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ORIGINAL RESEARCH ARTICLE

Development and validation of a Spanish version of the Obstetric Quality of Recovery-10 item score (ObsQoR-10-Spanish)

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Abstract

Background: Spanish is the second most spoken language globally with around 475 million native speakers. We aimed to validate a Spanish version of the Obstetric Quality of Recovery-10 item (ObsQoR-10) patient-reported outcome measure.
Methods: ObsQoR-10-Spanish was developed using EuroQoL methodology. ObsQoR-10-Spanish was assessed in 100 Spanish-speaking patients undergoing elective Caesarean or vaginal delivery. Patients <38 weeks, undergoing an intrapartum Caesarean delivery, intrauterine death, or maternal admission to the intensive care unit (ICU) were excluded. Validity was assessed by evaluating (i) convergent validity—correlation with 24-h EuroQoL and global health visual analogue scale (GHVAS) scores (0–100); (ii) discriminant validity—difference in ObsQoR-10-Spanish score for patients with GHVAS scores >70 *vs* <70; (iii) hypothesis testing—correlation of ObsQoR score with maternal and neonatal factors; and (iv) cross-cultural validity assessed using differential item functioning analysis. Reliability was assessed by evaluating: (i) internal consistency; (ii) split-half reliability and (iii) test–retest reliability; and (iv) floor and ceiling effects.
Results: One hundred patients were approached, recruited, and completed surveys. Validity: (i) convergent validity: the ObsQoR 24-h score correlated moderately with the 24-h EuroQoL (r=−0.632) and GHVAS scores (r=0.590); (ii) discriminant validity: the ObsQoR-10-Spanish 24-h scores were higher in women who delivered vaginally compared to via Caesarean delivery, (mean [standard deviation] scores were 89 [9] *vs* 81 [12]; P<0.001). The 24-h ObsQoR-Spanish scores were lower in patients experiencing a poor *vs* a good recovery (mean [standard deviation] scores were 76 [12.3] *vs* 87.1 [10.6]; P=0.001); (iii) hypothesis testing: the ObsQoR-10 score correlated negatively with age (r=−0.207) and positively with 5-min (r=0.204) and 10-min (r=0.243) Apgar scores. Remaining correlations were not significant; and (iv) differential item functioning analysis suggested no potential bias among the 10 items. Reliability: (i) internal consistency was good (Cronbach alpha=0.763); (ii) split-half reliability was good (Spearman–Brown prophesy reliability estimate of 0.866); (iii) test–retest reliability was excellent with an intra-class correlation coefficient of 0.90; and (iv) floor and ceiling effects: six patients scored a maximum total ObsQoR-10 score.
Conclusions: The ObsQoR-10-Spanish patient-reported outcome measure is valid, reliable, and clinically feasible, and should be considered for use in Spanish-speaking women to assess quality of inpatient postpartum recovery.

Keywords: ObsQoR; obstetric anaesthesia; patient-reported outcome measure; postpartum recovery; quality of recovery

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Around the world, the United Nations estimated ~134 million births in 2021.[1] Recovery from childbirth, either vaginal or Caesarean delivery, is a unique experience that differs from non-obstetric surgery as mothers are expected to take care of their babies soon after delivery. Postoperative recovery is a multifaceted experience which involves dynamic changes in multiple domains (including physical, psychological, physiological, and social), ideally resulting in a return to the preoperative baseline state or better.[2] Defining the baseline state to which mothers are attempting to return is difficult given that the postpartum period often involves new experiences and challenges not previously encountered, including chronic sleep deprivation, fatigue, maternal–neonatal bonding, breastfeeding, and integration of a new life into the family.[3] Quality of recovery (QoR) has been defined as the process that describes the patients' experience to reach that goal and patient-reported outcome measures are regarded as the gold standard assessment tools.[24]

The Obstetric Quality of Recovery (ObsQoR) measure was developed and validated in an 11-item form for women undergoing elective Caesarean delivery in the UK.[5] This version was modified to a 10-item version (ObsQoR-10), which has now been validated in the UK[6] and the United States following all delivery modes.[7] Systematic reviews utilising validated Consensus based Standards for the selection of health Measurement Instruments (COSMIN) methodology, have proposed the ObsQoR as the best available measure of inpatient postpartum recovery.[8] Considering this outstanding potential for providing a patient-centred, multidimensional, and standardised measure of in-hospital postpartum recovery after childbirth,[9] the ObsQoR has so far also been translated and validated in Hebrew,[10] Portuguese,[9] Turkish,[11] Hindi,[12] Arabic,[13] French,[14] and Chinese.[15]

