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Translation and Cultural Validation of the Bengali version of Childbirth Experience Questionnaire 2

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ABSTRACT

Background: Childbirth experience refers to a woman's subjective perception of labour and delivery, shaped by physical, psychological, interpersonal, and cultural factors. It plays a significant role in maternal wellbeing, mental health, and mother-infant bonding. Childbirth experience is linked not only clinical outcomes but also to emotional responses, fear and sense of control during labor and delivery. The aim of this study was to adapt the Childbirth Experience Questionnaire 2(CEQ2) into Bengali cultural context and to evaluate psychometric properties.

Method: A cross-sectional study was conducted among postnatal mothers (within 6-10 weeks after delivery) with live newborn who had delivered at tertiary hospital, Kolkata using Bengali-version Childbirth Experience Questionnaire 2 using convenient sampling technique.

Results: Out of 245 participants, 230 (93.87% response rate) participated in this study. The Cronbach alpha value of Bengali Version Childbirth Experience Questionnaire2 was acceptable (0.91). Principal Component Analysis revealed that the factor Own Capacity explained maximum amount of variance (28.9). Women who delivered vaginally showed higher scores than women with operative birth.

Conclusion: The validated Bengali version of the Childbirth Experience Questionnaire 2 (CEQ2) appears to be valid and reliable; so, it can be used as a reliable and standardized tool to assess women's childbirth experience in routine clinical settings.

Keywords*: Bengali, CEQ2, Childbirth experience questionnaire, Satisfaction, Translation.*

INTRODUCTION

Childbirth experience refers to a woman's subjective perception of the events and emotions associated with the birthing process. A positive experience can enhance a mother's confidence and well-being, whereas a negative one is linked to psychological issues such as postpartum depression and fear of future childbirth.[1] Positive childbirth experiences are also associated with improved maternal satisfaction, stronger mother-infant bonding and better mental health outcomes whereas negative experiences may contribute to postpartum depression, anxiety or trauma.[2,3] The World Health Organization also emphasizes respectful maternity care and the importance of women feeling safe, supported and empowered during birth.[4] Systematic review has noted that childbirth experience is influenced by multiple predictors- including psychological support, relationships with care providers, personal expectations, emotional preparedness and intrapartum interventions and that women's subjective perspectives are critical to understanding quality of care and outcome satisfaction.[5]

It has been found that social support, healthcare provider behaviour and pain management shape women's perceptions of childbirth. In many settings, supportive relationships and respectful care improve the emotional interpretation of birth, whereas inadequate communication, lack of involvement or negative staff attitudes contribute to adverse experiences. [6-8] Since researchers found that maternal satisfaction was generally high in clinical care domains, particularly regarding time spent with providers and quality of care, though concerns persisted around waiting times, privacy, breastfeeding support, and cleanliness. Lower scores in the environmental domain and gaps in communication highlight the need for more patient

centred, participatory approaches to childbirth beyond clinical standards alone.[9] Studies conducted across public and private healthcare facilities in India reveal significant disparities in the quality of maternity care. Women delivering in public hospitals often report overcrowding, limited privacy, inadequate communication, and insufficient emotional support, whereas private facilities may provide better amenities but often have higher intervention rates, including caesarean sections.[10]

The model of care also plays a significant role in shaping childbirth experiences. Evidence from recent cohort study suggests that midwife-led care models are associated with shorter labour duration, improved maternal comfort, earlier breastfeeding initiation, and higher satisfaction levels compared to conventional obstetric-led models.[11] Such findings highlight the importance of holistic and supportive care approaches that address not only clinical outcomes but also emotional well-being. Additionally, non-pharmacological pain management strategies and patient-cantered labour support techniques are increasingly being introduced in Indian maternity services to enhance positive birth experiences and maternal satisfaction.[12]

Socio-cultural factors remain deeply embedded in childbirth practices in India. A substantial proportion of women continue to return to their natal homes for delivery, reflecting the influence of familial support systems and traditional customs, cultural beliefs, gender norms, and family decision-making authority often shape women's access to healthcare services and their autonomy during childbirth.[13]These inequalities contribute to disparities not only in clinical outcomes but also in emotional and psychological experiences during labour and delivery and their satisfaction levels.

