Instruments to evaluate hospitalised children parents’ satisfaction with nursing care: a scoping review

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ABSTRACT

Aim To identify instruments that allow the evaluation of parent’s satisfaction regarding nursing care during their child hospitalisation.

Methods A review was performed using Preferred Reporting Items for Scoping Reviews. The study was prospectively registered in Open Science Framework. Research was carried out on EBSCOhost, PubMed, SciELO, Web of Science and ScienceDirect platforms as well as grey literature. Additionally, the references of selected articles were also examined.

Results A sample of 65 articles allowed the identifications of 38 distinctive instruments to evaluate parents’ satisfaction in different hospital settings. Most studies were applied in paediatric wards (n=28), followed by neonatal intensive care units (n=21), paediatric intensive care units (n=9) and emergency departments (n=7). Sample size ranged from 13 to 3354 and 3 studies used mixed methods. 20 were methodological studies of instruments construction or validation and 43 were quantitative studies. 21 different instruments previously existed were found. In 3 studies, adapted instruments were used and, in 14 studies, structured instruments were purposively designed for the study. Instruments had between 1 and 13 domains and total number of items ranged between 13 and 92. Most studies assessed overall satisfaction (n=53) and instrument reliability (n=49) and/or validity (n=37).

Conclusion Most instruments consider nursing care as a domain of satisfaction. Only two instruments focused specifically on nursing care. In most of the studies, there was a concern to evaluate instruments psychometric properties. This review clearly shows that there is still a gap in the literature on the range of aspects that influence satisfaction and a lack of consensus on ideal conditions for instrument use and application.

INTRODUCTION

Satisfaction with nursing care is a recognised quality indicator, defined as a personal opinion that confronts perceived needs, care expectations and received care experiences in the professional, personal and environmental domains. In paediatric care, satisfaction is usually evaluated through parents particularly in hospitalised children. Hospitalisation represents an adverse event for children and families with impact in daily life and stress. Although there are several theoretical conceptions concerning hospitalised children care, family-centred care (FCC) is documented as the dominant one, providing orientation to nursing care in paediatric settings. This approach considers the relevance of family role in children’s life including them as partners in care. Partnership between health professionals, children and parents is fundamental for effective application of FCC. Evaluation of parent’s satisfaction leads to the identification of key aspects to improve the quality of care provided. The effect of satisfaction with nursing care on overall satisfaction with hospitalisation is well established in literature.

The evaluation of satisfaction with nursing care was first described in 1957 and evaluated through total nursing care hours available. In 1975, it was documented one of the first instruments to specifically measure nursing care. Over the years, more refined measurement instruments have been used still there is no consensus instrument used and knowledge in this matter is scattered. Previous reviews have been performed, focusing on specific contexts such as neonatal intensive care units (NICUs) or paediatric intensive care units (PICUs). In 1999, Conner and Nelson identified some of the

KEY MESSAGES

⇒ Evaluating satisfaction of parents of hospitalised children with nursing care is essential to assure quality of care.
⇒ The aspects that influence satisfaction with care from parents’ point-of-view are not clear or consensual in the literature.
⇒ There is a variety of instruments to evaluate parent satisfaction with care with valid psychometric properties and sensible to different hospital settings characteristics.
⇒ There is still a lack of consensus on ideal conditions for instrument use and application on parents’ satisfaction with nursing care.
dimensions most valued by parents concerning their satisfaction with the care provided in a NICU, highlighting communication, information, education, environment, pain management, participation and support. Nevertheless, the authors concluded that these dimensions are not fully integrated in questionnaires, and only a few are available and validated. Butt et al.,15 in an integrative review, tried to synthesise the literature on parents’ satisfaction in the same context, overlapping the dimensions previously found, showing a gap in the production of new evidence. Dall’Oglio et al.,16 in a systematic review, underlined the assessment of parental satisfaction as a key element of the FCC. Still, only two instruments were found to be validated and available to assess parents’ satisfaction within FCC principles. Additionally, to the reviews found on parental satisfaction in neonatal units, only one other was identified for the PICU context. In a critical appraisal of literature, Latour et al.,17 assessed the characteristics of satisfaction surveys for the development of a parent satisfaction questionnaire for those units. Most studies showed sufficient results on reliability and validity, despite the use of questionnaires being underreported. From what we could found there are no robust studies on the type of instruments applied to other child-care settings and no scoping review has been performed on this subject. Additionally, the reviews found were performed in 1999,14 2005,17 201315 and 201816 and, therefore, are not updated. Also, due to the dearth of evidence, there is the need of a more comprehensive and rigorous research in this field.