Spanish is the second most spoken language globally with ~475 million native speakers.[16] It is spoken in the majority of Latin America and the Caribbean and in Spain. ObsQoR-10 has not yet been validated in Spanish-speaking populations, and its potential benefits in both clinical and research settings justify the development of a Spanish version of ObsQoR-10. The aim of this study was to develop and validate the ObsQoR-10-Spanish in a Colombian cohort of patients undergoing elective Caesarean or vaginal delivery. The primary outcome of this study was the assessment of the psychometric properties (validity, reliability, and clinical feasibility) of the ObsQoR-10-Spanish.

Methods

Development of the Spanish version of ObsQoR-10 (ObsQoR-10-Spanish)

The process of translating and validating the ObsQoR-10 scale into Spanish involved six steps, as previously described by the EuroQoL group.[17] In brief, this involves: (i) independent translation of ObsQoR-10 from English to Spanish by two native Spanish-speaking physicians who are also fluent in English; (ii) blending of the two forward translations followed by comparison to the original version. This creates a consensus Spanish version; (iii) back translation of the consensus Spanish version into English. This was performed by two independent bilingual physicians who are native English speakers and also fluent in Spanish; (iv) comparison of the back-translated version to the original English ObsQoR-10 version, followed by modification of the Spanish version if any inconsistencies were evident; (v) cognitive debriefing interviews conducted with 10 native Spanish-speaking individuals, who provide feedback on each translated question of the ObsQoR-10; (vi) further modifications based on cognitive debriefing interviewee feedback.

Steps 1–5 of the above process were completed (with the sixth step not required) over a 2-week period and resulted in the final translated ObsQoR-10-Spanish version; Supplementary material).

Evaluation of psychometric properties of ObsQoR-10-Spanish

After local IRB approval (research ethics committee of the institution; CEIFUS 1381-20), a prospective observational study was conducted in an academic healthcare institution within Bogotá, Colombia.

Patients who were healthy (American Society of Anesthesiologists physical status class 2 or 3), Spanish-speaking (and able to read Spanish), primiparous patients who had a term gestation (≥38 weeks gestational age), elective Caesarean or vaginal delivery were considered for inclusion in this study. Patients were excluded upon refusal to participate, if <18 yr old, or had a history of intrauterine or fetal demise, maternal intensive care unit requirement, intrapartum urgent Caesarean, or needed general anaesthesia for Caesarean delivery.

The usual care for vaginal delivery in our institution includes neuraxial labour analgesia (if requested and feasible) with bupivacaine 0.1% + fentanyl 2 μg ml^{-1} via a patient-controlled epidural (PCEA) analgesia pump. For patients undergoing elective Caesarean delivery, the routine technique is spinal anaesthesia with a premixture of hyperbaric bupivacaine 10 mg + fentanyl 25 μg + morphine 100 μg through a 25 or 27 G pencil-point needle. Intraoperatively patients are given (if not contraindicated) diclofenac 75 mg and paracetamol 1 g or metamizole 2 g i.v. In the postpartum period, all women undergoing Caesarean and vaginal delivery are encouraged to breastfeed their baby within the first hour of life and rooming-in is the usual practice. Lactation consultants are available if needed. A full meal is usually available within the first 2 h for vaginal delivery patients and after 4 h for the Caesarean group. Water and clear liquids are always available. Analgesic regimens for both groups include scheduled oral non-steroidal anti-inflammatory drugs (diclofenac/naproxen/ibuprofen) and paracetamol and opioid rescue medication for breakthrough pain with i.v. hydromorphone or tramadol.

Investigators approached patients 24 h (plus or minus 6 h) after childbirth to complete the patient-reported ObsQoR-10-Spanish outcome measure. After informed consent, patients were asked by investigators to: (i) rate each ObsQoR-10-Spanish recovery item from 0 to 10 (total score 0=worst recovery and 100=best recovery); (ii) complete a Spanish version of the EuroQoL (EQ-5D-3L) patient-reported outcome measure (permission obtained from the EuroQoL group), which includes five self-reported domain scores and a global health visual analogue scale (GHVAS) score between 0 and 100 (0=worst and 100=best health state).

