



Instrument to evaluate the perception of abuse and/or disrespectful treatment during childbirth: A validation study

Antonio Hernández-Martínez^a, Julian Rodríguez-Almagro^{a,*}, Miriam Donate Manzanares^b, Inmaculada Ortiz Esquinas^c, Ana Rubio Álvarez^d, Ana Ballesta Castillejos^e, Nuria Infante Torres^f, Silvia García de Mateos^h, Victoriano González Trujillo^g, Juan Miguel Martínez-Galiano^{i,j}

^a Department of Nursing, Faculty of Nursing of Ciudad Real, University of Castilla-La Mancha, Ciudad Real, Spain

^b Hospital Santa Barbara de Puertollano, Ciudad Real, Spain

^c Hospital Universitario Reina Sofía de Córdoba, Córdoba, Spain

^d Hospital Universitario de Torrejón, Madrid, Spain

^e Department of Nursing, Faculty of Nursing of Albacete, University of Castilla-La Mancha, Ciudad Real, Spain

^f Hospital Virgen de Altagracia de Manzanares, Ciudad Real, Spain

^g CS de Campo de Criptana y Villafranca de los Caballeros, Gerencia de Atención Integrada de Alcázar de San Juan, Ciudad Real, Spain

^h Gerencia de Atención Integrada de Ciudad Real, Ciudad Real, Spain

ⁱ Department of Nursing of University of Jaen, Jaén, Spain

^j Consortium for Biomedical Research in Epidemiology and Public Health (CIBERESP), Madrid, Spain

ARTICLE INFO

Keywords:

Abuse
Childbirth
Disrespect
Mistreatment
Obstetric violence
PTSD
Validation studies

ABSTRACT

Aim: To design and validate a tool to assess a woman's perception of whether she has experienced a situation of abuse or disrespect during childbirth attendance: "Childbirth Abuse and Respect Evaluation-Maternal Questionnaire" (CARE-MQ).

Methods: Multidisciplinary panel of experts (gynecologists, midwives, mothers) participated in creating CARE-MQ. A cross-sectional study was carried out on 901 Spanish women who had given birth between 1 and 3 months before to determine psychometric characteristics. Finally, an exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and a convergent validity study were carried out with the Quality Questionnaire from the Patient's Perspective-Intrapartum (QPP-I), and a reliability study using internal consistency (Cronbach's α) and coefficient of intraclass correlation (CCI).

Findings: The KMO test gave a value of 0.935, and Bartlett's sphericity test was <0.001 . The EFA identified four components ("Emotional Abuse", "Inadequate Professionalism", "Physical Abuse" y "Lost contact") that explained 55.16 % of variance. In the CFA, a good fit was observed for most of the evaluated indicators. CARE-MQ correlated negatively with QPP-I (Spearman's $\rho = -0.641$, 95 % CI: -0.679 , -0.600 ; $p < 0.001$) and was statistically associated with variables related to childbirth experience ($p < 0.005$) such as the use of a birth plan, use of regional analgesia, type of birth, episiotomy, presence of severe tears, skin-to-skin contact, length of hospital stay and postpartum surgical intervention. Cronbach's α value was 0.903. The ICC of absolute agreement after administering the questionnaire one week after was 0.927 (95 % CI: 0.85–0.97).

Conclusions: CARE-MQ is a valid and reliable instrument to evaluate the perception of a woman regarding the situation of abuse and/or disrespect that she may have experienced during birth in a population of Spanish postpartum women.

* Corresponding author at: Department of Nursing, Physiotherapy and Occupational Therapy, Faculty of Nursing, University of Castilla La-Mancha, Avenida Camilo José Cela 14, CP:13071, Ciudad Real, Spain.

E-mail address: julianj.rodriguez@uclm.es (J. Rodríguez-Almagro).

<https://doi.org/10.1016/j.midw.2024.104118>

Received 3 March 2024; Received in revised form 17 July 2024; Accepted 22 July 2024

Available online 22 July 2024

0266-6138/© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).

Introduction

The World Health Organization (WHO), in its Declaration “The prevention and elimination of disrespect and abuse during facility-based childbirth” carried out in 2014, warns of a high number of women who experience disrespectful and offensive treatment during the care they receive during childbirth (OMS 2015). The WHO promotes respectful childbirth care, so that women have a positive experience. In this new context, terms such as obstetric violence, mistreatment, abuse, and disrespect emerge and become visible, relating them to childbirth care. Although there is no consensus on the term used, there is majority acceptance in considering this phenomenon, as has been mentioned without a clear and agreed name, as any action, conduct, or omission of the right of a pregnant woman. In this way, a woman perceives a hierarchical, dehumanizing treatment in which a physiological process such as childbirth is medicalized and pathologized, with the consequent loss of autonomy and deprivation of the woman’s ability to decide freely which ends up affecting quality of life (Egan et al., 2016). These behaviors include a broad series of actions such as, for example, performing procedures without asking the woman’s permission, lack of respect, carrying out non-recommended clinical practices during childbirth, physical abuse, insults, discrimination, infantilization of women, and the provision of little attention and care, among others (Sando et al., 2017). An issue of particular concern is mothers’ experiences of lack of privacy during childbirth. Privacy is one of the fundamental rights of women during the birth process and is often at risk of being violated. (Mrayan et al., 2023).

The percentage of women who state that they have experienced any of these behaviors is between 15 % and 91 % depending on the country, the instrument, and method used, the definition and type of abuse, as well as the type of hospital where the birth occurred, among other factors (Sando et al., 2017; Raval di et al., 2018; Siraj et al., 2019; Tobiasía-Hege et al., 2019). In Spain, a recent study places this figure around 67 % (Martínez-Galiano et al., 2020). The presence of this phenomenon has been associated with some factors and determinants such as marital status, age, educational level, socioeconomic level, employment situation, race, parity, history of abortion, as well as the sex and professional category of the person who attends the birth, the type of birth and the public or private nature of the center where it takes place (Siraj et al., 2019; Shrivastava and Sivakami, 2019; Hameed and Avan, 2018; Baranowska et al., 2019; Vedam et al., 2019; Sharma et al., 2019; Lukasse et al., 2015). Additionally, different clinical practices, such as giving birth on the delivery table in the lithotomy position, performing episiotomy without the woman’s authorization, applying pressure on the uterine fundus, or carrying out vaginal examinations without the woman’s permission, are associated with a greater perception of abuse and/or lack of respect on her part (Raval di et al., 2018).

The association of the presence of health problems in women and their offspring with this phenomenon has been little studied and has fundamentally been done at a psychological level (Silveira et al., 2019; Olza Fernández, 2013; Hernández-Martínez et al., 2020). In this sense, one of the most described consequences has been the development of post-traumatic stress disorder (PTSD) (Olza Fernández, 2013; Martínez-Vázquez et al., 2021).

Currently, there are few tools for assessing abuse during childbirth, and they also present important limitations, especially because they have been developed in developing countries with a social, cultural, and economic reality that is different from other countries such as Western countries, where this phenomenon has been less studied (Dhakal et al., 2021; Castro and Frías, 2020; Cárdenas and Salinero, 2021).

This lack of a valid and reliable instrument implies that the different published studies could present a significant classification bias and that their conclusions could be erroneous and/or imprecise. Hence, it is necessary to develop a tool that allows us to specifically identify whether a woman has perceived experiencing this abuse and/or disrespectful treatment during childbirth, the type of treatment received, and its

severity so that the detection of this problem can be homogenized and an approach to combat this developed.

For this reason, we proposed to design and validate a tool to assess a woman’s perception of whether she has experienced a situation of abuse or disrespect during childbirth attendance: “Childbirth Abuse and Respect Evaluation- Maternal Questionnaire” (CARE-MQ).

Methods

A design and validation study using mixed methodology was carried out in 4 phases on a sample of puerperal women who gave birth in Spain following the approval of the Clinical Research Ethics Committee of the Mancha-Centro Hospital (197-C), which was further ratified at the Reina Sofía University Hospital from Córdoba (5615), and at the Integrated Care Management University Hospital of Ciudad Real (C-600) as it was intended to transfer this study to the entire Spanish territory. All participants received written information about the study and signed the informed consent prior to their participation.

Phase 1: Questionnaire design and development

A literature search was carried out in the main health sciences databases (Web of Science, Pubmed, Scopus, and Cinahl) during April to May 2023 with the objective of locating similar instruments and information that an instrument should contain. In that same period of time, a qualitative investigation was carried out with a methodology based on phenomenology according to Giorgi’s method (Giorgi (2009) on an intentional sample of 20 women with the objective of identifying all the aspects that women who have experienced childbirth potentially perceive as susceptible to being considered abuse or disrespectful treatment.

After analyzing the women’s discourses and extracting the units of meaning along with the detailed review of the 5 located instruments (Cárdenas and Salinero, 2021; Mena-Tudela et al., 2020; Castro and Frías, 2020; Paiz et al., 2022; Dwekat et al., 2021), a questionnaire was developed consisting of 31 distributed items (30 common to all mothers and one optional item depending on whether the newborn was alive at the time of birth or was a fetal death). This resulted in version 0 of the questionnaire:

“Childbirth Abuse and Respect Evaluation- Maternal Questionnaire”(CARE-MQ).