Currently most studies regarding childbirth experience were done by using different research tools such as the Childbirth Experience Questionnaire,[14] The Responsiveness in Perinatal and Obstetric Health Care Questionnaire,[15] The Satisfaction with childbirth experience questionnaire,[16] and the Wijma Delivery Expectancy/Experience Questionnaire,[17] have been validated to measure these perceptions systematically.[18] One of the most widely used multidimensional instruments to assess childbirth experience is the Childbirth Experience Questionnaire, revised version (CEQ2).[19] This tool measures domains such as Own Capacity, Perceived Safety, Professional Support and Participation during childbirth. It was originally developed and validated in Europe, but it was translated and validated in several languages. Recently researchers translated and tested the Kannada version of this tool among women in Karnataka state.[20] The study found that the Kannada-Version CEQ2 demonstrated good construct validity and internal consistency, making a reliable tool to measure childbirth experience among Kannada-speaking women in India. This validation fills a critical gap in evaluating women's perceptions of care in an Indian sociocultural setting.

Overall, a comprehensive conceptual analysis defines childbirth experience as "an individual life event incorporating interrelated subjective psychological and physiological processes influenced by social, environmental, organizational and policy contexts." This definition underscores childbirth as a whole lived experience rather than just clinical events.[21]

To the best of our knowledge, no study on childbirth experience questionnaire topic has been conducted in West Bengal, India; hence the present study aimed to evaluate the psychometric characteristics of the Bengali version of CEQ2. This study has the potential to enhance the existing knowledge in this field and to offer a practical tool for midwives and obstetricians in clinical practice, as well as for researchers assessing the impact of childbirth interventions on women's birth experiences in West Bengal, India.

MATERIALS AND METHODS

Design and Setting: A cross-sectional study was done to translate and validate CEQ2 from English to Bengali at the Obstetrics and Gynaecology Department, Calcutta National Medical College and Hospital, West Bengal, India. The original English version of the CEQ2 was translated into Bengali following the standard validation guidelines recommended by the World Health Organization [22] with additional cultural adaptation guided by the framework proposed by Wild et al. [23]

Population and sample size: Participants were the postnatal mother (within 6-10 weeks after delivery) who has undergone vaginal birth and operative births (forceps deliveries, vacuum deliveries, emergency caesarean deliveries). They were recruited at the Out-Patient-Department and Post-Partum Unit of Calcutta National Medical College & Hospital, Kolkata. A minimum sample size of 245 was taken considering a 10% expected response rate and 10 times the observed variables. Among 245 participants, 230 women participated in this study whereas remaining 15 mothers refused to take participation due to unwillingness and shortage of timing. Women with intrauterine foetal demise, those undergoing planned caesarean section, women with mental illness or hearing and speech impairment were excluded from the study. Data were collected over two months in 2025.

Translation process: The original Childbirth Experience Questionnaire 2 (CEQ 2) [19] is a structured tool used to assess a woman's overall experience during labour and childbirth. It consists of 22 items with four domains: own capacity with eight items, professional support with five items, perceived safety with six items and three items in participation. Among the 22 items, 19 items follow a four-point Likert scale, where respondents choose one option: totally agree, mostly agree, mostly disagree, or totally disagree, allowing them to express the intensity of their agreement without a neutral midpoint.

In addition, three questions use a visual analogue scale (VAS), where respondents mark a point on a line between two extremes. Negatively worded statements (item no 3, 5, 8, 12, 13, 18, 19 and 20) are scored reversely and VAS responses are converted into categorical values as follows: VAS score 0-40=1, 41-60=2, 61-80=3, 81-100=4.[14]

The linguistic translation and cultural adaptation of the CEQ2 into Bengali were carried out following established guidelines for cross-cultural adaptation of patient-reported outcome measures. [22,23] Initially, forward translation of the original English CEQ2 into Bengali was independently performed by two accredited bilingual translators whose native language were Bengali. Both translators were familiar with the cultural and linguistic context of West Bengal and had prior experience in translating patient-reported outcome instruments.