The purpose of this review is to identify available instruments to evaluate parents’ satisfaction with nursing care during their children hospitalisation. A scoping review was chosen since this type of review allows to identify and map the available evidence.18 19

METHODS

A scoping review,20 to identify instruments used to evaluate hospitalised children parents’ satisfaction with nursing care was conducted. The research question was defined according to PCC: which are the instruments used to evaluate hospitalised children parents’ satisfaction with nursing care? (Population: children’s parents; Concept: satisfaction with nursing care; Context: hospital). Scoping review steps20 are detailed bellow.

Protocol and registration

Scoping review protocol was drafted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA) and registered prospectively in Open Science Framework on 30/03/2022 (https://osf.io/mabgv/).

Eligibility criteria

Published articles concerning parent’s satisfaction with nursing care evaluation were considered. Empirical studies with quantitative or mixed methods were included to amplify the coverage of existing evidence. Peer-reviewed papers available in open access and full text, written in English, Spanish or Portuguese and published between 1 January 2001 and 31 December 2021 were included. Exclusion criteria comprised: qualitative methodology and studies that evaluated ambulatory nursing care; literature reviews, letters to the editor, editorials, blog articles, advertising and opinion articles; studies where satisfaction with nursing care was evaluated by children or others than parents.

Information sources

Three steps were followed as recommended.21 In step 1, a preliminary search in Medical Literature Analysis and Retrieval System Online (MEDLINE) and Cumulative Index to Nursing and Allied Health Literature (CINAHL) was conducted. This allowed the identification of keywords for the search equation that were validated in Medical Subject Headings (MeSH). In step 2, the research was performed in EBSCOhost in the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL) (complete); MEDLINE (complete); Nursing & Allied Health Collection (comprehensive); Cochrane Central Register of Controlled Trials; Cochrane Database of Systematic Reviews; Cochrane Methodology Register; Library, Information Science & Technology Abstracts (LISTA) and MedicLatina. PubMed, SciELO, Web of Science and ScienceDirect were also searched. For grey literature, Open Grey and Portuguese Scientific Open Access Repository (RCAAP) were used.

The list of references from the articles selected were, in step 3, searched to locate supplementary significant literature.

Search

Keywords (parents; mothers; fathers; satisfaction; nursing care; nurses; nursing), boolean operators (AND/OR) and an asterisk operator (*) (to identify variations of the original word) were used for research equation. Different grouping and combinations were used according to each platform and database characteristics (https://osf.io/mabgv/). Researched was performed by both authors in February 2022.

Selection of sources of evidence

Initially, articles were selected by title. When it was not clear if the article tailored this review, the abstract was read. Duplicates were removed and inclusion/exclusion criteria were applied. To increase consistency both authors screened the same publications. Disagreements were resolved through peer discussion.

Data charting process

Data charting tables were developed to extract variables. The process was initially performed individually and then compared by authors to decide divergences and increase accuracy.
Data items
Data from each article were initially extracted related to its characteristics namely: authors, year, country, purpose, methods, instrument, context, results and main conclusions (https://osf.io/mabgv/). Later information about the instruments was reorganised by context: emergency department (ED), NICU, paediatric ward and PICU.

Critical appraisal of individual sources of evidence
To evaluate the quality of articles sample (n=65), studies were appraised individually by each author. Divergent opinions were discussed until agreement. For critical appraisal, a four-grade assessment tool was used and higher scores indicate higher quality. Total score ranged between 19 and 36 (online supplemental file 1).

Synthesis of results
After screening each article, results were combined in a table that included evidence from all articles extracted separately and approved by both authors. To facilitate synthesis of results presentation, information about the instruments was reorganised by context, in four distinctive tables, and by type of instrument in three additional tables.

RESULTS
Selection of sources of evidence
From our initial sample of 5488 articles, a total of 65 articles were included in this review. Reasons for article exclusion included: use of qualitative methodology; articles that evaluated other concepts (eg, parent’s needs), and when satisfaction evaluation considered exclusively other care dimensions (eg, medical care). Study selection process is summarised in figure 1 using PRISMA flow chart.

Characteristics of sources of evidence
A total of 38 instruments were identified applied in four main hospital contexts: ED, NICU, paediatric wards and PICU. Most were quantitative studies with the application of only one instrument. Regarding ED, a total of four different instruments were found that were purposively designed for each study as shown in table 1.

Regarding NICU, a variety of different instruments were found that were adapted, purposively designed or validated for this specific context. Results were summarised in table 2.

As anticipated, instruments applied to parents of children hospitalised in paediatric wards were quantitatively the most representative ones. Table 3 summarises our findings.

Regarding PICU, fewer instruments were identified. Studies applied in PICU context were summarised in table 4.