Phase 2: Expert panel

After obtaining version 0 of the CARE-MQ questionnaire, it was evaluated by a multidisciplinary panel of experts. Eighteen experts from different disciplines were contacted: 5 midwives, 5 gynecologists, and 8 mothers. This group of experts belonged to various geographical areas of Spain in order to contemplate the different social, cultural, and linguistic realities that make up this country. They were contacted via email, inviting them to participate in this research as experts on the birth experience. After they agreed to participate, they were sent the original questionnaire and asked to evaluate, assigning a score of 1 (worst score) – 5 (best score), each of the items that make up the questionnaire based on four parameters: wording, understanding, relevance and general assessment. Likewise, a section was included for them to note any observations they considered appropriate on each item. To reach a consensus, the median score of the panelists had to be greater than or equal to 4. The coefficient validity ratio of each item (CVR) was also estimated following Lawshe’s criteria (Lawshe, 1975), eliminating or modifying those items that did not reach a score of 0.5. The Content Validity Index (CVI) was obtained from these scores, the result of the average scores of all the CVRs, with the objective of reaching a value greater than 0.80 (Davis, 1992). Regarding the evaluation of the questionnaire in general, an observations section was enabled for their evaluation in general terms and for them to make any contributions/suggestions they considered necessary.

Once the 18 evaluations were received, they were shared, and the appropriate corrections were made based on the experts’ opinions,

obtaining version 1 of the questionnaire. The questionnaire was modified by reducing its length by 20 items and was sent again to the panel of experts for a second evaluation, after which approval was received from all participants (version 1).

Phase 3: Questionnaire pilot

The questionnaire was distributed among 30 women from various geographical areas and different socio-educational levels who had a birth experience, regardless of the route and its outcome in the last 3 months. In this group of women, in addition to applying the CARE-MQ instrument, all the necessary questions for the validation process were applied to improve the writing, understanding, and adjusting its length. After the piloting, all the items were maintained, and modifications were made in their wording, obtaining version 2 of the questionnaire after reformulating the items that the women had indicated.

Phase 4. Application of the instrument in the target population to determine its psychometric properties

Design and subject selection

For this part, a cross-sectional validation study was carried out on a sample of women whose childbirth experience had occurred in the last 3 months. The exclusion criteria were women under 18 years of age and who did not speak or did not know the Spanish language (language barrier). The sample was made up of all types of women (primiparous and multiparous) regardless of the place of birth, type of birth, and outcome. Sampling was non-probabilistic and intentional and consisted of women from all over Spain. The sample size was estimated according to the criteria for conducting a factor analysis. These criteria consider between 4 and 10 subjects for each item, so we needed a sample of at least 200 participants (De Vet et al., 2005).

Information sources

To collect the information necessary for validation, a questionnaire consisting of sociodemographic variables, obstetric history, variables of the most recent birth, obstetric practices carried out, and neonatal results was developed. To distribute, contact was made with different associations related to pregnancy, childbirth, and postpartum, and with support groups for breastfeeding and parenting throughout the Spanish territory. The questionnaire was also disseminated through the different associations of midwives in Spain so that it could be distributed to women through their members. The recruitment period was established between September and December 2023.

After applying the inclusion and exclusion criteria, the participating women were informed and accepted informed consent for participation in the research, providing a contact telephone number or email address.

Various tools were included in this questionnaire:

- Childbirth Abuse and Respect Evaluation- Maternal Questionnaire" (CARE-MQ), version 2. (Annex 1; Annex 2 (Spanish version)).
- Intrapartum-Specific Quality from the Patient's Perspective Questionnaire (QPP-I), Spanish version. This tool comprises 39 items distributed among 11 factors, which has been validated and presents good psychometric characteristics. (Donate-Manzanares et al., 2017) From this tool, 13 items that referred to the treatment from professionals (doctors, midwives, and nursing assistants) were used.
- Modified QPP questionnaire on post-traumatic stress (Callahan et al., 2006) and validated in Spanish (Hernández-Martínez et al., 2021). It is a 14-item instrument that assesses post-traumatic symptoms related to the birth experience, including intrusion or re-experiencing, avoidance behaviors, hyperactivity, or numbing of responsiveness. Response options were modified from the original dichotomous scale to a five-level Likert scale (scored from 0 to 4). Mothers provide responses that reflect their experience during the anticipated time period. The total possible score on the modified QPP ranged from 0 to 56.

- SF-12 quality of life questionnaire (Tabachnick and Fidell, 2013). This questionnaire consists of a set of 12 items on Health-Related Quality of Life (HRQoL). The SF12 version presents eight domains: physical functioning, physical role, bodily pain, general health, vitality, social functioning, emotional role, and mental health. The total quality of life score is obtained from the sum of the two subscales, physical health and mental health, on a scale from 0 to 100, in which higher scores indicate better perceived HRQoL.

Statistical analysis

For sociodemographic and clinical data, absolute and relative frequencies were used to describe qualitative variables, and the mean and standard deviation (SD) were used to describe quantitative variables.

To determine the scale's validity, we analyzed content validity, construct validity, and convergent criterion validity. Regarding content validity, we analyze the relevance of the items that make up the test by determining the content validity index (CVI) (Lawshe, 1975), where values greater than 0.80 must be obtained as proposed by Davis (Davis, 1992).

For construct validity, we performed an exploratory factor analysis (EFA) to understand the underlying factors through a Principal Components Analysis (PCA). PCA aims to reduce the number of dimensions of large datasets to principal components that retain most of the original information. It does this by transforming potentially correlated variables into a smaller set of variables, called principal components. Before performing EFA, we analyzed Kaiser-Meyer-Olkin (KMO) tests and Bartlett's tests of sphericity, which indicated whether it was appropriate to apply this analysis. For this to be the case, the KMO must be above 0.6 and as close to 1 as possible, and Bartlett's sphericity, which consists of statistical hypothesis testing, must be less than 0.05 to reject the null hypothesis of sphericity and ensure that the factor model is adequate to explain the data. In the EFA, we use Varimax rotation to help clarify the assignment of items to different factors. To determine the number of factors we wanted to maintain, we used the Kaiser criterion, one of the most used. It retains factors with eigenvalues greater than the unit value (Tabachnick and Fidell, 2013).

Within criterion validity, convergent validity was also analyzed in order to establish the relationship between obstetric violence and some factors that are believed to be associated with it, such as induction of labor, mode of birth, episiotomy, presence of severe tears, skin-to-skin contact, type of feeding, length of hospital stay, etc. To do this, a bivariate analysis was carried out using Pearson's chi-square or Fisher's t-student according to data from qualitative or quantitative variables. The results were considered statistically significant when $p < 0.05$.

For convergent validity, the QPP-I birth satisfaction questionnaire was also used in the items related to professional treatment. If instruments that quantify the same construct are compared, and the results between both measures present significant correlations, they are said to "converge." Spearman correlation coefficients were calculated for this, hoping to obtain, in ideal circumstances, an acceptable psychometric performance that implies a correlation greater than 0.60 (convergent). In addition, the relationship between the different QPP-I items and the CARE-MQ scores was analyzed using the linear trend analysis of variance test (ANOVA) and the Jonckheere-Terpstra non-parametric trend test. The dimensions of the SF-12 questionnaire were used to determine discriminant validity using the Spearman correlation coefficient. With its 8 dimension structure, we can assess how the CARE-MQ correlates more or less depending on the evaluated aspect of the SF-12.

The reliability analysis was carried out by studying Cronbach's α to evaluate internal consistency (IC) (Streiner et al., 2015). The IC tells us to what extent the elements in question are correlated with each other and how they fit together and measure the same concept. Cronbach's α is one of the most used measures to evaluate the reliability of a scale. Its values range from 0 to 1. One of the most accepted rules is to consider $\alpha > 0.9$ as excellent, $\alpha > 0.8$ as good, $\alpha > 0.7$ as acceptable, $\alpha > 0.6$ as

Table 1

Characteristics of the sample included in a validation study of the Spanish questionnaire for the CARE-MQ scale.

Variable	Total N (%)	CARE-MQ	
		Mean (SD)	P value
Maternal age			
Mean (SD)	33.3 (4.0)		
Planned pregnancy			0.155
No	63 (7.0)	8.08 (10.54)	
Yes	838 (93.0)	6.12 (9.06)	
Number of antenatal education sessions			0.117
No	155 (17.3)	5.35 (8.69)	
Less than 5 classes	192 (21.3)	7.34 (9.63)	
At least 5 classes	554 (61.5)	6.13 (9.13)	
Birth plan			<0.001
No	368 (40.8)	5.49 (7.92)	
Yes, not respected	119 (13.2)	19.76 (12.16)	
Yes, and respected	414 (45.9)	3.04 (4.72)	
Twin pregnancy			0.142
No	885 (98.3)	6.16 (9.06)	
Yes	15 (1.7)	11.87 (14.15)	
Missing	1		
Gestational age			0.492
Term	853 (94.7)	6.20 (9.18)	
Preterm	48 (4.3)	7.15 (9.17)	
Live newborn			0.445
No	4 (0.4)	2.75 (2.98)	
Yes	897 (99.6)	6.27 (9.20)	
Parity			0.012
Primiparous	693 (76.9)	6.66 (9.31)	
Multiparous	208 (23.1)	4.09 (8.61)	
Induction of labor			0.003
No	494 (54.8)	5.41 (8.34)	
Yes	407 (45.2)	7.28 (10.02)	
Natural analgesia			0.005
No	611 (67.8)	6.85 (89.60)	
Yes	290 (32.2)	4.99 (8.11)	
Regional analgesia			<0.001
No	158 (17.5)	3.41 (6.20)	
Yes	740 (82.1)	6.87 (9.60)	
General anesthesia			0.057
No	879 (97.6)	6.08 (8.98)	
Yes	21 (2.3)	9.95 (12.33)	
Type of birth			<0.001
Normal birth	519 (57.6)	4.18 (7.44)	
Instrumental	181 (20.2)	8.77 (10.73)	
Elective CS	37 (4.1)	5.97 (8.14)	
Emergency CS	164 (18.2)	10.09 (10.59)	
Episiotomy			<0.001
No	710 (78.8)	5.62 (8.89)	
Yes	191 (21.2)	8.60 (9.85)	