Twenty-five percent of the recruited patients were randomly selected to complete both questionnaires again (ObsQoR-10 and EuroQoL EQ-5D-3L) 1 h after the initial completion. Patients and the researcher were blinded to the scores obtained from the questionnaires. For descriptive

purposes, baseline characteristics (ethnicity, age, and body mass index [BMI]), clinical variables (gestational age, parity, medical comorbidities, obstetric diagnoses, estimated blood loss, and Apgar scores at 1, 5, and 10 min) and intrapartum anaesthesia management were obtained either from the patient's medical records or by direct questioning, when applicable.

Data analysis

The psychometric properties (validity, reliability, and clinical feasibility) of the ObsQoR-10-Spanish were evaluated as the primary outcome of this study.

Validity

Similar to previous ObsQoR methodology, validity was assessed in four ways: (i) convergent validity (comparison of ObsQoR-10-Spanish scores to EuroQoL and 24-h GHVAS scores at 24 h post childbirth); (ii) discriminant validity (comparison of mean (standard deviation; SD) 24-h ObsQoR-10-Spanish scores from women: (a) after Caesarean *vs* vaginal delivery; and (b) reporting 'good recovery' (GHVAS ≥70) *vs* poor recovery (GHVAS <70); (iii) hypothesis testing; and (iv) cross-cultural validity. Hypothesis testing was evaluated by exploring the correlation between 24-h ObsQoR-10-Spanish scores to parturient age, gestational age, BMI, ASA physical status classification, estimated volume of blood loss, maternal factors (nausea, vomiting, and requirement for supplemental analgesics), and neonatal factors (Apgar scores at 1, 5, and 10 min). These outcomes were selected based on published evidence and biological plausibility.[18–21]

Reliability

Reliability was assessed in four ways: (i) internal consistency (assessed using Cronbach's alpha and inter-item correlation for the ObsQoR-10-Spanish items); (ii) split-half reliability (assessed through correlational analyses between random split segments from ObsQoR-10-Spanish); (iii) test–retest reliability (correlation between ObsQoR-10-Spanish scores completed at 24 *vs* 25 h postpartum); and (iv) floor and ceiling effects (ideally <15% of respondents should achieve a highest possible score of 100) or a lowest possible score of 0).[22]

Clinical feasibility

Clinical feasibility was assessed in three ways: (i) recruitment rate into the study (number of participants recruited as a percentage of the number of women approached and invited to participate); (ii) response rate (number of women that completed ObsQoR-10-Spanish as a percentage of the number of women recruited); (iii) successful completion rate (percentage of completed forms without data missing) and number of women that declined to complete ObsQoR-10-Spanish.

Statistical analysis

A sample size of 100 patients was selected for this study based on previous ObsQoR validation studies.[5,23] Based on previously published literature this number of patients was deemed adequate to identify differences between good *vs* poor recovery in women undergoing elective Caesarean and vaginal delivery. Statistical analyses were conducted with GraphPad Prism (GraphPad Prism version 9.0. for Windows/Mac, GraphPad Software, San Diego, CA, USA, www.graphpad.com). The null hypothesis was rejected if the two-tailed *P*-value was ≤0.05.

Normality testing was conducted for continuous data using the Shapiro–Wilk normality test. Data are presented as number (%), mean (SD) or median (inter-quartile range), with 95% confidence intervals (CI). Correlations for hypothesis testing were calculated using Spearman's rank correlation coefficients. Cross-cultural validity was assessed using differential item functioning (DIF) analyses, which were performed using linear regression (regressing each outcome on the sum score after removing the focal item) and determined for country through comparison made to US data.[7] Potential DIF by significance of country was determined after Bonferroni correction for multiple testing. Internal consistency was measured using Cronbach's alpha and Spearman–Brown prophesy reliability estimate was used to assess split-half reliability. Intra-class correlation coefficient was used to assess test–retest reliability (see Supplementary material).

Results

One hundred patients (50 elective Caesarean and 50 vaginal delivery), who were approached, recruited, and completed surveys over the study period are summarised in Fig. 1. Over the 15-month study period between April 2021 and July 2022, all patients approached consented to participate in the study.

Patient variables including medical and obstetric factors are summarised in Table 1. Patients who underwent Caesarean delivery were older, had a higher BMI, experienced greater blood loss, and experienced more nausea and vomiting compared with women delivering via vaginal delivery. No other differences in patient characteristics, obstetric, or neonatal factors were demonstrable.

