DOI: 10.12923/pielxxiw-2024-0047

The level of satisfaction with the experience of childbirth

Poziom satysfakcji kobiet z porodu

Bohdana Dušová[1,A-B,D-F,K-L], Juliana Furčak[1,B,E], Radka Bužgová[1,E-F,K-L]

Department of Nursing and Midwifery, Department of Nursing and Midwifery, Faculty of Medicine, University of Ostrava, Czech Republic, Czech Republic

CORRESPONDING AUTHOR:
Bohdana Dušová
Department of Nursing and Midwifery, Faculty of Medicine, University of Ostrava, Czech Republic
e-mail: bohdana.dusova@osu.cz

A – Development of the concept and methodology of the study/Opracowanie koncepcji i metodologii badań; B – Query - a review and analysis of the literature/Kwerenda – przegląd i analiza literatury przedmiotu; C – Submission of the application to the appropriate Bioethics Committee/Złożenie wniosku do właściwej Komisji Biotycznej; D – Collection of research material/Gromadzenie materiału badawczego; E – Analysis of the research material/Analiza materiału badawczego; F – Preparation of draft version of manuscript/Przygotowanie roboczej wersji artykułu; G – Critical analysis of manuscript draft version/Analiza krytyczna roboczej wersji artykułu; H – Statistical analysis of the research material/Analiza statystyczna materiału badawczego; I – Interpretation of the performed statistical analysis/Interpretacja dokonanej analizy statystycznej; K – Technical preparation of manuscript in accordance with the journal regulations/Opracowanie techniczne artykułu zgodne z regulaminem czasopisma; L – Supervision of the research and preparation of the manuscript/Nadzór nad przebiegiem badań i przygotowaniem artykułu

STRESZCZENIE

POZIOM SATYSFAKCJI KOBIET Z PORODU

Cel pracy. Celem badań była ocena satysfakcji kobiet z porodu oraz określenie czynników wpływających na jej poziom.

Materiał i metody. Dane zebrano za pomocą 10-itemowej Skali Satysfakcji z Porodu (*Birth Satisfaction Scale-Revised*) uzupełnionej o dane demograficzne i kliniczne. Zbieranie danych przeprowadzono w ramach międzynarodowego projektu INTERSECT.

Wyniki. Połowa kobiet postrzegała poród jako nieprzyjemne doświadczenie, z bólami porodowymi trwającymi bardzo długo. Istniały różnice w całkowitych wynikach BSS-R w zależności od sposobu porodu ($p<0,001$). Najwyższe wyniki stwierdzono u kobiet z porodem pochwowym. Ponadto stwierdzono różnice w wynikach jakości opieki w zależności od subiektywnego postrzegania zakresu urazu porodowego ($p=0,043$).

Wnioski. Skala Satysfakcji z Porodu (*Birth Satisfaction Scale-Revised*) jest użytecznym narzędziem do pomiaru ogólnej satysfakcji z porodu.

Słowa kluczowe: ocena, czynniki, satysfakcja, kobieta, poród

ABSTRACT

THE LEVEL OF SATISFACTION WITH THE EXPERIENCE OF CHILDBIRTH

Aim. The aim of the research was to assess women's satisfaction with childbirth and to determine the factors influencing their level of satisfaction.

Material and methods. Data were collected using the 10-item Birth Satisfaction Scale-Revised supplemented with demographic and clinical data. Data collection was conducted as part of the international INTERSECT project.

Results. Half of the women perceived childbirth as an unpleasant experience, with labour pains lasting for a very long time. There were differences in total BSS-R scores according to mode of delivery ($p<0.001$). The highest scores were found in women with vaginal delivery. In addition, differences were found in the quality of care scores according to subjective perception of the extent of birth injury ($p=0.043$).

Conclusions. The Birth Satisfaction Scale-Revised is a useful tool for measuring overall satisfaction with childbirth.