Table 1 (continued)

Variable	Total N (%)	CARE-MQ	
		Mean (SD)	P value
Severe tear			<0.001
No	864 (95.9)	6.03 (9.03)	
Yes	37 (4.1)	11.32 (11.21)	
Skin to skin			<0.001
No	149 (16.5)	12.13 (12.10)	
Yes, but less than 50 min	95 (10.5)	8.27 (9.50)	
Yes, between 50 and 120 min	108 (12.9)	6.77 (8.89)	
Yes, at least 120 min	549 (60.9)	4.21 (7.31)	
Neonatal Admission			0.106
No	780 (86.6)	6.04 (9.01)	
Yes	121 (13.4)	7.62 (10.13)	
Hospital length of stay			<0.001
Homebirth	14 (1.6)	4.14 (11.1)	
1 day	75 (8.3)	3.62 (6.39)	
2 days	478 (53.1)	5.27 (8.41)	
3 days	231 (25.6)	7.92 (10.24)	
4 days or more	103 (11.5)	9.31 (10.25)	
Feeding at discharge			0.073
Maternal	659 (73.1)	5.84 (8.86)	
Mixed	172 (19.1)	7.56 (10.00)	
Artificial	70 (7.8)	6.94 (9.82)	
Postnatal surgical intervention			0.008
No	859 (95.3)	5.99 (8.87)	
Yes	42 (4.7)	11.69 (13.18)	
Hospital readmission			0.113
No	879 (97.6)	6.14 (9.08)	
Yes	22 (2.4)	10.46 (12.16)	

CS, Cesarean section; NICU, Neonatal Intensive Care Unit.

Analyses: Variables with two categories Student-Fisher t-test. Variables with more than two categories test Analysis of Variance (ANOVA).

questionable, $\alpha > 0.5$ as poor, and $\alpha < 0.5$ as unacceptable (George and Mallery, 2011).

The IBM SPSS Amos program was used to perform confirmatory analysis and determine the fit of the model. Using absolute fit measures: Chi-square and Root mean squared error of approximation (RMSEA); incremental fit measures: Comparative fit index (CFI), Tucker-Lewis Index (TLI) and Normed Fit Index (NFI); Parsimony Fit Measures: Parsimony Ratio (PRATIO), Parsimony Comparative Fit Index (PCFI), Parsimony Normalized Fit Index (PNFI), and the Akaike Information Criterion Index (AIC). To interpret these indices, the critical values recommended by the literature were considered, which propose acceptable values greater than 0.90 for the TLI, CFI, and PRATIO indices, values greater than 0.80 for PCFI and PNFI, and less than 0.08 for the RMSEA, as well as the lowest possible value for the AIC (Castro and Frías, 2020). After determining these indicators, modification indices were requested, and the model was respecified by relating errors to determine the adjustment indicators again.

Finally, temporal reliability was studied through a test-retest. To evaluate this property, we use the intraclass correlation coefficient (ICC). We calculated it using the two-factor mixed effects model, and it analyzed both Concordance and Absolute Agreement. In this case, the questionnaire was administered again after 7 days to a randomly

Table 2
Rotated component matrix.

Item	Components			
	1 Emotional Abuse	2 Inadequate Professionalism	3 Physical Abuse	4 Lost Contact
Q1		0.681		
Q2		0.738		
Q3		0.653		
Q4		0.568		
Q5		0.605		
Q6				0.813
Q7	0.408			
Q8		0.501		
Q9		0.552		
Q10	0.820			
Q11	0.572			
Q12	0.775			
Q13	0.762			
Q14	0.695			
Q15		0.500		
Q16			0.746	
Q17			0.462	
Q18		0.567		
Q19			0.710	
Q20				0.810
Variance explained	17.4 %	10.2 %	8.9 %	8.7 %
Cronbach's alpha (α)	0.853	0.858	0.538	0.622

selected subgroup of the participating women to complete this analysis. Following the Fleiss criteria, ICC values greater than 0.9 are considered excellent (Koo and Li, 2016).

Results

Characteristics of participants

A total of 901 women participated with a mean age of 33.3 years (SD = 4.0 years) and 76.9 % (693) were primiparous. Labor was induced in 45.2 % (407), while 57.6 % (519) had a normal vaginal birth, and 82.1 % (740) used regional analgesia. 13.4 % (121) of the newborns were admitted to the neonatal unit and at the time of hospital discharge, 73.1 % (659) of them were receiving exclusive breastfeeding. The remaining characteristics of the sample are shown in Table 1.

Content validity

After the initial expert judgment, 11 items with median scores below 4 and a Coefficient Validity Ratio (CVR) equal to or lower than 0.5 were eliminated. The CVR scores of the 20 selected items ranged between 0.66 and 1, obtaining a CVI of 0.82 and, therefore, adequate to be maintained.

Psychometric properties

Factor construct validity

The KMO test gave a value of 0.935, and Bartlett's sphericity test was <0.001. Therefore, we proceeded to carry out the EFA. Four main components explained 55.16 % of the variance. The first component, consisted of items 7, 10, 11,12, 13 and 14 explained 17.4 % of variance and corresponds to items that describe “**Emotional Abuse**”, reflecting the poor interpersonal relationships between professionals and women. The second component consisted of items 1, 2, 3, 4, 5, 8, 9, 15 and 18 and accounted for 10.2 % of variance. This component groups items related to “**Inadequate Professionalism**” that range from communication problems and violation of privacy to the use of inappropriate or unnecessary techniques. The third component was formed by items 16, 17 and 19, which accounted for 8.9 % of total variance and represents

Table 3
Relationship between the scores on the QPP-I scale and the CARE-MQ scores.

Variable	Total N (%)	CARE-MQ		
		Mean (SD)	P value *	P value**
Midwives treated me with respect			<0.001	<0.001
Not relevant in my case	0			
I do not agree	21 (2.3)	28.5 (12.87)		
I partly agree	69 (7.7)	20.4 (10.84)		
I mostly agree	127 (14.1)	10.2 (8.04)		
Completely agree	684 (75.9)	3.4 (6.00)		
I felt like the midwives understood how I felt.			<0.001	<0.001
Not relevant in my case	0			
I do not agree	58 (6.4)	22.9 (12.11)		
I partly agree	77 (155)	15.6 (10.43)		
I mostly agree	155 (17.2)	8.5 (8.97)		
Completely agree	611 (67.8)	2.9 (5.18)		
The midwives showed commitment: they looked after me			<0.001	<0.001
Not relevant in my case	0			
I do not agree	39 (4.3)	24.3 (12.97)		
I partly agree	88 (9.8)	16.4 (10.70)		
I mostly agree	125 (13.9)	6.2 (9.18)		
Completely agree	649 (72.0)	3.0 (5.19)		
The midwife gave me the best possible support during childbirth.			<0.001	<0.001
Not relevant in my case	10 (1.1)			
I do not agree	55 (6.1)	22.9 (11.61)		
I partly agree	78 (8.7)	15.1 (11.19)		
I mostly agree	109 (12.1)	9.2 (9.28)		
Completely agree	649 (72.0)	3.2 (9.18)		
The midwife was present for as long as I wanted during the first stage of birth (dilatation).			<0.001	<0.001
Not relevant in my case	53 (5.9)			
I do not agree	96 (10.7)	17.2 (12.10)		
I partly agree	105 (11.7)	8.3 (8.90)		
I mostly agree	137 (15.2)	5.9 (7.23)		
Completely agree	510 (56.6)	3.5 (9.18)		
The midwife was present for as long as I wanted during the second stage of birth (dilatation).			<0.001	<0.001
Not relevant in my case	85 (9.4)	20.0 (12.76)		
I do not agree	59 (6.5)	14.7 (11.47)		
I partly agree	54 (6.0)	8.9 (8.85)		
I mostly agree	80 (8.9)	3.5 (6.13)		

(continued on next page)

Table 3 (continued)