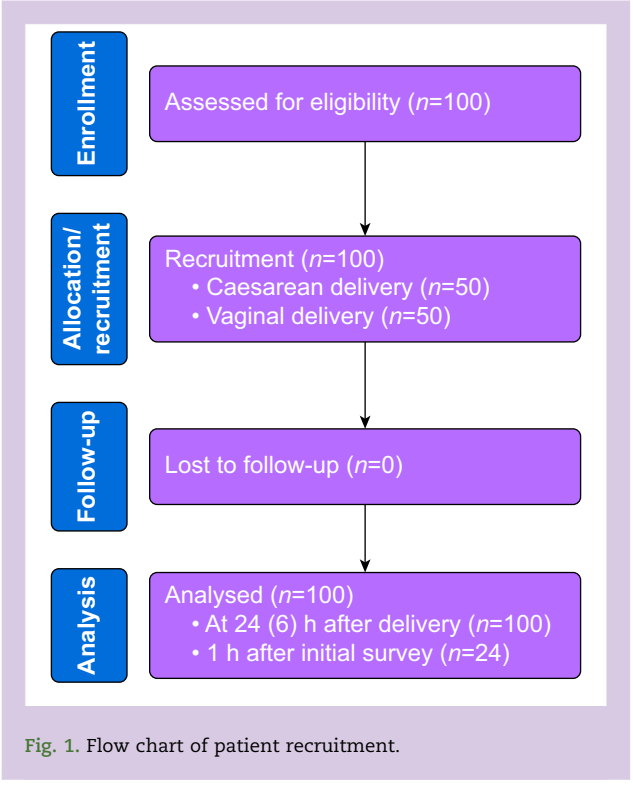

Fig. 1. Flow chart of patient recruitment.

Table 1 Patient, obstetric, and medical variables. Data are mean (standard deviation) or median [inter-quartile range], unless otherwise specified. ASA, American Society of Anesthesiologists; BMI, body mass index; NICU, neonatal intensive care unit.*P<0.05 +Colombian ethnic groups as defined by the Colombian National Administrative Department of Statistics (DANE). †The person does not identify her/himself with any of the following ethnic groups.

	Vaginal (n=50)	Caesarean (n=50)	P-value
Age (yr)	26.7 (4.6)	30.5 (6.3)	0.001*
Gestational age (weeks)	38.9 (0.8)	38.7 (0.7)	0.269
Gravidity	1 [1–1]	1 [1–2]	0.248
Ethnicity+, n (%)			0.367
Non-ethnic†	47 (94)	49 (98)	
Afro-Colombian	0	1 (2)	
Indigenous	2 (4)	0	
Raizal	1 (2)	0	
BMI kg m^{-2}	27.9 (4.2)	29.8 (4.0)	0.020*
ASA physical status grade, n (%)			0.148
2	46 (92)	40 (80)	
3	4 (8)	10 (20)	
Anaesthesia and obstetric factors			
Estimated blood loss (ml)	300 [200–300]	400 [300–500]	<0.001*
Transfusion	0	0	—
Additional analgesia requested by patient	0	5 (10)	0.056
Nausea, n (%)			0.012*
No	50 (100)	43 (86)	
Mild	0	4 (8)	
Moderate	0	1 (2)	
Severe	0	2 (4)	
Vomiting	0	5 (10)	0.056
Additional anti-emetic	0	0	—
Neonatal			
Apgar score			
1 min	8 [8–8]	8 [8–8]	0.679
5 min	9 [9–9]	9 [9–9]	0.464
10 min	9 [9–10]	9 [9–9]	0.494
NICU admission, n (%)	6 (12)	5 (10%)	0.749

Indications for Caesarean delivery and variables related to vaginal delivery are summarised in Table 2. Among the patients who underwent Caesarean delivery, six patients experienced a failed induction of labour and were scheduled for non-urgent Caesarean delivery. Mode of anaesthesia was spinal anaesthesia for most patients and the majority received neuraxial morphine 100 μg. Most patients that delivered vaginally received oxytocin and labour epidural analgesia.

Postpartum recovery variables for women delivering via Caesarean and vaginal delivery are provided in Table 3. Times to food intake, mobilisation, urinary catheter removal, and time to discharge readiness were all prolonged in the Caesarean delivery group when compared with the vaginal delivery group.

