

Birth satisfaction of women delivered at CMC, Vellore

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Abstract:

Background: Childbirth is a unique experience for every woman whether first or last. Various factors contribute to this experience while many may cause dis-satisfaction. Negative experiences increase the risk for maternal postpartum depression and may affect attitudes to future pregnancies and births. Patients' satisfaction is an important measure of the quality of health services. It is a complex multidimensional measure, affected by a number of clinical and technical factors, as well as by expectations and personal characteristics. Hence it needs to be addressed so as to improve the quality and efficiency of health care provided during pregnancy, childbirth, and puerperium.

Materials and Method: Descriptive research design was used in this study, and using total enumeration sampling technique 710 women who delivered live fetus either by normal vaginal or by instrumental delivery and could read and write english/ tamil/ telugu were included. Data was collected using a self-administered questionnaire consisting of two parts. Part: A consisted of demographic variables and clinical variables. Part: B consisted of a scale measuring the birth satisfaction of women adopted from Mohammed et al. women's satisfaction with hospital based intrapartum care – a Jordanian study. This tool measured satisfaction in relation to the three dimensions of intrapartum care such as "interpersonal care, information and decision making and physical birth environment". Satisfaction was rated on a five-point Likert scale from strongly disagree to strongly agree. Data was analyzed and interpreted using descriptive statistics, frequency tables, Paired t test, Mann-Whitney U test and Chi-square.

Results: The total mean satisfaction score was 58.94 (SD ± 6.16), and in regard to the three subscales the mean of interpersonal care was 23.20 ± 2.344 SD, mean for information and decision making was 13.71 ± 3.61 SD and mean for physical birth environment was 22.02 ± 2.94. The findings of this study revealed that majority of the women were satisfied with their birth experience. The study also revealed that 24.1% of women were not satisfied with "during labour/ birth decisions were made without taking my wishes into account, 20.8% felt pressured to have the baby quickly and 16.1% of them felt labour was taken over by strangers and machines". 44.1% of the women were not satisfied with the level of noise.

Conclusion: Health care professionals need to plan and implement appropriate strategies to develop satisfying birth experience for women who deliver in the health care facility. Involving the women in decision making, reducing their pressure to deliver the baby quickly and improving personal communication with the women during labour/ birth will help in improving the satisfaction of the women to a great extent

Key Words: Birth satisfaction, Women.

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I. Introduction

Childbirth is a unique experience for every woman whether it is first or last. Various factors such as pain, support, midwifery care received, experience of earlier deliveries, so on and so forth contribute to this experience while many other things may cause dissatisfaction to the woman. First-time mothers are particularly vulnerable for negative experiences that increase the risk for maternal postpartum depression and may negatively affect attitudes to future pregnancies and births. Therefore, knowledge of factors affecting maternal satisfaction is important in order to improve childbirth care. Patients' satisfaction and experience are important measures of the quality of health services. In this regard, studies have shown its importance not only for the health and well-being of both mothers and children, but also for service providers and decisionmakers. However, satisfaction has been recognized as a key construct. Hence this study was designed to assess the level of birth satisfaction among the women who delivered in the labour room of CMC, Vellore with the following objectives:

- 1) To assess the level of birth satisfaction among the women who delivered in CMC, Vellore

- 2) To find the association between the level of birth satisfaction and the selected demographic and clinical variables

II. Materials and Methods

This descriptive research was carried out in the labour room and the postnatal wards of the Department of Obstetrics and Gynaecology at a tertiary care teaching hospital, Vellore, a city in the state of Tamil Nadu in the southern part of India. The study was carried out from December 2019 to January 2020. A total of 710 women who delivered a live fetus either by normal vaginal or by instrumental delivery and could read and write English/ Tamil/ Telugu were included in this study.

Study Design: Descriptive research design

Study Location: This was a tertiary care teaching hospital-based study carried out in labour room and postnatal wards of the Department of Obstetrics and Gynaecology located at Vellore, a city in the southern state of Tamil Nadu, India.

Study Duration: December 2019 – January 2020

Sample Calculation: Based on the study provided in the reference, the mean (SD) of overall satisfaction with intrapartum care (Number of items 14) was 36.12(8.88). Assuming precision level 0.66 with a 95% confidence level, the required number of the study would be around 700.

Subjects and Selection method: Total enumeration sampling technique was used and 710 women who delivered a live fetus either by normal vaginal or by instrumental delivery and could read as well as write English/ Tamil/ Telugu were included.

Inclusion criteria:

- 1) All the women who delivered a live fetus in CMC, Vellore either by Normal vaginal delivery or by instrumental delivery will be included in the study.
- 2) All women who read and write English and Tamil and Telugu will be included for the study.