Variable	Total N (%)	CARE-MQ		P value**
		Mean (SD)	P value *	
Completely agree	623 (69.1)			
The midwife gave me the best possible support when I breastfed the first time.			<0.001	<0.001
Not relevant in my case	64 (7.1)			
I do not agree	137 (15.2)	14.1 (11.80)		
I partly agree	103 (11.4)	8.7 (9.60)		
I mostly agree	126 (14.0)	6.4 (7.93)		
Completely agree	471 (52.3)	3.1 (5.97)		
The nurse aides treated me with respect.			<0.001	<0.001
Not relevant in my case	20 (2.2)			
I do not agree	38 (4.2)	17.7 (12.3)		
I partly agree	64 (7.1)	16.6 (12.75)		
I mostly agree	138 (15.3)	8.7 (9.17)		
Completely agree	641 (71.1)	14.0 (6.92)		
I felt like the nurse aides understood how I felt.			<0.001	<0.001
Not relevant in my case	27 (3.0)			
I do not agree	54 (6.0)	16.5 (11.87)		
I partly agree	101 (11.2)	13.1 (12.28)		
I mostly agree	157 (17.4)	7.4 (7.92)		
Completely agree	562 (62.4)	3.7 (6.87)		
The nurse aides showed commitment: they looked after me.			<0.001	<0.001
Not relevant in my case	24 (2.7)			
I do not agree	51 (5.7)	17.9 (10.25)		
I partly agree	102 (11.3)	12.9 (11.28)		
I mostly agree	146 (16.2)	7.7 (8.15)		
Completely agree	578 (64.2)	3.7 (6.84)		
The doctor(s) treated me with respect.			<0.001	<0.001
Not relevant in my case	37 (4.1)			
I do not agree	49 (5.4)	23.1 (13.28)		
I partly agree	83 (9.2)	14.9 (10.12)		
I mostly agree	124 (13.8)	8.2 (6.14)		
Completely agree	608 (67.5)	3.4 (6.14)		
I felt like the doctor(s) understood how I felt.			<0.001	<0.001
Not relevant in my case	43 (4.8)			
I do not agree	80 (8.9)	19.0 (12.57)		
I partly agree	107 (11.9)	12.2 (10.15)		

Table 3 (continued)

Variable	Total N (%)	CARE-MQ		P value**
		Mean (SD)	P value *	
I mostly agree	158 (17.5)	6.4 (7.75)		
Completely agree	513 (56.9)	2.9 (5.59)		
The doctor(s) showed commitment: they looked after me.			<0.001	<0.001
Not relevant in my case	38 (4.2)			
I do not agree	70 (7.8)	19.4 (12.09)		
I partly agree	106 (11.8)	13.4 (10.74)		
I mostly agree	149 (16.5)	6.8 (8.09)		
Completely agree	538 (59.7)	3.1 (5.74)		

* ANOVA test for linear trend.

** Jonckheere-Terpstra test.

Table 4
Internal consistency of the CARE-MQ.

Variable	Cronbach's alpha (α)
Total	0.903
When removing the item:	
Q1	0.900
Q2	0.894
Q3	0.894
Q4	0.897
Q5	0.899
Q6	0.903
Q7	0.899
Q8	0.904
Q9	0.895
Q10	0.897
Q11	0.897
Q12	0.897
Q13	0.898
Q14	0.895
Q15	0.898
Q16	0.903
Q17	0.900
Q18	0.899
Q19	0.903
Q20a	0.903
Q20b	

“Physical Abuse”. These items include the perception of pain due to the action or omission of professionals. The fourth component, “Lost Contact” explained 8.7 % and was made up of two items, 6 and 20, resulting from the mother’s separation from her companion and/or her infant. Furthermore, all the anti-image diagonal correlations showed figures higher than 0.868. All this information is presented in Table 2.

Convergent validity

Next, the convergent validity was analyzed using bivariate analysis of the scores from the questionnaire and various clinical factors and sociodemographics. A statistically significant ($p < 0.05$) relationship was observed between the scores with the following variables: Use of a birth plan, labor induction, parity, use of natural and regional analgesia, type of birth, episiotomy, presence of severe tears, skin-to-skin contact, length of hospital stay and postpartum post-surgical reintervention (Table 1).

The scores obtained by applying 13 items from the QPP-I questionnaire specific to the treatment received by midwives, doctors, and nursing assistants were also used as convergent criteria. As seen in

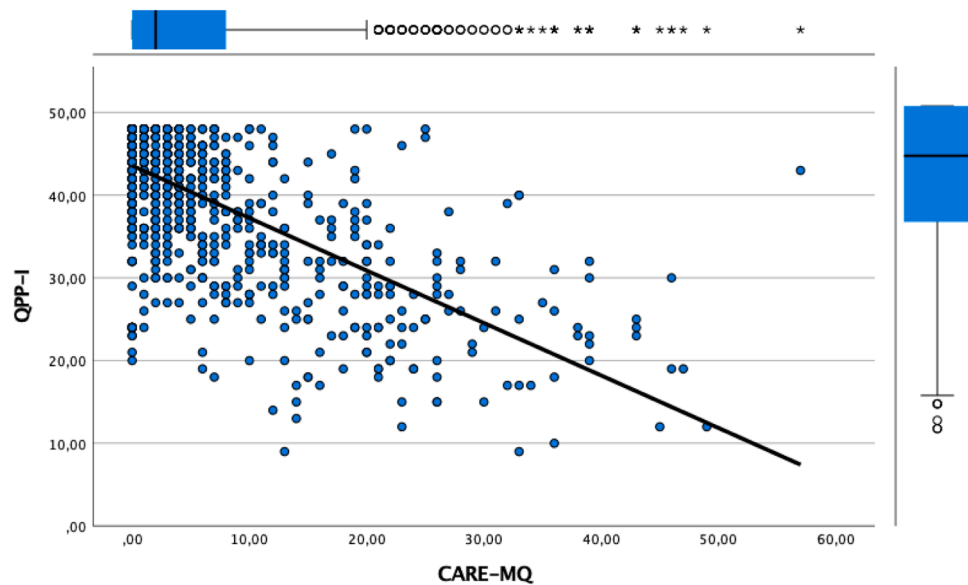


Fig. 1. Relationship between the scores on the CARE-MQ and the QPP-I scales.

Table 5
Confirmatory factorial analysis. Model fit analysis.

Indicators	Reference criteria	Original model estimated values	Estimated values after correlating errors
Absolute fit indices			
Chi cuadrado	>0.005	<0.001	<0.001
Root mean squared error of approximation (RMSEA)	<0.08	0.059	0.056
Incremental fit indices			
Tucker-Lewis Index (TLI)	>0.90	0.909	0.928
Comparative fit index (CFI)	>0.90	0.921	0.917
Normed Fit Index (NFI)	>0.90	0.899	0.906
Parsimonious fit indices			
Parsimony ratio (PRATIO)	>0.90	0.874	0.868
Comparative Fixed Parsimony Index (PCFI)	>0.80	0.804	0.806
Parsimony Normed fit Index (PNFI)	>0.80	0.785	0.786
Akaike Information Criterion (AIC)	Minor value	814.24	768.08

Bold: Acceptable fit criteria in the confirmatory factorial analysis.

Table 3, when applying the linear trend analysis of variance and the non-parametric Jonckheere-Terpstra trend test, we found a statistically significant association in all the QPP-I items ($p < 0.001$) with the CARE-MQ scores. Furthermore, we created a variable with the sum of the scores of these 13 QPP-I items and although there was no convergence because the tests had inverse scores, we found a statistically significant negative correlation with the CARE-MQ scores (Spearman's $\rho = -0.641$ 95 % CI: $-0.679, -0.600$). $p < 0.001$).

Internal consistency

To evaluate internal consistency, the α of the total of the questionnaire was used, as well as that of each of the dimensions found with the EFA. For the total scale, α was 0.903. All the alfa values scored higher than 0.895 when removing an item, and the general α did not increase by more than 0.01; therefore, we decided to keep them. The α values for each factor are shown in Table 4.

Discriminant validity

The dimensions of the SF-12 questionnaire were used to evaluate discriminant validity. The Spearman correlation coefficient values were: -0.207 for Physical Role, -0.217 for General Health, for Body Pain -0.254 , for Emotional Role -0.290 , for Social Function -0.308 , for Vitality -0.328 and for Mental Health -0.364 . As can be seen, the dimensions with a more psychosocial component are those that presented the highest degree of correlation, while those related to more physical aspects had a very low correlation.

Temporal stability

To determine this aspect, the CARE-MQ tool was applied again to a random sample of 30 women one week after its first administration. In this test-retest, an ICC of absolute agreement of 0.927 (95 % CI: 0.85–0.97) was found and considered excellent (Koo and Li, 2016). (Fig. 1)

Confirmatory factor analysis

After performing the confirmatory factor analysis, a good fit of the model was observed in the absolute fit index RMSEA (0.056); incremental fit indices: TLI (0.928), CFI (0.917), NFI (0.906) and CFI (0.992); and the parsimonious fit index PCFI (0.806). Table 5 shows all the values of each of the indicators and the criteria required to confirm the fit of the model. The Path diagram can also be consulted in Fig. 2.

Main results of CARE-MQ

Regarding the total scale, the mean score was 6.3 points (SD = 9.18) (minimum 0 and maximum 57). On the other hand, to determine the most affected aspects, we grouped the items into 5 subscales and standardized the scores on a scale from 0 to 100 points. In this way, we were able to observe that the most affected subscale was professional communication, with a mean score of 15.6 (SD = 25.07), and the least affected subscale was Inappropriate or unnecessary practices, with a mean score of 8.7 (SD = 14.7).