Validity

(i) Convergent validity: the ObsQoR 24-h score correlated moderately with the EQ5D score ($r=-0.632$ [−0.755 to −0.490], $P<0.001$) and GHVAS score ($r=0.590$ [0.426 to 0.729], $P<0.001$) at 24 h after delivery. (ii) Discriminant validity: the ObsQoR-10-Spanish 24-h scores were significantly higher in women who delivered vaginally compared with via Caesarean delivery, representing better recovery in this cohort (Table 3). The 24-h ObsQoR-Spanish scores were significantly lower in patients experiencing a poor *vs* a good recovery (GHVAS <70 *vs* ≥70; mean values 76 plus or minus 12.3 *vs* 87.1 plus or minus 10.6; difference of means: 11.1 (95% CI 5.6–16.6); $P=0.001$). (iii) Hypothesis testing: the ObsQoR-10 score correlated negatively with age ($r=-0.207$, (95% CI −0.392 to −0.004); $P=0.039$) and positively with 5-min ($r=0.204$, (95% CI 0.022–0.370); $P=0.042$) and 10-min Apgar scores ($r=0.243$, (95% CI 0.067–0.443); $P=0.015$). Correlations of ObsQoR scores with remaining patient, anaesthesia, and obstetric and neonatal variables were not significant (see Supplementary Table S1). (iv) DIF analysis suggested no potential bias among the 10 items when compared with the English version (validated in the United States).[7]

Reliability

(i) Internal consistency was good (Cronbach alpha=0.763) and the mean inter-item correlation was 0.244 (inter-item correlation matrix provided in Table 4). (ii) Split-half reliability was good (Spearman–Brown prophesy reliability estimate of 0.866). (iii) Test–retest reliability (24- *vs* 25-h scores in 25 patients) was excellent with an intra-class correlation coefficient of 0.901 (95% CI 0.785–0.956). (iv) Floor and ceiling effects—six patients (6%) scored a maximum total ObsQoR-10-Spanish score of 100/100 and no patients scored 0/100.

Clinical feasibility

Some 100% of the women who were screened and deemed to be eligible to participate in this study were successfully recruited into the study. Some 100% of the study participants responded to surveys at each time point and there were no incomplete survey responses or dropouts in the study.

Table 2 Caesarean and vaginal delivery variables. Data given as *n* (%) or median [inter-quartile range].

Caesarean delivery (*n*=50)	
Indication for Caesarean	
Breech position	11 (22)
Cephalopelvic disproportion	9 (18)
Failed induction of labour	6 (12)
Fetal macrosomia	6 (12)
Oligohydramnios	4 (8)
Prior myomectomy	4 (8)
Unfavourable Bishop score	10 (20)
Anaesthetic technique	
Epidural top-up	4 (8)
Spinal	46 (92)
Neuraxial morphine	42 (84)
Duration of surgery (min)	41.5 [34–50]
Vaginal delivery (*n*=50)	
Cervical dilatation at time of admission (cm)	2.5 [2–5]
Induction of labour	14 (28)
Oxytocin administered	41 (82)
Epidural analgesia	45 (90)
Cervical dilatation at time of epidural (cm)	5 [4–6]
Time from admission to delivery (h)	31 [22–44]
Perineal tear	15 (30)
Duration of	
1st stage (min)	436 [254–650]
2nd stage (min)	13 [8–26]

Discussion

Our main finding is that the ObsQoR-10-Spanish is a valid, reliable, and clinically feasible patient-reported outcome measure for assessing inpatient postpartum recovery in Spanish-speaking women delivering in Colombia. This study demonstrates validity of this measure in Hispanic patients and provides additional supporting evidence that ObsQoR-10 is a generalisable measure that should be considered for clinical and research use in the South American setting and in Spanish-speaking patients.

Clinical implications

ObsQoR-10 has previously been identified as the best available patient-reported outcome measure to assess inpatient postpartum recovery,[3 8] and is a component of a recently developed core outcome set of metrics that should be considered for assessing enhanced recovery after Caesarean delivery (ERAC) protocol success.[24] ObsQoR-10 is now validated for use in the following countries: UK, USA, France, South Korea, Israel, Brazil, Turkey, Saudi Arabia, China, and Colombia.[6 7 9–11 14 15] ObsQoR-10 scores consistently demonstrate moderate correlation with GHVAS (r=0.51–0.59) and EuroQoL scores (r=−0.63 to −0.51) in Spanish, Portuguese, and English-speaking populations and differentiate between good *vs* poor recovery (according to GHVAS scores), with acceptable floor and ceiling effects (<15%). Given the growing evidence surrounding improved outcomes associated with enhanced recovery protocol utilisation in obstetrics,[25,26] and professional society support,[27–30] data from this study further support the validity of including ObsQoR-10 as a composite outcome measure to evaluate ERAC protocol success in healthcare settings across Europe, North America, and South America.

