. During the intranatal period, midwife-led care provided holistic support, including pain relief through hot compresses and massage, exercises, dietary advice, and

mobilization. In contrast, Group B received routine care, primarily relying on injectable opioids for pain management, lacking support for exercises and alternative birthing positions.

Both groups were assessed for the normal progression of labor, underwent essential medical tests, and were allowed to be mobile during the first stage of labor. They were accompanied by a female birth companion, and fetal heart rate monitoring was monitored regularly.

Table 2: Satisfaction with regards to antenatal, intranatal and postnatal care questionnaire.

Antenatal period	Intrapartum period	Postpartum period
Antenatal visits: Number of visits, time spent during consultation. Antenatal care: Enquiry about concerns, explanation about concerns, examination, tests done. Health education: Diet, antenatal exercises, preparedness for delivery, breastfeeding counselling, family planning	Interpersonal care: Health care providers were friendly, encouraging and reassuring during labour and childbirth, the HCP kept me informed about what was happening during labour, I was allowed to take my own decisions, I was allowed to deliver in position of my choice. Physical environment of birth: During labour and birth, room was spacious and light was adequate for my need. During labour and birth, the trays and other equipment's were clean. Perception of pain	Information about women's health during post-natal stay. Information and guidance about newborn during post-natal stay, breastfeeding counselling, post partum contraception

Delivery was facilitated in the chosen position of the mother, with the duration of the second stage of labor recorded. After delivery, maternal vitals were assessed, episiotomy repair was performed as necessary, and the initiation of breastfeeding was noted. Post-delivery, maternal satisfaction with antepartum, intrapartum, and postpartum care was evaluated, along with postpartum pain scores and the initiation of breastfeeding within one hour. Blood loss assessment was carried out through CBC testing, and neonatal assessments included APGAR scores at birth and after 5 minutes, with detailed records maintained for analysis. The midwife-led care program at SSGH aimed to provide comprehensive, personalised, and empowering support to expectant mothers, ensuring their physical and emotional well-being throughout the entire pregnancy journey.

In this study evaluating maternal and fetal outcomes in the context of antepartum, intrapartum, and postpartum care, patient satisfaction played a crucial role. To gauge patient satisfaction, a satisfaction score system was employed, categorising responses into five distinct levels. Scores of 1 and 2 indicated very unsatisfied, 3 and 4 signified unsatisfied, 5 and 6 represented a neutral stance, while scores of 7 and 8 marked satisfaction, and 9 and 10 denoted very satisfied. The primary maternal outcome centred on assessing the satisfaction of women with their birth experiences, encompassing antenatal, intrapartum, and postpartum care up to discharge. Additionally, several secondary outcomes were considered, including the duration of the second stage of labor, the necessity for episiotomy, initiation of breastfeeding within one hour, blood loss, and postpartum pain.

Statistical analysis

Data was analysed using SPSS 27 Software. It was conducted using chi-square tests and mean T tests, with a significance threshold set at a p value of less than 0.05.

RESULTS

A total of 126 antenatal women were assessed and divided according to the type of antenatal counselling they have received in group A and B. The (Table 3) shows close similarity in the demographic profile of both arms of the cohort.

Table 3: Patient demography.

Variables	Group A		Group B	
	N	%	N	%
Age (years)				
Mother (mean±SD)	23.35	2.42	22.51	2.52
Foetus/gestational age (mean±SD)	38.44	1.10	38.78	1.02
Booking status				
Booked	63	100.00	0	0.00
Un booked	0	0.00	63	100.00
Education status				
Up to 8th	17	26.98	29	46.03
Up to 12th	33	52.38	23	36.51
Graduate	13	20.63	11	17.46
Occupation				
Housewife	60	95.24	58	92.06
Farmer	3	4.76	5	7.94

Table 4 shows that there is a statistically significant difference in only antepartum and not intrapartum and

postpartum satisfaction score of both groups. Analysis showed that midwife care during antenatal period has found higher rates of satisfaction compared to standard care.

Table 5 shows a statistically significant reduction in duration of second stage of labor between mothers receiving parental exercises counselling and support of midwives to anticipate a comfortable birthing position. Table 6 shows significant lesser requirement of episiotomy in Group A (31.75%) in comparison to group B (53.97%). Table 7 shows significant reduction in postpartum pain score in pregnant ladies who received counselling on antenatal exercises and anticipatory information about pain in various stages of pregnancy.

Table 4: Satisfaction score (out of 10).

Period	Group A		Group B		P value
	Mean	SD	Mean	SD	
Antepartum	8.59	1.06	6.33	1.15	0.0001
Intrapartum	8.76	0.89	8.51	1.03	0.1474
Postpartum	8.97	0.80	8.92	0.77	0.7214

Table 5: Duration of second stage of labor.

Duration of second stage of labor (minutes)	Group A	Group B	P value
Mean±SD	45.35±14.10	51.08±10.99	0.0122

Table 6: Need of episiotomy.

Need of episiotomy	Group A		Group B		P value
	N	%	N	%	
Yes	20	31.75	34	53.97	0.0193
No	43	68.25	29	46.03	

Table 7: Postpartum pain score.

Pain score on VAS (out of 10)	Group A	Group B	P value
Mean±SD	4.37±1.17	6.90±1.10	0.0001

Table 8: APGAR at birth.

