

Psychometric properties of the hospital birth satisfaction scale: *Birth in Brazil* survey

Propriedades psicométricas da escala de satisfação com a assistência hospitalar no parto: estudo *Nascer no Brasil*

Propiedades psicométricas de la escala de satisfacción sobre cuidados hospitalarios durante el parto: encuesta *Nacer en Brasil*

Dayana Dourado de Oliveira Costa ¹
Valdinar Sousa Ribeiro ²
Marizélia Rodrigues Costa Ribeiro ²
Ana Paula Esteves-Pereira ³
Lucas Guimarães Cardoso de Sá ⁴
Joana Athayde da Silva Cruz ¹
Maria do Carmo Leal ³
Antônio Augusto Moura da Silva ⁵

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Abstract

The objective of this study was to analyze the psychometric properties of the hospital birth satisfaction scale with data from the first follow-up interview of the Birth in Brazil survey. The 11 questions of the scale were asked by telephone up to six months after discharge in a stratified random sample of 16,109 women residing in all five regions of the country. The sample was randomly divided into two halves. Exploratory factor analysis (EFA) was applied to the first half in order to identify the scale's factorial structure. The scree plot suggested the scale to be one-dimensional. The EFA demonstrated a good fit of the one-dimensional model. Factor loadings were greater than 0.5 for all items, except for the mean time transpired between leaving the home and arriving at the maternity hospital, which was excluded from the next analysis. The confirmatory factor analysis applied to the sample's second half with the remaining ten items had a good fit and the factor loadings were > 0.50 with p -values < 0.001 . The associations between birth satisfaction and the external variables, the mother's education level (standardized coefficient = 0.073; $p = 0.035$), private insurance (SC = 0.183; $p < 0.001$) and having a companion at some point during the hospitalization for labor (SC = 0.193; $p = 0.001$) were all as expected. There was evidence of configural and metric invariance according to type of hospital (private or public) and type of delivery (cesarean or vaginal). These results showed that the hospital birth satisfaction scale in Brazil is a one-dimensional instrument composed of ten items.

Factor Analysis, Statistical; Parturition; Patient Satisfaction; Validation Studies

Correspondence

D. D. O. Costa
Rua Sorocaba 7, São Luís, MA 65065-490, Brasil.
dayanadourado@gmail.com

¹ Universidade Federal do Maranhão, São Luís, Brasil.

² Departamento de Medicina III, Universidade Federal do Maranhão, São Luís, Brasil.

³ Escola Nacional de Saúde Pública Sergio Arouca, Fundação Oswaldo Cruz, Rio de Janeiro, Brasil.

⁴ Departamento de Psicologia, Universidade Federal do Maranhão, São Luís, Brasil.

⁵ Departamento de Saúde Coletiva, Universidade Federal do Maranhão, São Luís, Brasil.



Introduction

Experiences related to childbirth directly interfere with the health and well-being of the mother and her newborn, as well as with the choice of a future delivery^{1,2}. Women who are satisfied with childbirth have fewer difficulties in caring for the newborn, tend to breastfeed their babies for longer and adapt more easily to the new functions of motherhood^{3,4,5}. Dissatisfaction with childbirth increases the risk of negative health outcomes, such as postpartum depression and fear of giving birth again, which may lead to a preference for cesarean birth in future pregnancies and cause impacts on reproduction^{5,6}.

The concept of satisfaction is complex and there is no consensus regarding its definition^{5,7}. Patient satisfaction has been defined as the degree of quality attributed to a health service or product by an individual or whether its delivery was regarded as useful, effective, or beneficial⁸. From this perspective, satisfaction with delivery expresses the user's assessment of the care received^{5,9,10}.

The evaluation of the birth satisfaction of women has become an object of interest to health managers and professionals in Brazil¹⁰. One of the specific objectives of the National Health Services Evaluation is to assess the patients' satisfaction with the Brazilian Unified National Health System (SUS) in specialized healthcare centers, outpatient clinics and hospitals of the Ministry of Health¹¹. Despite this, the Rede Cegonha strategy for the Humanization of Prenatal, Childbirth and Pregnancy Care proposes service evaluation indicators that do not include patient satisfaction¹².