The worst-ranking recovery item in both vaginal and Caesarean delivery cohorts was pain in the past 24 h, which suggests that efforts to optimise postpartum analgesia are still required. Although most patients received neuraxial morphine for Caesarean delivery analgesia, there may also be a role for epidural morphine administration after vaginal

Table 3 Postpartum recovery variables. Time to discharge ready = from delivery to discharge ready as per obstetrician note. Data are median [inter-quartile range] or mean (standard deviation). ObsQoR, Obstetric Quality of Recovery-10-Spanish patient-reported outcome measure; VAS, visual analogue scale. *P<0.05.

	Vaginal (*n*=50)	**Caesarean (*n*=50)**	***P*-value**
Time to solid intake (h)	2.9 [1.9–5]	7.2 [6.0–12.3]	<0.001*
Time to mobilisation (h)	7.0 [6.0–8.9]	13.0 [11.0–16.4]	<0.001*
Time to urinary catheter removal (h)	—	10.9 [8.0–14.6]	—
Time to discharge ready (h)	19.2 [14.4–23.3]	25.0 [20.8–38.1]	<0.001*
ObsQoR score at 24 h	89.1 (9.3)	80.9 (12.4)	<0.001*
1 Pain	6.3 (2.6)	5.6 (2.3)	0.125
2 Nausea	9.9 (0.5)	8.8 (2.6)	0.005*
3 Dizzy	9.4 (1.4)	8.4 (2.7)	0.026*
4 Shivering	9.1 (2.3)	9 (2.6)	0.872
5 Comfort	8.4 (1.8)	7.9 (2.0)	0.212
6 Mobilise	8.9 (1.9)	8.1 (2.3)	0.061
7 Hold baby	9.4 (1.6)	8.6 (1.8)	0.028*
8 Feed baby	9.2 (1.7)	7.9 (2.3)	0.001*
9 Hygiene	9.2 (1.6)	8.3 (2.1)	0.017*
10 Control	9.3 (1.3)	8.2 (2.3)	0.003*
EQ5D at 24 h	6.7 (1.5)	7.2 (1.6)	0.127
Global Health VAS	80.4 (16.0)	78.6 (14.3)	0.547
Mobility	1.2 (0.4)	1.3 (0.5)	0.206
Self-care	1.2 (0.4)	1.3 (0.5)	0.378
Daily activity	1.5 (0.6)	1.6 (0.6)	0.190
Pain	1.7 (0.5)	1.7 (0.5)	0.556
Anxiety	1.1 (0.4)	1.2 (0.4)	0.416

Table 4 Inter-item correlation matrix for ObsQoR-10-Spanish. Correlation coefficients. ObsQoR-10-Spanish, Obstetric Quality of Recovery-10-Spanish patient-reported outcome measure.

	Pain	Nausea	Dizzy	Shivering	Comfort	Mobilise	Hold baby	Feed/nurse	Hygiene	Control
Pain	1.0000									
Nausea	0.1249	1.0000								
Dizzy	0.2366	0.4149	1.0000							
Shivering	0.2586	0.2723	0.5258	1.0000						
Comfort	0.3152	−0.1004	−0.0487	−0.1079	1.0000					
Mobilise	0.2237	−0.0234	0.2304	0.1472	0.4565	1.0000				
Hold baby	0.1273	−0.0851	−0.0107	−0.0071	0.2738	0.5580	1.0000			
Feed/nurse	0.2696	0.0221	0.2218	0.1609	0.3352	0.4759	0.7303	1.0000		
Hygiene	0.1120	−0.0000	0.2179	0.0778	0.3766	0.5368	0.4822	0.4917	1.0000	
Control	0.1856	0.0004	0.1035	−0.0571	0.4503	0.4389	0.5821	0.4694	0.5128	1.0000

delivery to improve post-vaginal delivery pain outcomes. Several of the ObsQoR items were significantly worse after Caesarean delivery compared with vaginal delivery (nausea, dizziness, ability to hold and feed the baby, and feeling in control) and none of the items were superior in women who underwent Caesarean delivery, which is consistent with our hypothesis that quality of inpatient recovery is superior in women delivering vaginally. These data can be used to counsel women during delivery planning and may facilitate antenatal management of expectations.