Key words: evaluation, factors, satisfaction, woman, childbirth

INTRODUCTION

The assessment of birth satisfaction represents a crucial instrument for the enhancement of maternal and newborn care. It offers invaluable insight for midwives and obstetricians, allowing them to discern both areas of excellence and potential areas for enhancement. The assessment of women's subjective satisfaction during labour provides a useful indicator of the quality of care provided. Furthermore, it facilitates a more comprehensive understanding of the adverse effects of childbirth, including postpartum post-traumatic stress disorder [1-3] and postnatal depression [3-5].

A number of scales have been developed for the purpose of assessing satisfaction with childbirth [6]. However, these scales tend to focus on specific areas, such as caesarean section or preterm birth. The Satisfaction with Childbirth Scale was developed based on an extensive literature review of existing literature, is based on theoretical concepts in the area of satisfaction, and has been applied for use in the context of childbirth [7]. Satisfaction with childbirth is a multidimensional construct that has been conceptualised within a model that encompasses distinct but related domains, namely stress during childbirth, personal attributes of the mother, and quality of care as assessed from the woman's perspective [8].

The 10-item Birth Satisfaction Scale Revised has recently been endorsed by international expert consensus for global use as the birth satisfaction outcome measure of choice [3]. The psychometric properties of the scale have been validated in a number of languages, including English [3,8-10], Greek [11], Italian [12], Turkish [13], Hebrew [14], Spanish [15], Iranian [16], Portuguese [17], and Urdu [18]. In 2024, Ratislavova et al. [19] published a Czech version of the BSS-R scale, which demonstrated excellent psychometric properties. The Cronbach alpha coefficient for the CZ-BSS-R total scale and all sub-scales was found to be acceptable, with a value exceeding 0.70.

The principal objective of the study was to ascertain the level of satisfaction experienced by women in relation to the process of childbirth. Furthermore, the study aimed to ascertain whether the age of the parturient, method of labour management, duration of labour pain, extent of birth injury, education of the parturient and the week of pregnancy at the time of delivery had an effect on the level of satisfaction with labour.

MATERIALS AND METHODS

The Czech version of the Birth Satisfaction Scale-Revised (BSS-R) [8, 19], which comprises ten items, was used for the purposes of data collection. The items of the BSS-R are grouped into three domains: (1) perceived stress during labour (4 items), (2) women's personal attributes, such as anxiety experienced during labour (2 items), and (3) quality of care provided, such as the level of support and communication from the labour room staff or the cleanliness and hygiene of the environment (4 items). The items are presented as statements, and respondents are asked to indicate their level of agreement on a five-point Likert scale, where 0 indicates strong disagreement, 1 indicates disagreement, 2 indicates neither agreement nor disagreement, 3 indicates agreement, and 4 indicates strong agreement. The scores for the four BSS-R items are rotated. The total BSS-R score ranges from 0, indicating complete dissatisfaction with the birth experience, to 40, indicating maximum satisfaction. The total scores on the Stress Felt During Childbirth and Quality of Care Provided subscales range from 0 to 16, while the scores on the Personal Attributes of Women subscale range from 0 to 8. Additionally, the scale was augmented with inquiries pertaining to socio-demographic characteristics, including age, educational attainment, mode of delivery, and gestational age.

Data collection was conducted as part of the international project INTERSECT in five gynaecological outpatient clinics located in Ostrava, Hlucin and Havířov. The study population comprised postpartum women who met the following criteria: age 16 years or older, delivery in the last six to twelve weeks, and voluntary consent to participate in the study. A total of 300 women were approached, of whom 238 (79%) met the criteria and completed the questionnaire.

The data were analysed using the statistical software STATA, version 17. Descriptive statistics were employed for the purpose of basic data analysis, including the calculation of the following: absolute frequency (N), relative frequency (%), mean, and standard deviation (s). The significance of the observed differences between the groups was evaluated using the Mann-Whitney and Kruskal-Wallis tests. The inter-scale correlation was evaluated using Spearman's correlation coefficient. A 5% level of statistical significance was employed.