To assess the birth satisfaction of women, it is necessary to use instruments that are easy to apply and that have good psychometric proprieties^{5,9,13,14}. Two systematic reviews analyzing instruments that measure birth satisfaction concluded that most of them were inadequate for their purposes^{5,9}. Some instruments were used before having been tested for their psychometric properties⁵. Only the *Maternal Satisfaction Scale for Caesarean Section* developed in Canada was evaluated in the two reviews^{5,9}. The 2013 review evaluated nine instruments and concluded that a few of them had evidence of validity and reliability⁵. The most recent review analyzed 36 instruments and concluded that only seven had been assessed in relation to their psychometric proprieties. In this review, the authors point out that these instruments have a wide variety of purposes, number of scale items, dimensions, contents evaluated and periods of applicability, and this diversity compromises their reproducibility⁹.

In Brazil, two studies that evaluated birth satisfaction were identified^{10,15}. The first one used a six-dimensional scale developed by the study team, but no evidence of reliability and validity was presented. The authors used only the chi-square test in the analyses and concluded that 67% of those interviewed were satisfied with the delivery process¹⁰. In 2015, evidence of validity of subscales 2 and 3 of the *Childhood Experience and Satisfaction Questionnaire* (QESP in the Portuguese acronym) were investigated in a sample of 237 mothers submitted to vaginal birth in a teaching maternity hospital in the city of Fortaleza (Ceará State). The authors also concluded that QESP had high reliability according to Cronbach's alpha¹⁵. QESP was developed in Portugal and showed some evidence of good psychometric proprieties in a sample of 306 women. The subscales evaluate positive and negative experiences with vaginal birth¹⁶.

The *Birth in Brazil* survey used a scale to measure women's satisfaction with the childbirth care received at the hospital¹⁰. This instrument was adapted from questions that measured the user's satisfaction with general health care of the *World Health Survey* (WHS)¹⁷, plus three specific questions regarding overall satisfaction with delivery, postpartum and neonatal care and one question about institutional violence (physical, psychological or verbal)¹⁰.

The women's birth satisfaction was positively associated with age, number of children, education level and income¹⁸. Those who had more personal control during childbirth¹⁹, more social support²⁰, medical problems during labor²⁰ and low labor pain¹⁹ showed higher birth satisfaction levels.

Thus, the objective of this study was to evaluate the hospital birth satisfaction scale's psychometric properties: internal consistency, association with external variables, and configural and metric invariance.

Methods

Type of study

This is a cross-sectional study with data from the first follow-up interview of the national survey on childbirth and birth in Brazil: *Birth in Brazil*.

Birth in Brazil was a hospital-based population survey aimed at understanding the determinants, the magnitude, and the adverse effects of unnecessary cesarean sections in Brazil. At the baseline, carried out from February 2011 to October 2012, postpartum women were interviewed during their hospital admission and data was extracted from their medical records. In the first follow-up, conducted from March 2011 to February 2013, the participants were contacted by telephone up to six months after delivery ²¹.

Sample and data collection

In the *Birth in Brazil* survey, three-stage cluster sampling was performed with previous stratification according to the five regions of the country, the location (capital or non-capital) and the type of hospital (public, mixed or private). In the first stage, hospitals with 500 or more births per year were selected; in the second stage, the number of days the staff would be in the hospitals to collect data from the medical records was defined (at least seven days in each hospital); and in the third stage, the number of researchers per hospital and number of shifts and interviews per day was established to ensure the random selection of participants. A total of about 90 mothers who had recently given birth were selected to be interviewed in each of the 266 hospitals, totaling 24,200 newborns. After excluding women whose satisfaction data was not found (n = 64), as well as the 2nd and 3rd products of multiple gestations (n = 244), the sample size totaled 23,892 women. Details of the sampling design have been published previously ²².

The postpartum interviews were conducted by telephone up to six months after hospital discharge. A total of 16,255 women were located and interviewed in the follow-up. After excluding the 2nd and 3rd products of multiple gestations (n = 146), the sample size for analysis totaled 16,109 women, corresponding to 67.4% of the initial sample. Detailed information on data collection has been described previously ²¹.

