



Access the article online

Quick Response Code



www.jacjournal.org

DOI: <https://doi.org/10.51648/jac121>**\*Corresponding author**

Dr. Renu Khayamali  
Assistant Professor  
Department of Swasthavritta & Yoga,  
Ayurveda Campus  
Institute of Medicine, Tribhuvan  
University  
Kirtipur, Kathmandu, Nepal  
E-mail: [drrenukhayamali@gmail.com](mailto:drrenukhayamali@gmail.com)

Submitted: 15.09.2304

Received: 15.10.2024

Accepted: 29.10.2024

Copyright: © The Author(s) 2024. This is an open access article under the CC BY NC license.



## Maternal birth satisfaction among postnatal women in Bhaktapur of Nepal

Rameswori Khayamali<sup>1</sup>, Padam Raj Joshi<sup>2</sup>, Renu Khayamali<sup>3\*</sup>, Narendra Singh Thagunna<sup>2</sup>

<sup>1</sup> Hospital Nursing Inspector; Government of Nepal, Bajrabarahi Chapagaun Hospital, Lalitpur, Nepal, <sup>2</sup> Faculty; Department of Psychology, Padma Kanya Multiple Campus, Bagbazar, Kathmandu, Nepal, <sup>3</sup> Assistant Professor; Department of Swasthavritta & Yoga, Ayurveda Campus, Institute of Medicine, Tribhuvan University, Kirtipur, Kathmandu, Nepal

### ABSTRACT

**Background:** Maternal birth satisfaction is a multi-faceted notion which is concerned with quality of care. It is affected by several socio-demographic and obstetric factors. A mother's satisfaction with childbirth facilities can have a great impact on her physical and mental health and capacity to bond with her baby as well. The study aimed to assess the level of maternal birth satisfaction among postnatal women attending Changunarayan Primary Health Care (PHC), Bhaktapur, Nepal.

**Materials and Methods:** A quantitative descriptive cross-sectional study was assessed among 254 postnatal women of aged 20-45 years and had a baby in the previous 6-12 weeks. Non-probability purposive sampling method was used. Data collection was done by using standardized pre-tested, birth satisfaction scale-revised (BSS-R) tool. Structured interview schedule in Nepali language was carried out. Data analysis was done using SPSS version 16. Chi-square test and regression analysis were used to analyze the relationship between the dependent and independent variables.

**Results and Discussions:** Total mean score of maternal birth satisfaction of postnatal women was  $21.85 \pm 3.43$ , which showed that there is moderate satisfaction among the women. The study showed that the majority (86%) of the respondents were satisfied whereas, 14% were unsatisfied with perinatal service delivery. In Pearson's Chi-square analysis, there was statistically significant association between age ( $p = 0.03$ ), type of family ( $p = 0.001$ ), parity ( $p = 0.02$ ) and getting support during labor and child birth ( $p = 0.001$ ) and maternal birth satisfaction. In bivariate and multivariate regression analysis, respondents living in the joint family has 4.74 times more likely to have maternal birth satisfaction [AOR=4.74; 95% CI: 1.43-15.76] than respondents living in the nuclear family. Regarding getting support, postnatal women who received support at birth and after birth were 3.525 times more likely to be satisfied [AOR=3.52; 95% CI: 1.24-9.96] than those did not received any support during labor and childbirth.

**Conclusion:** The result concludes that majority of the postnatal women were satisfied with the perinatal delivery service. Age, family type, parity and getting support during labour and childbirth were statistically associated with maternal birth satisfaction. Maternal satisfaction plays significant role in physical and mental health in the postpartum period.

**Keywords:** Birth Satisfaction, Maternal Birth Satisfaction, Postnatal Women, BSS, BSS-R

### INTRODUCTION

Maternal birth satisfaction (MBS) is the satisfaction level of postnatal women during service delivery.<sup>1</sup> Satisfaction is a multi-faceted notion which is concerned with quality of service and care.<sup>2,3</sup> Boosting of MBS is important for averting postnatal women's anxiety, enhancing treatment adherence, escaping disease, and promoting health.<sup>4</sup> Focusing on assessment of postnatal women which are highly sensitive to identify their physical, psychological, social needs, and challenges.<sup>5,6</sup> Similarly, assessing MBS is also crucial to assess whether

health services are developed according to their needs or not and to provide quality maternal-friendly services.<sup>7</sup>

Birth trauma is misery expressed by a mother during intra-partum and postpartum period. Trauma can be physical, although it usually manifests as emotional or psychological. Birth trauma is not just about the events occurred during labour and the birth, but can also refer to how the mother, are left feeling subsequently. Birth trauma can not always be averted, but there are activities which can be done to reduce the risk.<sup>8</sup>

Maternal satisfaction is a marker of the quality of health facilities perceived by the women during their childbirth experience at health care centres. It is a vital determinant of maternal and newborn health services provided at any health care centers. Assessing the mother's perception is a good indicator of their expectations and can help enhance the quality of services at the health care centers. Furthermore, evaluating service recipient satisfaction with healthcare and child birth services has been considered as approach to ameliorate the excellence of healthcare.<sup>9</sup>

Women's contentment with maternity services is a critical period which is distinguished by a number of events that are all very important to all the stakeholders like the legislators, administrators, and healthcare professionals. On the other hand, the lack of satisfaction may impact mothers either in or during labor, or after delivery in various ways.<sup>10</sup>

The satisfaction of mothers on healthcare services has been widely considered as an important determinant of quality in healthcare facilities. Much effective effort is essential from all the stakeholders to boost delivery services satisfaction by decreasing waiting time, maintaining privacy, and arranging waiting areas. An optimistic delivery experience and a favorable approach into the maternal role will improve women's satisfaction with the care provided during labour and delivery, which enhances a positive transition towards motherhood. On the other hand, a negative child birth experience can cause the mother to feel distress and impact her mental health, which also increases the chances of postpartum blues, depression, psychotic disorders and post-traumatic stress disorder.<sup>11</sup>