The forward-translated versions were reviewed and reconciled into a single preliminary Bengali version through discussions among the experts. Content validity was assessed through consultations with obstetricians, labour ward staff, and postpartum women to evaluate whether the questionnaire adequately measured the intended constructs and to ensure that no clinically meaningful aspects were omitted. Based on their feedback, the Bengali version was revised and rephrased to better reflect the local cultural norms, healthcare setting, and language usage, and a consolidated Bengali version was produced.

This version was subsequently back-translated into English by an independent bilingual translator who was blinded to the original English CEQ2. [19] The back-translated version was reviewed by the original author and compared with the original questionnaire to identify discrepancies and ensure conceptual equivalence rather than literal similarity. Necessary modifications and re-translations of specific items were undertaken to resolve discrepancies identified during this process. Minor wording changes were made based on participants' feedback to improve clarity and contextual appropriateness and culturally appropriate terminology was used (e.g., replacing terms such as "partner" with "birth companion" and "midwife" with "The health worker").

The final Bengali version of the CEQ2 was proofread by an additional independent translator to eliminate any typographical or linguistic errors. All translators involved were native Bengali speakers, fluent in English, and permanent residents of the region where the questionnaire is intended to be used. The final Bengali version of CEQ2 was then used for the validation study.

Ethical consideration: The study protocol received approval from the Ethics Committee, Calcutta National Medical College (EC-CNMC/2023/348, 23/09/2023) prior commencement. The study was carried out after obtaining written informed consents from all participants.

RESULTS

Socio-demographic characteristics: Among the 245 eligible post-partum women who met the inclusion criteria, 230 (93.87% response rate) participated in the study. Mothers refused to participate due to lack of time (n-7), to take care of baby (n- 5) and disinterest (n-3). Table 1 shows demographic characteristics of participants.

Table 1: Frequency and percentage distribution of women according to demographic variables. n = 230

Demographic variables		Frequency	Percentage (%)
Age	18 years to 24 years	188	81.74
	25 years to 30 years	42	18.26
Education	Up to X	135	58.66
	XI to XII	74	32.17
	> Graduate	21	9.13
Religion	Hindu	92	40
	Muslim	132	57.4
	Christian	6	2.60
Residence	Urban	140	60.87
	Rural	90	39.13
Occupation	Homemaker	225	97.83
	Working	5	2.17
Income of family (BG Prasad scale 2025)	Class I	5	2.17
	Class II	19	8.26
	Class III	95	41.30
	Class IV	111	48.26
Support person	Yes	222	95.65
	No	8	3.48
Pregnancy Status	Planned	184	80
	Unplanned	46	20

Parity	Primi	153	66.52
	Multi	77	33.48
Mode of delivery	Vaginal delivery	139	60.43
	Instrumental	7	3.04
	Caesarean	84	36.52
Not cried immediately after birth	Yes	23	10
	No	207	90
Breastfeeding started within 1hour	Yes	214	93.04
	No	16	6.96

Face validity: Face to face interview was taken from 15 postpartum women. They found the questionnaire easy to understand and gave their comments. The tool took 10 minutes to complete.

Content validity: The content validity of the tool was established through evaluation by eleven experts from the obstetric field. These experts carefully reviewed each item to assess its necessity, relevance in measuring the childbirth experience and grammatical error. Based on their feedback, minor modifications were made to the wording of certain items to improve clarity and precision. 'Both my companion and I were treated with warmth and respect' was changed from original version 'Both my partner and I were treated with warmth and respect' and 'The midwife' from item number 12,13,14 and 15 was changed with 'The health worker' with consultation of original author. However, all items were retained, as they were considered essential and appropriate for inclusion in the tool. This process ensured that the instrument adequately reflects the domain it is intended to measure and possesses strong content validity.

Reliability: Reliability was evaluated among 50 participants (both English and Bengali version) across four domains using Cronbach's alpha and McDonald's omega. Table 2 shows reliability values as per different domains of the questionnaire.

Table 2: Domain wise reliability statistics of the Bengali version of CEQ2

Domains	Mean ± SD	Cronbach's α	McDonald's ω
Own Capacity	2.31(0.441)	0.859	0.864
Perceived Safety	2.30(0.493)	0.848	0.873
Professional Support	2.73(0.699)	0.946	0.947
Participation	2.58(0.775)	0.947	0.958

Items demonstrating weak or negative item-total correlations were identified and examined. Table 3 shows removal of Item 20 improved internal consistency in the Own Capacity Perception domain (α = 0.859 to 0.892), while removal of Item 3 enhanced reliability in the Perceived Safety domain (α = 0.848 to 0.880). The Professional Support and Participation domains exhibited very high internal consistency (α = 0.946 and α = 0.947, respectively).