The item with the greatest impact was item 3 "They did NOT clearly explain to me the evolution of my birth, the state of health of mine and my son/daughter, in an understandable manner and/or I was NOT able to ask the questions that arose", where the 9.3 % (84) of the women

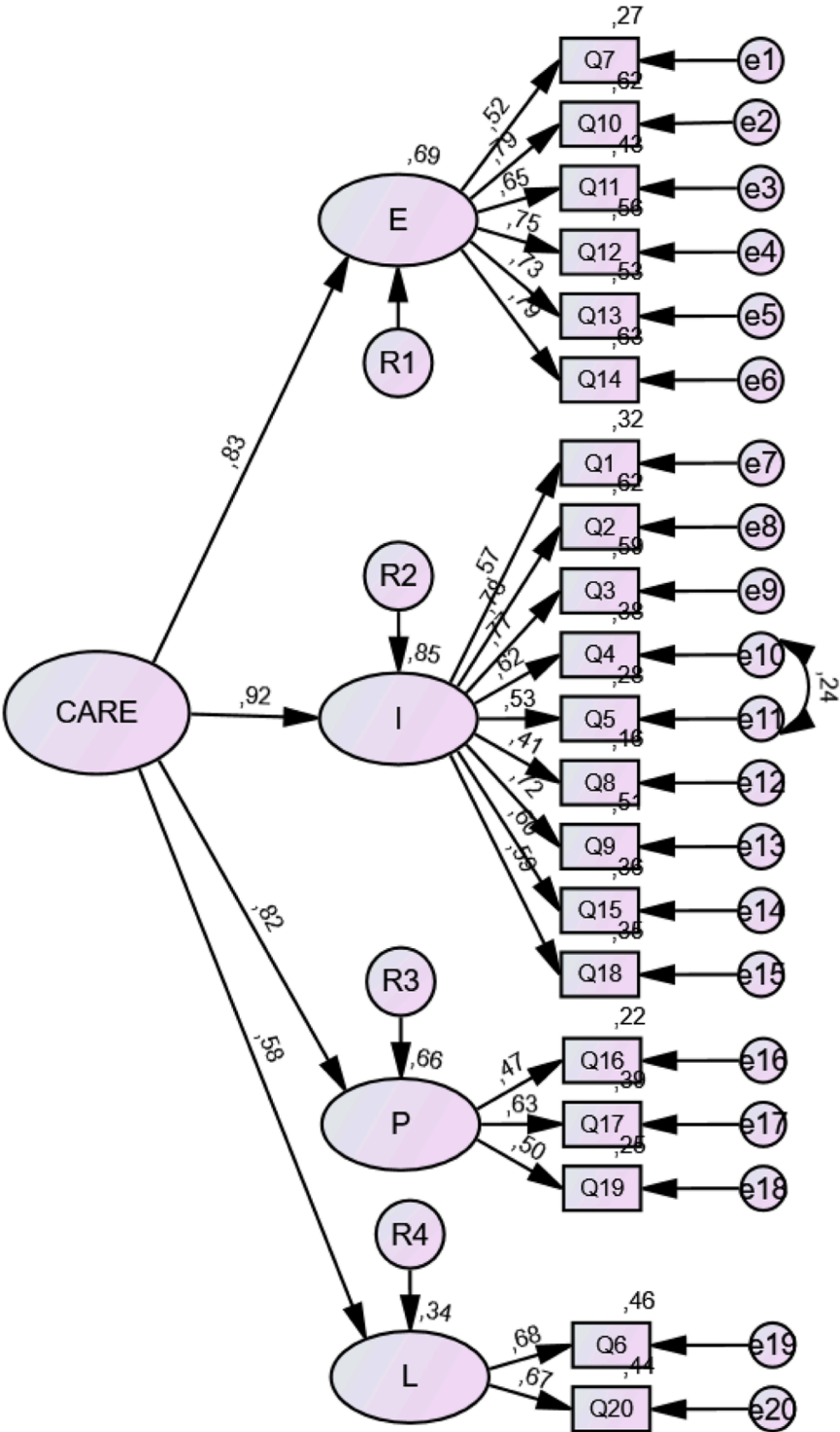


Fig. 2. Patch Diagram CARE-MQ.
CARE: Childbirth Abuse and Respect Evaluation; E: Emotional abuse; I: Inadequate Professionalism; P: Physical abuse; L: Lost contact

responded that it occurred and it affected them a lot. All the detailed information on the scores of each item can be found in [Table 6](#).

Clinically oriented cut-off value

Although the tool should be used to assess the degree of compliance with each item, from a clinical point of view, it may be useful to estimate a cut-off point to focus on and delve deeper into each woman’s experience. To do this, we divided the sample into groups according to score

percentiles, and we determined the score in each of the PTSD risk groups, as it is a complication closely related to abuse and/or disrespectful treatment during childbirth. As can be seen in [Fig. 3](#), from 8 points on the CARE-MQ, there is a relevant increase in the risk of PTSD evaluated through the QPP questionnaire.

Comment

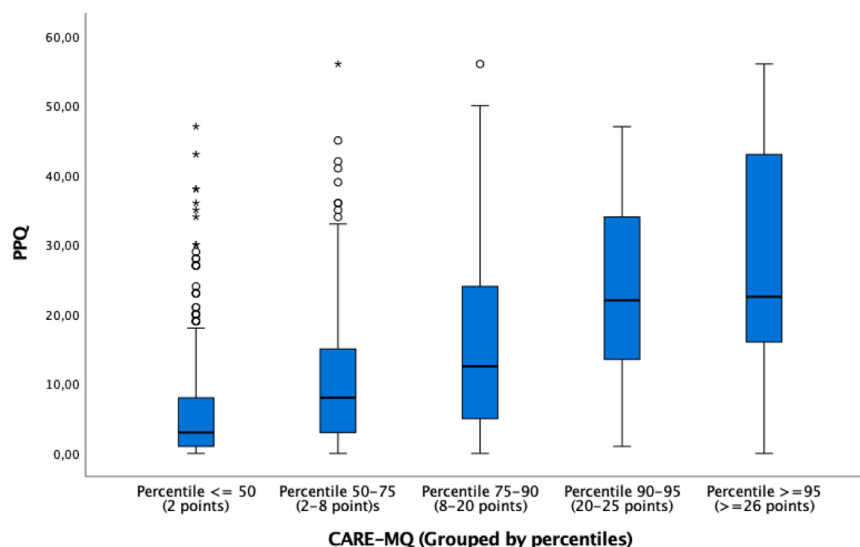
Childbirth Abuse and Respect Evaluation- maternal questionnaire”

Table 6

CARE-MQ: Scores obtained per item and grouped by subject

Indicate if these situations occurred during your labor and how they affected you.

	Not applicable because it did NOT occur (0 points) N (%)	It occurred, but it did NOT affect me AT ALL (1 point) N (%)	It occurred and affected me A LITTLE (2 points) N (%)	It occurred and affected me A LOT (3 points) N (%)	Standardized scale 0–100 Mean (SD)
Items on information received from the professionals (Items 1–3)	SUM OF ITEMS (1.3) x 100/9				15.6 (25.07)
Q1	648 (71.9)	136 (15.1)	95 (10.5)	22 (2.4)	
Q2	701 (77.8)	49 (5.4)	82 (9.1)	69 (7.7)	
Q3	701 (77.8)	34 (3.8)	82 (9.1)	84 (9.3)	
Items regarding privacy (Items 4–5)	SUM OF ITEMS (4–5) x 100/6				13.7 (23.7)
Q4	721 (80.0)	80 (8.9)	63 (7.0)	37 (4.1)	
Q5	654 (72.6)	113 (12.5)	90 (10.0)	44 (4.9)	
Items regarding professional support and care received (6–9)	SUM OF ITEMS (6–9) x 100/12				12.3 (19.55)
Q6	783 (86.9)	25 (2.8)	33 (3.7)	60 (6.7)	
Q7	791 (87.8)	27 (3.0)	44 (4.9)	39 (4.3)	
Q8	684 (75.9)	59 (6.5)	97 (10.8)	61 (6.8)	
Q9	719 (79.8)	44 (4.9)	66 (7.3)	72 (8.0)	
Items regarding inadequate interpersonal relationship (Items 10–14)	SUM OF ITEMS (10–14) x 100/15				8.8 (20.21)
Q10	784 (87.0)	25 (2.8)	45 (5.0)	47 (5.2)	
Q11	789 (87.6)	27 (3.0)	40 (4.4)	45 (5.0)	
Q12	800 (88.8)	23 (2.6)	41 (4.6)	37 (4.1)	
Q13	797 (88.5)	24 (2.7)	40 (4.4)	40 (4.4)	
Q14	787 (85.3)	30 (3.8)	36 (5.2)	48 (5.7)	
Items on inadequate or unnecessary procedures (Items 15–20)	SUM OF Item (15–20) x 100/18				8.7 (14.7)
Q15	769 (85.3)	34 (3.8)	47 (5.2)	51 (5.7)	
Q16	846 (93.9)	24 (2.7)	16 (1.8)	15 (1.7)	
Q17	732 (81.2)	48 (5.3)	63 (7.0)	58 (6.4)	
Q18	727 (80.7)	56 (6.2)	65 (7.2)	53 (5.9)	
Q19	872 (96.8)	22 (2.4)	2 (0.2)	5 (0.6)	
Q20a	782 (86.6)	10 (1.1)	47 (5.1)	62 (6.9)	
Q20b					

**Fig. 3.** Relationship between the scores on the CARE-MQ scale grouped by percentiles and the QPP scale to detect the risk of PTSD.

(CARE-MQ) was evaluated very positively by experts (content validity) and showed adequate psychometric characteristics (construct, convergent criterion, model fit, reliability and temporal stability).

Comparison with other tools

Regarding content, the CARE_MQ tool presents only 20 items, a much lower number than the questionnaires of [Mena-Tudela et al. \(2020\)](#), [Paiz et al. \(2022\)](#) and [Dwekat et al. \(2021\)](#) with 33, 36, and 43

items respectively, which represents an improvement to facilitate its completion by women. Another advantage of our tool compared to those identified is that it can be applied to women who have suffered a perinatal loss. Item 20 presents an option for mothers with a live fetus and for those who have a dead fetus, specifically, “I was NOT offered the possibility of seeing my baby or preparing a memory box.” This element is important to promote the humanization process that is promoted, for example, by the WHO in these difficult circumstances for mothers.