All estimates were weighed while taking the complex sampling design and questions that had not been answered into account, using inverse probability weighting. The probability of participation in the second follow-up was estimated based on the three variables that composed the stratum (macro-region, capital or non-capital city and type of hospital), socioeconomic status, maternal age, maternal work, satisfaction with gestation at onset of pregnancy and infant death ²².

Instruments

The hospital birth satisfaction scale was part of Block III (Satisfaction with hospital care) of the *Birth in Brazil* survey's follow-up questionnaire, in which there was an introductory text that reads: "We will now ask you some questions regarding your hospitalization for labor and your satisfaction with how it went". The first seven questions were extracted and adapted from the WHS applied in Brazil (items 1 to 7) ¹⁷. Because satisfaction with hospital childbirth care involves aspects not covered by the nine questions of WHS's satisfaction with general care instrument, three specific questions regarding overall satisfaction with delivery, postpartum and neonatal care were included (items 9 to 11) ¹⁰. Considering that violence is a component of satisfaction with hospital childbirth care, one question about institutional violence (physical, psychological or verbal) was also added to the scale (item 8) ¹⁰.

For all questions, except question 8 on violence, there were five Likert response options (1. Very good; 2. Good; 3. Moderate; 4. Bad; 5. Very bad). All the items of the scale were reverse coded so that higher values expressed greater satisfaction with the care received. For question 8, there were four answer options, allowing the choice of more than one option if violence had occurred: 1. Did not suffer violence; 2. Suffered verbal violence; 3. Suffered psychological violence; and 4. Suffered physical violence. Since this variable is nominal, with more than two items, it was necessary to transform it

into a dichotomous variable. In our analyses, we considered two responses for this item: 0 – There was no violence and 1 – There was violence in case of one or more positive answers for the occurrence of institutional violence ¹⁰.

External variables

The following variables from the *Birth in Brazil* survey were also used: type of delivery (vaginal or cesarean), type of insurance (public or private), presence of companion at some point during hospitalization for labor (yes/no) and the mother's education level (0 to 4, 5 to 8, 9 to 11, ≥ 12 years of study).

Statistical analysis

A descriptive analysis was performed with the complete follow-up sample ($n = 16,109$) to calculate the frequency and proportion of the 11 items of the original scale proposed. The sample was then randomly divided into two parts for the analysis: first half ($n = 8,055$) and second half ($n = 8,054$). Scree-plot was applied to the first half in order to determine the number of factors. According to this method, the best number of factors corresponds to a change in the graph's inclination (the "elbow" method) ²³. Afterwards, Exploratory Factor Analysis (EFA) was carried out to verify the model's fit and factor loadings with the number of factors suggested by the scree plot, on the Mplus software version 7.31 (<https://www.statmodel.com/>). We used the weighted least squares means and variance (WLSMV) method ²⁴, because all variables were ordinal.

In the EFA, model fit was assessed using the following indices: (a) value ≤ 0.06 for the Root Mean Square Error of Approximation (RMSEA) index ^{25,26}; (b) value ≥ 0.95 for the Comparative Mean Square (CFI) and the Tucker Lewis Index (TLI) ²⁶; and (c) value ≤ 0.05 for the Standardized Root Mean Square Residual index (SRMR) ²⁴. Factor loadings were considered adequate if higher than 0.5 ²⁷.

Then, Loevinger's H coefficient (LH) was calculated for each of the scale's items to verify if they measured the same latent characteristic, if there was redundancy of items and also, to validate the score as an ordinal measure of the latent characteristic (internal consistency). It was considered acceptable if $LH > 0.30$. Later, the relation between the latent trait and the answers to the items was tested according to Mokken's criterion ²⁸. The Stata 14.0 (<https://www.stata.com>) was used for these analyses.

Confirmatory Factor Analysis (CFA) was applied to the sample's second half based on the dimensional structure proposed in the EFA. The RMSEA, CFI and TLI ^{25,26} indicators were used to assess the model's fit. A factor loading > 0.5 with p -value < 0.05 was considered to indicate if the correlation between the indicator and the construct which it is supposed to measure was satisfactory ²⁷.