The maternal satisfaction with childbirth facilities can have an important positive and negative effect on her physical and mental health as well as her capacity to bond with her baby. It should be considered that the feeling of women in labour may also impact maternal and neonatal health outcomes because anxiety during labour is connected with increased adrenaline levels, abnormal fetal heart rate, reduction of uterine contractility, and an increase in the duration of the active labour stage. On the other hand, the emotional support, and soothe techniques may reduce anxiety, fear, and their adverse effects.<sup>12</sup> Healthcare service satisfaction is predisposed by cultural viewpoints, ease of access, socioeconomic condition, capacity to afford, and approach to healthcare professionals. Satisfaction of services refers to expectations and the excellence of healthcare services received.<sup>13</sup> Satisfaction during delivery is a vital aspect of postnatal maternal health after delivery, which has long standing effects on her life.<sup>14</sup> It is influenced by multiple

factors such as personal characteristics, ideals and prediction.<sup>15</sup> A positive childbirth feelings helps a mother to identify her baby positively and easily adjusts the motherhood role by feeling positive sentiments towards her child.

Pregnancy and delivery are a period of huge physiological, psychological, and social alteration for most of the mother. It is a time of quick shift and adjustment. Although the delivery is considered positively in nearly all cultures, research reflects that 20 to 40% of women experience childbirth psychologically hurtful.<sup>16</sup>

Maternal satisfaction measures the capacity of services to meet clients' expectations, and is an essential indicator of the selection of health facilities and for selection of future consumption of healthcare services. Satisfied consumer will be more likely to revisit in the future and suggest the facilities to their relatives and friends.<sup>17</sup>

MBS is one of the most commonly reported outcome measures for excellence of healthcare. It requires to be considered to enhance the excellence and efficiency of healthcare services during pregnancy, delivery, and postpartum period to provide excellence maternal friendly health services and to address the proper psychological needs of the mother.<sup>18</sup>

The psychological health of a postnatal mother is significant for the holistic growth and development of both mother and baby. One of the elements of psychological health is the birth satisfaction expressed by the mother during delivery. Maternal satisfaction during delivery can impact the choice of place for delivery and be useful to recognize gaps between actual and intended healthcare services. This study was conducted with an aim of assessing the satisfaction among postnatal women who attend PHC at Changunarayan, Bhaktapur, Nepal.

## MATERIALS AND METHODS

The descriptive cross-sectional and quantitative method study was carried out to assess maternal birth satisfaction among postpartum women attending Changunarayan Hospital, Bhaktapur, Nepal. The study was conducted on postnatal women aged 20-45 years, and had a baby in the previous 6-12 weeks. The size of the sample was 254 which was calculated by adopting Cochran formula. Purposive sampling technique was adopted to conduct the study.

The socio-demographic characteristics of the study were age, residence, educational level, ethnicity, type of family, religion, occupation, and relationship status whereas the obstetric characteristics were parity, gestational age at childbirth, previous birth trauma, complication of mother, complication of infant, pregnancy loss and number of living children. The respondents not giving voluntary consent for participation and women who underwent caesarean section were excluded from the study.

Standardized pre-tested Birth Satisfaction Scale Revised (BSS-R) questionnaire was adopted to conduct the study. The BSS-R is a Likert scale which consists of 10 items that was developed by using the original 30 items of BSS which gives a concise measure

of birth satisfaction. It is considered as a possible lead performance determinant for evaluating perinatal service delivery. The question was designed by Hollins Martin and Martinin 2014.<sup>19</sup> It is a strong, valid and reliable multi-faceted psychometric tool for evaluating level of birth satisfaction of postnatal women. The tool is suggested as the technique of choice for measuring maternal birth perception by the International Consortium for Health Outcome Measurement (ICHOM). It comprises of one, higher-order factor (childbearing experience) containing three lower order factors (excellence of care rendered, women's personal attributes, and stress perceived during labour). It also consists of four items measure excellence of care rendered; four items measure stress during labour; and two items measure women's attributes. It desires respondents to rate their level of agreement with each item (0=Strongly Disagree to 4=Strongly Agree), with four of its items being reverse-coded. A score of 0 indicates no birth satisfaction and 40 most (score range from 0-40). Each item is measured on a descending ranking from 'Strongly Agree' with a score of '4' to 'Strongly Disagree' with a score of '0'. But, items 2, 4, 7 and 8 are reverse measured.

All the data were first entered to Microsoft Excel sheet and checked for the completeness of the data. Then the data were imported and coded in SPSS. The obtained data was subjected to statistical analysis by using SPSS software (version 16) for computation of descriptive statistics as Mean, Standard Deviation and inferential statistics, Chi-square test and regression analysis were adopted to assess the relationship between the dependent and independent variables. Analysis and interpretation of the study findings were undertaken by using descriptive and inferential statistics. Significance was evaluated by Adjusted Odds Ratio (AOR) with 95% confidence intervals. Odds ratio was calculated to measure the strength of association. Bivariate logistic regression was used to identify the association between the dependent variables and independent variables. Then multivariate logistic regression was used to find out various predictors by considering *p*-value less than 0.05.

## RESULTS

The present study on maternal birth satisfaction among postnatal women of Bhaktapur, Nepal was conducted among 254 respondents. The median age of the respondents was 32 years. The age of the respondents was not normally distributed. Out of the respondents, the demographic data showed that the age group 31-35 years comprises the highest population with 38.2 % (n = 97). Likewise, only 5.5% (n = 14) of the respondents lies between age group more than 41 years. Majority of the respondents 39.37% (n = 100) had completed secondary level, and 18.90% (n = 48) had completed above secondary level whereas, 14.96% (n = 38) had no formal education, more than half 56.3% (n = 143) were *Janajati* followed by 31.1% (n = 79) of *Brahmin/Chhetri* whereas, 12.6% (n = 32) were *Dalit*. The type of family of the respondents showed that majority of respondents (59.45%, n = 151) resided in nuclear family and majority of respondents (82.67%, n = 210) were follower of Hinduism whereas 11.81% (n = 30) and 5.52% (n = 14) respondents were follower of Buddhism and Christianity,

respectively. The occupation of the respondents showed that majority 39.77% (n = 101) had agriculture as a source of income and others were homemaker, labourer and service holder. The relationship status showed that majority of respondents (98.03%, n = 249) were married whereas others were divorced. Moreover, majority of respondents (44.09%, n = 142) reside in rural area.