Exclusion criteria:

- 1) Women who delivered by caesarean section.
- 2) Women who are critically
- 3) Women who delivered sick baby/ intrauterine death/ still birth

Procedure methodology:

A daily list of all the women who delivered was prepared from the birth register kept in Labour room. The women who fulfilled the inclusion criteria were then selected and visited within 24 – 48 hours after delivery either in Labour room or in the Obstetrical wards. Privacy was provided. Written informed consent was obtained from them followed by the data on birth satisfaction. Data was collected using a self-administered questionnaire consisting of two parts. Part: A consisted of demographic variables such as age, educational qualification, occupation, income, residential locality and clinical variables such as parity, gestational age at delivery, type of delivery, duration of labour, induction/ augmentation done, sex of the baby, condition of the baby at birth, complications developed during delivery, name of the complication, place of previous delivery and social support person during delivery. Part: B consisted of a scale measuring the birth satisfaction of women adopted from Mohammed et al. women's satisfaction with hospital based intrapartum care – a Jordanian study. This tool measured satisfaction in relation to the three dimensions of intrapartum care. Subscale one consisted of 5 items related to "interpersonal care" provided by the doctors and the midwives. The second subscale consisted of 4 items relating to "information and decision making" and the third subscale consisted of 5 items relating to "physical birth environment". Satisfaction was rated on a five-point Likert scale from 1= strongly disagree to 5 = strongly agree. Three items "during labour and or birth decisions were made without taking my wishes into account, I felt pressured to have the baby quickly and I felt labour taken over by strangers and machines" were reversed scored. Overall satisfaction of the women was considered with a score of ≥ 45 and scores of ≥ 15 , ≥ 14 , ≥ 15 were considered with subscales 1, 2 and 3 respectively. The tool was translated in two Indian local languages such as Tamil and Telugu.

Statistical analysis:

Data was entered using EPIDATA software and screened for outliers and extreme values using Box-Cox plot and histogram (for shape of the distribution). Summary statistics was used for reporting demographic and clinical characteristics. All categorical variables were reported using frequencies and percentages and continuous variables were expressed in terms of mean \pm sd or Median (IQR). For statistical comparisons between the means from two groups t-test with normally distributed data and Mann-Whitney U test for data with non-normal distribution was used. The categorical variables were compared using the chi-square test or the

Fisher exact test. Differences were considered to be significant at $p < 0.05$. All the statistical analysis was performed using SPSS 25.0.

III. Results

The findings of the study are presented in the following order:

Table 1: Distribution of woman based on socio-demographic variables.

Table 2: Distribution of woman based on clinical variables.

Table 3: Descriptive analysis of overall birth satisfaction of woman.

Table 4: Descriptive analysis of birth satisfaction of woman related to interpersonal care, information and decision making and physical birth environment.

Table 5: Association between birth satisfaction of woman with socio-demographic and clinical variables.

Table: 1 shows that majority (40.56%) of the women were in the age group of 20 – 25 years, 37.18% of them are with an educational background of postgraduation and above, while 88.30% of them are house wives.

50.56% of the women come from a family with an annual income of ₹10000 and above and 55.21% of them have their homes in the urban locality

Table no:1 Distribution of woman based on socio-demographic variables

Socio-Demographic Variables	Frequency	Percentage
Age (Years)		
Less than 20	28	3.94
20-25	288	40.56
26-30	276	38.87
31-35	102	14.37
36-40	14	1.97
41 and above	2	0.28
Education		
None	2	0.28
Primary School	30	4.23
Secondary School	157	22.11
Undergraduate	257	36.20
Postgraduate and above	264	37.18
Occupation		
House wife	627	88.30
Professional	77	10.85
Non-professional	6	0.85
Income		
Less than 2000	58	8.17
2000-5000	91	12.82
5001-10,000	202	28.45
10,001 and above	359	50.56
Locality		
Urban	392	55.21
Rural	318	44.79

Table: 2 shows that 55.07% of the women included in the study were primiparous and majority (83.80%) of them were at term gestational age. 82.39% of the women had normal vaginal delivery and 86.34% of the deliveries were conducted by doctors. Large proportion (83.24%) of the women have had a total duration of their labour extending between 2 hours to 18 hours with 72.39% of them having had induction or augmentation of their labour. It's an interesting fact to see that the sex of the baby delivered by these women have been almost equal. 97.89 % of women had their babies delivered in good condition. It is very a significant finding that only 8.73% of women developed complications following delivery of which majority (46.77%) of them had postpartum haemorrhage. 84.95% of women have had their previous child birth in the tertiary hospital where this study was conducted. As the cultural norms in the society warrants the mother to be the social support person for a women during labour the study reveals the fact in majority (61.13%) of women.