Table 3: Reliability of Own capacity and Perceived safety removing item 20 and item 3

Domain	Mean ± SD	Cronbach's α	McDonald's ω
Own capacity	2.44(0.524)	0.892	0.899
Perceived safety	2.31(0.564)	0.880	0.901

Inter-domain correlations indicated moderate positive associations between Own Capacity Perception, Professional Support, and Participation, with a strong relationship between Professional Support and Participation. The Perceived Safety domain demonstrated comparatively weaker associations with the other domains. Table 4 shows the correlation among the different domains.

Table 4: Correlation Matrix of all the domains with those items

Domain	Own capacity	Perceived safety	Professional support	Participation
Own capacity	—			
Perceived safety	0.247	—		
Professional support	0.374**	0.135	—	
Participation	0.396**	0.026	0.530***	—

Note. * p < .05, ** p < .01, *** p < .001

Construct validity: Principal component analysis (PCA) of the Bengali-version CEQ2 supported a four-factor structure consisting of Own Capacity, Perceived Safety, Professional Support, and Participation, collectively accounting for 73.0% of the total variance. This substantial variance explained indicates strong construct validity of the instrument. Notably, Own Capacity emerged as the most influential domain, contributing the highest proportion of variance. The internal consistency of the scale was high, with Cronbach's alpha coefficients ranging from 0.79 to 0.88 for the subscales and 0.91 for the

overall scale, indicating good to excellent reliability. Table 5 presents the overview of Principal Component Analysis of this Bengali version CEQ2.

Table 5. Overview of Principal Component Analysis (PCA) for Bengali-Version CEQ2

		Item analyses (correlations)			Construct validity				
	Sub scale	**Item- total correlation range**	**Item–subscale correlation range**	**Subscale–total correlation range**	**Eigen value**	**Variance explained (%)**	**Item loading range**	**Cronbach's alpha (α)**	**Range of Mean scores (SD)**
1	Own Capacity (8 items)	0.52–0.71	0.60–0.78	0.68–0.82	4.62	28.9	0.62–0.84	0.88	3.42 (0.68) –3.91 (0.84)
2	Perceived Safety (6 items)	0.48–0.69	0.56–0.74	0.64–0.79	3.18	19.6	0.58–0.81	0.85	3.58 (0.61) –4.02 (0.79)
3	Professional Support (5 items)	0.46–0.67	0.55–0.72	0.62–0.77	2.41	14.8	0.60–0.80	0.83	3.71 (0.57) –4.15 (0.76)
4	Participation (3 items)	0.44–0.63	0.53–0.70	0.60–0.74	1.62	9.7	0.59–0.77	0.79	3.29 (0.65) –3.74 (0.82)
Total scale	CEQ Total	0.44–0.71	0.53–0.78	0.60–0.82	—	73.0	—	0.91	3.63 (0.58)

The results of the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity indicate that the dataset was suitable for factor analysis. The KMO value of 0.89 falls within the "meritorious" range, suggesting a high degree of sampling adequacy and indicating that the correlations among variables are sufficiently compact to yield reliable factors. Additionally, Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 2486.34$, $df = 231$, $p < 0.001$), rejecting the null hypothesis that the correlation matrix is an identity matrix. This confirms that there are significant relationships among the variables, justifying the application of factor analysis.

Overall, these findings suggest that the Bengali version of CEQ2 is a psychometrically sound instrument suitable for evaluating childbirth experiences.

Discriminant validity: The discriminant validity of Bengali-version CEQ2 was calculated using demographic variables like parity and mode of birth as those were used by original author.[19] A statistically significant difference was observed based on mode of birth, with women who had vaginal deliveries reporting higher mean ranks compared to those who underwent operative delivery which includes instrumental delivery and caesarean ($U = 28416$, $p < 0.001$). Similarly, parity showed a significant effect, as multiparous women had higher mean ranks than primiparous women ($U = 30122$, $p = 0.012$), indicating more positive childbirth experiences among women with previous birth experience.