**Obstetric Information of the Respondents:** The obstetric information of the study was parity of mother, gestational age at childbirth, previous birth trauma, complication of mother, complication of infant, pregnancy loss, number of living children, condition of getting support in birth and after the birth, and place of birth.

The study revealed that majority of respondents (65.75%, n = 167) were primipara while others were multipara. The gestational age at childbirth showed that majority of respondents (64.96%, n = 165) were between 37-42 weeks of gestation at the time of their childbirth, 30.31% (n = 77) of respondents were <37 weeks of gestation whereas others were > 42 weeks of gestation. Majority of respondents (94.09%, n = 239) did not have previous birth trauma. Similarly, majority of respondents responded no complications of mother (88.19%, n = 224) and infant (72.2%, n=217). The majority of respondents (78.74%, n = 200) did not had pregnancy loss. Majority (92.52%, n = 234) had one living children, 92.52% (n=235) got support in birth and after the birth and 92.13% (n=234) had planned birth at maternity ward.

**Level of Maternal Birth Satisfaction:** The study revealed that majority (86.2%) of the respondents were satisfied whereas, 13.8% were unsatisfied with perinatal delivery services provided in the PHC (**Figure 1**). Among 254 respondents, 13.8% (n=35) were low satisfied, 72% (n= 183) were moderately satisfied and 14.2% (n=36) respondents were highly satisfied with perinatal delivery services provided in the hospital. The total mean score of MBS from the BSS-R questionnaire of postnatal women was 21.85±3.43, which showed that there was moderate MBS among the women visiting the PHC for the perinatal services.

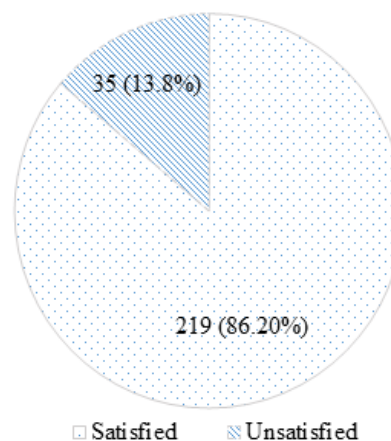


Fig 1: Level of Maternal Birth Satisfaction

**Association between the socio-demographic factors with maternal birth satisfaction:** The level of maternal birth satisfaction in women with age >31 years was found higher (55.91%, n = 142) than the women aged below 31 years, which is statistically significant ( $\chi^2 = 4.695$ ,  $df = 1$ ,  $p \leq 0.030$ ), which signifies that the MBS increases with increase in age of the mother. The data showed that the higher percentage of MBS was found among women with formal education (72.44%, n = 184) than non-formal education, although it was not statistically significant ( $p \leq 0.252$ ). The higher percentage of MBS was found in women residing in rural area (47.64%, n = 121), which was found statistically insignificant ( $p \leq 0.59$ ).

Similarly, the MBS was observed to be the higher among *janajati* ethnic group (50%, n = 127) than others. The women having other occupation (53.54%, n = 136) had than agriculture; married (84.65%, n = 215) than divorced, and nuclear family type (47.24%, n = 120) than the joint family showed higher percentage of MBS level. There were statistically insignificant association of MBS with ethnicity ( $p \leq 0.17$ ), occupation ( $p \leq 0.12$ ) and marital status ( $p \leq 0.68$ ). However, there was statistically significant association between MBS and type of family ( $\chi^2 = 14.289$ ,  $df = 1$ ,  $p \leq 0.001$ ) which showed that the family living in joint family had higher MBS than family living in nuclear family. The association between MBS and socio-demographic factors are presented in **table1**.

**Table 1: Association between socio-demographic factors and maternal birth satisfaction**

Characteristics	Level of Birth satisfaction		$\chi^2$	df	p value
Sociodemographic factors	Unsatisfactory	Satisfactory			
	n (%)	n (%)			
Age (in years)					
<31	19 (7.48)	77 (30.31)	4.695	1	0.030*
≥ 31	16 (6.30)	142 (55.91)			
Educational Level					
No formal Education	3 (1.18)	35 (13.78)	1.303	1	0.254
Formal Education	32 (12.60)	184 (72.44)			
Residence					
Urban	14 (5.51)	98 (38.58)	0.276	1	0.599
Rural	21(8.27)	121 (47.64)			
Ethnicity					
Janajati	16 (6.30)	127 (50.00)	1.849	1	0.174
Others	19 (7.48)	92 (36.22)			
Occupation					
Agriculture	18 (7.09)	83 (32.68)	2.306	1	0.129
Others	17 (6.69)	136 (53.54)			
Family Type					
Nuclear	31 (12.21)	120 (47.24)	14.281	1	0.001*
Joint	4 (1.57)	99 (38.98)			
Relationship Status					
Married	34 (13.39)	215 (84.65)	0.166		0.684
Divorced	1 (0.39)	4 (1.57)			
Religion					
Hindu	30 (11.81)	180 (70.87)	0.261	1	0.609
Others	5 (1.97)	39 (15.35)			