The study was approved by the Ethics Committee of the Faculty of Medicine, University of Ostrava (reference number 15/2021). The questionnaire included an informed consent section. The participation of respondents in the research was anonymous and voluntary, and they were at liberty to withdraw from the research at any time.

RESULTS

The results revealed that the majority of the women were aged between 30 and 39 years, and had attained a university education. The majority of respondents gave birth naturally via vaginal delivery between the 38th and 40th weeks of gestation. The characteristics of the study population are presented in Tab. 1.

Tab. 1. Demographic and clinical characteristics of the cohort (n=238)

Demographic data		N	%	Clinical data		N	%
Age	< 30 years	99	41.6	Mode of delivery	Vaginal	150	63.0
	30–39 years	131	55.0		VEX	13	5.5
	> 40 years	4	1.7		Acute SC	39	16.4
	No response	4	1.7		Planned SC	35	14.7
					No response	1	0.4
Education	Primary school education	15	6.3	Gestational week	< 38. week	32	13.4
	Secondary school	107	45.0		38.–39. week	136	57.1
	University	115	48.3		> 40. week	62	26.1
	No response	1	0.4		No response	8	3.4

N - absolute frequency, % - relative frequency

The reliability of the BBS-R scale in the Czech version was initially evaluated using Cronbach's alpha, which yielded satisfactory results for the total score (alpha = 0.751) and the individual subscales: stress during labour (alpha = 0.719), quality of care (alpha = 0.738) and attributes of the woman (alpha = 0.724).

■ Tab. 2. BSS-R questionnaire item scores and subscales

Headings and subscales of the BSS-R	Average	SD	3-4 N (%)
Subscale: Stress during childbirth	8.79	3.52	---
1. I got through the birth with virtually no injuries.	2.06	1.29	99 (41.6)
2. I think the labor pains lasted an inordinate amount of time.	2.27	1.23	121 (50.9)
7. I perceived childbirth as an unpleasant experience.	2.45	1.18	122 (51.3)
9. I did not feel uncomfortable at all during the birth.	2.20	1.17	93 (39.1)
Subscale: Quality of care provided	12.71	3.28	---
3. The staff in the delivery room encouraged me to make decisions about how I wanted my birth to go.	2.88	1.12	159 (66.8)
5. I felt very supported by the staff during the labor pains and delivery.	3.21	0.88	195 (82.0)
6. The staff communicated very well with me during the labor pains.	3.26	0.85	198 (83.2)
10. The delivery room was tidy and hygienically clean.	3.68	0.69	220 (92.4)
Subscale: Personal attributes of women	4.15	2.11	---
4. I felt very nervous during labour pains and delivery.	1.94	1.25	93 (39.0)
8. I felt a loss of control during labour.	2.31	1.22	110 (46.2)
Overall BSS-R score	25.65	7.21	---

SD - standard deviation, mean - mean score values, 3-4 - women answered strongly agree or agree in the questionnaire

■ Tab. 3. Correlations between BSS-R subscales

	Stress during childbirth	Quality of care	Personal attributes of women
Stress during childbirth	1.000		
Quality of care	0.323**	1.000	
Personal attributes of women	0.534**	0.188**	1.000

**p<0.001

■ Tab. 4. Differences in BSS-R scores according to respondents' mode of delivery

Domains BSS-R	Method of delivery				p
	Vaginal delivery (n=150)	VEX (N=13)	Acut SC (N=39)	Planned SC (N=35)	
	average (s)	average (s)	average (s)	average (s)	
Stress during childbirth	9.48 (3.48)	4.69 (3.43)	7.67 (3.02)	8.49 (3.05)	<0.001
Personal attributes of women	4.44 (2.00)	2.23 (1.83)	4.13 (2.03)	3.57 (2.32)	<0.001
Quality of care	13.27 (2.99)	10.62 (5.03)	12.15 (2.71)	11.80 (3.81)	0.004
Total score	27.19 (6.71)	17.54 (8.91)	23.95 (5.35)	23.86 (8.02)	<0.001