Score (out of 10)	Group A	Group B	P value
Mean±SD	8.65±0.63	7.62±0.63	0.0001

Table 9: Initiation of breastfeeding within one hour of delivery.

Whether initiated within 1 hour	Group A		Group B		P value
	N	%	N	%	
Yes	55	87.30	33	52.38	<0.0001
No	8	12.70	30	47.62	

Table 8 shows statistically higher APGAR score in neonates of mother in group A than group B. This may be result of better counselling and antenatal exercises or confounded by shorter 2nd stage of labor or lower postpartum pain.

Table 9 shows a significantly higher rates of initiation of breastfeeding within one hour with 87.30% of women in group A and 52.38% women in group B. On admission and post-delivery Hb was noted in both the groups and none of the patient required blood transfusion. There was no antenatal or perinatal maternal mortality observed in the duration of the study.

DISCUSSION

Counselling of expectant mothers regarding antenatal exercises including meditation, breastfeeding, alternate birthing positions, about progress of labor, warning symptoms and other relevant pregnancy related issues supplement confidence of mother, which in turn improves satisfaction leading to positive pregnancy experience. This may be seen in terms of protecting a women's right to respectful maternity in terms of position assumed during labor affecting progression of labor.

This study highlights various aspects of such intervention over antepartum, intrapartum and postpartum outcomes in the setting of a tertiary care teaching hospital. The need for episiotomy and duration of 2nd stage of labor was found to be significantly lower in group A. This is corroborated by various studies like the one by Meyvis et al showing 38% episiotomy in lateral position compared to 7% in lateral position or a 3-year retrospective cohort study by da Silva et al.[6] Showing 55% more Frances of women to have episiotomy in dorsal position.[7] Similarly, a study shows lower rate of episiotomy in squatting or standing position or another RCT to show decreased rates of episiotomy and second-degree perineal laceration in women with hands and knees position.[8,9]

In this study, significantly lower pain scores in mothers with non-pharmacological management of pain during labor i.e. Group A. This is similar to a study on primigravida women performing antenatal exercises for 15 to 34 days wherein experimental group had 74% moderate and 26% severe pain, while control group had 95% severe and 44% moderate pain.[10] Another study showed decreased feeling of pain and requirement of analgesics with prenatal counselling.[11] Another component of antenatal exercises like brisk walking, relaxation techniques, yoga was shown to significantly reduce duration of 2nd stage of labor, post labor pain and improve satisfaction rate in Group A, probably by boosting confidence in the process of labor and anticipation of pain during childbirth process. This is similar to study by Moragluo showing women having knowledge and opting for squatting position had lower Visual Analog Scale score than those opting supine to 45 degree semi- fowler position.[12] It was seen that APGAR score at birth was

significantly higher in Group A which is in contrast to study by Moraloguo no significant difference between squatting and supine position.[12] Use of verbal or pictorial counselling of breastfeeding in this study showed significant improvement in the initiation of breastfeeding within 1 hour of delivery in Group A coinciding with studies Apanga et al showing at least one timely visit increased chances of early initiation of breastfeeding or by Phuljhele et al showing >3 ANC visits was associated with higher rate of EIBF.[13,14] This may be attributed to increased maternal-neonate bonding resulting in the early initiation of breastfeed.[15]

In a tertiary care setting, the role of midwives (ASHA/Anganwadi/other similar stakeholders) assumes special importance in a staggering low doctor to patient ratio. These healthcare professionals closely influence choices of mother about labor including birthing position, neurohormonal mechanisms like oxytocin release by their respectful caring practices. Care by midwives like personal control and partnering in decision making have been shown to have protective effect on labor pain.[16] Antenatal education programme like the one in this study, significantly enhance maternal self-efficacy and decrease fear of childbirth giving positive pregnancy perception.[17,18] Lastly, the study showed a statistically significant higher antepartum patient satisfaction score in Group A which is due to better knowledge and awareness about the changes in mothers' body during pregnancy and a better anticipation of its challenges. However, no statistical difference in patient satisfaction score during intrapartum and postpartum period can't be taken with a pinch of salt. This is because even though it's not significant but the scores are still on a higher side (>8 out of 10) in both groups. This higher side may be explained by the ethical constraint of an interventional cohort study where at a tertiary care, like in this study setting, a mother can't be denied due diligent medical care and counselling for intra and post-partum stages, even if she missed the same during antepartum phase.

Limitations

This study has its limitations in terms of small sample size, limited ethnicity and conduct in a tertiary care centre with easy availability of other confounding factors that improve patient satisfaction. However, the strength lies in the sample including mothers of different educational backgrounds and first hand as well as referred cases from lower echelons of medical care. This mandates the requirement of a multi-centric study with larger sample for extrapolation of results to general population.

CONCLUSION

In healthy antenatal women, antenatal counselling like explaining physical and mental challenges of pregnancy, intrapartum interventions such as adopting alternative birth position, exercises and non-pharmacological method of pain management was associated with higher antenatal satisfaction, shorter second stage of labor, less need for episiotomy, lower Visual Analog pain Scale score, higher APGAR score and increased rate of breastfeeding within one hour compared with adopting lithotomy position. We conclude that pregnant women expressed positive satisfaction of antenatal care provided by midwives who provide patient centred care which promotes compliance and thus quality of healthcare.

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