Additionally, because this review focuses on instruments, its characteristics were synthesised in tables, by type of instrument, related to the following items: instrument name, domains designation, overall satisfaction assessment, number of items, assessment scale, reliability, validity and distribution. The instrument that was found more often was the EMPATHIC. Therefore, we chose to synthesise its characteristics as used in studies in table 5.

We located several studies that adapted or purposively designed the instruments for the study. Table 6 details the instruments found.

Additionally, other instruments were found in literature as summarised in table 7.

Critical appraisal within sources of evidence
Overall, studies quality was quite high. Quality appraisal ranged from 19 to 36. Sampling, ethics and bias, and implications and usefulness were the main limitations of the studies (online supplemental table 1).
Results of individual sources of evidence

Results from each study are synthesised and publicly available at https://osf.io/mabgv/. Additionally, seven tables integrated in this manuscript were created to resume instrument characteristics by context and type of instrument.

Synthesis of results

From the 65 articles sample, studies were carried out in a wide range of countries: Iran with 9 studies, Netherlands with 7 studies, and Norway, Poland, Portugal and Turkey with 4 studies. Most studies were applied in paediatric wards (n=28), followed by NICU (n=21), PICU (n=9) and EDs (n=7). Sample size ranged from 1355 to 3354 and 3 studies used mixed methods, 20 studies were methodological of instruments construction or validation and 43 studies were quantitative.

Most studies reported a single use of instrument and didn’t integrate any clinical application of its results. Instrument development or its adaptation/validation was fully explained in most studies. Globally, all studies reported that instruments were easy to complete or had minor issues that were addressed by researchers. A total of 38 instruments were found as following: 21 instruments previously validated, 3 adapted instruments and 14 structured instruments purposively designed for the study.

The numbers of domains in each study ranged from 1 to 13. In 53 studies, overall satisfaction was assessed as a formal question or by average results. The total number of items was not reported in 6 studies and in the remaining it ranged between 13 and 92 items. Only 15 studies clearly stated that the instrument had open-ended question/free space for additional comments. All studies used Likert scales and a five point-Likert scale was the mostly used (n=29). In five studies, instruments included more than one assessment scale such as dichotomous or Visual Analogue Scales. Regarding psychometric properties, instrument reliability was not reported in 16 studies. Reliability was measured through internal consistency assessment or other combined statistical methods (factor analysis and test–retest) in the remaining 49 studies. In 28 studies, validity was not assessed, and in the other 37, it was assessed through content validity or through a combination of different approaches (construct validity, face validity, concurrent validity, congruent validity, discriminant validity and non-differential validity).

DISCUSSION

From the 65 studies identified, a total of 38 instruments were found to evaluate parents’ satisfaction with care. This high number due to the fact that we cover all contexts of hospital care. Studies came from all around the globe: Argentina, Australia, Brazil, Denmark, England, France, Greece, Iceland, India, Iran, Italy, Jordan, Kenya, Kingdom of Saudi Arabia, Korea, Mexico, Netherlands, Norway, Poland, Portugal, South Africa, Spain, Sweden Switzerland, Turkey, USA, UK and Vietnam. This shows the relevance and importance of this theme. Most studies have been conducted in high income countries, which may reflect the growing concern in the use of satisfaction as an indicator of health quality.

Our initial goal was to identify instruments aimed at nursing care. However, it became evident that most
instruments consider it as a domain of satisfaction. Only two instruments focused specifically on nursing care: Citizen Satisfaction with Nursing Care Scale for parents of hospitalised children (CSNCS) and Newcastle Satisfaction with Nursing Care scale (NSNCS). Additionally, the Family Paediatric Satisfaction Questionnaire includes two subscales. The first one measures...
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Overall satisfaction or assessment</th>
<th>No of items</th>
<th>Open-ended questions/free space</th>
<th>Assessment scale</th>
<th>Reliability</th>
<th>Validity</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPATHIC</td>
<td>Yes (AV)</td>
<td>30</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>CVV</td>
<td>After 24 hours AD78</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>74</td>
<td>Yes</td>
<td>NR</td>
<td>IC</td>
<td>CVV</td>
<td>AD35 NR</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>78</td>
<td>NR</td>
<td>10-point LS</td>
<td>IC; CFA</td>
<td>NR</td>
<td>2–3 weeks AD36</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>30</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CVV; NDV</td>
<td>2–3 weeks AD37</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>30</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CVV</td>
<td>AD77 NR</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>65</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CVV</td>
<td>After 1 DH33</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>57</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC; CFA</td>
<td>NR</td>
<td>AD59 NR</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>30</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CgV; NDV</td>
<td>The day before discharge or AD79</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>30</td>
<td>Yes</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>After 2 DH40</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>38</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CgV</td>
<td>AD48 NR</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>38</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CVV; DV</td>
<td>AD57 NR</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>39</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>After&gt;3 DH44</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>57</td>
<td>Yes</td>
<td>6-point LS</td>
<td>IC; CFA</td>
<td>CgV; NDV</td>
<td>AD or 3 days AD58</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>57</td>
<td>Yes</td>
<td>6-point LS</td>
<td>IC</td>
<td>CgV</td>
<td>NR55 NR</td>
</tr>
<tr>
<td></td>
<td>Yes (AV)</td>
<td>57</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CgV; NDV</td>
<td>3–4 weeks AD33</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>65</td>
<td>Yes</td>
<td>6-point LS</td>
<td>IC; CFA</td>
<td>CV; FC, CgV; NDV</td>
<td>2–3 weeks AD36</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>65</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC</td>
<td>CgV; NDV</td>
<td>The day before discharge or AD64</td>
</tr>
<tr>
<td></td>
<td>NR</td>
<td>78</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC; EFA</td>
<td>CV</td>
<td>NR46 NR</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>92</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>After 2 DH42</td>
</tr>
</tbody>
</table>