Composite Reliability (CR) was calculated from the factor loadings obtained in the EFA and CFA. $CR \geq 0.70$ was considered evidence of internal consistency ²⁹.

Configural (whether the same items measure satisfaction between groups – factor loading not constrained in any groups) and metric (in addition to satisfaction being measured by the same items, the factor loadings of these items are equivalent between groups – the constraining factor loadings are the same in all groups) invariances between type of hospital (private or public) and type of delivery (cesarean or vaginal) were tested. Chi-squared, chi-squared difference test, TLI, CFI and RMSEA were used to assess invariance ^{24,30}.

The relationships between satisfaction and hospital childbirth care and external variables "presence of companion at some point during hospitalization for labor", "private insurance" and "mother's education level" were evaluated by the standardized coefficient, and its significance value was estimated in a model that regressed each variable at a time.

Ethical aspects

The project complied with the principles of *Resolution n. 196/96* for research involving human beings, of the Brazilian National Health Council and its complementary norms. It was submitted and approved by the Ethics Research Committee of Sergio Arouca National School of Public Health, Oswaldo Cruz Foundation (ENSP/Fiocruz) under CAAE n. 0096.0.031.000-10. Those responsible for each institution and all the participants signed an informed consent form at the time of the in-person interview.

Results

The satisfaction of the women in the sample ($n = 16,109$) is described in Table 1. More than 75% of the survey's respondents classified the time it took them to get to the maternity hospital, the time transpired since their arrival at the hospital until they were attended to, respect, privacy, clarity of explanations and possibility of discussing the birth process with the health professionals, as well as their overall satisfaction with the childbirth, postpartum and newborn care received, as "good" or "very good". Approximately 95% of the women answered that they did not suffer maltreatment or any other kind of abuse/violence by the health professionals.

The scree plot suggested the proposed construct to be one-dimensional (Figure 1). The EFA showed a good fit of the one-dimensional model for all the indicators in the first half of the sample, with factor loadings higher than 0.5 for all items, except for the item that investigates the time taken to get to the maternity hospital (Table 2). A two-dimensional model was also tested and showed good fit.

LH coefficient showed value < 0.3 only for the first item, "When you were going to the hospital for labor, how would you score the amount of time it took you to get there?" (LH = 0.264) (Table 2).

Table 1

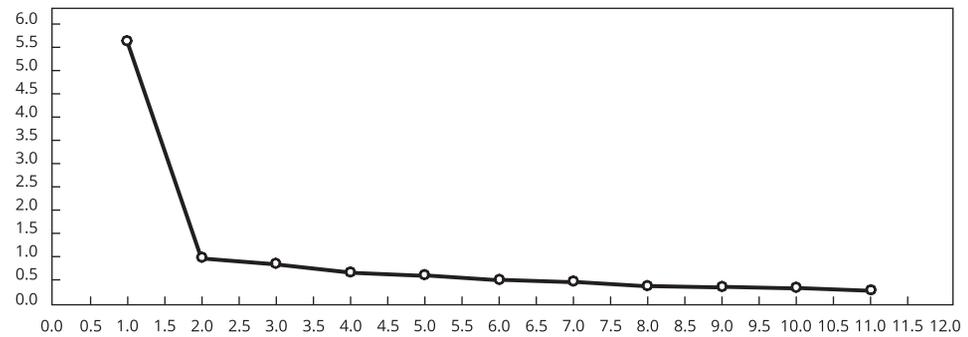
Women's satisfaction with the childbirth care received at the hospital. *Birth in Brazil*, 2011/2013.

Item	Very good		Good		Moderate		Bad		Very bad	
	n	%	n	%	n	%	n	%	n	%
1	4,159	25.8	9,302	57.7	1,839	11.4	367	2.3	442	2.7
2	5,060	31.4	7,341	45.6	2,387	14.8	655	4.1	666	4.1
3	7,278	45.2	6,738	41.8	1,412	8.8	276	1.7	405	2.5
4	7,306	45.4	7,140	44.3	1,217	7.6	197	1.2	249	1.6
5	6,207	38.5	7,285	45.2	1,859	11.5	348	2.2	410	2.6
6	4,874	30.3	8,400	52.1	2,026	12.6	398	2.5	411	2.6
7	5,665	35.2	7,876	48.9	1,744	10.8	404	2.5	420	2.6
9	8,084	50.2	6,384	39.6	1,189	7.4	199	1.2	253	1.6
10	7,368	45.7	6,716	41.7	1,479	9.2	255	1.6	291	1.8
11	8,687	53.9	6,069	37.7	978	6.1	154	1.0	221	1.4
Item	No		Yes							
	n	%	n	%						
8	15,283	94.9	826	5.1						

Note: percentages may not add up to 100% because of rounding. N = 16,109.