**Association between obstetric factors and maternal birth satisfaction:** The MBS was significantly higher among the primiparous women than multiparous women [ $\chi^2 = 5.276$ ,  $df = 1$ ,  $p \leq 0.022$ ]. The percentage of maternal satisfaction was higher among women who gave birth between 37 weeks and above [ $\chi^2 = 0.407$ ,  $df = 1$ ,  $p \leq 0.524$ ] than <37 weeks, however it was insignificantly associated. Likewise, the percentage of MBS was

higher among women with no previous birth trauma [ $\chi^2 = 0.233$ ,  $df = 1$ ,  $p \leq 0.629$ ] than with previous birth trauma; higher among women with no complication of mother [ $\chi^2 = 0.239$ ,  $df = 1$ ,  $p \leq 0.625$ ] than with the complication; higher among the women with no complication of infant [ $\chi^2 = 0.321$ ,  $df = 1$ ,  $p \leq 0.571$ ] than with complication with the infant; higher among women with no pregnancy loss [ $\chi^2 = 0.481$ ,  $df = 1$ ,  $p \leq 0.488$ ] than with previous



pregnancy loss; higher among women with single living children [ $\chi^2 = 3.470$ ,  $df = 1$ ,  $p \leq 0.63$ ] than two or more children; higher among women with planned place of birth [ $\chi^2 = 0.261$ ,  $df = 1$ ,  $p \leq 0.609$ ] than those with unplanned place of birth and higher among women with husband as birth partner [ $\chi^2 = 0.065$ ,  $df = 1$ ,  $p \leq 0.789$ ] than others as birth partner. The above analysis showed that there were no statistically significant association among the categories. However, the level of MBS was highly significant among women

who got support at birth and after [ $\chi^2 = 13.869$ ,  $df = 1$ ,  $p \leq 0.001$ ] than those who did not get support. The association between the obstetric factors and MBS are presented in **table 2**.

**Table 2: Association between Obstetric factors and Maternal birth satisfaction**

Characteristics	Level of Birth Satisfaction		$\chi^2$	p value
Obstetric Factors	Unsatisfactory n (%)	Satisfactory n (%)		
Parity of mother				
Primipara	29 (11.42)	138 (55.33)	5.276	0.022*
Multipara	6 (2.36)	81 (31.89)		
Gestational Age at Childbirth				
<37 weeks	9 (3.54)	68 (26.77)	0.407	0.524
37weeks and above	26 (10.24)	152 (59.84)		
Previous Birth Trauma				
No	35 (13.78)	204 (80.31)	0.233	0.629
Yes	0 (0.00)	15 (5.91)		
Complication of Mother				
No	30 (11.81)	194 (76.38)	0.239	0.625
Yes	5 (1.97)	25 (9.84)		
If Yes, type of complication (n = 30)				
Minor	5 (16.67)	22 (73.33)	0.667	0.414
Major	0 (19.3)	3 (10.00)		
Complication of Infant				
No	31(12.20)	186 (73.23)	0.321	0.571
Yes	4 (1.57)	33 (12.99)		
If yes, type of complication (n = 37)				
Minor	5(24.32)	28(75.68)	0.255	0.614
Major	1(2.70)	3(8.11)		
Pregnancy loss				
No	26(10.24)	174(68.50)	0.481	0.488
Yes	9(3.54)	45(17.72)		
Number of living children				
One	35(13.78)	199(78.35)	3.470	0.63
Two or more	0(0.00)	20(7.87)		
Getting support at birth and after birth				
Not Received	8(3.15)	11(4.33)	13.869	0.000*
Received	27(10.63)	208(81.89)		
Place of birth				
Unplanned	2(0.79)	18(7.09)	0.261	0.609
Planned	33(12.99)	201(79.13)		
Birth Partner				
Husband	28(11.02)	171(67.32)	0.065	0.798
Others	7 (2.76)	48 (18.90)		

Those variables which were significantly associated with MBS ( $p \leq 0.05$ ) were further analysed for multivariate analysis after bivariate

analysis. By adjusting potential confounders in multivariate logistic regression analysis, age, family type, parity, and getting support during and after birth of a baby were significantly associated with MBS.

Respondents living in the joint family has 4.74 times more likely to have MBS [AOR=4.749; 95% CI:1.431-15.762] than respondents living in the nuclear family. Regarding getting support, postnatal

women who received support during and after birth were 3.525 times satisfactory [AOR=3.525;95% CI:1.247-9.967)] than those did not received any birth support. However, no association was found in age and parity of the mother. The predictors of the statistically significant factors are given in **table 3**.

Table 3: Predictors of Maternal Birth Satisfaction

Predictors	Birth satisfaction		AOR [95% CI]	p value
Total (n = 254)	Unsatisfactory n (%)	Satisfactory n (%)		
Age				
<31 years	19 (7.48)	77 (30.31)	1.10 [0.481-2.5]	0.81
>31 years	16 (6.30)	1		
Family type				
Nuclear	31(12.21)	120 (47.24)	4.749 [1.43-15.7]	0.01*
Joint	4 (1.57)	1		
Parity				
Primi	29 (11.42)	138 (55.33)	1.90 [0.72-5.02]	0.19
Multi	6 (2.36)	81 (31.89)	1	
Getting Support				
Not Received	8 (3.15)	11 (4.33)	3.525 [1.24-9.96]	0.018*
Received	27 (10.63)	208 (81.89)	1	

DISCUSSION

**Demographic Characteristics:** In the study, mean age of the participants was 31.78± 5.07 years. The age of respondents was not distributed normally. The demographic characteristics showed that majority of the respondents had completed secondary level education and belong to *janajati* ethnic group. The result showed that most of the participants resided in nuclear family; and were hindu by religion. The major source of income of the participants was agriculture. Most of the participants were married and reside in rural area. Similarly, the obstetric information showed majority of respondent were primiparous and gave birth at term. Majority of participants had no previous birth trauma and no complications of mother and infants during the birth. Most of them had no previous pregnancy loss and majority of participants has one living children. The majority participants had planned place of birth of their baby. The result may be due to the site of data collection and the sample of the population.