s - standard deviation

Tab. 2. presents the evaluation of overall satisfaction with childbirth across the items and subscales. The mean score across all subscales indicates that respondents were most satisfied with the quality of care provided. The highest levels of satisfaction were reported with regard to the hygiene and cleanliness of the room and the communication of the healthcare staff. The respondents exhibited a neutral response to the items pertaining to the sub-scale „Stress felt during delivery" and „Personal attributes of women." It was found that approximately 50% of the women surveyed perceived childbirth as an unpleasant experience, with labour pains lasting for an extended period of time.

A correlation was identified between the BSS-R subscales, as illustrated in Tab. 3. A moderate correlation was observed between the Personal Attributes of Women and Stress during Childbirth domains ($r = 0.534$; $p < 0.001$).

The mean score for all subscales of the BSS-R questionnaire and for the total score was highest among respondents who had given birth vaginally. Conversely, the lowest score was observed among women who had undergone a VEX delivery. Significant statistical differences were identified in all subscales of the BSS-R questionnaire and in the total score (see Tab. 4). The women who had to use VEX were the least satisfied with their delivery, and also experienced greater stress during the process.

Furthermore, a comparison was conducted between the levels of satisfaction expressed by women with regard to the quality of care received, and their subjective perception of pain, as well as the extent of any birth injury. No statistically significant difference was identified in relation to the subjective perception of labour pain. A statistically significant difference was identified in relation to the subjective perception of birth injury. The women who indicated that they had undergone labour without injury exhibited higher levels of satisfaction with the quality of care provided, as evidenced by the higher scores on the Quality of Care Provided subscale (see Tab. 5). No statistically significant results were observed in the remaining subscales.

No statistically significant difference was observed in the total BSS-R score in relation to age (p=0.220), education (p=0.221) or gestational week (p=0.635).

DISCUSSION

The assessment of women's satisfaction during childbirth is a crucial element in the evaluation of the quality of care provided. The BSS-R scale may be an appropriate instrument for evaluating satisfaction. The Czech version of this scale has demonstrated satisfactory reliability in our study and in previous studies [19]. The findings of our research indicate that a significant proportion of women expressed satisfaction with the hygiene and equipment of the delivery room, as well as with the communication and support provided by the medical staff. Fleming et al. [7] also identified a high level of satisfaction among women with the delivery process.

The study population comprised primarily of women who had undergone a natural vaginal delivery without the

necessity for surgical intervention. Our findings indicate that the mode of delivery is a significant determinant of women's overall satisfaction with their birth experience. The overall satisfaction with the birth experience was significantly lower among women who delivered via VEX compared to those who gave birth naturally vaginally or via caesarean section (planned or acute). The findings of Shkodova et al. [20] yielded comparable outcomes. In contrast, Holins-Martin and Martin [8] found no significant difference between the subscales of personal attributes of women and quality of care provided by mode of delivery. In our study, the highest levels of satisfaction were reported among women who had undergone caesarean section. Similarly, Fleming et al. [7] reached comparable results in the USA. In contrast, Mortazavi et al. [21] identified emergency caesarean section as a predictor of lower satisfaction. Furthermore, Fleming et al. [7] demonstrated that women who gave birth in a setting they had planned in advance (home or birth centre) reported higher satisfaction.

Furthermore, the objective was to ascertain whether the subjective perception of the duration of labour pain affects the level of satisfaction with the quality of care received. As reported by Carlhäll et al. [22], the duration of the active phase of labour has been identified as a significant risk factor for an overall negative birth experience, irrespective of whether the woman is a first-time or multiparous mother. However, the findings of our research did not corroborate the hypothesis that the subjectively perceived length of labour pain affects women's satisfaction with the quality of care provided.