AD, after discharge; AtD, at discharge; AV, average result; CcV, concurrent validity; CFA, confirmatory factor analysis; CgV, congruent validity; CV, construct validity; CV, content validity; CgV, convergent validity; DH, days of hospitalisation; DV, differential validity; EFA, exploratory factor analysis; FC, face validity; IC, internal consistency; LS, Likert Scale; NDV, non-differential validity; NR, not reported.
## Table 6  Characteristics of structured instruments adapted/designed purposively for the study

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Domains designation</th>
<th>Overall satisfaction or assessment</th>
<th>No of items</th>
<th>Open-ended questions/free space</th>
<th>Assessment scale</th>
<th>Reliability</th>
<th>Validity</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQAS²⁸ ²⁹ ³⁰ ³¹ ³²</td>
<td>Parental presence, participation in neonatal care and information about neonatal care.</td>
<td>Yes (AV)</td>
<td>18</td>
<td>NR</td>
<td>4-point LS</td>
<td>IC</td>
<td>CV</td>
<td>After 1 DH³³</td>
</tr>
<tr>
<td></td>
<td>Accessibility, medical treatment, care processes, staff attitudes, participation and staff work environment</td>
<td>Yes</td>
<td>63</td>
<td>NR</td>
<td>4-point LS</td>
<td>IC and CFA</td>
<td>CV and CV</td>
<td>NR³⁴</td>
</tr>
<tr>
<td></td>
<td>Emotional, communicative-informative, esteem support and Instrumental care</td>
<td>Yes (AV)</td>
<td>25</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>CV</td>
<td>NR³⁵</td>
</tr>
<tr>
<td>SQDS³⁶ ³⁷ ³⁸ ³⁹ ⁴⁰</td>
<td>Care and treatment, communication, and hospital environment</td>
<td>Yes</td>
<td>22</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>After &gt;7 DH³⁹</td>
</tr>
<tr>
<td></td>
<td>Caring behaviour, technical nursing care, information, availability and continuity of care, and personal and environmental needs.</td>
<td>yes (AV)</td>
<td>27</td>
<td>NR</td>
<td>4-point LS</td>
<td>IC</td>
<td>CV</td>
<td>NR³⁷</td>
</tr>
<tr>
<td></td>
<td>Access to care and treatment, Information and communication related to care and treatment, Information related to practical conditions around the ward, physicians' behaviour, nurses' behaviour and access to service</td>
<td>Yes (AV)</td>
<td>36</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>AtD³⁵</td>
</tr>
<tr>
<td></td>
<td>Questionnaire based on 14 quality standards for emergency admitances to a paediatric department.</td>
<td>Yes (AV)</td>
<td>19</td>
<td>Yes</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>AtD³⁴</td>
</tr>
<tr>
<td></td>
<td>Waiting time, ward decor, privacy, quality of food, access to play, recreational facilities, manner of nurses, and level of noise, pain, or discomfort</td>
<td>Yes</td>
<td>NR</td>
<td>Yes</td>
<td>NR</td>
<td>NR</td>
<td>NR</td>
<td>NR³⁶</td>
</tr>
<tr>
<td></td>
<td>Parent perceptions of waiting time, environment/facilities, professionalism and communication skills of staff</td>
<td>Yes</td>
<td>13</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>CV</td>
<td>NR³⁶</td>
</tr>
<tr>
<td></td>
<td>Personnel, structure and quality of the facility, perceived length of waiting times, and the child-friendliness of the ED environment.</td>
<td>Yes</td>
<td>21</td>
<td>NR</td>
<td>7-point LS</td>
<td>IC</td>
<td>NR</td>
<td>Discharged in the last from ED in the last 3 years³⁷</td>
</tr>
<tr>
<td></td>
<td>General aspects, access, patient admission, personnel, treatment and exams, facilities and expectations.</td>
<td>Yes</td>
<td>17</td>
<td>Yes</td>
<td>5-point LS and dichotomous.</td>
<td>NR</td>
<td>NR</td>
<td>NR³⁶</td>
</tr>
<tr>
<td></td>
<td>Communication, concern, information, caring, participation, education and support</td>
<td>Yes (AV)</td>
<td>NR</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>NR³⁶</td>
</tr>
<tr>
<td></td>
<td>Interpersonal relationships with staff, parental involvement, staff competence and services offered by the health system</td>
<td>Yes (AV)</td>
<td>15</td>
<td>Yes</td>
<td>3-point LS</td>
<td>NR</td>
<td>NR</td>
<td>After &gt;7 DH³⁴</td>
</tr>
<tr>
<td></td>
<td>Admission process, staff, environment/services, treatment interventions and treatment outcome</td>
<td>Yes (AV)</td>
<td>19</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>NR³⁷</td>
</tr>
<tr>
<td></td>
<td>Child's admission, information and communication, parental support, environment and facilities, parents' perceptions of the standard of care and the discharge processes.</td>
<td>Yes (AV)</td>
<td>NR</td>
<td>Yes</td>
<td>3-point and 5-point LS</td>
<td>NR</td>
<td>CV and FC</td>
<td>Posted within 4 days AD³⁵</td>
</tr>
<tr>
<td></td>
<td>Welfare, nursing care, medical care</td>
<td>Yes (AV)</td>
<td>49</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC and EFA</td>
<td>NV</td>
<td>NR³⁷</td>
</tr>
<tr>
<td>Welfare, nursing care, medical care</td>
<td>Yes (AV)</td>
<td>49</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC and EFA</td>
<td>CV and CV</td>
<td>NR³⁸</td>
<td></td>
</tr>
</tbody>
</table>