Furthermore, unlike the few instruments identified, the one

developed in this study is more oriented to a socio-health context in developed countries where practices such as, for example, the use of the birth plan are promoted, and the present instrument includes an item that does not appear in the other tools: “The professionals did NOT respect my birth plan when possible and when not possible they did NOT explain the reason to me NOR did we agree on an alternative.” On the other hand, our tool does not include items related to postpartum contraception as in the qualitative approach; this aspect was not a problem expressed by women, nor was it one of the aspects usually addressed in childbirth attendance. However, several items in this regard are included in the instruments of Castro et al. (Castro and Frías, 2020) and Cardenas et al. (Cárdenas Castro and Salinero Rates, 2021). This may be because in the countries where they were developed (Chile and Mexico), these contraception recommendations are included, and these freedoms are more frequently violated due to the existence of greater social inequality in this aspect (Sully et al., 2019).

On the other hand, currently, only one other tool has been developed in Spain, “PercOV-S Questionnaire.” This tool has been designed, according to the authors themselves, to assess the perception of obstetric violence by professionals and not by women. This instrument was validated with a population of health sciences students who had not yet become health professionals or had work experience in childbirth care. Furthermore, the study was carried out with a small sample size and with the absence of the study of some psychometric properties such as, for example, temporal stability. Currently, it has not been adopted by any institution or group of researchers other than those who created it (Mena-Tudela et al., 2020).

Regarding the psychometric characteristics evaluated internal consistency (Cronbach's $\alpha = 0.903$) and temporal stability (ICC = 0.927) were adequate. In the identified tools, temporal stability was not evaluated in any of them, except for González-de la Torre et al. (2023), who made this assessment by validating Cardenas' work in a subsample of 20 women. Similarly, the scales developed by Dwekat et al. (2021), Cárdenas Castro and Salinero Rates (2021) and Mena-Tudela et al. (2020) lack an assessment of convergent validity. In our case, the CARE-MQ did not show convergence with the QPP-I, because the scores of these tests are inverse. However, they did statistically correlate both globally and with each of the items that make up the QPP-I and an association was also observed between higher CARE-MQ scores and certain variables that have been described in the literature as associated with bad birth experiences and perception of obstetric violence, abuse or lack of respect such as type of birth, episiotomies, existence of tears, neonatal admission, not being able to perform skin-to-skin, not respecting the birth plan, among others (Martínez-Galiano et al., 2020; Aşci and Bal, 2023; Molla et al., 2022).

Strengths and limitations of the application of the tool

Among its strengths, it stands out that it is a tool created from the perception and opinion of the two affected groups: women and professionals. It addresses physical, emotional, and social aspects and inappropriate practices during childbirth. One of the potential benefits of the tool lies in the response options for each item, as assigning severity scores allows us to quantify the impact of each practice or situation, and it is also possible to do so globally by adding the scores of all the items. Furthermore, we can identify the “invisible or unperceived” abuse under the response, “It occurred, but it didn't affect me AT ALL.” Among the limitations of this instrument is that until it is applied in other populations, we cannot ensure that it can have adequate external validity and that it would be necessary to recruit more women with a perinatal loss to assess its validity in this group. In this sense, it would be appropriate that in future research, we can determine whether the inclusion of this tool systematically as a quality indicator in health institutions produces an improvement by raising awareness among professionals towards a more respected birth, avoiding, in turn, legal problems due to poor quality care. Another limitation observed is that

the four components of the CARE-MQ only explain 55 % of the variance. This is low and we believe that it is attributable to the complexity of the construct that encompasses abuse and lack of respect during birth. It is a complex perception that can be influenced by many aspects. However, the values found in the rest of the psychometric indices are adequate.

In conclusion, the CARE-MQ scale is a valid tool to assess the perception of abuse and/or disrespectful treatment during childbirth in a population of Spanish postpartum women.

CRedit authorship contribution statement

Antonio Hernández-Martínez: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Julian Rodríguez-Almagro:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization. **Miriam Donate Manzanares:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Inmaculada Ortiz Esquinas:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Ana Rubio Álvarez:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Ana Ballesta Castillejos:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Nuria Infante Torres:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Silvia García de Mateos:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Victoriano González Trujillo:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources. **Juan Miguel Martínez-Galiano:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Methodology, Investigation, Formal analysis.

Declaration of competing interest

No conflict of interest has been declared by the author(s).

Acknowledgement

To all the women's associations and especially the association “El parto es nuestro” for their participation as a panelist and their distribution of the questionnaire among women.

Funding

This study has been funded by Instituto de Salud Carlos III (ISCIII) through the project “PI22/00541” and co-funded by the European Union.

Ethical and legal considerations

The study was approved by the Clinical Research Ethics Committee of the Mancha-Centro Hospital (197-C), which was further ratified at the Reina Sofia University Hospital of Córdoba (5615), and at the Integrated Care Management University Hospital of Ciudad Real (C-600) as it was intended to transfer this study to the entire Spanish territory.

Reference number of the ethical approval

The study was approved by the Clinical Research Ethics Committee of the Mancha-Centro Hospital (197-C), which was further ratified at the Reina Sofia University Hospital of Córdoba (5615), and at the Integrated Care Management University Hospital of Ciudad Real (C-600) as it was intended to transfer this study to the entire Spanish territory.

Sources of outside support for research: This study has been funded by Instituto de Salud Carlos III (ISCIII) through the project "PI22/00541" and co-funded by the European Union.

Annex 1. Childbirth Abuse and Respect Evaluation- Maternal Questionnaire”(CARE-MQ)

Indicate if any of these situations occurred during your labor and how it affected you.

	(0 points)	(1 point)	(2 points)	(3 points)
Items on information received from the professionals (Items 1–3)				
1. The professionals that assisted at my birth introduced themselves by name and profession.	Information received	Information not given, but it did not affect me AT ALL	Information not given, and it affected me A LITTLE	Information not given, and it affected me A LOT
2. They explained to me the techniques and/or procedures that were going to be performed on me (for example, placing an IV, rupturing the amniotic sac, administering medication, etc.) and the reason why, the alternatives, as well as the risks and benefits of them in an understandable way, and/or I was able to ask the questions that arose and choose between the proposed alternatives.	It occurred	It did NOT occur, but it did not affect me AT ALL	It did NOT occur, and affected me A LITTLE	It did NOT occur, and affected me A LOT
3. They explained clearly how my labor was progressing, or my health status, or that of my infant, in a way that I could understand and/or I was able to ask any questions I had.	It occurred	It did NOT occur, but it did not affect me AT ALL	It did NOT occur, and affected me A LITTLE	It did NOT occur, and affected me A LOT
Items regarding privacy (Items 4–5)				
4. The professionals who treated me protected my privacy (using screens, covering my private parts, etc.)	It occurred	It did NOT occur, but it did not affect me AT ALL	It did NOT occur, and affected me A LITTLE	It did NOT occur, and affected me A LOT
5. During vaginal examinations and/or techniques, there were more people present than necessary (other doctors, nurses, orderlies, cleaning staff, etc.) or students (nursing, medicine) were present without anyone having asked my permission.	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
Items regarding professional support and care received (6–9)				
6. I was allowed to be accompanied by the person I chose during the entire birth process.	They allowed me	They did not allow me, but it did not affect me AT ALL	They did not allow me, and it affected me A LITTLE	They did not allow me, and it affected me A LOT
7. When I requested help (to move, wash myself, pain relief, etc.) I was NOT assisted.	Yes, I was assisted	I was not assisted, but it did not affect me AT ALL	I was not assisted, and affected me A LITTLE	I was not assisted, and affected me A LOT
8. I was helped with care of my newborn, breastfeeding or artificial feeding, and they did NOT answer my questions.	They helped me and answered my questions	They did not help me, but it did not affect me AT ALL	They did not help me, and it affected me A LITTLE	They did not help me, and it affected me A LOT
9. The professionals respected my birth plan when possible and when not possible they explained the reason to me and we agreed on an alternative.	Yes, they respected it	They did not respect it, but it did not affect me AT ALL	They did not respect it, and it affected me A LITTLE	They did not respect it, and it affected me A LOT
Items regarding inadequate interpersonal relationship (Items 10–14)				
10. I was told off during childbirth or my questions and doubts were answered disrespectfully (with criticism, yelling, or abuse).	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
11. They verbally scared or intimidated me about a danger to me or my baby into accepting certain practices that I did not agree with and they did NOT explain to me why they carried them out or with what justification.	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
12. They spoke to me like I was a child or mocked me.	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
13. I was criticized during childbirth for expressing my emotions (crying, yelling in pain, etc.)	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
14. During the birth experience, I was made to feel vulnerable, guilty, insecure, or that I had not lived up to what was expected of me (that I had not collaborated).	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
Items on inadequate or innecessary procedures (Items 15–20)				
15. They allowed me to adopt the position that I requested during dilation and delivery when not contraindicated.	They allowed me	They did not allow me, but it did not affect me AT ALL	They did not allow me, and it affected me A LITTLE	They did not allow me, and it affected me A LOT
16. They used anesthesia, whether requested or not, for example, to suture a tear or episiotomy or manually remove the placenta.	Yes, they used it	They did not use it, but it did not affect me AT ALL	They did not use it, and it affected me A LITTLE	They did not use it, and it affected me A LOT

(continued on next page)

(continued)