**Satisfaction level among postnatal women:** Childbirth is one of the most crucial moments in a mother’s life and is an extremely individual perception. Childbirth experience may have short-term and long-term impacts on the mother’s physical and mental health condition and the bond with her newborn baby. The main components of care are the responsibility to a positive delivery experience for mother that are excellence connection with clinicians, choice and control, and psychological safety.<sup>20</sup> MBS is a significant determinant of the excellence of maternal and newborn services. Awareness regarding the determinants of MBS can help the facilities to improve their services as increased

satisfaction leads to increased utilization of the services and better compliance to treatment as well. The availability of skilled care and involvement of mother in care is an important indicator of level of MBS.<sup>21</sup>

The study revealed that out of 254 respondents, majority (86.2%) of the respondents were satisfied whereas, 13.8% were unsatisfied with perinatal delivery services provided in the hospital. The total score of revealed that the participants has moderate level of MBS with mean score 21.85±3.43. The findings of the study is alike the findings of a cross sectional study carried out in Nigeria which reported that majority of respondents 86.7 % (n = 173) were satisfied with delivery services rendered.<sup>22</sup> Likewise, the findings of the study are alike to the findings of a descriptive, cross sectional study conducted in Bheri zonal hospital of Nepal, which showed majority of respondents 89.89% (n = 178) were satisfied with delivery services.<sup>23</sup> A cross sectional study conducted from a nationally representative facility based survey across 13 districts in Nepal revealed that the prevalence of MBS was 77%; high satisfaction among the women attending the institution for delivery.<sup>24</sup> Likewise, the study is similar with a cross sectional study carried out in Turkey, which reported that 70.4% (n = 418) respondents were pleased with delivery services rendered.<sup>25</sup>

The outcomes of the study is contradictory with the descriptive study conducted in India which showed 100% (n = 36) of the women were pleased with their delivery experience.<sup>26</sup> Similarly, the results of the current study are also contradictory with a cross sectional study carried out among 102 mothers visiting

the immunization clinics which showed that only 61.1% of the respondents were pleased with the delivery services.<sup>27</sup> This might be due to the different design of the study and sample size. This dissimilarity might be due to a variation in MBS definition, distribution of risk factors among the studied respondents and time period of the study.

**Factors associated with maternal birth satisfaction:** Childbirth is vital feelings and biological events in a mother's life, and the way it is recalled is affected by various factors, while many of which are considered to varying degrees in intra-partum care.<sup>28</sup> These findings also compared with a descriptive cross-sectional study conducted in Nepal among 178 respondents of a government hospital of Mid-Western Nepal which showed no statistically significant association between socio-demographic and obstetric characteristics and MBS. Although the association was insignificant, postnatal women who were illiterate were 2.71 times more likely to be pleased than who were literate, also postnatal women up to primary level were 2.85 times more likely to be pleased than secondary level and above. Furthermore, the study revealed that the postnatal mothers who were multiparous women were 2.35 times more likely to be pleased with the childbirth service than primiparous women.<sup>29</sup>

Another descriptive cross-sectional study done in Poland among 275 respondents demonstrated a significant relationship between place of residence and level of MBS, with women living in rural areas expressing a significantly higher satisfaction with the accessible amenities during childbirth, and overall satisfaction with the childbirth feeling in comparison to those residing in urban areas with populations of up to 150,000. This study observed no statistically significant relationship between marital status and level of satisfaction with delivery. It was also identified that multiparous expressed significantly higher satisfaction level. The presence of a company during childbirth significantly increased the satisfaction with the probability of utilizing available amenities during delivery.<sup>30</sup>

The study demonstrated a substantial association between level of MBS and socio demographic characteristics such as age and type of family. The present study revealed that respondents living in the joint family has 4.74 times more likely to have MBS than respondents living in the nuclear family. This study also revealed that educational level, residence, ethnicity, occupation, income status and religion were not linked to MBS statistically. This finding is similar to the study conducted in Nepal among 447 respondents which revealed that socio-demographic factors are not statistically associated with level of MBS.<sup>31</sup>

The current study also revealed a substantial association between MBS and parity of the mother and getting support during and after labour or childbirth but there was no statistically significant association between gestational age at childbirth, previous birth trauma, complication of mother, complication of infant, pregnancy loss, number of living children, place of birth and birth partner. The present study also reflected that postnatal women getting support during and after birth were 3.52 times more likely to be satisfied

than those did not received any birth support. The study is similar to the study carried out in Mid-western Nepal which showed that the obstetric characteristics and maternal level of satisfaction are not statistically significant.<sup>32</sup>

**Association between socio-demographic factors and maternal birth satisfaction:** The study demonstrated a substantial association between level of MBS and socio demographic characteristics such as age and type of family. The present study revealed that respondents living in the joint family has 4.74 times more likely to have higher MBS than respondents living in the nuclear family. The study also revealed that educational level, residence, ethnicity, occupation, income status and religion were not statistically associated to MBS.

The findings compared with a cross sectional study conducted in Ethiopia among 400 respondents showed that significant association between the socio-demographic characteristic of the respondents that is age, educational level and birth satisfaction were found.<sup>33</sup> Similarly, the findings of the current study are contradictory with a descriptive cross-sectional study conducted in Nigeria with 267 respondents using simple random sampling technique which showed that significant association exists between level of respondents' education and MBS on delivery care.<sup>34</sup> The results of the study is contradictory with a descriptive exploratory survey carried out in Government Medical College Hospital, India among 170 respondents which revealed that the age and education were significantly related to the level of satisfaction.<sup>35</sup>

Studies showed that socio-economic, cultural factors and ethnicity impacted level of maternal satisfaction in Kenya<sup>36</sup> and Sri Lanka<sup>37</sup>, while religion showed significant association in a study conducted in Nigeria.<sup>38</sup> Education level of mother negatively influenced their level of satisfaction with maternal care in accordance with the studies conducted in India<sup>39</sup>, Tanzania<sup>40</sup> and Ghana.<sup>41</sup> Women's expectation of baby's gender influenced level of satisfaction with health services rendered in studies done in Thailand<sup>42</sup> and Saudi Arabia.<sup>43</sup> Likewise, literacy is considered as a key factor impacting level of satisfaction with maternity care and the duration of mothers' schooling affects their experiences about health facilities, leading to sound knowledge and better use of most types of health care services.<sup>44</sup>

The difference in the level of MBS of this study from other studies may be elaborated by the difference in ethnicities, culture, and the various expectation levels among the women, especially in the western countries where it is elevated.