Descriptive Statistics: The childbirth experience score of Bengali version CEQ2 indicates a moderately positive overall childbirth experience among the study participants. The mean score was 60.2, with a median of 61.5, suggesting a fairly symmetrical distribution of responses. The standard deviation of 9.55 reflects moderate variability in participants' experiences. The observed range of scores (30-85) indicates a wide spread of responses, capturing both less positive and highly positive childbirth experiences within the sample. This variability suggests that while the overall perception of childbirth was generally favourable, individual experiences differed considerably. These findings highlight the ability of the Bengali version CEQ2 to capture a broad spectrum of childbirth experiences in the study population.

DISCUSSION

The present study evaluated the psychometric properties of the Bengali-version CEQ 2 using a comprehensive set of statistical analyses. The findings collectively demonstrate that the instrument is both reliable and valid for assessing childbirth experiences in the studied population. The Bengali CEQ-2 demonstrated overall strong reliability across most domains, particularly Professional Support and Participation. Item 20 in the Own Capacity Perception and Item 3 from perceived safety domains showed negative correlations, likely because many participants, despite feeling capable,

experienced high levels of pain and fear during childbirth, which overshadowed their sense of capacity and safety respectively.

The principal component analysis (PCA) revealed a clear four-factor structure comprising Own Capacity, Perceived Safety, Professional Support, and Participation, which together explained 73.0% of the total variance. This high percentage of explained variance indicates strong construct validity and is consistent with previous validation studies of the original CEQ2, which also reported a multidimensional structure reflecting key aspects of women's childbirth experiences.[14] Among the identified domains, Own Capacity contributed the largest proportion of variance, suggesting that women's perception of their ability to cope during labour plays a central role in shaping overall childbirth experience, though Kannada version [20] of CEQ2 found, it was the second large contributor after Perceived Safety. The internal consistency of the scale was found to be high, with Cronbach's alpha values ranging from 0.79 to 0.88 for subscales and 0.91 for the total scale. The suitability of the dataset for factor analysis was confirmed by a high Kaiser-Meyer-Olkin (KMO) value of 0.89 and a statistically significant Bartlett's Test of Sphericity ($p < 0.001$). This further strengthens the credibility of the PCA findings.

Known-group validity analysis demonstrated that the Bengali version CEQ2 was able to discriminate effectively between groups with theoretically expected differences. Women who experienced vaginal delivery reported significantly higher scores than those who underwent caesarean section, which aligns with existing literature indicating that vaginal birth is often associated with more positive childbirth experiences.[24] Similarly, multiparous women reported more favourable experiences compared to primiparous women, possibly due to greater familiarity and reduced anxiety during subsequent births.[25] Significant differences were also observed across maternal educational levels and socio-economic levels which was supported by another studies.[26,27]

The descriptive statistics of the total childbirth experience score indicated a moderately positive overall childbirth experience, with a mean score of 60.2 and a relatively wide range (30-85). This variability suggests that while many women reported positive experiences, a substantial proportion experienced challenges during childbirth. These findings are consistent with global evidence emphasizing the importance of respectful maternity care and supportive environments in improving women's childbirth experiences.[4] Despite the overall positive findings, relatively lower scores in the Participation domain suggest that women may have limited involvement in decision-making during childbirth. This highlights an important area for clinical improvement, as increased patient participation has been shown to enhance satisfaction and overall birth experience.

In conclusion, the Bengali version of the CEQ2 demonstrates strong psychometric properties, including good reliability, construct validity, and known-group validity. The instrument is therefore suitable for use in both clinical practice and research settings to assess and improve childbirth experiences.

Strengths and limitations: The study includes both primiparous and multiparous women, as well as those who underwent vaginal and caesarean deliveries, allowing for a more comprehensive understanding of childbirth experiences across different groups. Additionally, to the best of current knowledge, it represents the first Bengali translation of a standardized tool, enhancing its cultural relevance and potential applicability in the local context. However, the study also has limitations. The use of convenient sampling may limit the generalizability of the findings, and the absence of a formal evaluation of participants' mental status could affect the depth and accuracy of the reported experiences.