Table no: 2 Distribution of woman based on clinical variables

Clinical Variables	Frequency	Percentage
Parity		
Primiparous	391	55.07
Multiparous	301	42.39
Grand multiparous	18	2.54
Gestational age at delivery		
Preterm	55	7.75
Term	595	83.80
Post term	60	8.45
Type of Delivery		
Normal vaginal	585	82.39
Instrumental	125	17.61
Delivery Conducted by		
Doctor	613	86.34
Midwife	97	13.66
Duration of labour		
Less than 2 hours	29	4.08
2 – 18 hours	591	83.24
18 – 24 hours	90	12.68
Induction/Aumentation of labour done		
Yes	514	72.39
No	196	27.61
Baby sex		
Boy	343	48.31
Girl	367	51.69
Baby condition		
Active and good	695	97.89
Depressed at birth	15	2.11
Complications developed during labour		
Yes	62	8.73
No	648	91.27
Comp if yes		
Postpartum haemorrhage	29	46.77
Perineal tears	23	37.10
Birth asphyxia of the baby	2	3.22
Shoulder dystocia	0	0
Others	8	12.90
Place Of Previous Delivery (319)		
CMC	271	84.95
Outside	48	15.05
Social Support Person During Labour		
Spouse	21	2.96
Mother	434	61.13
In – laws	129	18.17
Others	126	17.74

Table:3 reveals that majority of the women in this study were found to be satisfied with their birth experience. However findings also revealed that women were not satisfied with certain aspects such as “During labour and or birth, decisions were made without taking my wishes into account (24.15), I felt pressured to have the baby quickly (20.8%), I felt labour was taken over by strangers and or machines and The level of noise was appropriate(44.1%)

Table no:3 Satisfaction with subscales and item percentage

Characteristics	Frequency	Percentage
Interpersonal Care		
When you arrived at the hospital, staff were friendly and welcoming	440	62.0
Doctors and midwives were encouraging and reassuring	458	64.5
During labour and / or birth, the midwives / nurses were helpful	514	72.4
During labour and / or birth, the doctors were helpful	523	73.7
The overall care during labour and or birth was good	497	70.0
Information and Decision Making		
The midwives and doctors always kept me informed about what was happening during labour and or birth	400	56.3
During labour and or birth, decisions were made without taking my wishes into account	171	24.1
I felt pressured to have the baby quickly	148	20.8
I felt labour was taken over by strangers and or machines	114	16.1
Physical birth environment		

The level of light was adequate	409	57.6
The room was spacious and adequate for my needs	395	55.6
The level of noise was appropriate	313	44.1
Trays and other equipment were clean	443	62.4
I was able to find the supplies I needed	376	53.0

Table no:4 showed that overall birth satisfaction mean was 58.94 (SD ± 6.16). Among the three subscales the mean of Interpersonal Carehas the highest meanof 23.20 (SD± 2.34) and Information & Decision making has the lowest mean of 13.71 (SD±3.61).

Table no:4 Descriptive analysis of overall birth satisfaction of woman

Variables	Mean	SD
overall	58.94	6.16
Interpersonal Care	23.20	2.34
Information & Decision making	13.71	3.61
Physical birth environment	22.02	2.94

Figure 1 showed that among the three subscales showed the Interpersonal Carehas the highest percentage of satisfaction (99.4%) and Information & Decision making has the lowest mean (51.3%).

Figure no: 1Descriptive analysis of birth satisfaction of woman related to interpersonal care, information and decision making andPhysical birth environment

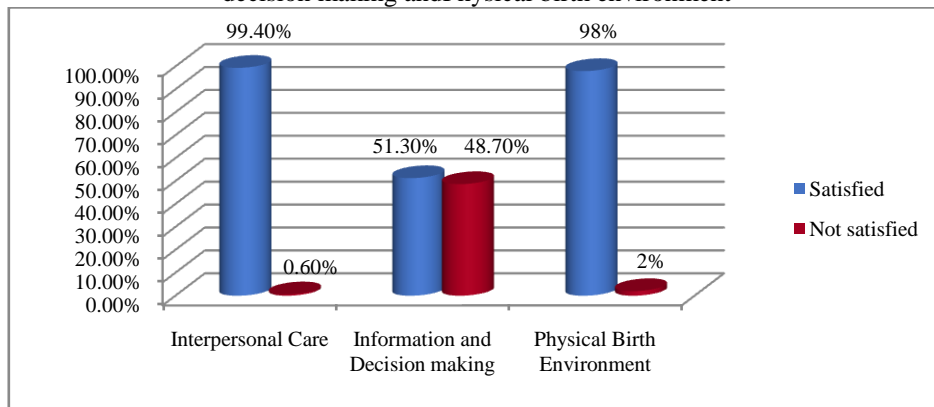


Table:5shows that there is no significant association between birth satisfaction of women and their socio-demographic variables

Table 5: Association between overall birth satisfaction of woman with socio-demographic variables.