**Association between obstetric factors and maternal birth satisfaction:** The current study demonstrated a substantial relationship between level of MBS and parity of the mother and getting support during and after labour/childbirth, but there was statistically insignificant association between gestational age at childbirth, previous birth trauma, complication of mother, complication of infant, pregnancy loss, number of living children, place of birth and birth partner. The present study also revealed that women getting support during and after birth were 3.52 times more

likely to be satisfied than those did not received any birth support. The finding is supported by a research done in India, among 102 respondents which revealed that there was statistically significant relationship between MBS and receiving support.<sup>45</sup> Likewise, the study is alike with a mixed method study conducted in Ireland in 2023, among 307 reflected that there is positive association between getting support and MBS.<sup>46</sup> The study is contradictory with a cross sectional study done among 320 women which revealed that urban residence, absence of antepartum hemorrhage, absence of fetal distress during labour, and absence of intrauterine meconium were associated with maternal satisfaction.<sup>47</sup>

The difference in the result may be due to difference in the study tools adopted to identify the level of MBS, which might have also contributed to the difference in the level of satisfaction.

## CONCLUSION

The findings of the study conclude that the majority of the postnatal women were satisfied with the perinatal delivery service and socio-demographic and obstetric factors influence the maternal birth satisfaction. Age, type of family, parity and receiving support during labour and childbirth are the factors associated with the MBS. Besides, the women having joint family has higher maternal birth satisfaction than the women living in the nuclear family. Other factor such as postnatal women getting support at birth and after birth are also highly satisfied than the women getting no support.

It is essential to address the factors influencing level of maternal birth satisfaction in order to enhance the care given during birth and in the puerperium period. The maternal birth satisfaction has direct and indirect impact on the physical, mental and social health of both mother and child at present and in the future as well. It is also important to look further into the reason of displeasure of the few respondents that were dissatisfied. Periodic maternal satisfaction survey should be conducted to gather feedback for consistent quality enhancement, enhancing mother an infant bonding, improve mental health of the postnatal women, and overall quality of life.

## ETHICAL CONSIDERATION

The study addressed ethical issues properly before starting of the study. The study was undertaken based on the ethical guidelines of human participations. The study was carried out after obtaining administrative permission from the Changunarayan Hospital (Ref No 84). Respondents who did not wish to continue during study were allowed to do so. Confidentiality was maintained by assuring that the provided information was only be used for the academic purpose of the research. Each respondent was treated with dignity and respect.

## ACKNOWLEDGEMENT

We would like to thank all the participants for their voluntary consent to be the part of the study, all the faculty of Department of Psychology, Padma Kanya Multiple Campus, Bagbazar, Kathmandu, Nepal, Changunarayan Hospital Bhaktapur administration, and Ms. Chanchala Suwal, Hospital Nursing

Inspector, Changunarayan Hospital, Bhaktapur, Nepal for their support and encouragement throughout the study.

## CONFLICT OF INTEREST

There is no conflict of interest between the authors. This study was conducted as a part of thesis for the partial fulfillment of MA Clinical Psychology from Padma Kanya Multiple Campus, Bagbazar, Kathmandu Nepal entitled ‘Maternal Birth Satisfaction among Postnatal Women of Changunarayan Primary Health Care Center.’ (The Primary Health Care centre has been updated to Hospital at present.)

## SOURCE OF SUPPORT

None

## REFERENCES

1. Panth A, Kifle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March). DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).
2. Ozkan SA, Bal MD. *Maternal Satisfaction in Normal and Caesarean Birth: A Cross-Sectional Study*. International Journal of Caring Sciences. 2019; 12(1):408-415. [Cited: 2024 January]. Available from: [https://www.internationaljournalofcaringsciences.org/docs/46\\_aydinozkan\\_12\\_1\\_1.pdf](https://www.internationaljournalofcaringsciences.org/docs/46_aydinozkan_12_1_1.pdf)
3. Esan DT, Soka-Adeaga AA, Rasaq No. Assessment of satisfaction with delivery care among mothers in selected health care facilities in Ekiti state. *Journal of Public Health Research*. 2022; 11(4): 22799036221127572. DOI: [10.1177/22799036221127572](https://doi.org/10.1177/22799036221127572)
4. Doherty J, Coughlan B, Lynch S, Sheehy L, Martin C. The importance of communication and involvement in decision-making: A study in Ireland exploring birth satisfaction using the Birth Satisfaction Scale-Revised (BSS-R). *European Journal of Midwifery*. 2023; 7(12). DOI: [10.18332/ejm/162943](https://doi.org/10.18332/ejm/162943)
5. Konieczka J, Tomczyk K, Wilczak M, Chmaj-Wierzchowska K. Factors Affecting Women's Assessment and Satisfaction with Their Childbirth. *Medicina*. 2024; DOI: [10.3390/medicina60010086](https://doi.org/10.3390/medicina60010086)
6. Alcorn KL, O'Donovan A, Patrick JC, Creedy D, Devilly G J. A prospective longitudinal study of the prevalence of post-traumatic stress disorder resulting from childbirth events. *Psychological Medicine*. 2010; 40(11): 1849–1859. DOI: [10.1017/S0033291709992224](https://doi.org/10.1017/S0033291709992224)
7. Panth A, Kifle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March).



DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).