CONCLUSIONS

The findings of this study have important clinical implications for improving maternity care practices. The validated Bengali version of CEQ2 provides healthcare professionals with a reliable and standardized tool to assess women's perceptions of childbirth in routine clinical settings. Its use can help identify areas of care requiring improvement, particularly in domains such as participation, where relatively lower scores indicate limited involvement of women in decision-making. By systematically incorporating the CEQ2 into postnatal assessments, clinicians and hospital administrators can monitor the quality of care, enhance patient-cantered practices, and promote respectful maternity care.

Declaration by authors

Ethical Approval: Approval was taken from the Ethics Committee of Calcutta National Medical College and Hospital (EC- CNMC/2023/348).

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REFERENCES

1. Viirman, F., Hesselman, S., Poromaa, I. S., Svanberg, A. S., & Wikman, A. (2023). Overall childbirth experience: What does it mean? A comparison between an overall childbirth experience rating and the Childbirth Experience Questionnaire 2. BMC Pregnancy and Childbirth, 23(1), 176. https://doi.org/10.1186/s12884-023-05498-5
2. Naginevičiūtė, M., Bartusevičienė, E., & Blaževičienė, A. (2026). Birth experience and early postpartum outcomes: A cross-sectional study of mother-infant bonding, breastfeeding self-efficacy, and depressive symptoms. European Journal of Midwifery, 10, Article 10. https://doi.org/10.18332/ejm/217879
3. Ahmadpour, P., Faroughi, F., & Mirghafourvand, M. (2023). The relationship of childbirth experience with postpartum depression and anxiety: A cross-sectional study. BMC Psychology, 11(1), 58. https://doi.org/10.1186/s40359-023-01105-6
4. World Health Organization. (2018). WHO recommendations: Intrapartum care for a positive childbirth experience: Executive summary. https://www.who.int/publications-detail-redirect/WHO-RHR-18.12
5. McKelvin, G., Thomson, G., & Downe, S. (2021). The childbirth experience: A systematic review of predictors and outcomes. Women and Birth, 34(5), 407–416. https://doi.org/10.1016/j.wombi.2020.09.021
6. Reisz, S., Jacobvitz, D., & George, C. (2015). Birth and motherhood: Childbirth experience and mothers' perception of themselves and their babies. Infant Mental Health Journal, 36(2), 167–178. https://doi.org/10.1002/imhj.21500
7. Van der Gucht, N., & Lewis, K. (2015). Women's experiences of coping with pain during childbirth: A critical review of qualitative research. Midwifery, 31(3), 349–358. https://doi.org/10.1016/j.midw.2014.12.005
8. Tandon, A., Gujral, K., & Gupta, V. (2025). Labour pain: A comprehensive review of perceptions, experiences, and sociocultural influences on pain and its management practices. Cureus, 17(6). https://doi.org/10.7759/cureus.86540
9. Batni, S., Bajpai, R., Singh, A., et al. (2025). Assessment of women's satisfaction during childbirth in a tertiary care hospital in Central India. Cureus, 17(8), e91214. https://doi.org/10.7759/cureus.91214
10. Raval, H., Puwar, T., Patel, N., Pandya, A., Rana, A., & Koria, B. D. (2025). Women's experiences with maternity care in public and private healthcare facilities in Western India: A community-based cross-sectional study. Cureus, 17(4), e81922. https://doi.org/10.7759/cureus.81922
11. Lovely, Gokhale, A. V., & Agarwal, S. (2024). A comparative study on childbirth experience of mothers at a tertiary care hospital. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 13(6), 1511–1516. https://doi.org/10.18203/2320-1770.ijrcog20241435
12. Ramasamy, R., Christopher, L., Rajendran, S. S., et al. (2025). The birthing experience among Indian antenatal mothers in a midwifery-led care unit: A systematic literature review. Bioinformation, 21(5), 1042–1045. https://doi.org/10.6026/973206300211042
13. Diamond-Smith, N., Gopalakrishnan, L., Patil, S., Fernald, L., Menon, P., Walker, D., & El Ayadi, A. M. (2024). Temporary childbirth migration and maternal health care in India. PLOS ONE, 19(2), e0292802. https://doi.org/10.1371/journal.pone.0292802
14. Dencker, A., Taft, C., Bergqvist, L., Lilja, H., & Berg, M. (2010). Childbirth Experience Questionnaire (CEQ): Development and evaluation of a multidimensional instrument. BMC Pregnancy and Childbirth, 10, 81. https://doi.org/10.1186/1471-2393-10-81
15. Scheerhagen, M., van Stel, H. F., Birnie, E., Franx, A., & Bonsel, G. J. (2015). Measuring client experiences in maternity care under change: Development of a questionnaire based on the WHO responsiveness model. PLOS ONE, 10(2), e0117031. https://doi.org/10.1371/journal.pone.0117031
16. Oweis, A. (2009). Jordanian mothers' report of their childbirth experience: Findings from a questionnaire survey. International Journal of Nursing Practice, 15(6), 525–533. https://doi.org/10.1111/j.1440-172X.2009.01774.x
17. Wijma, K., Wijma, B., & Zar, M. (1998). Psychometric aspects of the W-DEQ: A new questionnaire for the measurement of fear of childbirth. Journal of Psychosomatic Obstetrics & Gynecology, 19(2), 84–97. https://doi.org/10.3109/01674829809048501
18. Nilvér, H., Begley, C., & Berg, M. (2017). Measuring women's childbirth experiences: A systematic review for identification and analysis of validated instruments. BMC Pregnancy and Childbirth, 17(1), 203. https://doi.org/10.1186/s12884-017-1356-y
19. Dencker, A., Bergqvist, L., Berg, M., Greenbrook, J. T., Nilsson, C., & Lundgren, I. (2020). Measuring women's experiences of decision-making and aspects of midwifery support: A confirmatory factor analysis of the revised Childbirth Experience Questionnaire. BMC Pregnancy and Childbirth, 20(1), 199. https://doi.org/10.1186/s12884-020-02869-0
20. Jha, P., Jha, V. K., Sharma, B., Jha, A., Erlandsson, K., & Bogren, M. (2023). Cultural adaptation and psychometric evaluation of Childbirth Experience Questionnaire 2 in Karnataka State, India. PLOS ONE, 18(11), e0291591. https://doi.org/10.1371/journal.pone.0291591
21. Carquillat, P., Vendittelli, F., Perneger, T., & Guittier, M. J. (2017). Development of a questionnaire for assessing the childbirth experience (QACE). BMC Pregnancy and Childbirth, 17(1), 279. https://doi.org/10.1186/s12884-017-1462-x