	(0 points)	(1 point)	(2 points)	(3 points)
17. The vaginal examinations were performed on me without taking measures to reduce the discomfort that this entails (use of lubricant, performing the technique progressively, trying to relax)	Yes, they used measures	They did not use it, but it did not affect me AT ALL	They did not use it, and it affected me A LITTLE	They did not use it, and it affected me A LOT
18. They carried out some of these practices without my consent (enema, shaving, vaginal examinations, episiotomy, abdominal pressure).	Yes, with my consent	It occurred without my consent, but it did not affect me AT ALL	It occurred without my consent, and it affected me A LITTLE	It occurred without my consent, and it affected me A LOT
19. I experienced some type of physical violence during labor. For example, I was slapped on the face or slapped on the thighs during childbirth to scold me or reprimand me for my behavior.	It did NOT occur	It occurred, but it did NOT affect me AT ALL	It occurred, and affected me A LITTLE	It occurred, and affected me A LOT
20.a I was allowed to do skin-to-skin immediately after giving birth without reasons and/or without giving explanations that would contraindicate it. (Only women with a live birth)	They allowed it/ offered it	They did not allow it/ offer it, but it did not affect me AT ALL	They did not allow me/ , and it affected me A LITTLE	They did not allow it/ offer it, but it did not affect me A LOT
20.b They offered me the possibility of seeing my baby or preparing a memory box. (Only women with fetal loss)				

Anexo 2. Childbirth Abuse and Respect Evaluation- Maternal Questionnaire”(CARE-MQ). Spanish Versión

Indica si alguna de estas situaciones se produjeron durante tu parto y cómo te afectó

Tabla 2: Relación entre las puntuaciones del cuestionario CARE-MQ con las puntuaciones del cuestionario PPQ.

	(0 puntos)	(1 punto)	(2 puntos)	(3 puntos)
Ítems sobre información recibida de los profesionales (Ítems 1–3)				
1. Los profesionales que atendieron mi parto se presentaron por su nombre y profesión.	Se presentaron	No se presentaron, pero no me afectó NADA	No se presentaron y me afectó UN POCO	No se presentaron y me afectó MUCHO
2. Me explicaron las técnicas y/o procedimientos que me iban a realizar (por ejemplo coger una vía, romper la bolsa, administrar medicación, etc.) y el motivo razonado, las alternativas, así como los riesgos y beneficios de las mismas de manera comprensible y/o pude preguntar las dudas que me surgieron y elegir entre las alternativas propuestas.	Se produjo	No se produjo, pero no me afectó NADA	No se produjo, y me afectó UN POCO	No se produjo, y me afectó MUCHO
3. Me explicaron claramente la evolución de mi parto, el estado de salud mío y de mi hijo/a, de manera comprensible y/o pude preguntar las dudas que me surgieron.	Se produjo	No se produjo, pero no me afectó NADA	No se produjo, y me afectó UN POCO	No se produjo, y me afectó MUCHO
Ítems sobre privacidad (Ítems 4–5)				
4. Los profesionales que me atendieron protegieron mi privacidad e intimidad (emplear biombo, cubrir mis partes íntimas, etc.).	Se produjo	No se produjo, pero no me afectó NADA	No se produjo, y me afectó UN POCO	No se produjo, y me afectó MUCHO
5. Durante la realización de las exploraciones vaginales y/o técnicas había más personas de las necesarias (otros médicos, enfermeras, celadores, personal de limpieza, etc.) o estaban presentes estudiantes (enfermería, medicina) sin que nadie me pidiera permiso.	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
Ítems sobre apoyo profesional y cuidados recibidos (6–9)				
6. Me permitieron estar acompañada por la persona que yo elegí durante todo el proceso de parto	Me lo permitieron	No me lo permitieron, pero no me afectó NADA	No me lo permitieron, y me afectó UN POCO	No me lo permitieron, y me afectó MUCHO
7. Cuando solicité ayuda (para moverme, asearme, calmar el dolor, etc.) fui atendida	Sí, fui atendida	No fui atendida, pero no me afectó NADA	No fui atendida, y me afectó UN POCO	No fui atendida, y me afectó MUCHO
8. Me ayudaron con los cuidados de mi hijo/a, con la lactancia materna o artificial y/o resolvieron mis dudas.	Me ayudaron y resolvieron mis dudas	No me ayudaron, pero no me afectó NADA	No me ayudaron, y me afectó UN POCO	No me ayudaron, y me afectó MUCHO
9. Los profesionales respetaron mi plan de parto cuando fue posible y cuando no fue posible me explicaron el motivo y consensuamos/dialogamos una alternativa.	Sí lo respetaron	No lo respetaron, pero no me afectó NADA	No lo respetaron, y me afectó UN POCO	No lo respetaron, y me afectó MUCHO
Ítems sobre relación interpersonal inadecuada (Ítems 10–14)				
10. Fui regañada durante el parto o ante mis preguntas y dudas me respondieron de forma irrespetuosa (con críticas, gritos o insultos).	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
11. Me asustaron o intimidaron sobre el peligro que corría yo o mi bebé verbalmente para que aceptara determinadas prácticas con las que no estaba de acuerdo y no me explicaron por qué las llevaban a cabo y con qué justificación.	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO

(continued on next page)

(continued)

	(0 puntos)	(1 punto)	(2 puntos)	(3 puntos)
12. Hablaban conmigo como si fuera una niña o ridiculizándome.	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
13. Me criticaron durante el parto por expresar mis emociones (llorar, gritar por el dolor, etc.).	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
14. Durante la experiencia de parto, me hicieron sentir vulnerable, culpable, insegura o que no había estado a la altura de lo que se esperaba de mí (que no había colaborado).	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
Ítems sobre técnicas inadecuadas o innecesarias (Ítems 15–20)				
15. Me permitieron que adoptara la posición que yo solicité durante la dilatación y el expulsivo, porque no existían motivos que la contraindicasen	Me lo permitieron	No me lo permitieron, pero no me afectó NADA	No me lo permitieron, y me afectó UN POCO	No me lo permitieron, y me afectó MUCHO
16. Emplearon anestesia, solicitándola o no, por ejemplo, para suturar un desgarro o la episiotomía (corte vaginal) o extraer la placenta de forma manual.	Sí la emplearon	No la emplearon, pero no me afectó NADA	No la emplearon, y me afectó UN POCO	No la emplearon, y me afectó MUCHO
17. Las exploraciones vaginales me las realizaron sin adoptar medidas que redujese las molestias que ello conlleva (empleo de lubricante, realizar la técnica de forma progresiva, intentar relajarme).	Sí las utilizaron	No las utilizaron, pero no me afectó NADA	No las utilizaron, y me afectó UN POCO	No las utilizaron, y me afectó MUCHO
18. Ejercieron alguna de estas prácticas sin mi consentimiento (enema, rasurado, tactos vaginales, episiotomía, presión abdominal).	Sí, con mi aprobación	Se produjo sin mi aprobación, pero no me afectó NADA	Se produjo sin mi aprobación, y me afectó UN POCO	Se produjo sin mi aprobación, y me afectó MUCHO
19. Sufrí algún tipo de agresión física durante mi parto. Por ejemplo, me dieron bofetadas en la cara o palmadas en los muslos durante el parto para reñirme o reprenderme por mi comportamiento.	No se produjo	Se produjo, pero no me afectó NADA	Se produjo, y me afectó UN POCO	Se produjo, y me afectó MUCHO
20.a Me permitieron hacer piel con piel inmediatamente tras el parto sin existir motivos y/o sin dar explicaciones que lo contraindicasen. (solo para mujeres cuyo hijo ha nacido vivo).	Me lo permitieron/ofrecieron	No me lo permitieron/ofrecieron, pero no me afectó NADA	No me lo permitieron/ofrecieron, y me afectó UN POCO	No me lo permitieron/ofrecieron y me afectó MUCHO
20.b Me ofrecieron la posibilidad de ver a mi bebe o preparar una caja de recuerdos. (solo para mujeres que han tenido una pérdida fetal)				

References

OMS. Recomendaciones de la OMS sobre intervenciones de promoción de salud para la salud materna y neonatal. 2015;1; 90.

Egan, V., Alberto, L., Gutiérrez, A., Santiago, M.V., Fernández, R.L., Ángel, M., 2016. ¿De qué hablamos cuando hablamos de violencia obstétrica? Rev. Conamed 21 (1), 371.

Sando, D., Abuya, T., Asefa, A., Banks, K.P., Freedman, L.P., Kujawski, S., et al., 2017. Methods used in prevalence studies of disrespect and abuse during facility based childbirth: lessons learned. Reprod. Health 14 (1), 127. Oct.

Mrayan, L., Abuidhail, J., Abujilban, S., Al-Modallal, H., 2023. Exploring Jordanian mothers' experiences of childbirth. Midwifery 127. Dec 1.

Ravaldi, C., Skoko, E., Battisti, A., Cericco, M., Vannacci, A., 2018. Abuse and disrespect in childbirth assistance in Italy: a community-based survey. Eur. J. Obst. Gynecol. Reprod. Biol. Ireland 224, 208–209.

Siraj, A., Teka, W., Hebo, H., 2019. Prevalence of disrespect and abuse during facility based child birth and associated factors, Jimma University Medical Center, Southwest Ethiopia. BMC Pregnancy Childb. 19 (1), 1–9.

Tobiasia-Hege, C., Pinart, M., Madeira, S., Guedes, A., Reveiz, L., Valdez-Santiago, R., et al., 2019. Disrespect and abuse during childbirth and abortion in Latin America: systematic review and meta-analysis. Pan Am. J. Public Health 43, e36.