8. Sun X, Fan Z Cong S, Wang R, Sha L, Xie H, Han J, Zhu Z, Zhang A. Psychological birth trauma: A concept analysis. *Front Psychol*. 2023;13(13): 1065612. DOI: [10.3389/fpsyg.2022.1065612](https://doi.org/10.3389/fpsyg.2022.1065612).
9. Vyas H, Joseph MO, Bhardwaj P. Maternal satisfaction with childbirth services among postnatal mothers at a primary health center. *International Journal Of Community Medicine And Public Health*.2023; 10(4): 1387–1390. DOI: [10.18203/2394-6040.ijcmph20230678](https://doi.org/10.18203/2394-6040.ijcmph20230678)
10. Esan DT, Sokan-Adeaga AA, Rasag NO. Assessment of satisfaction with delivery care among mothers in selected health care facilities in Ekiti state. *Journal of Public Health Research*. 2022;11(4): 22799036221127572. DOI: [10.1177/22799036221127572](https://doi.org/10.1177/22799036221127572)
11. Kidane A, Getachew T, Mesfin F, Eyeberu A, Dheresa M. Maternal satisfaction on delivery care services and associated factors at public hospitals in eastern Ethiopia. *International Health*. 2022;15(2): 189–197. DOI: [10.1093/inthealth/ihac038](https://doi.org/10.1093/inthealth/ihac038)
12. Gandhi PA, Doley P, Balasubramanian T, Mishra A, Pardeshi G. Assessment of birth satisfaction among the women attending the immunization clinics in South Delhi: A cross-sectional study. *CHRISMED Journal of Health and Research*.2020; 7: 212. DOI: [10.4103/cjhr.cjhr\\_142\\_18](https://doi.org/10.4103/cjhr.cjhr_142_18)
13. Tadele M, Bikila D, Fite RO, Obsa MS. Maternal satisfaction towards childbirth Service in Public Health Facilities at Adama town, Ethiopia. *Reproductive Health*. 2020; 17(1):60. DOI: [10.1186/s12978-020-00911-0](https://doi.org/10.1186/s12978-020-00911-0)
14. Sahu S, Tripathy P, Nayak D, Khosla P. Assessment of Birth Satisfaction after Receiving Midwifery Care among Postnatal Mothers. *TEST Engineering & Management*. 2020;83: 7230–7236.
15. Ozkan SA, Bal MD. *Maternal Satisfaction in Normal and Caesarean Birth: A Cross-Sectional Study*. International Journal of Caring Sciences. 2019; 12(1):408-415. [Cited: 2024 January]. Available from: [https://www.internationaljournalofcaringsciences.org/docs/46\\_aydinozkan\\_12\\_1\\_1.pdf](https://www.internationaljournalofcaringsciences.org/docs/46_aydinozkan_12_1_1.pdf)
16. Carquillat P, Vendittelli F, Perneger T, Guittier MJ. Development of a questionnaire for assessing the childbirth experience (QACE). *BMC Pregnancy and Childbirth*.2017; 17: 279. <https://doi.org/10.1186/s12884-017-1462-x>
17. Paudel YR, Mehata S, Paudel D, Dariang M, Aryal KK, Poudel P, King S, Barnett S. Women's Satisfaction of Maternity Care in Nepal and Its Correlation with Intended Future Utilization. *International Journal of Reproductive Medicine*. 2015; 783050. DOI: [10.1155/2015/783050](https://doi.org/10.1155/2015/783050)
18. Panth A, Kafle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March). DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).
19. Martin CH, Fleming V. The birth satisfaction scale. *International Journal of Health Care Quality Assurance*. 2011c; 24(2):124–135. DOI: [10.1108/09526861111105086](https://doi.org/10.1108/09526861111105086)
20. Doherty J, Coughlan B, Lynch S, Sheehy L, Martin CH, Martin C, Brosnan M, Cronin M, Barry T, Calnan A, Horton S, Egan S, O'Brien D. The importance of communication and involvement in decision-making: A study in Ireland exploring birth satisfaction using the Birth Satisfaction Scale-Revised (BSS-R). *European Journal of Midwifery*. 2023; 7: 12. DOI: [10.18332/ejm/162943](https://doi.org/10.18332/ejm/162943)
21. Vyas H, Joseph MO, Bhardwaj P. Maternal satisfaction with childbirth services among postnatal mothers at a primary health center. *International Journal of Community Medicine And Public Health*. 2023; 10(4): 1387–1390. DOI: [10.18203/2394-6040.ijcmph20230678](https://doi.org/10.18203/2394-6040.ijcmph20230678)
22. Mahnoosh H, Nasr S. Assessment of Childbirth Fear Associated with Childbirth Satisfaction among Pregnant Women in Al-Nasiriyah City. *Pakistan Journal of Medical and Health Sciences*. 2022; 16: 1004–1007. DOI: [10.53350/pjmhs221631004](https://doi.org/10.53350/pjmhs221631004)
23. Panth A, Kafle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March). DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).
24. Paudel YR, Mehata S, Paudel D, Dariang M, Aryal K K, Poudel P, King S, Barnett S. Women's Satisfaction of Maternity Care in Nepal and Its Correlation with Intended Future Utilization. *International Journal of Reproductive Medicine*. 2015; 783050. DOI: [10.1155/2015/783050](https://doi.org/10.1155/2015/783050)
25. Ozkan S A, Bal M D. *Maternal Satisfaction in Normal and Caesarean Birth: A Cross-Sectional Study*. International Journal of Caring Sciences. 2019; 12(1):408-415. [Cited: 2024 January]. Available from: [https://www.internationaljournalofcaringsciences.org/docs/46\\_aydinozkan\\_12\\_1\\_1.pdf](https://www.internationaljournalofcaringsciences.org/docs/46_aydinozkan_12_1_1.pdf)
26. Vyas H, Joseph MO, Bhardwaj P. Maternal satisfaction with childbirth services among postnatal mothers at a primary health center. *International Journal Of Community Medicine And Public Health*. 2023; 10(4): 1387–1390. DOI: [10.18203/2394-6040.ijcmph20230678](https://doi.org/10.18203/2394-6040.ijcmph20230678)