Another factor that may influence a woman's experience during labour is the risk of birth injury. Childbirth is a demanding process, both mentally and physically. During vaginal delivery, the perineal area can sustain injuries of varying degrees and severity for a number of reasons [23, 24]. The objective of our research was to ascertain whether there was a correlation between the subjectively perceived extent of birth injury and women's overall satisfaction with the quality of care provided. The women who indicated that they had undergone labour without injury were found to have higher satisfaction scores with regard to the quality of care provided.

No significant differences in satisfaction scores with delivery were observed according to age, education, or gestational week at delivery.

CONCLUSIONS

In conclusion, it can be posited that women's subjectively perceived satisfaction with childbirth may serve as a significant indicator of the quality of care provided. However, it is possible that circumstances beyond the control of the individual, such as the mode of delivery or the extent of birth injury, may exert an influence. It is recommended that greater attention be paid to these women.

Ethical considerations

The study was approved by the Ethics Committee of the Faculty of Medicine, University of Ostrava (No. 15/2021). The questionnaire included an informed consent section. The participation of respondents in the research was anonymous and voluntary, and they were at liberty to withdraw from the research at any time.

ORCID

Bohdana Dušová https://orcid.org/0000-0002-6749-7117
Radka Bužgová https://orcid.org/0000-0002-2529-5058

REFERENCES

1. Dale-Hewitt V, Slade P, Wright I, et al. Patterns of attention and experiences of post-traumatic stress symptoms following childbirth: An experimental study. Archives of Womens Mental Health. 2012; 15(4): 289-296. doi:10.1007/s00737-012-0290-2.
2. Kouros N. Australian women turning to home births after hospital trauma. Monash Bioethics Review. 2013; 31(2): 10-11.
3. Jefford CJ, Hollins M, Colin RM. Development and validation of the Australian version of the Birth Satisfaction Scale Revised (BSS-R), Journal of Reproductive and Infant Psychology. 2018; 36(1): 42-58. doi:10.1080/02646838.2017.1396302
4. Anding JE, Rohrle B, Grieshop M, et al. Couple comorbidity and correlates of postnatal depressive symptoms in mothers and fathers in the first two weeks following delivery. Journal of Affective Disorders. 2016; 190: 300-309. doi:10.1016/j.jad.2015.10.033
5. Razurel C, Kaiser B. The role of satisfaction with social support on the psychological health of primiparous mothers in the perinatal period. Women and Health. 2015; 55(2): 167-186. doi:10.1080/0 3630242.2014.979969
6. Sawyer A, Ayers S, Abbott J, et al. Measures of satisfaction with care during labour and birth: a comparative review. BMC Pregnancy and Childbirth. 2013; 13(1): 108. doi:10.1186/1471-2393-13-108.
7. Fleming SE, Donovan-Batson C, Burduli E, et al. Birth Satisfaction Scale/Birth Satisfaction Scale-Revised (BSS/BSS-R): A large scale United States planned home birth and birth centre survey. Midwifery. 2016; 41: 9-15. doi:10.1016/j.midw.2016.07.008
8. Hollins Martin CJ, Martin CR. Development and psychometric properties of the Birth Satisfaction Scale – Revised (BSS– R). Midwifery. 2014; 30(6), 610-619. doi:10.1016/j.midw.2013.10.006
9. Barbosa-Leiker C, Fleming S, Hollins Martin CJ, et al. Psychometric properties of the birth satisfaction scale-revised (BSS-R) for US mothers. Journal of Reproductive and Infant Psychology. 2015; 33(5): 504-511. doi: 10.1080/02646838.2015.1024211
10. Martin CR, Hollins Martin C, Redshaw M. The Birth Satisfaction Scale-Revised Indicator (BSS-RI). BMC Pregnancy Childbirth. 2017; 17(1): 277. doi:10.1186/s12884-017-1459-5.
11. Vivilaki VG, Zemperligkou E, Iliopoulou E, et al. The reversed birth satisfaction scale: translation, adaptation and validation for a Greek sample. European Journal of Midwifery. 2017; 1:3. doi: 10.18332/ejm/76655
12. Nespoli A, Colciago E, Fumagalli S, et al. Validation and factor structure of the Italian version of the Birth Satisfaction Scale-Revised (BSS-R). Journal of Reproductive and Infant Psychology. 2020; 39(5): 516-531. Doi:10.1080/02646838.2020.1836333
13. Göncü Serhatllu S, Karahan N, Hollins Martin CJ, et al. Construct and content validity of the Turkish Birth Satisfaction Scale - Revised (T-BSS-R). Journal of Reproductive and Infant Psychology. 2018; 36(3): 235-245. doi:10.1080/02646838.2018.1443322
14. Skvirsky V, Taubman–Ben-Ari O, Hollins Martin CJ, et al. Validation of the Hebrew Birth Satisfaction Scale – Revised (BSS-R) and its relationship to perceived traumatic labour. Journal of Reproductive and Infant Psychology. 2019; 38(2): 214-220. Doi:10.1080/02646838.2019.1600666
15. Romero-Gonzalez B, Peralta-Ramirez MI, Caparros-Gonzalez RA, et al. Spanish validation and factor structure of the Birth Satisfaction Scale-Revised (BSS-R). Midwifery. 2019; 70: 31-37. doi: 10.1016/j.midw.2018.12.009
16. Mortazavi F, Mehrabadi M, Hollins Martin CJ, et al. Psychometric properties of the birth satisfaction scale-revised (BSS-R) in a sample of postpartum Iranian women. Health Care for Women International. 2020; 42(4–6): 836-851. doi:10.1080/07399332.2020.1802464
17. Moreira H, Hollins Martin CJ, Martin C. Factor structure and psychometric properties of the Birth Satisfaction Scale-Revised in Portuguese postpartum women. Journal of Reproductive Infant Psychology. 2024; 42(4): 715-730. doi: 10.1080/02646838.2023.2176473