AD, after discharge; AtD, at discharge; AV, average result; CV, concurrent validity; CFA, confirmatory factor analysis; CgV, congruent validity; CV, construct validity; CV, content validity; CgV, convergent validity; DH, days of hospitalisation; DV, differential validity; ED, emergency department; EPA, exploratory factor analysis; FC, face validity; IC, internal consistency; LS, likert scale; NDV, non-differential validity; NR, not reported; SQAS, Structured Questionnaire Adapted for this Study; SQDS, Structured Questionnaire Designed for this Study.
Table 7  Characteristics of the remaining instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Domains designation</th>
<th>Overall satisfaction or assessment</th>
<th>No of items</th>
<th>Open-ended questions/free space</th>
<th>Assessment scale</th>
<th>Reliability</th>
<th>Validity</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSNCC</td>
<td>Nursing Care Experiences scale and Opinions on Nursing Care scale.</td>
<td>No</td>
<td>47</td>
<td>Yes</td>
<td>7-item LS and 5-item LS</td>
<td>IC and CFA</td>
<td>CV</td>
<td>After 1 DH</td>
</tr>
<tr>
<td>FPSO</td>
<td>Hospitalisation services and satisfaction with nursing care</td>
<td>No</td>
<td>18</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>After&gt;3 DH</td>
</tr>
<tr>
<td>FSQ</td>
<td>Participatory care, educational support and psychological support.</td>
<td>Yes (AV)</td>
<td>30</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC and EFA</td>
<td>CV</td>
<td>NR</td>
</tr>
<tr>
<td>MPO</td>
<td>Enabling and partnership, providing general information, providing specific information, coordinated and comprehensive care, and respectful and supportive care.</td>
<td>Yes (AV)</td>
<td>20</td>
<td>NR</td>
<td>7-point LS</td>
<td>IC</td>
<td>NR</td>
<td>NR</td>
</tr>
<tr>
<td>NnP</td>
<td>Open-ended questions/free space</td>
<td>Yes (AV)</td>
<td>20</td>
<td>NR</td>
<td>7-point LS</td>
<td>IC</td>
<td>CV</td>
<td>third and 10th day of hospitalisation</td>
</tr>
<tr>
<td>NSS</td>
<td>Care and treatment, doctors, visits, NICU facility, siblings, information, parent anxiety, and discharge.</td>
<td>Yes (AV)</td>
<td>51</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>AtD</td>
</tr>
<tr>
<td>NSNCS</td>
<td>Staff, admission, nurses, anxiety, siblings, information, timeout, doctors, facilities, nutrition, preparation for discharge, trust and visitors.</td>
<td>NR</td>
<td>42</td>
<td>Yes</td>
<td>NR</td>
<td>IC</td>
<td>CV</td>
<td>NR</td>
</tr>
<tr>
<td>NICUPSO</td>
<td>Care and treatment, information, hospital facilities, parental education and parental participation.</td>
<td>NR</td>
<td>59</td>
<td>NR</td>
<td>6-point LS</td>
<td>IC and EFA</td>
<td>FC; CV; CV</td>
<td>AtD</td>
</tr>
<tr>
<td>NICU Survey</td>
<td>Delivery, environment, nurses, physicians, discharge, personal and overall assessment</td>
<td>Yes (AV)</td>
<td>42</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>60 days AD</td>
</tr>
<tr>
<td>NICUPFF</td>
<td>General satisfaction, continuity of care, communication and information, preparedness, involvement in care, being a parent, being near the baby, support and follow-up.</td>
<td>Yes (AV)</td>
<td>62</td>
<td>Yes</td>
<td>5-point LS; frequency and dichotomous.</td>
<td>IC</td>
<td>CV and discriminant validity</td>
<td>AtD</td>
</tr>
<tr>
<td>PEPCQ</td>
<td>Nursing services, doctor services, organisation, information: examinations and tests, information: discharge, and hospital facilities.</td>
<td>Yes</td>
<td>25</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC; EFA; Test-retest</td>
<td>CV</td>
<td>Mailed AD</td>
</tr>
<tr>
<td>PSS</td>
<td>Environment, childcare and communication</td>
<td>Yes (AV)</td>
<td>24</td>
<td>Yes</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>After 2 DH</td>
</tr>
<tr>
<td>PASAT PEDIATRIA package</td>
<td>Admission to hospital, emergency room, hospitalisation, medical care, nursing care and other aspects of hospital stay.</td>
<td>Yes (AV)</td>
<td>26</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>NR</td>
<td>After&gt;3 DH</td>
</tr>
<tr>
<td>PFSo</td>
<td>Medical care, nursing care and welfare services.</td>
<td>Yes (AV)</td>
<td>28</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>AtD</td>
</tr>
<tr>
<td>Medical care, nursing care and accommodations.</td>
<td>Yes (AV)</td>
<td>NR</td>
<td>35</td>
<td>IC</td>
<td>CFA</td>
<td>NR</td>
<td>NR</td>
<td>AtD</td>
</tr>
<tr>
<td>PHOPSS</td>
<td>General satisfaction, communication and interaction style, information amount and timeliness, and emotional support.</td>
<td>Yes</td>
<td>24</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC and EFA</td>
<td>CV</td>
<td>Mailed AD</td>
</tr>
</tbody>
</table>