Socio-Demographic Variables	Satisfied		Not Satisfied		Total	χ ²	p value
	n	%	n	%			
Age (Years)							
Less than 20	27	96.4	1	3.6	28	2.783	0.733
20-25	284	98.6	4	1.4	288		
26-30	273	98.9	3	1.1	276		
31-35	101	99	1	1	102		
36-40	13	92.9	1	7.1	14		
41 and above	2	100	-	-	2		
Education							
None	2	100	-	-	2	1.448	0.836
Primary School	30	100	-	-	30		
Secondary School	155	98.7	2	1.3	157		
Undergraduate	254	98.8	3	1.2	257		
Postgraduate and above	259	98.9	5	1.9	264		
Occupation							
House wife	619	98.7	8	1.3	627	0.880	0.644
Professional	75	97.4	2	2.6	77		
Non-professional	6	100	-	-	6		
Income							
Less than 2000	57	98.3	1	1.7	58	0.538	0.911
2000-5000	90	98.9	1	1.1	91		
5001-10,000	200	99	2	1	202		
10,001 and above	353	98.3	6	1.7	359		
Locality							

Urban	387	98.7	5	1.3	392	0.111	0.739
Rural	313	98.4	5	1.6	318		

Table:6 reveals that there is no significant association between birth satisfaction of women and their clinical variables, however there is a significant association ($p < 0.05$) between complications developed in women and birth satisfaction.

Table 6: Association between overall birth satisfaction of woman with selected clinical variables.

Clinical Variables	Satisfied		Not Satisfied		Total	χ^2	p value
	n	%	n	%			
Parity							
Primiparous	385	98.5	6	1.5	391	0.316	0.854
Multiparous	297	98.7	4	1.3	301		
Grand multiparous	18	100	-	-	18		
Gestational age at delivery							
Preterm	54	98.2	1	1.8	55	0.106	0.948
Term	587	98.7	8	1.3	595		
Post term	59	98.3	1	1.7	60		
Type of Delivery							
Normal vaginal	578	98.8	7	1.2	585	0.931	0.335
Instrumental	122	97.6	3	2.4	125		
Delivery Conducted by							
Doctor	605	98.7	8	1.3	613	0.309	0.578
Midwife	95	97.9	2	2.1	97		
Duration of labour							
Less than 2 hours	28	96.6	1	3.4	29	1.21	0.546
2 – 18 hours	584	98.8	7	1.2	591		
18 – 24 hours	88	97.8	2	2.2	90		
Induction/Augmentation of labour done							
Yes	506	98.4	8	1.6	514	0.313	0.576
No	194	99	2	1	196		
Baby sex							
Boy	339	98.8	4	1.2	343	0.280	0.596
Girl	361	98.4	6	1.6	367		
Baby condition							
Active and good	686	98.7	9	1.3	695	1.64	0.20
Depressed at birth	14	93.3	1	6.7	15		
Complications developed during labour							
Yes	59	93.7	4	6.3	63	7.20	0.007*
No	641	99.1	6	0.9	647		
Supported by							
Spouse	21	100	-	-	21	0.001	0.978
Mother	428	98.6	6	1.4	434		
In – laws	126	97.7	3	2.3	129		
Others	125	99.2	1	0.8	126		

IV. Discussion

The demographic characteristics reveal that majority (40.56%) of the women were in the age group of 20 – 25 years and 38.87% of them were in the age group of 26 – 30 years. 37.18% of them were postgraduates and above and 36.20% of them were undergraduates. Majority (88.30%) of the women were house wives and 10.85% of them were employed professionals. 50.56% of the women come from a family with an annual income of ₹10001 and above 28.45% of them had family income ranging between ₹5001 - ₹10000. 55.21% of them have their homes in the urban against 44.79% of them in the rural locality.