ObsQoR-10 scores after spontaneous vaginal delivery are lower in women delivering in the group studied in the UK[6] compared with Colombia (80 *vs* 89), which may, in part, be attributable to the lower proportion of patients receiving labour epidural analgesia in the UK sample (32% *vs* 90%, respectively). The mean score in our Colombian population delivering via elective Caesarean delivery was also higher than the studied US population (81 *vs* 76).[7] Ultimately, adjustment for multiple confounding factors such as medical and obstetric comorbidity, hospital protocols, anaesthesia drug regimens, and surgical factors is necessary to determine the role that cultural difference alone plays in postpartum recovery outcomes.

Research implications

Detailed analyses of QoR data using ObsQoR linked to longitudinal postpartum recovery domain metrics (such as those identified for pain, sleep, and depression) [4,31] will help provide insights into the relationship between inpatient QoR and longer-term postpartum recovery outcomes. A comprehensive and robustly validated outpatient postpartum recovery patient-reported outcome measure is still currently lacking.[4] Prospectively collected quality of postpartum recovery data utilising the same measure provides a rare opportunity to examine the differences in clinical practice between healthcare systems and practices which are associated with best and worst postpartum recovery. As ObsQoR scores are likely to differ between populations and cultures, large prospective studies, such as that recently conducted in the UK using ObsQoR,[32] can help inform values associated with clinically significant differences and potential cut-off values associated with good and poor recovery after each delivery mode. Such data can also be used to identify modifiable and non-modifiable risk factors for poor inpatient recovery. This information can be used to develop targeted interventions and improve recovery trajectory and patient experience.

Strengths and limitations

The ObsQoR-10-Spanish measure has been tested using multiple psychometric analyses for validity and reliability, which are in line with COSMIN recommendations.[33] Despite the fact that our studied population comes from a single Spanish-speaking centre, consistent performance across multiple languages and healthcare settings supports its usefulness as a research and clinical measure for inpatient postpartum recovery and the feasibility of its use is demonstrated by consistently high survey response and completion rates. However, measurement error and responsiveness properties of ObsQoR-10 still require further study. Measurement error is regarded as sufficient if the smallest detectable change (i.e. a change in score of 1 for ObsQoR-10) is lower than the minimal important change value. Minimal important change is yet to be determined for ObsQoR-10 in addition to cut-off values, which are associated with worse clinical recovery. Responsiveness is best assessed in cohorts of patients requiring prolonged hospital admission or community follow-up, which compromises high response rates with longitudinal evaluations using ObsQoR-10.

Our research population consisted of both non-urgent Caesarean and vaginal deliveries, including six patients who experienced failed induction of labour followed by Caesarean delivery, which might have affected their experience. Although ObsQoR is a generalisable measure of recovery in patients undergoing all modes of delivery, some patient groups, such as patients who experience an undesirable fetal outcome (e.g. intrauterine or neonatal death or NICU admission), should not be asked to complete the ObsQoR-10, as several items are not relevant and may be psychologically traumatic (e.g. ability to hold and feed the baby). ObsQoR is also not sensitive or specific for some women with poor recovery, or who have experienced severe maternal morbidity, for example, headaches after accidental dural puncture or severe nerve injury. Future studies should focus on assessing these groups of women at higher risk of psychosocial morbidity and developing appropriate patient-reported outcome metrics for the inpatient and outpatient settings.

In summary, the ObsQoR-10-Spanish patient-reported outcome measure is valid, reliable, and clinically feasible, and should be considered for use in Spanish-speaking women to assess quality of inpatient postpartum recovery. Further studies are needed to evaluate recovery in different healthcare systems and assess its association with meaningful outpatient postpartum outcomes and recovery trajectories.

Author's contributions

Designed the study: JG, CS, JOM, NG, PS
Conducted the study: JG, CS, JOM, PS
Analysed the data: JG, JOM, PS
Wrote the manuscript: all authors
Provided statistical analyses: BD, NG

Declarations of interest

The authors declare that they have no conflicts of interest.

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Data availability

The datasets generated, analysed, or both during the current study are available from the corresponding author on reasonable request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.bjao.2024.100269.

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