Continued
### Table 7  Continued

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Domains designation</th>
<th>Overall satisfaction or assessment</th>
<th>No of items</th>
<th>Open-ended questions/free space</th>
<th>Assessment scale</th>
<th>Reliability</th>
<th>Validity</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>PedQLHCST</td>
<td>Knowledge, technical skills, emotional needs, family involvement, communication and overall satisfaction.</td>
<td>Yes</td>
<td>25</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>CV</td>
<td>After&gt;3 DH</td>
</tr>
<tr>
<td></td>
<td>General satisfaction, information, inclusion of family, communication, technical skills and emotional need.</td>
<td>Yes (AV)</td>
<td>25</td>
<td>NR</td>
<td>5-point LS</td>
<td>NR</td>
<td>FC</td>
<td>NR 77</td>
</tr>
<tr>
<td>NR</td>
<td>Information, family inclusion, communication, technical skills, emotional needs and overall satisfaction.</td>
<td>Yes (AV)</td>
<td>NR</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>NR</td>
<td>At re-hospitalisation 51</td>
</tr>
<tr>
<td>PIPST</td>
<td>Information and education to the parent/child, coordination of care, physical comfort, emotional support, respect for patient’s preferences, involvement of family, continuity and transition, and overall impression of quality of care.</td>
<td>Yes</td>
<td>NR</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>FC</td>
<td>NR 36</td>
</tr>
<tr>
<td>PPACQ</td>
<td>General impression; accessibility and availability of doctors and nurses; consideration and respect; coordination and integration of care; Information and communication; relationship between parents and health team; physical comfort and continuity of care</td>
<td>Yes</td>
<td>37</td>
<td>NR</td>
<td>5-point LS</td>
<td>IC</td>
<td>CV and FC</td>
<td>After&gt;3 DH</td>
</tr>
<tr>
<td>SPQ</td>
<td>Accessibility, staff attitudes, care processes, information about their child’s state of health, information about routines, medical treatment, parent participation and staff work environment</td>
<td>Yes</td>
<td>63</td>
<td>NR</td>
<td>4-point LS; Visual Analogue Scale (1–10)</td>
<td>IC and CFA</td>
<td>NR</td>
<td>After&gt;3 DH 72</td>
</tr>
<tr>
<td>USAQ</td>
<td>General aspects, access, admission of patients, staff, exams and treatments, facilities, and expectations.</td>
<td>NR</td>
<td>NR</td>
<td>Yes</td>
<td>4-point LS</td>
<td>NR</td>
<td>NR</td>
<td>AtD</td>
</tr>
</tbody>
</table>