The clinical characteristics of the women in this study revealed that 55.07% of the women were primiparous, 42.39% multiparous and 2.54% grand-multiparous. This finding is similar to the study conducted by Jha P et al where <6% of the respondents were grandmultiparas. The study also revealed that majority (83.80%) of them delivered at term gestational age while about 8.45% and 7.75% of the delivered at post term and preterm respectively. 82.39% of the women had normal vaginal delivery and the rest 17.61% instrumental. 86.34% of the deliveries were conducted by doctors and 13.66% was done by midwives. This is in contrast to a study conducted by Mohammad et al showed that 51% of women were primarily assisted by a midwife only while 12.8% of them were assisted by medical staff. Large proportion (83.24%) of the women had a total duration of their labour extending between 2 – 18 hours, 12.68% was 18 – 24 hours and 4.08% was less than 2 hours. 72.39% of them had induction or augmentation of their labour against 27.61% who delivered spontaneously. It's an interesting fact to find that the sex of the baby delivered by these women were 48.31%

boys and 51.69% girls. Majority (97.89 %) of babies were in good condition at the time of birth while 2.11% of them were depressed at birth. It is very a significant finding that 91.27% of women did not develop any complications following delivery against 8.73% who developed. Majority (46.77%) of them who developed complications following delivery had postpartum haemorrhage and 37.10% had perineal tears. 84.95% of women have had their previous child birth in the tertiary hospital where this study was conducted and only 15.05% elsewhere. As the cultural norms in the society warrants the mother to be the social support person for a woman during labour, this study also reveals the fact in majority (61.13%) of women.

In regard to the satisfaction of women with each aspect of their birth experience it was found that 62% were satisfied with the staff being friendly and welcoming on arrival at the hospital. 64.5% of them said that the doctors and midwives were encouraging and reassuring. 72.4% felt satisfied with the nurses help during labour/ birth, while 73.7% with doctors help and 70% of the women were satisfied with the overall care. The study revealed that only 56.3% of the women were satisfied with always being kept informed about what was happening during labour/ birth by the midwives and doctors. Women also expressed satisfaction with level of adequate light (57.6%), adequate room space (55.6%), clean equipments and trays (62.4%), finding supplies and needs (53%). 24.1% of women were not satisfied with “during labour/ birth decisions were made without taking my wishes into account, 20.8% felt pressured to have the baby quickly and 16.1% of them felt labour was taken over by strangers and machines”. 44.1% of the women were not satisfied with the level of noise.

This study also revealed that the total mean satisfaction score was 58.94 (SD \pm 6.16), a similar study done by Mohammad et al in his study found that the total mean satisfaction score was 36.12 (SD \pm 8.88). Among the three subscales the mean of interpersonal care was 23.20 \pm 2.344 SD, mean for information and decision making was 13.71 \pm 3.61 SD and mean for physical birth environment was 22.02 \pm 2.94. Mohammad et al in his study found that the mean subscale for interpersonal care was 11.28 (SD \pm 3.62), mean with information and decision making was 10.87 (SD \pm 3.03) and the mean for physical birth environment was 11.54 (SD \pm 4.21). The findings of the present study showed that majority of the women were satisfied with their birth experience.

Previous studies related to this topic have revealed that there is no straightforward association between socio-demographic variables and birth satisfaction. This study also reveals that there is no significant association between birth satisfaction and the socio-demographic variables as well as clinical variables of the women. However, a significant association ($p < 0.05$) between complications developed in women and birth satisfaction has been identified. This could be because the women who developed complications had unmet needs and high expectations with added psychological and financial stress due to the increased period of hospital stay.

V. Conclusion

Health care professionals need to plan and implement appropriate strategies to develop satisfying birth experience for women who deliver in the health care facility. Involving the women in decision making, reducing their pressure to deliver the baby quickly and improving personal communication with the women during labour/ birth will help in improving the satisfaction of the women to a great extent.

References

- [1]. Jha P, Larsson M, Christensson K, Svanberg SA. Satisfaction with childbirth services provided in public health facilities: results from a cross-sectional survey among postnatal women in Chhattisgarh, India. *Global Health Action*. 2017. Oct 10(1): 1386932. Published online 2017 Oct 31. doi: 10.1080/16549716.2017.1386932
- [2]. Mohammad K, Shaban I, Homer C, Creedy D. Women's satisfaction with hospital-based intrapartum care: A Jordanian study. *International Journal of Nursing and Midwifery*, 2014. July;6(3): 32 – 39. Available from <http://www.academicjournals.org/IJNM>
- [3]. Tocchioni V, Seghieri C, De Santis G, Nuti S. Socio-demographic determinants of women's satisfaction with prenatal and delivery care services in Italy. 2018. April; 30(8): 594 – 601. Downloaded from <https://academic.oup.com/intqhc/article-abstract/30/8/594/4973658> by Dodd Library: Christian Medical College – Vellore

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