Martínez-Galiano, J.M., Martínez-Vázquez, S., Rodríguez-Almagro, J., Hernández-Martínez, A., 2020. The magnitude of the problem of obstetric violence and its associated factors: a cross-sectional study. Women Birth [Internet]Oct [cited 2020 Dec 11]; Available from: <https://pubmed.ncbi.nlm.nih.gov/33082123/>.

Shrivastava, S., Sivakami, M., 2019. Evidence of “obstetric violence” in India: an integrative review. J. Biosoc. Sci. 1–19. Nov.

Hameed, W., Avan, B.I., 2018. Women's experiences of mistreatment during childbirth: a comparative view of home- and facility-based births in Pakistan. PLoS ONE 13 (3), e0194601.

Baranowska, B., Doroszewska, A., Kubicka-Kraszyńska, U., Pietrusiewicz, J., Adamska-Sala, I., Kajdy, A., et al., 2019. Is there respectful maternity care in Poland? Women's views about care during labor and birth. BMC Pregnancy Childb. 19 (1), 520. Dec.

Vedam, S., Stoll, K., Taiwo, T.K., Rubashkin, N., Cheyney, M., Strauss, N., et al., 2019. The giving voice to mothers study: inequity and mistreatment during pregnancy and childbirth in the United States. Reprod. Health 16 (1), 77. Jun.

Sharma, G., Penn-Kekana, L., Halder, K., Filippi, V., 2019. An investigation into mistreatment of women during labour and childbirth in maternity care facilities in Uttar Pradesh, India: a mixed methods study. Reprod Health 16 (1), 7. Jan.

Lukasse, M., Schroll, A.M., Karro, H., Schei, B., Steingrimsdottir, T., Van Parys, A.S., et al., 2015. Prevalence of experienced abuse in healthcare and associated obstetric characteristics in six European countries. Acta Obstet. Gynecol Scand. 94 (5), 508–517. May.

Silveira, M.F., Mesenburg, M.A., Bertoldi, A.D., De Mola, C.L., Bassani, D.G., Domingues, M.R., et al., 2019. The association between disrespect and abuse of women during childbirth and postpartum depression: findings from the 2015 Pelotas birth cohort study. J. Affect. Disord. 256, 441–447. Sep.

Olza Fernández, I., 2013. PTSD and obstetric violence. Midwifery Today Int. Midwife (105), 48–49, 68.

Hernández-Martínez, A., Rodríguez-Almagro, J., Molina-Alarcón, M., Infante-Torres, N., Rubio-Álvarez, A., Martínez-Galiano, J.M., 2020. Perinatal factors related to post-traumatic stress disorder symptoms 1-5 years following birth. Women Birth 33 (2), e129–e135. Mar 1.

Martínez-Vázquez, S., Rodríguez-Almagro, J., Hernández-Martínez, A., Martínez-Galiano, J.M., 2021. Factors associated with postpartum post-traumatic stress disorder (Pstd) following obstetric violence: a cross-sectional study. J. Pers. Med. 11 (5).

Dhakal, P., Gamble, J., Creedy, D.K., Newnham, E., 2021. Quality of measures on respectful and disrespectful maternity care: a systematic review. Nurs. Health Sci. 23 (1), 29–39 [Internet]Mar 1 [cited 2022 Mar 16]Available from: <https://pubmed.ncbi.nlm.nih.gov/32677167/>.

Castro, R., Frías, S.M., 2020. Obstetric violence in Mexico: results from a 2016 national household survey. Violence Against Women 26 (6–7), 555–572. May 1.

Cárdenas, M., Salinero, S., 2021. Validación de la escala de violencia obstétrica y pruebas de la invarianza factorial en una muestra de mujeres chilenas. Interdisciplinaria 38 (2), 209–223.

Giorgi, A., 2009. The Descriptive Phenomenological Method in Psychology: A Modified Husserlian Approach. Duquesne University Press, Pittsburgh, PA.

Mena-Tudela, D., Cervera-Gasch, A., Alemany-Anchel, M.J., Andreu-Pejó, L., González-Chordá, V.M., 2020. Design and validation of the PercOV-S questionnaire for measuring perceived obstetric violence in nursing, midwifery and medical students. Int. J. Environ. Res. Public Health 17 (21), 1–12 [Internet]Nov 1 [cited 2022 Mar 16]Available from: <https://pubmed.ncbi.nlm.nih.gov/33143368/>.

Castro, R., Frías, S.M., 2020. Obstetric violence in Mexico: results from a 2016 National Household Survey. Violence Against Women 26 (6–7), 555–572.

Paiz, J.C., de Jesus Castro, S.M., Giugliani, E.R.J., dos Santos Ahne, S.M., Dall' Aquia, C. B., Souto, A.S., et al., 2022. Development of an instrument to measure mistreatment of women during childbirth through item response theory. PLoS ONE 17 (7 July). Jul 1.

Dwekat, I.M.M., Ismail, T.A.T., Ibrahim, M.I., Ghayeb, F., Hanafi, W.S.W.M., Ghazali, A. K., 2021. Development and validation of a new questionnaire to measure mistreatment of women during childbirth, satisfaction of care, and perceived quality of care. Midwifery 102, 103076. Nov 1.

- Lawshe, C.H., 1975. A quantitative approach to content validity. *Pers. Psychol.* 28 (14), 563–575.
- Davis, L.L., 1992. Instrument review: getting the most from a panel of experts. *Appl. Nurs. Res.* 5 (4), 194–197.
- De Vet, H.C.W., Adèr, H.J., Terwee, C.B., Pouwer, F., 2005. Are factor analytical techniques used appropriately in the validation of health status questionnaires? A systematic review on the quality of factor analysis of the SF-36. *Qual. Life Res.* 14, 1203–1218.
- Donate-Manzanas, M., Rodríguez-Almagro, J., Rodríguez-Cano, T., Hernández-Martínez, A., Barrilero-Fernández, E., Santos-Hernández, G., et al., 2017. Cross-cultural adaptation and validation of the psychometric properties of the Quality from the Patient's Perspective I Questionnaire translated into Spanish. *Midwifery* [Internet]. 55, 75–82. Sep 14 [cited 2017 Oct 12] Available from: <http://linkinghub.elsevier.com/retrieve/pii/S0266613817302772>.
- Callahan, J.L., Borja, S.E., Hynan, M.T., 2006. Modification of the perinatal PTSD questionnaire to enhance clinical utility. *J. Perinatol.* [Internet] 26 (9), 533–539. Sep [cited 2018 Aug 23] Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16826190>.
- Hernández-Martínez, A., Martínez-Vázquez, S., Rodríguez-Almagro, J., Khan, K.S., Delgado-Rodríguez, M., Martínez-Galiano, J.M., 2021. Validation of perinatal post-traumatic stress disorder questionnaire for Spanish women during the postpartum period. *Sci. Rep.* 11 (1), 5567. Dec.
- Tabachnick, B., Fidell, L., 2013. *Using Multivariate Statistics*, 6th ed. Pearson Education Limited, Harlow, United Kingdom.
- Streiner, D., Norman, G., Cairney, J., 2015. *Health Measurement Scales: A Practical Development and Usable*, 5th ed. Oxford University Press, Oxford.
- George, D., Mallery, P., 2011. *SPSS For Windows Step By Step: a Simple Guide and Reference 18.0 Update*, 11th ed. Allyn & Bacon/Pearson, Boston.
- Koo, T.K., Li, M.Y., 2016 Jun 1. A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *J. Chiropr. Med.* 15 (2), 155–163.
- Castro, R., Frías, S.M., 2020 May 8. Obstetric violence in Mexico: results From a 2016 National Household Survey. *Violence Against Women* 26 (6–7), 555–572.
- Cárdenas Castro, J.M., Salinero Rates, S., 2021. Validación de la escala de violencia obstétrica y pruebas de la invarianza factorial en una muestra de mujeres chilenas. *Interdiscipl.: Rev. Psicol. Ciencias Afines =J. Psychol. Relat. Sci.* 38 (2), 209–223. ISSN 0325-8203, Vol 38, N° 2, 2021, págs 209-223 [Internet] [cited 2024 Jan 6] Available from: <https://dialnet.unirioja.es/servlet/citart?info=link&codigo=8224096&orden=0>.
- Sully, E.A., Biddlecom, A.S., Darroch, J.E., 2019. Not all inequalities are equal: differences in coverage across the continuum of reproductive health services. *BMJ Glob. Health* 4 (5). Sep 1.
- González-de la Torre, H., González-Artero, P.N., Muñoz de León-Ortega, D., Lancha-de la Cruz, M.R., Verdú-Soriano, J., 2023. Cultural adaptation, validation and evaluation of the psychometric properties of an obstetric violence scale in the spanish context. *Nurs. Rep. (Pavia, Italy)* [Internet] 13 (4), 1368–1387. Oct 3 [cited 2023 Nov 14] Available from: <http://www.ncbi.nlm.nih.gov/pubmed/37873822>.
- Aşci, Ö., Bal, M.D., 2023. The prevalence of obstetric violence experienced by women during childbirth care and its associated factors in Türkiye: a cross-sectional study. *Midwifery* 124. Sep 1.
- Molla, W., Wudneh, A., Tilahun, R., 2022. Obstetric violence and associated factors among women during facility based childbirth at Gedeo Zone, South Ethiopia. *BMC Pregnancy Childb.* 22 (1). Dec 1.