AD, after discharge; AV, average result; CgV, concurrent validity; CFA, confirmatory factor analysis; CgV, congruent validity; CSNCC, Citizen Satisfaction with Nursing Care Scale; COfV, construct validity; CV, content validity; CVV, convergent validity; DH, days of hospitalisation; Dv, differential validity; EFA, exploratory factor analysis; FC, face validity; FSSQ, Family Paediatric Satisfaction Questionnaire; FSQ, Family Satisfaction Questionnaire; IC, internal consistency; LS, Likert Scale; MPC, measurement of process of care; NDv, non-differential validity; NICUPPF, Neonatal Intensive Care Unit Parent Satisfaction Form; NICUPSQ, Neonatal Intensive Care Unit Parents Satisfaction Questionnaire; NInPS, Neonatal Index of Parental Satisfaction; NR, not reported; NSNSCS, Newcastle Satisfaction with Nursing Care Scale; NSS, Neonatal Satisfaction Survey; PedQLHCST, Paediatric Quality of Life Healthcare Satisfaction Tool; PEPCQ, Parent Experience of Paediatric Care Questionnaire; PEPSQ, Paediatric Satisfaction Questionnaire; PPACQ, Picker Institute Paediatric Inpatient Survey tool; PPACST, Picker Institute Paediatric Inpatient Survey tool; SPQ, Swedish Pyramid Questionnaire; USAQ, Users Quality and Satisfaction Assessment Questionnaire.
general aspects of hospitalisation such as hygiene and noise and the second evaluates satisfaction with nursing care on the following domains: treatment, kindness, knowledge and nursing staff skills, continuity of care, information on the state of health and mother involvement in care. From a theoretical point a view, it makes sense to distinguish the satisfaction with nursing care from other dimensions of care. However, from the respondent perspective, it may be difficult for parents to individualise their assessment because they may not know how to distinguish the role of the nurse in relation to other professionals.

From the 38 instruments identified, the Empowerment of Parents in the Intensive Care (EMPATHIC) was the most frequently found. It was designed to measure both parental experiences and satisfaction with care provided. It includes five domains (information, care and treatment, availability, parental participation and professional attitude) and initially had 92 items that were later reduced to a shorter version with 30 items. It is an instrument primarily used in PICU or NICU or ICU, however, it has been successively used in paediatric wards, and was also adapted to evaluate family satisfaction in adult intensive care units. Psychometric properties of this instrument have been extensively evaluated.

The most striking result to emerge from this review was the number of structured instruments purposively designed (n=14). Although there are many existent instruments, researchers continue to develop additional ones. We believe that the diversity of hospital settings may lead researchers to construct a different instrument that is more tailored to a particular context and/or population.

Also, although satisfaction with nursing care is an indicator widely considered by health organisations for quality assessment, this research clearly shows that there is still a gap in literature on the range of aspects that influence satisfaction. This review identified few instruments that were specific to nursing care or consensual dimension that should be integrated in such instruments. Despite the two identified instruments (CSNCS and NSNCS) that evaluate the experience with nurses, it is essential that instruments can detail nursing dimensions and how nursing interventions influence parents’ satisfaction.

Another important aspect was the difficulty to find generalisable studies, which may be related to the fact that there is no homogeneity in nursing tasks and skills across countries, cultures and settings. Also, since the instruments have been developed primarily to assess parent satisfaction with specific aspects of care mostly in NICU and PICU, they have little potential for other settings.

Personal and sociodemographic characteristics as well as the type of care provided influences the level of satisfaction with nursing care. However, literature relating satisfaction with these characteristics has inconsistent results and additionally, these are aspects cannot be changed.

For decision-makers, it makes sense to have more generic instruments that allow organisational decisions to be made (concerning professional ratios, physical structure, equipment and environment among others), to achieve high ratings of satisfaction and improve the quality-of-service delivery. However, healthcare professionals’ performance is one of the main drivers of overall patients’ satisfaction, and nursing care is the most critical determinant of patient satisfaction. Selecting an appropriate parent satisfaction instrument is still a critical challenge for healthcare organisations.