Figure 1

Scree plot after Exploratory Factor Analysis performed in the first random half of the sample.

**Table 2**

Exploratory Factor Analysis of the hospital birth satisfaction scale and Loevinger's H coefficient, applied to the random first half of the sample. *Birth in Brazil, 2011/2013.*

Fit indices	Value
χ^2	563.403
p-value	< 0.001
RMSEA	0.038
90%CI	0.035-0.041
CFI	0.979
TLI	0.974
SRMR	0.050

Items	Factor loading	LH
1	0.420	0.264
2	0.577	0.367
3	0.756	0.455
4	0.722	0.442
5	0.753	0.452
6	0.712	0.440
7	0.691	0.420
8	0.601	0.321
9	0.802	0.494
10	0.735	0.425
11	0.711	0.410

90%CI: 90% confidence interval; CFI: Comparative Fit Index; LH: Loevinger's H; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Square Residual; TLI: Tucker-Lewis Index.

In the evaluation using Mokken's criterion, this item was removed from the scale. The LH coefficient for the 10-item scale was 0.415.

CFA was applied to the sample's second half, including the ten remaining items. All factor loadings were > 0.5 and all p-values were < 0.001 (Table 3). CR was 0.91.

Configural and metric invariance was obtained for both type of delivery and type of hospital (Table 4).

Birth satisfaction was associated with the mother's education level (Standardized Coefficient – SC = 0.073; $p = 0.035$), private insurance (SC = 0.183; $p < 0.001$) and having a companion at some point during hospitalization for labor (SC = 0.193; $p = 0.001$).

Discussion

In the present study, the psychometric analysis showed that the hospital birth satisfaction scale is a unidimensional instrument composed of ten items. The unidimensionality suggested in the scree plot was initially tested in the EFA conducted with the sample's first half. A good fit of this one-dimensional model was observed for eleven items, but with low factor loading for the first item: "When you were going to the hospital for labor, how would you score the amount of time it took you to get there?". The scalability tests (LH coefficient and Mokken's criterion) suggested the removal of this item.

The first item, "When you were going to the hospital for labor, how would you score the amount of time it took you to get there?", refers to factors that are external to hospital childbirth care and was thus excluded by the scalability tests, suggesting that this item does not measure the desired latent trait. This exclusion showed that the instrument could discriminate situations occurring inside and outside the hospital setting. The instruments analyzed in three recent systematic reviews did not include questions about the amount of time spent to get to the maternity hospital ^{4,9,15}. Furthermore,

Table 3

Confirmatory Factor Analysis of the hospital birth satisfaction scale, applied to the random second random half of the sample. *Birth in Brazil*, 2011/2013.

Fit indices	Value		
χ^2	787.913		
p-value	< 0.001		
RMSEA	0.052		
90%CI	0.049-0.055		
CFI	0.969		
TLI	0.960		

Items	Factor loading	SE	p-value
2	0.584	0.012	< 0.001
3	0.750	0.008	< 0.001
4	0.742	0.010	< 0.001
5	0.769	0.010	< 0.001
6	0.719	0.011	< 0.001
7	0.703	0.013	< 0.001
8	0.608	0.024	< 0.001
9	0.814	0.007	< 0.001
10	0.765	0.011	< 0.001
11	0.687	0.010	< 0.001

90%CI: 90% confidence interval; CFI: Comparative Fit Index; RMSEA: Root Mean Square Error of Approximation; SE: standard error; TLI: Tucker-Lewis Index.

Table 4

Configural and metric invariance of the hospital birth satisfaction scale according to type of hospital (private or public), and type of delivery (cesarean or vaginal). *Birth in Brazil*, 2011/2013.