18. Zafar S, Tayyab F, Liaqat A, et al. Translation and validation of the Birth Satisfaction Scale-Revised in Urdu for use in Pakistan. International Journal of childbirth. 2021; 11(2): doi:10.1891/IJCBIRTH-D-21-00001
19. Ratislavová K, Hendrych Lorenzová E, Hollins Martin CJ, Martin CR. Translation and validation of the Czech Republic version of the Birth Satisfaction Scale-Revised (BSS-R). Journal of Reproductive Infant Psychology. 2024; 42(1): 78-94. doi: 10.1080/02646838.2022.2067837
20. Škodová Z, Nepelová Z, Grendár M, et al. Psychometric properties of the Slovak version of the Birth Satisfaction Scale (BSS) and Birth Satisfaction Scale – Revised (BSS–R). Midwifery. 2019; 79: 102550. doi: 10.1016/j.midw.2019.102550
21. Mortazavi F, Mehrabadi M. Predictors of low birth satisfaction among Iranian postpartum women: A cross-sectional study. Nursing Open. 2022; 9(1): 604-613. doi: 10.1002/nop2.1104
22. Carlhäll S, Nelson M, Svenvik M, et al. Maternal childbirth experience and time in labor: a population-based cohort study. Scientific Reports. 2022; 12(1): 11930. doi: 10.1038/s41598-022-14711-y.1-11
23. Horsch A, Garthus-Niegel S. Posttraumatic stress disorder following childbirth. Childbirth, Vulnerability and Law. 2019; doi: 10.4324/9780429443718-4
24. Fernando RJ, Williams A, Adams EJ. The management of third and fourth degree perineal tears. RCOG Green Top Guidelines. 2007; 29: 1-19.

Manuscript received: 18.10.2024
Manuscript accepted: 20.11.2024