Regarding the data collection methodology studies are not unanimous as to the moment of application of the instruments. However, they were all applied in a period of more than 24 hours of hospitalisation, which apparently allows enough time for an opinion to be formed about the satisfaction with the care received. This inconsistency reveals the fragility of satisfaction surveys, as the moment of application of the questionnaire may influence the perception of the respondent and the specific aspects of care, they value the most. Parents whose child has been admitted to an intensive care unit in the last 24 hours and is still in a critical health condition, may be focused on specific aspects of care that diverge from other parents whose child is already stabilised. The concerns regarding the validity of patient satisfaction measures to accurately quantify inpatient experience and the limitations related to its modes of administration is well documented in literature. If there is no unanimity, the time of application of the questionnaire should be considered a determinant of satisfaction and be analysed individually.

Another relevant aspect is that not all studies report having a specific question to assess overall satisfaction. Some studies extrapolate this value through the remaining items, which may not reflect the respondent real perception and miss other aspects of care that have more weight in overall parental satisfaction.

This also brings us to the need for an open-ended question, as most of our studies did not report it. Despite this type of questions has been highly recommended as a method for improving patient satisfaction surveys, they are still underused. Notwithstanding the complex data processing of patients’ comments, from the analysis of open responses, important dimensions not previously covered can emerge. Also, the verbatim responses can help researchers to understand what is behind a score, allowing a more detailed and reliable interpretation of the results.

In the identified instruments, we found a wide range of satisfaction assessment items, with a tendency towards excess (ranging from 13 to 92). Although an extensive questionnaire provides a great amount of information, data processing and respondents filling may also be exhaustive, and suboptimal participation rates can be achieved. This phenomenon is defined as response burden and results in low response rates. It is usually used as an incentive to develop brief instruments and abbreviate the existing ones. Our review supports this aspect,
since some instruments found were adapted to reduce the number of items.\textsuperscript{37, 40} A general concern with the shortening of instruments is validity and reliability, as items removal may result in a limited scope and can make the instrument insensitive to changes.\textsuperscript{39} It is important to note that in most studies there was a concern to evaluate instruments psychometric properties. For reliability most studies calculated the internal consistency through Cronbach’s alpha. Previously literature reviews identified the lack of validated instruments and the need for greater rigour in its application.\textsuperscript{14–17} These measurements are mandatory to guarantee the scientific validity of the studies. Despite this, our findings suggest an improvement compared with previous literature reviews.\textsuperscript{14–17}

Social desirability bias in instrument application was not addressed as our quality appraisal has shown. However, this is an important issue directly related to instrument application procedure\textsuperscript{92} that needs to be addressed in future studies.

As to limitations we must consider the possibility of having excluded or missed some relevant studies due to the scoping protocol applied. Different databases, timeframe or language selection could lead to the identification of other instruments. Additionally, we verify that some studies did not clearly identify instruments characteristics or provide the instrument itself leading to difficulty in instrument information extraction.

\section*{CONCLUSIONS}

This review allowed the identification and description of existing instruments to evaluate parents’ satisfaction with nursing care. A total of 38 instruments were found; however, only two instruments assess specifically satisfaction with nursing care. In all the others nursing care appears as a domain of satisfaction. Studies are consensus in the need to evaluate communication, information, environment, care participation and support as major dimensions of nursing care. The need to include specific aspects of nursing care in satisfaction instruments appears as a major conclusion in this review. Also, attention is needed toward methodological aspects such as: the inclusion of an overall satisfaction assessment question and open-ended questions to better assess parents’ satisfaction and integrate aspects not considered in the instrument. The timing of questionnaire distribution could be crucial as it influences satisfaction ratings. This review clearly shows that there is still a gap in literature on the range of aspects that influence satisfaction and a lack of consensus on ideal conditions for instruments use and application. It is essential that instruments can detail nursing dimensions and how nursing interventions influence parents’ satisfaction. Selecting an appropriate parent satisfaction instrument is still a critical challenge for healthcare organisations.\textsuperscript{35} As to clinical implications, this scoping review may provide guidance and advice for researchers to find a suitable instrument to assess parents’ satisfaction based on instrument characteristics and its validity.

\section*{REFERENCES}


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\section*{Supplemental material}

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\section*{Supplemental material}

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\section*{Contributors}

Conceptualisation, FL and VA; methodology, FL and VA; software, FL and VA; validation, FL and VA; formal analysis, FL and VA; investigation, FL and VA; resources, FL and VA; data curation, FL and VA; writing—original draft preparation, FL; writing—review and editing VA; visualisation, FL and VA; supervision, FL and VA; project ad-ministration, FL and VA. All authors have read and agreed to the published version of the manuscript.

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