Invariance	χ^2	df	$\delta\chi^2$	δdf	$\delta\chi^2$ p-value	CFI	TLI	RMSEA
Type of hospital								
Configural	491.6	100				0.986	0.988	0.022
Metric	442.0	109	20.701	9	0.014	0.988	0.990	0.020
Type of delivery								
Configural	449.1	100				0.989	0.990	0.021
Metric	410.2	109	25.241	9	0.003	0.990	0.992	0.019

$\delta\chi^2$: chi-squared difference test; $\delta\chi^2$ p-value: p-value for the chi-squared difference test; δdf : difference in degrees of freedom; CFI: Comparative Fit Index; df: degrees of freedom; RMSEA: Root Mean Square Error of Approximation; TLI: Tucker-Lewis Index.

other two studies that evaluated different types of instruments do not mention or suggest that the time taken to get to the maternity hospital is related to satisfaction with childbirth care ^{2,8}.

In the CFA, applied to the sample's second half, the one-dimensional scale of ten items once again showed good fit for assessing satisfaction with hospital childbirth care, indicating that a single "satisfaction" dimension encompasses several aspects of childbirth care. The composite reliability results suggested that the construct had good internal consistency.

A two-dimensional model also showed good fit but no plausible theoretical justifications were found to explain the groupings of items in these models. Furthermore, since the one-dimensional model already showed good fit, we considered the one-factor model a more parsimonious description of our data.

Unidimensionality implies that the answers to all items are governed by a single latent trait. A practical advantage of this assumption is that it makes it easy to interpret the results. For a questionnaire with the objective of measuring several latent traits, this analysis must be performed for each one-dimensional latent characteristic ²⁸.

These results showed that the time spent waiting to receive care, respectful treatment and provision of guidance, participation of the users in the decisions about their labor process, absence of violence until delivery and the care received after childbirth, influenced the patients' satisfaction. This indicates that satisfaction is a construct formed by several attributes.

There was evidence of both configural and metric invariance, indicating that the scale has the same structure and equal factor loadings between groups of vaginal and cesarean delivery, and between those with private and public insurance ³⁰.

The associations between birth care satisfaction and external variables were as expected: the higher the mother's education level, the higher their satisfaction. Also, satisfaction was higher for mothers with private insurance and for those who had a companion at some point during their hospitalization for labor.

This study contributes with evidence of the validity of a scale used in a country of continental dimensions such as Brazil, with EFA and CFA. Also, the sample was huge and population-based, and the women were chosen at random. In addition, the sample included women from different socioeconomic and cultural backgrounds, from both public and private hospitals, subjected to either vaginal birth or cesarean section. Another positive point was that the hospital birth satisfaction's assessment was performed outside the institution and after a long time interval since birth, which makes the possibility of satisfaction being associated with gratitude unlikely.

One of the limitations is that there was a considerable percentage of losses (32.6%). Inverse probability weighing was used to minimize this limitation, taking questions that had not been answered into account. Recall bias may have also influenced the estimates, but a six-month period between childbirth and data collection is a short period of time, so any recall bias, if present, should have been small.

Conclusion

The hospital birth satisfaction scale is a one-dimensional instrument containing ten items, which evaluates the quality of the care received by women during labor, regardless of the type of birth or whether the facility was public or private. In addition, the associations between hospital birth satisfaction and external variables were as expected, showing evidence of its validity.

Contributors

D. D. O. Costa was responsible for ensuring the accuracy and integrity of all aspects of the work. V. S. Ribeiro and J. A. S. Cruz contributed to the data analysis and interpretation and revision and approval of the article's final version. M. R. C. Ribeiro and A. A. M. Silva contributed to the design of the project, analysis and interpretation of the data, writing of the manuscript and approval of the article's final version. A. P. Esteves-Pereira and M. C. Leal contributed to the data analysis and interpretation and approval of the article's final version. L. G. C. Sá contributed to the data analysis and interpretation, writing of the manuscript and approval of the article's final version.