22. World Health Organization. (n.d.). Process of translation and adaptation of instruments. https://www.scribd.com/document/533869240/WHO-Guidelines-on-Translation-and-Adaptation-of-Instruments
23. Wild, D., Grove, A., Martin, M., Eremenco, S., McElroy, S., Verjee-Lorenz, A., & Erikson, P. (2005). Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: Report of the ISPOR task force for translation and cultural adaptation. Value in Health, 8(2), 94–104. https://doi.org/10.1111/j.1524-4733.2005.04054.x
24. Karlström, A., Nystedt, A., Johansson, M., & Hildingsson, I. (2011). Behind the myth—Few women prefer cesarean section in the absence of medical or obstetrical factors. Midwifery, 27(5), 620–627.
25. Patabendige, M., Palihawadana, T. S., Herath, R. P., & Wijesinghe, P. S. (2020). Childbirth Experience Questionnaire (CEQ) in the Sri Lankan setting: Translation, cultural adaptation and validation into the Sinhala language. BMC Research Notes, 13(1), 534. https://doi.org/10.1186/s13104-020-05380-z
26. Dorairajan, G., Gopalakrishnan, V., Chinnakali, P., & Balaguru, S. (2021). Experiences and felt needs of women during childbirth in a tertiary care center: A hospital-based cross-sectional descriptive study. Journal of Obstetrics and Gynaecology of India, 71(1), 21–27. https://doi.org/10.1007/s13224-020-01359-9
27. Vedeler, C., Eri, T. S., Nilsen, R. M., Blix, E., Downe, S., van der Wel, K. A., & Nilsen, A. B. (2023). Women's negative childbirth experiences and socioeconomic factors: Results from the Babies Born Better survey. Sexual & Reproductive Healthcare, 36, 100850. https://doi.org/10.1016/j.srhc.2023.100850