27. Gandhi PA, Doley P, Balasubramanian T, Mishra A, Pardeshi G. Assessment of birth satisfaction among the women attending the immunization clinics in South Delhi: A cross-sectional study. *CHRISMED Journal of Health and Research*.2020; 7: 212.  
DOI: [10.4103/cjhr.cjhr\\_142\\_18](https://doi.org/10.4103/cjhr.cjhr_142_18)
28. Konieczka J, Tomczyk K, Wilczak M, Chmaj-Wierzchowska K. Factors Affecting Women's Assessment and Satisfaction with Their Childbirth. *Medicina*. 2024; 60(1): 86.  
DOI: [10.3390/medicina60010086](https://doi.org/10.3390/medicina60010086)
29. Panth A, Kaffle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March).  
DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).
30. Konieczka J, Tomczyk K, Wilczak M, Chmaj-Wierzchowska K. Factors Affecting Women's Assessment and Satisfaction with Their Childbirth. *Medicina*. 2024; 60(1): 86.  
DOI: [10.3390/medicina60010086](https://doi.org/10.3390/medicina60010086)
31. Mehata S, Paudel YR, Dariang M, Aryal KK, Paudel S, Mehta R, King S, Barnett S. Factors determining satisfaction among facility-based maternity clients in Nepal. *BMC Pregnancy and Childbirth*.2017; 17(1): 319.  
DOI: [10.1186/s12884-017-1532-0](https://doi.org/10.1186/s12884-017-1532-0)
32. Panth A, Kaffle P. Maternal Satisfaction on Delivery Service among Postnatal Mothers in a Government Hospital, Mid-Western Nepal. *Obstetrics and Gynecology International*. 2018; 4530161. (Cited:2024 March).  
DOI: [10.1155/2018/4530161](https://doi.org/10.1155/2018/4530161).
33. Tadele M, Bikila D, Fite RO, Obsa MS. Maternal satisfaction towards childbirth Service in Public Health Facilities at Adama town, Ethiopia. *Reproductive Health*. 2020; 17(1):60. <https://doi.org/10.1186/s12978-020-00911-0>
34. Esan DT, Sokan-Adeaga AA, Rasaq NO. Assessment of satisfaction with delivery care among mothers in selected health care facilities in Ekiti state. *Journal of Public Health Research*. 2022; 11(4): 22799036221127572.  
DOI: [10.1177/22799036221127572](https://doi.org/10.1177/22799036221127572)
35. Sahu S, Tripathy P, Nayak D, Khosla P. Assessment of Birth Satisfaction after Receiving Midwifery Care among Postnatal Mothers. *TEST Engineering & Management*. 2020; 83: 7230–7236.
36. Bazant, Eva S, Michael A Koenig. Women's satisfaction with delivery care in Nairobi's informal settlements. *International journal for quality in health care: journal of the International Society for Quality in Health Care* .2009; 21(2): 79-86.  
DOI:[10.1093/intqhc/mzn058](https://doi.org/10.1093/intqhc/mzn058)
37. Senarath, Upul et al. Factors determining client satisfaction with hospital-based perinatal care in Sri Lanka. *Tropical medicine & international health: TM & IH*. 2006;11(9): 1442-51.  
DOI: [10.1111/j.1365-3156.2006.01698.x](https://doi.org/10.1111/j.1365-3156.2006.01698.x)
38. Oladapo, Olufemi T, Modinat O Osiberu. Do sociodemographic characteristics of pregnant women determine their perception of antenatal care quality? *Maternal and child health journal*.2009;13(4): 505-11.  
DOI: [10.1007/s10995-008-0389-2](https://doi.org/10.1007/s10995-008-0389-2)
39. Das, Palas et al. Client satisfaction on maternal and child health services in rural bengal. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*.2010;35(4): 478-81.  
DOI: [10.4103/0970-0218.74344](https://doi.org/10.4103/0970-0218.74344)
40. Urassa, David P et al. Quality assessment of the antenatal program for anaemia in rural Tanzania. *International journal for quality in health care: journal of the International Society for Quality in Health Care*.2002;14(6): 441-8.  
DOI: [10.1093/intqhc/14.6.441](https://doi.org/10.1093/intqhc/14.6.441)
41. Dzomeku M V. Maternal satisfaction with care during labour: a case study of the Mampong-Ashanti district hospital maternity unit in Ghana. *Int J Nurs Midwifery*. 2011;3(3): 30-34.
42. Chunuan SK, Kochapakdee WC. Patient satisfaction with nursing care received during the intrapartum period. *Thai J Nurs Res*.2003;7:83-92.
43. Moawad SA, Gemeay EM, Alshami N. Identification of factors associated with maternal satisfaction with primary health care center in Riyadh City. *Tanta Med J*.2009;37:1-5.
44. Srivastava A, Avan BI, Rajbangshi P, Bhattacharyya S. Determinants of women's satisfaction with maternal health care: a review of literature from developing countries. *BMC pregnancy and childbirth*.2015;15:1-12.
45. Gandhi PA, Doley P, Balasubramanian T, Mishra A, Pardeshi G. Assessment of birth satisfaction among the women attending the immunization clinics in South Delhi: A cross-sectional study. *CHRISMED Journal of Health and Research*.2020; 7: 212.  
DOI: [10.4103/cjhr.cjhr\\_142\\_18](https://doi.org/10.4103/cjhr.cjhr_142_18)
46. Doherty J, Coughlan B, Lynch S, Sheehy L, Martin CH, Martin C, Brosnan M, Cronin M, Barry T, Calnan A, Horton S, Egan S, O'Brien D. The importance of communication and involvement in decision-making: A study in Ireland exploring birth satisfaction using the Birth Satisfaction Scale-Revised (BSS-R). *European Journal of Midwifery*. 2023; 7: 12.  
DOI: [10.18332/ejm/162943](https://doi.org/10.18332/ejm/162943)
47. Ezo E, Getachew H, Degefu S, Ashager K. Maternal satisfaction on delivery service and associated factors among mothers delivered at Arba Minch town governmental health facilities, South Ethiopia: A cross-sectional study. *SAGE Open Medicine*. 2024; 12: 20503121241247995.  
DOI: [10.1177/20503121241247995](https://doi.org/10.1177/20503121241247995)