Additional informations

ORCID: Dayana Dourado de Oliveira Costa (0000-0002-1157-1859); Valdinar Sousa Ribeiro (0000-0003-4623-1499); Marizélia Rodrigues Costa Ribeiro (0000-0003-4289-4527); Ana Paula Esteves-Pereira (0000-0002-0236-2043); Lucas Guimarães Cardoso de Sá (0000-0003-1656-0136); Joana Athayde da Silva Cruz (0000-0002-0038-3449); Maria do Carmo Leal (0000-0002-3047-515X); Antônio Augusto Moura da Silva (0000-0003-4968-5138).

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Resumo

O estudo teve como objetivo analisar as propriedades psicométricas da escala de satisfação com a assistência hospitalar no parto, a partir dos dados da primeira entrevista de seguimento do estudo Nacer no Brasil. As 11 perguntas da escala foram endereçadas via telefone dentro de seis meses depois da alta hospitalar em uma amostra aleatória estratificada de 16.109 mulheres residentes nas cinco macrorregiões brasileiras. A amostra foi dividida aleatoriamente em duas metades. Na primeira metade, foi realizada análise fatorial exploratória (AFE) para identificar a estrutura fatorial da escala. O gráfico de declividade sugeriu que a escala era unidimensional. A AFE demonstrou bom ajuste do modelo unidimensional. As cargas fatoriais foram maiores de 0,50 para todos os itens, exceto para o tempo médio de viagem da residência da parturiente até a maternidade, que foi excluído da análise subsequente. A análise fatorial confirmatória realizada com os dez itens remanescentes na segunda metade da amostra mostrou bom ajuste, com cargas fatoriais $> 0,50$ e valores de $p < 0,001$. As associações entre a satisfação com a assistência hospitalar no parto e as variáveis externas de escolaridade materna (coeficiente padronizado = 0,073; $p = 0,035$), plano de saúde privado (CP = 0,183; $p < 0,001$) e ter acompanhante em algum momento durante a internação para o parto (CP = 0,193; $p = 0,001$) foram na direção esperada. Houve evidências de invariância configural e métrica de acordo com o tipo de hospital (privado vs. público) e tipo de parto (cesáreo vs. vaginal). Os resultados mostram que a escala de satisfação com a assistência hospitalar no parto no Brasil é um instrumento unidimensional constituído de dez itens.

Análise Fatorial; Parto; Satisfação do Paciente; Estudos de Validação

Resumen

El objetivo de este estudio fue analizar las propiedades psicométricas de la escala de satisfacción sobre cuidados hospitalarios durante el parto, con datos procedentes de la primera entrevista de seguimiento, pertenecientes a la encuesta Nacer en Brasil. Se hicieron 11 preguntas de esta escala por teléfono hasta seis meses después del parto, mediante un muestreo aleatorio estratificado a 16.109 mujeres, residentes en las cinco regiones del país. Se dividió el mismo aleatoriamente en dos mitades. En la primera, se realizó un análisis factorial exploratorio (AFE) para identificar la estructura factorial de la escala. El gráfico de sedimentación indicó que la escala era unidimensional. El AFE demostró un buen ajuste al modelo unidimensional. Las cargas factoriales fueron superiores al 0,5 en todos los ítems, excepto en el tiempo empleado en ir de casa al hospital materno-infantil, que se excluyó del siguiente análisis. En la segunda mitad de la muestra se realizó un análisis factorial confirmatorio con los diez ítems restantes que tuvo un buen ajuste y cuyas cargas factoriales fueron $> 0,50$ con p -valor $< 0,001$. Las asociaciones entre la satisfacción con los cuidados hospitalarios recibidos para el parto, las variables externas, escolaridad materna (coeficiente estandarizado = 0,073; $p = 0,035$), seguro privado (CE = 0,183; $p < 0,001$) y contar con pareja en algún momento durante la hospitalización para el parto (CE = 0,193; $p = 0,001$), estuvieron en línea con lo esperado. Hubo evidencia de invarianza métrica y de configuración, según el tipo de hospital (privado o público), y tipo de parto (cesárea o vaginal). Estos resultados mostraron que la escala de satisfacción sobre cuidados hospitalarios durante el parto en Brasil es un instrumento unidimensional compuesto de diez ítems.

Análisis Factorial; Parto; Satisfacción del Paciente; Estudios de Validación

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